

**Remote M&C Specification  
for  
Quantum and Evolution Series  
Satellite Modems**

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## Chapter 1 Introduction

---

This document specifies the remote control protocol for Quantum and Evolution Series satellite modems. It specifies the protocols used for IF, L-band and Redundancy Switch modems.

For this modem series, Paradise Datacom have introduced a new protocol called Paradise Universal Protocol (PUP). This protocol is designed to provide a human-readable, command-response method of controlling equipment that is independent of the underlying physical communications medium. As a result, PUP can be used over serial, Ethernet and other interfaces.

The primary objective of PUP is to provide a simple universal protocol for controlling Paradise equipment. A secondary objective is to allow third parties to replace any Paradise user interface with their own user interface, by providing the same level of control externally that is used internally on the equipment.

The modem also has the ability to function as a Simple Network Management Protocol (SNMP) agent. The agent responds to requests from SNMP network managers and also sends SNMP traps notifications to them. This document specifies an SNMP Management Information Base (MIB) that defines a set of manageable attribute Object Identifiers (OID) that can be used for monitor and control purposes. The modem actually requires two MIBs – one that is common to all Paradise equipment that specifies top-level OIDs and one that provides the modem OIDs; both MIBs can be downloaded from the modem (V1.5.0 software onwards) via the 'Download MIB files' hyperlink at the foot of the web *Edit/Unit/M&C/SNMP* page.

---

### 1.1 Scope

This document defines the PUP protocol in terms of a command/response message format, the actual commands, error messages and examples.

---

### 1.2 Related Documents

1. Quantum and Evolution Series Installation and Operation Handbook

---

### 1.3 Definitions

M&C	Monitor and Control
MCP	Modem Configurable Property
MIB	Management Information Base
OID	Object Identifier
PCB	Printed Circuit Board
PUP	Paradise Universal Protocol
SAF	Software Activated Feature
SNMP	Simple Network Management System

## Chapter 2 Remote Control

---

### 2.1 Serial and Ethernet Interfaces

The modem supports the following remote control interfaces:

- A built-in remote web user interface that provides web pages from the modem (using a web server) to a web browser. This is accessed by entering the IP address of the M&C Ethernet port of the modem into a web browser address bar (the web server being on well-known port 80).
- A serial interface (selectable between RS232 and RS485) that can be used to send and receive Paradise Universal Protocol (PUP) messages. This interface can be driven either through a generic user-entry application such as HyperTerminal (in the case of RS232) or through an application that uses a driver developed specifically to implement the PUP protocol. In the case of RS485, a message wrapper (defined in Section 2.3.3) is used to encapsulate PUP commands and responses, which are incorporated into the message payload.
- An Ethernet interface that can be used to send and receive PUP messages or Simple Network Management Protocol (SNMP) messages. This interface can be used in several ways.

Firstly, a generic user-entry application such as Telnet can be used to automatically send or manually enter PUP commands.

Secondly, PUP messages can be encapsulated directly into TCP packets. These must be sent to a specific TCP port that the modem listens on for PUP commands. Typically this will result in much faster communications than when using Telnet. This method is referred to as 'direct encapsulation' elsewhere in this document to differentiate it from the Telnet type of communications.

Thirdly, SNMP v1 or v2c can be used to communicate between an SNMP network manager and the SNMP agent on the modem.

---

### 2.2 Committing Changes

When PUP *set* commands are sent to the modem to change its operation, they are implemented immediately unless a *nocommit* parameter is appended to the end of the command. If commands are not implemented immediately, then they remain 'pending' until a PUP *commit* command is sent. Not committing changes until they have all been sent can significantly reduce the time taken to configure a modem.

---

### 2.3 RS485 Protocol

The Paradise RS485 protocol is compatible with all previous Paradise equipment in the sense that different equipment may coexist on the same M&C bus. The message format described below is identical to that used in previous equipment. However, this is used

purely to wrapper PUP commands that are specific to Quantum/Evolution Series satellite modems. RS485 messages that are not understood by other Paradise equipment will be ignored.

The SA-bus protocol (as defined by Scientific Atlanta) is no longer supported.

The Paradise RS485 protocol is a master/slave, command/response protocol. The Master device initiates all communications and Slave devices only ever send a message in response to a request from the master.

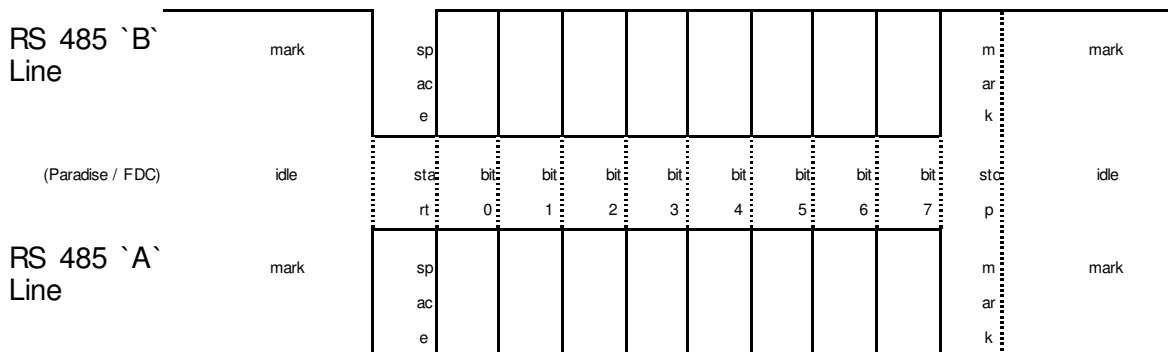
### 2.3.1 Character Format/Baud Rate

The character format and Baud rate are as follows: 8 bits, no parity, 1 stop bit, selectable from 300 to 19200 Baud.

### 2.3.2 Electrical Interface

The protocol requires a 4 wire plus ground interconnection between equipment. Signals are at RS485 levels (effectively a tri-statable RS422) with Tx & Rx data being transmitted as a series of async characters over a differential pair (labelled `A` and `B`). Lines referred to as Tx-A and Tx-B are outputs, and Rx-A and Rx-B are inputs. The Paradise convention (as specified by RS422) is that the `B` lines represent true data (i.e. the inactive state is `mark`, which is high), and the `A` lines inverse data (ie the inactive state is `space`, which is low).

An async character then appears as:



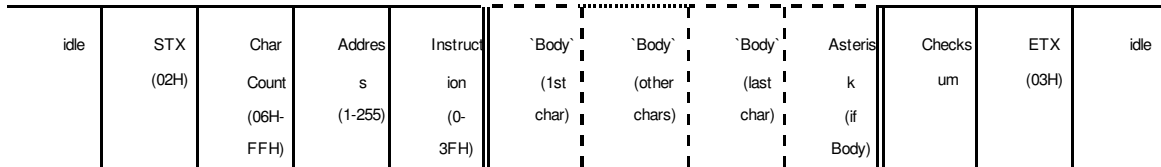
The differential pair from Master to Slaves is typically driven all the time by the Master device (i.e. never goes high impedance). The return pair (from Slaves to Master) is driven by a Slave device when sending a message. All devices hold their output drivers at a high impedance unless actually transmitting a message, to allow other Slave devices on the bus access to the `return pair`.

It is possible to operate a link to a single device using an RS232 interface instead of RS485. However as RS232 cannot go high impedance, only one Slave device can be on the bus otherwise there is permanent bus contention. Note that on RS232 systems, a `mark` (high) is defined as `negative voltage` and a space (low) is defined as a positive voltage. This means that a RS232 character will appear as the **RS485 `A` line** shown previously, except it will transition from <-3V to >+3V as opposed to 0V & 5V.

### 2.3.3 Message Structure

All messages are transmitted in a defined message format. The format is as follows:

The same format is used for message from Master to Slaves, and Slaves to Master. Messages from Master to Slaves carry the address of the destination Slave device, return messages from Slave to Master also carry the address of the Slave (i.e. the source of the message NOT the destination on the return, as all returned message are for the Master device).



- STX: The fixed character 02H.
- Char Count: The message length including STX and ETX characters (06H for zero `Body` length).
- Address: Slave address, range 1-255. Zero is reserved for the `Global` address to which all devices respond.
- Instruction: Range 0-3FH. Add 40H (64<sub>10</sub>) to request a standard `ACK`, add 80H (128<sub>10</sub>) to request an `extended ACK` to this message.
- Body: From 0 to 248 characters (resulting in a maximum message length of 255 characters). The body always contains a PUP command as specified in Chapter 4.
- Asterisk: An ASCII `\*` character if there is a body (i.e. if the length of the body of the message <>0).
- Checksum: The Modulo 256 sum of all the characters inclusive from the `Address` to the end of the `Body`, up to and including the asterisk.
- ETX: The fixed character 03H.

The following instruction codes are supported with respect to Quantum/Evolution Series modems:

Message Name	Instruction Code	Description
Ping	63 (3FH)	This results in the command being echoed back by the addressed modem (assuming an ACK or extended ACK has been requested and it is not a broadcast command).
Write	15 (FH)	This is used to send any PUP command (typically a get or set command) as the message body. Any response must be retrieved using the Query command.
Query	14 (EH)	This returns a response (with Instruction Code 14) that is dependent on the last Write command. The body of the message will typically contain the response to the last PUP command. If the response exceeds 255 bytes, it will be split into multiple packets, each a maximum of 255 bytes.
Write & Query	9	This combines the Write & Query messages, so that a Write message is sent to the modem, which then responds with a Query response. Both messages have instruction code of 9.

### 2.3.4 P300 Compatibility

An additional set of RS485 messages are supported to provide backward compatibility with P300 series modems. These are defined in the following tables. Not all P300 messages are supported – those not listed will be acknowledged if they are used, but will not be actioned by the Quantum/Evolution modem. The use of these messages is recommended only when replacing a P300 modem with a Quantum/Evolution modem in an existing installation - new Quantum/Evolution installations should use the Write and Query messages detailed in the previous section in order to access to the full feature set of the modem.

Fields shown as ~~strike through~~ are not supported on Quantum/Evolution series modems and will be blank when read and ignored when written. For more detailed information

regarding these messages see *Remote M&C Specification for P300 & P400 Series Satellite Modems*.

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: QFaultRd													
{Unit Fault active (BxUnitFault_U<>0)}	0-1	1	0=Normal, 1=Active / true	0							X		
{Unit Warn active (BxUnitWarn_U<>0)}	0-1	1	0=Normal, 1=Active / true							X			
{Tx Traffic fault active (TxTrafFault_U<>0)}	0-1	1	0=Normal, 1=Active / true					X					
{Tx Traffic warning active (TxTrafWarn_U<>0)}	0-1	1	0=Normal, 1=Active / true				X						
{Rx Traffic Fault active (RxTrafFault_U<>0)}	0-1	1	0=Normal, 1=Active / true			X							
{Rx Traffic warning active (RxTrafWarn_U<>0)}	0-1	1	0=Normal, 1=Active / true		X								
{Config Error active (BxConfigError<>0)}	0-1	1	0=Normal, 1=Active / true										X
{Config Warn active (BxConfigWarn<>0)}	0-1	1	0=Normal, 1=Active / true										X
{Config Info active (BxConfigInfo<>0)}	0-1	1	0=Normal, 1=Active / true									X	
* RemContMode	0-1	1	direct									X	
{Test or Loop active (BxTestMode<>0 OR BxLoopMode<>0)}	0-1	1	0=Normal, 1=Active / true							X			
{On-line / standby, carrier off for any reason (TxCarrierStat_U <> 0)}	0-1	1	0=Normal, 1=Active / true						X				
<del>{Local configuration change (cleared when any config read remotely)} (Note 7_Error Bookmark not defined:R/C)</del>	0-1	1	0=Normal, 1=Active / true	2							X		
<del>{UnreadEntries}</del>	0-1	1	1=At least 1 unread log entry								X		
<del>{Unread16Entries}</del>	0-1	1	1=At least 16 unread log entries					X					
{Device configuring / busy}	0-1	1	0=Normal, 1=busy/reconfiguring				X						
(Spare)		1											
(Spare)		7											
						--							

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TOTAL		24		4															
-------	--	----	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: RxBBRd & RxBBWr											
RxAsyncBaud	0-15	4	direct (index to Baud array, see appendix D8)	0			msb .. lsb				
RxBSAuxDat	0-2	2	direct			msb	lsb				
RxAsyncChar	0-7	3	direct							msb .. lsb	
RxCllkMode	1-5	3	direct					msb .. lsb			
RxESCLVCh1	+7 to -18 dBm (0-250)	8	(Lvl x 10) + 180	2	msb ... lsb						
RxBBDataRate	0-9,999,999	28	7 digit BCD							msb .. digit 6 .. lsb	
					4	msb .. digit 5 .. lsb		msb .. digit 4 .. lsb		msb .. digit 3 .. lsb	
				6	msb .. digit 2 .. lsb		msb .. digit 1 .. lsb		msb .. digit 0 .. lsb		
RxBBMode	0-23	5	direct	8					msb .. lsb		
RxBuflerSize	0-99	7	direct		msb .. lsb						
RxCustScr	As text	5	direct	10					msb .. lsb		
* RxEqTx	0-1	1	direct						X		
RxBSCust	0-7	3	direct				msb .. lsb				
RxFrmMode	0-7	3	direct		msb .. lsb						
RxESCLVCh2	+7 to -18 dBm (0-250)	8	(Lvl x 10) + 180	12	msb .. lsb						
RxDRAuxDat	0-3	2	direct							msb	lsb
RxBSESCDat	0-3	2	direct							msb	lsb

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxBAsAuxCh	0-31	5	direct	14																s b		
RxOriginate	0-1	1	direct		msb .. lsb																	
RxTurboScr (Note 7:PErr! Bookmark not defined.:V3.10)	0-1	1	direct		X																X	
* BxAsyncESCInh_C (Rd Only, Note 7:PErr! Bookmark not defined.:V1.77)	0-1	1	direct																		X	
RxDRESCDat	0-2	2	direct																		m s b	
RxScr	0-2	2	direct																		m s b	
RxDRCust	0-4	3	direct	16					msb .. lsb													
RxStatClkSource (Note 5:PErr! Bookmark not defined., Note 7:V1.50)	0-1	1	direct					X														
RxStatClk10M (Note 5:PErr! Bookmark not defined., Note 7:V1.50)	0-1	1	direct				X															
RxClosedNetPlusESC (Note 4:PErr! Bookmark not defined., Note 7:V1.50)	0-1	1	direct			X																
RxPartialInsert	0-1	1	direct																		X	
RxStatClk	0 and 1000 to 10000	17	4¼ Digit BCD																		¼ d 4	
																					msb .. digit 3 .. lsb	
					18	msb .. digit 2 .. lsb				msb .. digit 1 .. lsb				msb .. digit 0 .. lsb								
{Config memory number} (Note 6:PErr! Bookmark not defined.)	0-15	4	direct binary	20	msb .. Mem-N .. lsb																	

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

<del>not defined</del>																	
RxPartialTS(0-31)	32 x (0-1)	32	1 bit per element (e)					e 3 1	e 3 0	e 2 9	e 2 8	e 2 7	e 2 6	e 2 5	e 2 4		
				22	e 2 3	e 2 2	e 2 1	e 2 0	e 1 9	e 1 8	e 1 7	e 1 6	e 1 5	e 1 4	e 1 3	e 1 2	
				24	e 1 1	e 1 0	e 9	e 8	e 7	e 6	e 5	e 4	e 3	e 2	e 1	e 0	
RxBSESCO <del>h</del>	0-255	8	direct	26	msb .. lsb												
RxTerDataRate	2400- 4,920,000	28	7 Digit BCD											msb .. digit 6 .. lsb			
				28	msb .. digit 5 .. lsb				msb .. digit 4 .. lsb				msb .. digit 3 .. lsb				
				30	msb .. digit 2 .. lsb				msb .. digit 1 .. lsb				msb .. digit 0 .. lsb				
RxTS(0-31)	32 x (0-32)	192	6 bits per element 0-31 for specified elements 32 for unspecified elements (currently value of -1)	32	msb .. element 0 .. lsb						msb .. element 1 .. lsb						
				34	msb .. element 2 .. lsb						msb .. element 3 .. lsb						
				36	msb .. element 4 .. lsb						msb .. element 5 .. lsb						
				38	msb .. element 6 .. lsb						msb .. element 7 .. lsb						
				40	msb .. element 8 .. lsb						msb .. element 9 .. lsb						
				42	msb .. element 10 .. lsb						msb .. element 11 .. lsb						
				44	msb .. element 12 .. lsb						msb .. element 13 .. lsb						
				46	msb .. element 14 .. lsb						msb .. element 15 .. lsb						
				48	msb .. element 16 .. lsb						msb .. element 17 .. lsb						

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

				50	msb .. element 18 .. lsb	msb .. element 19 .. lsb
				52	msb .. element 20 .. lsb	msb .. element 21 .. lsb
				54	msb .. element 22 .. lsb	msb .. element 23 .. lsb
				56	msb .. element 24 .. lsb	msb .. element 25 .. lsb
				58	msb .. element 26 .. lsb	msb .. element 27 .. lsb
				60	msb .. element 28 .. lsb	msb .. element 29 .. lsb
				62	msb .. element 30 .. lsb	msb .. element 31 .. lsb
(Spare)		36		64	-- -- -- -- -- --	-- -- -- -- -- --
				66	-- -- -- -- -- --	-- -- -- -- -- --
				68	-- -- -- -- -- --	-- -- -- -- -- --
<b>TOTAL</b>		<b>420</b>		<b>70</b>		

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: RxModRd & RxModWr											
RxRSK	0-255, note 2 Error! Bookmark not defined.	8	direct	0	msb .. lsb						
RxIFFreq	52-88MHz and 104-176MHz with 100Hz resolution	28	nnnnn.n (KHz), 7 digit BCD							msb .. digit 6 .. lsb	
					2	msb .. digit 5 .. lsb		msb .. digit 4 .. lsb		msb .. digit 3 .. lsb	
					4	msb .. digit 2 .. lsb		msb .. digit 1 .. lsb		msb .. digit 0 .. lsb	
RxRSN	0-255, note 2 Error! Bookmark not defined.	8	direct	6	msb .. lsb						
RxFECMode[2-0] bits[1-0]	0-7	2	direct bits[1-0]				msb	lsb			
RxFECRate[4-0] bits[1-0]	0-31	2	direct bits[1-0]		msb	lsb					
RxIntDepth	0-1	1	direct	8						X	
RxSpectInv	0-1	1	direct							X	
RxMod[2-0] bits[1-0]	0-7	2	direct bits[1-0]						msb	lsb	
RxRSEn	0-2, note 2 Error! Bookmark not defined.	2	direct				msb	lsb			

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxSweepWidth	0-32	6	direct		msb .. lsb											
* RxEqTx	0-1	1	direct	10						X						
{Config memory number} (Note 6 <sub>Error! Bookmark not defined.</sub> )	0-15	4	direct binary										msb .. Mem-N .. lsb			
RxFECMode[2-0] bit[2] (Note 7 <sub>Error! Bookmark not defined.</sub> :V2.87)	0-7	1	direct bit[2]							X						
RxMod[2-0] bits[2] (Note 7 <sub>Error! Bookmark not defined.</sub> :V2.87)	0-7	1	direct bit[2]					X								
RxFECRate[4-0] bits[4-2] (Note 7 <sub>Error! Bookmark not defined.</sub> :V2.87)	0-31	3	direct bits[4-2]		bit[4] .. bit[2]											
(Spare)		2										--	--			
(Spare)		12		12	--	--	--	--	--	--	--	--	--	--	--	
<b>TOTAL</b>		<b>84</b>		<b>14</b>												

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: TxBBRd & TxBBWr											
TxEsclVCh1	+7 to -18 dBm (0-250)	8	(Lvl x10) + 180	0	msb .. lsb						
TxTerDataRate	2400-4,920,000	28	7 digit BCD							msb .. digit 6 .. lsb	
					2	msb .. digit 5 .. lsb		msb .. digit 4 .. lsb		msb .. digit 3 .. lsb	
					4	msb .. digit 2 .. lsb		msb .. digit 1 .. lsb		msb .. digit 0 .. lsb	
TxEsclVCh2	+7 to -18 dBm (0-250)	8	(Lvl x10) + 180	6	msb .. lsb						
TxAsyncBaud	0-15	4	direct (index to Baud array, see appendix D8)							msb .. lsb	
TxIBSChanID	0-255	8	direct	8	msb .. lsb						
TxAsyncChar	0-7	3	direct		msb .. lsb						
TxDropIdle	0-1	1	direct		X						
TxIBSESCOh	0-255	8	direct	10	msb .. lsb						
TxCikMode	0-2	2	direct		msb .. lsb						
TxDMXErrMon	0-3	2	direct		msb .. lsb						
TxIBSpareID	0-255	8	direct	12	msb .. lsb						
TxIBSAuxDat	0-2	2	direct		msb .. lsb						

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxBSESCDat	0-3	2	direct		m s b	l s b																	
TxBStatID	0-255	8	direct	14					msb .. lsb														
TxDRAuxDat	0-3	2	direct				m s b	l s b															
TxClosedNetPlusESC (Note 4 <sub>PErr</sub> ! Bookmark not defined., Note 7:V1.50)	0-1	1	direct				X																
* BxAsyncESCInh_C (Rd only, Note 7 <sub>PErr</sub> ! Bookmark not defined., V1.77)	0-1	1	direct			X																	
TxBBMode	0-23	5	direct	16									msb .. lsb										
TxCustScr	0-31	5	direct							msb .. lsb													
TxScr	0-2	2	direct			m s b	l s b																
TxFrmMode	0-7	3	direct	18												msb .. lsb							
TxBSCust	0-7	3	direct											msb .. lsb									
TxDRESCDat	0-2	2	direct							m s b	l s b												
{Config memory number} (Note 6 <sub>PErr</sub> ! Bookmark not defined.)	0-15	4	direct binary			msb .. Mem-N .. lsb																	
TxDRCust	0-4	3	direct	20	msb .. lsb																		
TxTurboScr (Note 7 <sub>PErr</sub> ! Bookmark not defined.:V3.10)	0-1	1	direct											X									
(Spare)		3								--	--	--											



Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: TxModRd & TxModWr												
TxRSK	0-255, note 2 Error! Bookmark not defined.	8	direct	0	msb .. lsb							
TxFFreq	52-88MHz and 104-176MHz with 100Hz resolution	28	nnnnn.n (KHz), 7 Char BCD							msb .. digit 6 .. lsb		
					2	msb .. digit 5 .. lsb		msb .. digit 4 .. lsb		msb .. digit 3 .. lsb		
					4	msb .. digit 2 .. lsb		msb .. digit 1 .. lsb		msb .. digit 0 .. lsb		
TxRSN	0-255, note 2 Error! Bookmark not defined.	8	direct	6	msb .. lsb							
TxFECMode[2-0] bits[1-0]	0-7	2	direct bits[1-0]				msb	lsb				
TxFECRate[4-0] bits[1-0]	0-31	2	direct bits[1-0]		msb	lsb						
* TxPower	0-250	8	Lvl x-10	8	msb .. lsb							
* TxCarrier	0-3	2	direct				msb	lsb				
(Spare)		2			--	--						
TxIntDepth	0-1	1	direct	10						X		
TxMod[2-0] bits[1-0]	0-7	2	direct bits[1-0]				msb	lsb				

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TxRSEn	0-2, note 2 PErr! Bookmark not defined.	2	direct																
TxSpectInv	0-1	1	direct																
{Config memory number} (Note 6 PErr! Bookmark not defined.)	0-15	4	direct binary																
TxFECMode[2-0] bit[2] (Note 7 PErr! Bookmark not defined.:V2.87)	0-7	1	direct bit[2]																
TxMod[2-0] bit[2] (Note 7 PErr! Bookmark not defined.:V2.87)	0-7	1	direct bit[2]																
TxFECRate[4-0] bits[4-2] (Note 7 PErr! Bookmark not defined.:V2.87)	0-31	3	direct bits[4-2]																
(Spare)		9																	
<b>TOTAL</b>		<b>84</b>			<b>14</b>														

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: UnitCfgRd & UnitCfgWr													
BxAutoLogFlags	0-1023	8	direct (bits 0-7)	0	(bit 7) msb .. lsb (bit 0)								
BxAutoLogPeriod	0-9999	16	4 digit BCD							msb .. digit 3 .. lsb			
				2	msb .. digit 2 .. lsb			msb .. digit 1 .. lsb			msb .. digit 0 .. lsb		
BxTerrIntRead_U (UnitCfgRd) or BxTerrIntWrite (UnitCfgWr)	0-255	8	direct	4	msb .. lsb								
<del>BxAutoLogFlags (Note 7 Error! Bookmark not defined. V2.00)</del>	0-1023	2	direct (bits 8&9)							b it 9	b it 8		
BxMaxMFPeriod	<b>0-15000</b>	14	direct									b 1 3	b 1 2
				6	bit 11 .. bit 0								
RxEbNoWarn	0.0 to 25.5 (0-255)	8	Value x 10	8	msb .. lsb								
RxMXErrMon	0-3	2	direct							m s b	l s b		
RxMinSlipHrs	0-9999	14	direct									b 1 3	b 1 2
				10	bit 11 .. bit 0								
* ID_VirtInt	0-255	8	direct	12	msb .. lsb								
BxUnitSetup	0-1	1	direct							X			
BxESCIntfc	<b>0-4</b>	3	direct		msb .. lsb								
BxBERWarn	Note 1 Error! Bookmark not defined.	12	Note 1	14	msb .BIN exp. lsb			msb .BCD mant 1. lsb			msb .BCD mant 0. lsb		

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

	defined.				
BxTerrIntMode	0-31	5	direct	16	msb .. lsb
BxFaultMode	0-15	4	direct		msb .. lsb
BxIBSMultiBA	<b>0-4</b>	3	direct		msb .. lsb
BxRelayMode	0-15	4	direct	18	msb .. lsb
RxSigBlockCode	0-3	2	direct		msb .. lsb
RxAGCOPScale	0-15	4	direct		msb .. lsb
TxBACKAlmMode	0-3	2	direct		msb .. lsb
BxAISAction	0-1	1	direct		msb .. lsb
BxAuxIntfc	0-1	1	direct		msb .. lsb
BxBERAction	0-1	1	direct	20	msb .. lsb
BxG732CRCAcq	0-1	1	direct		msb .. lsb
BxG732EBits	0-1	1	direct		msb .. lsb
BxG732TerrCRC	0-1	1	direct		msb .. lsb
BxFlImpedance	0-1	1	direct		msb .. lsb
BxOpDisp	0-1	1	direct		msb .. lsb
BxTRSpool	0-1	1	direct		msb .. lsb
BxTSOG732Sparee	0-1	1	direct		msb .. lsb
BxUpgradeMsg	0-1	1	direct		msb .. lsb
BxX50FullAIS	0-1	1	direct		msb .. lsb
FanMode	0-1	1	direct		msb .. lsb
RxBuffAutoCont	0-1	1	direct		msb .. lsb
RxBuffMFSlip	0-1	1	direct		msb .. lsb
					22
				msb .. lsb	
				msb .. lsb	

# Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxBERMon	0-4	3	direct		msb .. lsb														
{Config memory number} (Note 6 <small>! Bookmark not defined.</small> )	0-15	4	direct binary																msb .. Mem-N .. lsb
(Spare)		2								--	--								
Bx10MHzRefOffset (Note 7 <small>! Bookmark not defined.</small> )	0-100	8	Value+128. Incoming values of 0-127 and 229-255 are allowed but ignored to preserve compatibility with earlier drives not supporting this variable.	24								msb .. lsb							
(Spare)		4			--	--	--	--											
<b>TOTAL</b>		<b>156</b>		<b>26</b>															

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: UnitInfoRd																				
{ID_AuxAud / ID_Q309} <sup>▲</sup>	0-7	3	direct	0															msb .. lsb	
ID_Dig[2-0]	0-7	3	direct																	msb .. lsb
ID_Intfc	0-63	6	direct		msb .. lsb															
* ID_VirtInt	0-255	8	direct	2					msb .. lsb											
RxBearer_H	0-1	1	direct																	
ID_IFU	0-3	2	direct																	
TxIntClk_H	0-1	1	direct																	
(Spare)		4		4																
SerialNumber	0-99,999	20	5 digit BCD																	
* {ModelNumber} (fromSAFModel[1-0] & SAFManf[2-0]) upper case, right justified packed with spaces	4 chars	24	4 digit (ASCII-48) giving (0-63)	8	msb .. left char .. lsb					msb .. 2nd left char .. lsb										
				10	msb .. 2nd right char .. lsb					msb .. Right char .. lsb										
* SoftwareVersion	0.00 to 9.99	12	3 digit BCD	12	msb .. digit 2 .. lsb				msb .. digit 1 .. lsb				msb .. digit 0 .. lsb							
{ID_RF[1-0] / ID_Q311} <sup>▲</sup>	0-3	2	direct	14																
{ID_RF[4-2] / ID_Q313} <sup>▲</sup>	0-7	3	direct																	
{ID_RF[6-5] / ID_Q314} <sup>▲</sup>	0-3	2	direct																	
{ID_RF[7] / TxHiCurrentSupply} <sup>▲</sup>	0-1	1	direct																	

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

<del>{ID_RF[11-8] / Spare}<sup>A</sup></del>	0-15	4	direct	16	msb .. lsb															
<del>{ID_RF[15-12] (Note 7<sub>Error! Bookmark not defined.</sub>:V1.56) / Spare}<sup>A</sup></del>	0-15	4	direct		msb .. lsb															
<del>ID_Q303 (Note 5<sub>Error! Bookmark not defined.</sub>:V1.56)</del>	0-1	1	direct		X															
<del>ID_Q304 (Note 5<sub>Error! Bookmark not defined.</sub>:V1.56)</del>	0-1	1	direct		X															
<del>ID_IDR (Note 5<sub>Error! Bookmark not defined.</sub>:V1.56)</del>	0-7	3	direct																	
<del>ID_Dig[4-3] (Note 7<sub>Error! Bookmark not defined.</sub>:V2.87)</del>	0-3	2	direct												b it 4	b it 3				
<del>{Format indicator 0/1}Note A<sub>below</sub> (Note 7<sub>Error! Bookmark not defined.</sub>:V3.00)</del>	0-1	1	direct											X						
<b>TOTAL</b>		<b>108</b>		<b>18</b>																

Note A: See note 7<sub>Error! Bookmark not defined.</sub>:V2.87. Message response in one of two formats (corresponding to P400 / early P300, or later P300 / P310) to reflect the different subassemblies in each product. The single bit "Format Indicator" indicates which of the two formats is returned (so the information may be interpreted correctly). The format shown in the above table shows {"description for format=0" / "description for format=1"}

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: UnitStatRd										
BxConfigError	0-255	8	direct	0					msb .. lsb	
TxTrafFault_U	0-15	4	direct						msb .. lsb	
BxConfigInfo	0-255	8	direct	2					msb .. lsb	
TxTrafWarn_U	0-15	4	direct						msb .. lsb	
BxConfigWarn	0-255	8	direct	4					msb .. lsb	
BxUnitFault_U	0-15	4	direct						msb .. lsb	
(Spare)		1		6	--					
{TxRunTime} (calculated from TxLastBreak)	0.0-99 secs to days	11	UEnn: U=units: 0=secs, 1=mins, 2=hrs, 3=days E=1 bit exponent: 0=n.n, 1=nn nn 2 digit BCD of `OK` time			msb.U.l sb	E	msb . mant 1 . lsb	msb . mant 0 . lsb	
{RxRunTime} (calculated from RxLastBreak)	0.0-99 secs to days	11			8		msb.U.l sb	E	msb . mant 1 . lsb	msb . mant 0 . lsb
(Spare)		1			--					
RxTrafFault_U	0-31	5	direct	10					msb .. lsb	
BxUnitWarn_U	0-7	3	direct						msb .. lsb	
(Spare)		4			--	--	--	--		
RxEbNo_U	0.0 to 25.5 (0-255)	8	Value x 10	12	msb .. lsb					
{RxEbNo_U Prefix / validation}	0-3	2	0→"=", 1→"<", 2→">", 3→"invalid" When "invalid" RxEbNo_U gives 0=unavailable, 1=dem unlocked, 2=FEC unlocked, 3=lock det timeout)							msb lsb

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

Register Name	Value	Length	Description	Start Bit	End Bit	Field 1	Field 2	Field 3	Field 4	Field 5	Field 6	Field 7	Field 8	Field 9	Field 10	Field 11	Field 12	
RxLastBreak	MDHMS	26	MDHMS Month=4 bits, Date=5 Hour=5, Mins=6, Secs=6														M 3	M 2
				14		M 1	M 0	msb .. Date ..lsb				msb .. Hrs ..lsb						
				16		msb .. Mins .. lsb				msb .. Secs ..lsb								
RxBuffFill_U	0-100	7	direct	18	msb .. lsb													
RxBERSrc_C	0-4	3	direct		msb .. lsb													
TxLastBreak	MDHMS	26	MDHMS Month=4 bits, Day=5 Hour=5, Mins=6, Secs=6														M 3	M 2
				20		M 1	M 0	msb .. Date ..lsb				msb .. Hrs ..lsb						
				22		msb .. Mins .. lsb				msb .. Secs ..lsb								
BxRelayStatus_U	0-15	4	direct	24	msb .. lsb													
RxBuffOver_U	0-99	7	direct		msb .. lsb													
RxFreqOff_U	±99.9KHz	13	snn.n s=1 bit sign 0=+ve, 1=-ve nn.n= 3 digit BCD mag		msb .. lsb													
				26	msb .. digit 3 .. lsb			msb .. digit 2 .. lsb			msb .. digit 0 .. lsb							
RxUserErrRate_U	Note 1 <small>PErrors Bookmark no defined.</small>	12	Note 1	28	msb .BIN exp. lsb				msb .BCD mant 1. lsb				msb .BCD mant 0. lsb					
TxCARRIERSTAT_U	0-7	3	direct	30	msb .. lsb													
RxBuffUnder_U	0-99	7	direct		msb .. lsb													
Bx1FOR1Standby_U	0-1	1	direct		X													
{Device configuring / busy}	0-1	1	0=Normal, 1=busy/reconfiguring		X													

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxUserErrRate_U	Note 1 <sub>PError!</sub> Bookmark not defined.	2	Note 1	32							S 1	S 0				
(Spare)		1			--											
RxTrafWarn_U	0-31	5	direct		msb .. lsb											
Alog_U(1-8) (0-255) <del>Element 8 - +5V digital</del> <del>Element 7 - -5V</del> <del>Element 6 - -12V</del> <del>Element 5 - +12V</del> <del>Element 4 - +5V analog (P300 n/a)</del> <del>Element 3 - AGC</del> <del>Element 2 - Temperature</del> <del>Element 1 - Confidence check</del>	8 x 0-255	64	each value `direct` except element 2 encoded as follows (Bits[7..0]): Bits[7..6]: other bits contain: 0=Actual value, 1=<value, 2=>value, 3=Error code.  Bits[5..0]: When `value`: 1x(Level+21)dBm ie 0..63 represent -21 to -84dBm When `error`: 0=Unavail, 1=Demod not locked, 2=FEC not locked, 3=lock detect timeout.										b7 .. element 8 .. b4			
				34	b3 .. element 8 .. b0				msb .. element 7 .. lsb							
				36	msb .. element 6 .. lsb						b7 .. element 5 .. b4					
				38	b3 .. element 5 .. b0				msb .. element 4 .. lsb							
				40	msb .. element 3 .. lsb						b7 .. element 2 .. b4					
				42	b3 .. element 2 .. b0				msb .. element 1 .. lsb							
BxUnitTemperature_U Note 7 <sub>PError!</sub> Bookmark not defined. V2.87	-55 to +200	8	(Temp in C) + 55	44					msb .. lsb							
(Spare)		4			--	--	--	--								

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TOTAL		276		46															
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Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

<b>MSG: UnitTestRd &amp; UnitTestWr</b>													
BxLoopMode	0-7	3	direct	0								msb .. lsb	
BxPRBSMode	0-3	2	direct								m	ls	
BxPRBSPattern	0-3	2	direct							m	ls		
BxTestMode	<b>0-3</b>	3	direct				msb .. lsb						
BxPRBSSingleShot	0-1	1	direct			X							
(Spare)		1				--							
(Spare)		2		2					--	--			
BxEIA530Loop_U (Rd only)	0-3	2	direct				m	ls					
(Spare)		2				--	--						
<b>TOTAL</b>		<b>18</b>		<b>3</b>									

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

P4xx High Level Variable {Derived Value / action}	Range	# bits	Encoding in message	Body Character	+0							+1						
					Bits:	5	4	3	2	1	0	5	4	3	2	1	0	
<b>MSG: ActionWr</b>																		
{Buffer centre}	0-1	1	1=Action	0						X								
{PRBS Inject Error} (Note 7 <sub>PErr</sub> ! Bookmark not defined.:V2.34)	0-1	1	1=Inject							X								
{Test Stop/Start/Restart} (Note 7 <sub>PErr</sub> ! Bookmark not defined.:V2.34)	0-3	2	0=None, 1=Stop, 2=Start, 3=Restart				m	l										
							s	b										
{Zero slip counters}	0-1	1	1=Action			X												
{Reset Unit}	0-1	1	1=Action			X												
{Accept current config warning}	0-1	1	1=Accept												X			
{Accept all config warnings}	0-1	1	1=Accept												X			
{Accept current config info}	0-1	1	1=Accept										X					
{Accept all config info}	0-1	1	1=Accept									X						
{Spare}		1																
{Spare}	0-1	1										--						
{Request Setup check}	0-1	1	1=Request	2						X								
{Force Setup flag}	0-1	1	0=No action (ie NOT force low) 1=Force BXUNIT SETUP=1							X								
{Store config to memory N}	0-1	1	1=Store					X										
{Recall memory N}	0-1	1	1=Recall				X											
{1:1 Give Away}	0-1	1	1=Give 1:1 control			X												
{Start SAF `5 day feature test}	0-1	1	1=Start			X												

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

P4xx High Level Variable {Derived Value / action}	Range	# bits	Encoding in message	Body Character	+0						+1					
					5	4	3	2	1	0	5	4	3	2	1	0
				Bits:												
(Note 7 <small>PErrror! Bookmark not defined.:n/a</small> )																
(spare)		2									--	--				
{Memory Number}	0-15	4	0-9 for memories 1-10										msb .. Mem-N .. lsb			
<b>TOTAL</b>		<b>24</b>		<b>4</b>												

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: TxPwrRd & TxPwrWr					
* TxPower	0-250	8	Lvl x-10	0	msb .. lsb
* TxCarrier	0-3	2	direct		msb .. lsb
{Ignore TxPower} (Note 7PErrort! Bookmark not defined.:V1.77)	0-1	1	0=Normal, 1=Ignore TxPower (so becomes just carrier on/off)	2	X
(Spare)		1			--
<b>TOTAL</b>		<b>12</b>			

MSG: ShortDeviceRd						
* {ModelNumber} (fromSAFModel[1-0] & SAFManf[2-0]) upper case, right justified packed with spaces	4 chars "Ch3 Ch2 Ch1 Ch0" eg "P440"	24	4 digit (ASCII-48) giving (0-63)	0	msb .. Char 3 .. lsb	msb .. Char 2 .. lsb
				2	msb .. Char 1 .. lsb	msb .. Char 0 .. lsb
* {SoftwareVersion}	0.0 to 9.9	8	2 digit (ASCII-48) giving (0-63)	4	msb .. units .. lsb	msb .. tenths .. lsb
<b>TOTAL</b>		<b>36</b>		<b>6</b>		

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: TxLBandRd/Wr (see Note 7 <small>Error! Bookmark not defined.</small> : V2.87 re whole Tx/RxLBandRd/Wr messages)																				
TxDCVoltage	0-1	1	direct	0				X												
Tx10MHzRef	0-1	1	direct				X													
(spare)		2					--		--											
TxFFreq	from 50MHz to 2150MHz with 100Hz resolution	32	nnnn.nnnn (MHz), 8 Char BCD																	
				2																
				4																
<del>TxSHPower</del>	99.9 to -99.9	1	Sign bit, 0=+ve, 1=-ve	6																
<del>TxSHPowerUnits</del>	0-1	1	0="dBm", 1="dBW"																	
<del>TxSHPowerRadiated</del>	0-1	1	0="TxPwr", 1="EIRP"																	
(spare)		5																		
<del>TxSHOffset</del>	0-65535	16	direct																	
				8	bit 11 .. (lower order bits) .. bit 0															
<del>TxSHPower</del>	99.9 to -99.9	12	3 digit BCD	10																
TxDCCurrentUserMax	0-4000	12	direct	12	msb .. lsb															
TxDCCurrentUserMin	0-4000	12	direct	14	msb .. lsb															
(spare)		7		16																
<del>{Config memory number} (Note 6 <small>Error! Bookmark not defined.</small>)</del>	0-15	4	direct binary																	
TxDCCurrent_U (Read Only)	0-6250	13	direct																	

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

				18	bit 11 .. bit 0												
TxRFPower_U (Read only)	00.0 to -35.0	12	3 digit BCD (implied negative)	20	msb .. tens .. lsb			msb .. units .. lsb			msb .. tenths .. lsb						
<b>TOTAL</b>		<b>132</b>		<b>22</b>													

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: RxLBandRd/Wr (see Note 7 <small>Error! Bookmark not defined.</small> :V2.87 re whole Tx/RxLBandRd/Wr messages)											
RxDCVoltage	0-2	2	direct	0			msb	lsb			
Rx10MHzRef	0-1	1	direct			X					
RxDCCurrentSense	0-1	1	direct			X					
RxFFreq	from 50MHz to 2150MHz with 100Hz resolution	32	nnnn.nnnn (MHz), 8 Char BCD						msb .. digit 7 .. lsb		msb .. digit 6 .. lsb
(spare)		8		2		msb .. digit 5 .. lsb		msb .. digit 4 .. lsb		msb .. digit 3 .. lsb	
(spare)		8		4		msb .. digit 2 .. lsb		msb .. digit 1 .. lsb		msb .. digit 0 .. lsb	
RxSHEOffset	0-65535	16	direct binary	6	--	--	--	--	--	--	
(spare)		8		8	bit 11 .. (lower order bits) .. bit 0						
{Config memory number} (Note 6 <small>Error! Bookmark not defined.</small> )	0-15	4	direct binary	10		msb .. Mem-N .. lsb					
<b>TOTAL</b>		<b>72</b>		<b>12</b>							

Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

MSG: UnitResRd														
RxDFERrRateIn_U	Note 1 PErrord Bookmark no defined.	12	Note 1	0	msb .BIN exp. lsb		msb .BCD mant 1. lsb	msb .BCD mant 0. lsb						
RxFECrRateIn_U	Note 1 PErrord Bookmark no defined.	12	Note 1	2	msb .BIN exp. lsb		msb .BCD mant 1. lsb	msb .BCD mant 0. lsb						
RxFECrRateOut_U	Note 1 PErrord Bookmark no defined.	12	Note 1	4	msb .BIN exp. lsb		msb .BCD mant 1. lsb	msb .BCD mant 0. lsb						
RxBChanID_U	0-255	8	direct	6	msb .. lsb									
RxMXErrSrc_C	0-3	2	direct		m s b	l s b								
TxDMXErrSrc_C	0-3	2	direct		m s b	l s b								
RxDFERrRateIn_U	Note 1 PErrord Bookmark no defined.	2	Note 1	8	S 1	S 0								
RxFECrRateIn_U	Note 1 PErrord Bookmark no defined.	2	Note 1				S 1	S 0						
RxBSSpareID_U	0-255	8	direct		msb .. lsb									
RxFECrRateOut_U	Note 1 PErrord Bookmark no defined.	2	Note 1	10	S 1	S 0								
RxMXErrRate_U	Note 1 PErrord	2	Note 1					S S						

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	Bookmark defined.	no				1	0													
RxBStatID_U	0-255		8	direct						msb.. lsb										
RxDXErrRate_U	Note 1 Bookmark defined.	PErrors	12	Note 1	12	msb .BIN exp. lsb				msb .BCD mant 1. lsb				msb .BCD mant 0. lsb						
RxRErrRateIn_U	Note 1 Bookmark defined.	PErrors	12	Note 1	14	msb .BIN exp. lsb				msb .BCD mant 1. lsb				msb .BCD mant 0. lsb						
RxRErrRateOut_U	Note 1 Bookmark defined.	PErrors	12	Note 1	16	msb .BIN exp. lsb				msb .BCD mant 1. lsb				msb .BCD mant 0. lsb						
TxDXErrRate_U	Note 1 Bookmark defined.	PErrors	12	Note 1	18	msb .BIN exp. lsb				msb .BCD mant 1. lsb				msb .BCD mant 0. lsb						
RxRErrRateIn_U	Note 1 Bookmark defined.	PErrors	2	Note 1	20	S	S													
RxRErrRateOut_U	Note 1 Bookmark defined.	PErrors	2	Note 1				S	S											
TxDXErrRate_U	Note 1 Bookmark defined.	PErrors	2	Note 1						S	S									
(Spare)			6												--	--	--	--	--	
<b>TOTAL</b>			<b>132</b>		<b>22</b>															

## Chapter 3 PUP Message Format

---

### 3.1 Command

A PUP command is any of the commands defined in Chapter 4. The command is passed from the initiating equipment to the target equipment.

Since the protocol is based on the concept of a 'terminal mode' where commands can, in the simplest scenario, be entered manually a line at a time, all commands must be terminated with carriage return/line feed (typically '\r\n' in most computer languages).

As an example, the following sets the Tx service to IDR (note that carriage return and line feed characters are not explicitly shown):

```
set TBBTxService IDR
```

When using Ethernet, RS485-formatted PUP commands can be sent directly to port 6701. Alternatively, PUP commands can be manually entered via a Telnet session using the user name *pup* with default password *TEST*. It is strongly recommended that the password is changed.

When using RS485, PUP commands should be encapsulated in RS485 Write commands and responses should be retrieved using RS485 Query commands (see Section 2.3.3 for more details).

---

### 3.2 Response

Every command elicits a response from the communicating equipment. This response consists of a command-specific value (as detailed in Chapter 3) and a termination character.

A response always terminates in a '\$' character, unless using the 'direct encapsulation' method referred to in Section 2.1, which always terminates in a carriage return. If the command failed, the response is a '!' character followed by the error message and then the '\$'.

In all cases, the terminating '\$' tells the initiator that the modem is ready for the next command.

The target equipment issues a '\$' when the initiating equipment first makes a connection, thereby indicating that it is ready to receive its first command.

---

### **3.3 Addressing Local and Remote Modems**

*CPUSerialMode*, which controls the mode of operation of the M&C serial interface, has several addressing options including *Local*, *Remote* and *Forward*.

When in *Local* mode, the modem takes serial messages input locally and converts these to IP and sends them over the ESC channel.

*Forward* takes any IP M&C message addressed to port 6703 and forwards it over the ESC channel to the remote modem. Messages received over the ESC channel addressed to port 6703 from the remote modem are forwarded onto the IP M&C port.

*Remote* strips the payload out of IP messages that arrive over the ESC channel addressed to port 6703 and sends the data to the local serial M&C port with no changes (and must therefore be correctly formatted for RS485). Incoming M&C serial messages are returned in a similar way.

It is also possible to prefix any PUP command with *esc* in order to force the command to go over the ESC channel to the remote modem.

---

### **3.4 Optimising Command Bandwidth**

Several features are available that help to minimize the bandwidth requirements for M&C.

Each Modem Configurable Property (MCP) has both a name and a number. The numbers can be used to replace the longer textual names with various PUP commands such as *set*, *get*, *getisrelevant*, *getrelevantoptions*, etc. For example, *get TBBTxTerrDataRate* can be replaced with *get 4*. Numbers are assigned to MCPs starting from 0 and in accordance with the order of MCP names returned by the *enumerate* command.

The *commit count* command returns a count of the number of times the modem configuration has changed. If this number is different to the last time it was fetched, then it indicates the configuration has changed and can be used to minimize the rate at which the modem is polled for configuration data. Volatile data (such as Eb/No) is not flagged via *commit count* command since they are potentially changing all the time and therefore these continue to need to be polled for on a regular basis.

## Chapter 4 PUP Commands

---

### 4.1 Nomenclature

In the descriptions below, text shown between angle brackets (< >) should be substituted with the actual required values.

Section headers identify the actual name of each command. Commands and responses are shown in italics for clarity.

---

### 4.2 Command Overview

Two of the commands defined in this chapter, namely, the *get* and *set* commands will typically be used much more extensively than the rest. These operate on specific named M&C controls as defined in Chapter 5.

---

### 4.3 *alarm*

#### Description

This command is used to show status information on system alarms.

The command takes several parameters as follows:

Parameter 1	Parameter 2	Parameter 3	Action
<i>show</i>	<i>active</i>	<i>tx</i> <i>rx</i> <i>unit</i>	Returns list of all current active alarms of selected type
<i>show</i>	<i>all</i>		Returns status of all alarms
<i>show</i>	<AlarmName>		Returns the status of the selected alarm
<i>suppress</i>	<AlarmName>		Shows suppression state of selected alarm
<i>suppress</i>	<AlarmName>	<i>on</i> <i>off</i>	Sets selected alarm to suppressed state
<i>path</i>	<i>tx, rx</i>		Returns the time for which the selected path has been clear of alarms
<i>clear</i>	<AlarmName>		Sets alarm to inactive state

## Response

The response format varies with the command options that are selected. Some examples are given below .

## Error Messages

Error messages that can be returned are listed below .

Error Message	Description
!Unknown option	The modem did not recognise a parameter name.

## Examples

### Command:

*alarm show active rx*

### Response:

*RxDemodUnlockedAlarm – true, true, false, false, false, Fault*

(where:

*RxDemodUnlockedAlarm* is the alarm name

*true, true, false, false, false, Fault* represents, respectively, the current state of the alarm, its persistence, user suppressed status, 'other' suppressed status, system suppressed status and severity. The persistence status is set to 1 when an alarm has occurred and it will stay set in a latched state even after the alarm has cleared until reset by using the *alarm clear all/name* command, when it will be reported as 0. Suppression refers to the ability of the user or system to suppress particular alarms when an alarm indication is not required. With the current Paradise local and remote user interfaces there is no way for the user to suppress alarms therefore the user suppression status can be ignored if using either of these interfaces. Severity indicates whether the alarm is a fault (1) or a warning (0). Note that this response format is used in several of the other command option responses.)

### Command:

*alarm path tx*

### Response:

OK for 20.9mins

## 4.4 board

### Description

This command is used to read basic PCB information from the modem, including the build standard.

The command takes several parameters as follows:

Parameter 1	Parameter 2	Action
		Returns list of all currently fitted board types
<BoardTypeName>		Returns list of all attributes for selected board
<BoardTypeName>	<AttributeName>	Returns selected attribute value for given board
<i>all</i>		Returns the entire contents of the non-volatile storage. This includes board information as above and calibration data. The information is in XML format.

### Response

The response format varies with the command options that are selected. Some examples are given below .

### Error Messages

Error messages that can be returned are listed below .

Error Message	Description
<BoardTypeName> not found	The modem did not recognise the board type or attribute name.

### Examples

**Command:**

*board*

**Response:**

*[ControlZone] [LVDS] [RIF] [TIF]*

(w here the names of fitted assemblies are show n in square brackets.)

**Command:**

*board ControlZone*

**Response:**

*[ManufacturerID] [SerialNumber] [MotherboardSerialNumber] [PersistSAF] [MIH]*

(w here the names of manufacturing attributes are show n in square brackets.)

**Command:**

*board ControlZone SerialNumber*

**Response:**

10500445

**Command:**

*board all*

**Response:**

```

<P3000>
  <ControlZone>
    <ManufacturerID>Paradise Datacom</ManufacturerID>
    <SerialNumber>10500006</SerialNumber>
    <MotherboardSerialNumber>132AB034667</MotherboardSerialNumber>
    <ModelNumber>P3120</ModelNumber>
    <MacAddressMAndC>00:11:29:ff:ff:0a</MacAddressMAndC>
    <MacAddressTraffic>00:11:29:ff:ff:0b</MacAddressTraffic>
    <PersistSAF>1655618272772298359830462365553653</PersistSAF>
    <LoStabCal>197</LoStabCal>
  </ControlZone>
  <dummy/>
  <LVDS/>
  <TIF>
    <TX_CAL_3000>F=70000000 P1=-20.00 A1=1677 P2=0.00 A2=2783</TX_CAL_3000>
    <MOD_CAL_2C00>F=70000000 S=1000000 I_DC=-10 Q_DC=-16 I_GAIN=0
    Q_GAIN=0</MOD_CAL_2C00>
    <MOD_CAL_2C00>F=70000000 S=10000000 I_DC=-10 Q_DC=-15 I_GAIN=0
    Q_GAIN=0</MOD_CAL_2C00>
    <MOD_CAL_2C00>F=14000000 S=1000000 I_DC=-10 Q_DC=-14 I_GAIN=0
    Q_GAIN=0</MOD_CAL_2C00>
    <MOD_CAL_2C00>F=14000000 S=10000000 I_DC=-11 Q_DC=-13 I_GAIN=-1
    Q_GAIN=0</MOD_CAL_2C00>
  </TIF>
  <RIF>
    <DEM_CAL_5C00>G=14.54</DEM_CAL_5C00>
  </RIF>
</P3000>

```

*Note: Formatting has been added to the above for clarity.*

---

## 4.5 commit

### Description

This command is used to reconfigure the modem. It commits all pending MCP changes (i.e. those MCPs that have been modified using the *set* command) to the modem hardware. Use of the *set* command by itself has no impact on the modem. The command can also be used to find out how many times the modem configuration has been changed.

The command takes one parameter as follows:

Parameter	Action
<i>count</i>	This causes the modem to return the number of times the modem configuration has been changed. This can be used to minimize the rate at which the modem is polled for configuration information by detecting when the configuration has changed.

**Response**

None.

**Error Messages**

Intentionally blank.

**4.6 default**

**Description**

This command is used to set one or all MCPs back to their factory default settings.

The command takes one of two forms:

*default all*

(which sets all MCPs back to their factory default settings.)

*default <MCPName>*

(which sets the named MCP back to its factory default setting.)

**Response**

None.

**Error Messages**

Intentionally blank.

## 4.7 demod

### Description

This command is used to fetch the data used to create the spectral and constellation web browser graphs.

The command takes one parameter as follows:

Parameter	Action
<i>sym</i>	Returns 512 pairs of data values. The first value is the offset from the current centre frequency and the second value is the signal level in dBm. All values are comma separated.
<i>spect</i>	Returns 1024 pairs of data values. These values represent the x and y coordinates of the constellation points. All values are comma separated.

### Response

Intentionally blank.

### Error Messages

Intentionally blank.

### Example

**Command:**

*demod spect*

**Response:**

*-1550293,-78,-1544189,-74,-1538086,-73,-1531982,-72, .....*

**Command:**

*demod sym*

**Response:**

*-59,58,-68,-60,59,-64,-62,-63,58,-63,-63,-62,64,-63,67,65,-65,67,-72,.....*

## 4.8 *enumerate*

### Description

This command is used to get the name of every MCP property supported by the modem software.

The command does not take any parameters.

### Response

*TBBTxService*  
*TBBTxServiceStrict*  
*TBBTxFlexFrmIDR*  
*etc.*

### Error Messages

Intentionally blank.

## 4.9 *esc*

### Description

This command can be used to prefix any other PUP command documented here. If a command is prefixed with *esc* then it is passed over the ESC channel and executed on the remote modem. Any response is transmitted back to the initiating modem. The ESC channel must be setup and functioning correctly. As the data rate of the ESC channel is considerably less than the main channel PUP commands executed remotely may take a noticeable time to respond. Also these commands will be affected by the round-trip delay over the satellite link.

If a command is issued that breaks the ESC link (i.e. changes the configuration of the link) no response will be forthcoming and no further *esc* commands can be issued.

To check the status of the link the parameter *linkstatus* can be used, the command will then return either *OK* if the ESC is operational or *Failed* if it is not.

### Response

*The response is the same as if the command had been executed locally.*

### Error Messages

Error Message	Description
!Unable to connect	The modem ESC channel is not established

**Example**

**Command:**

*esc get GwyTxCarrier*

**Response:**

*On*

**4.10 framer**

**Description**

This command calculates and displays the current percentage of the signal bandwidth that is occupied by the overhead channel.

The command takes one parameter as follows:

Parameter	Action
<i>txoverhead</i>	Returns the percentage of the Tx signal bandwidth that is occupied by the overhead channel
<i>rxoverhead</i>	Returns the percentage of the Rx signal bandwidth that is occupied by the overhead channel

**Response**

See the example below .

**Error Messages**

Intentionally blank.

**Example**

**Command:**

*framer txoverhead*

**Response:**

*7%*

**4.11 get**

**Description**

This command fetches the current value of an MCP. The MCPs supported by the modem are defined in Chapter 5.

The command takes one or more parameters separated by a space as follows:

Parameter	Action
<MCPName> [<MCPName>]	Returns the current values of the selected MCPs

### Response

See the example below .

### Error Messages

Error messages that can be returned are listed below .

Error Message	Description
!Unknown variable name. Please correct & resubmit.	The modem did not recognise the MCP name.
!Syntax Error.	The modem received a message it does not understand.

### Example

**Command:**

*get GwyTxCarrier*

**Response:**

*On*

**Command:**

*get GwyTxCarrier TIFTxIFFreq*

**Response:**

*On,81*

## 4.12 *getattrib*

### Description

This command allows the initiating equipment to request the minimum value, maximum value, units and step size associated with a particular MCP.

The command takes several parameters as follows:

<b>Parameter 1</b>	<b>Parameter 2</b>	<b>Action</b>
<i>min</i>	<MCPName>	Returns the minimum valid value for the selected MCP
<i>max</i>	<MCPName>	Returns the maximum valid value for the selected MCP
<i>units</i>	<MCPName>	Returns the units for the selected MCP
<i>step</i>	<MCPName>	Returns the smallest increment in size that the selected MCP can be changed by

**Response**

See the examples below .

**Error Messages**

Intentionally blank.

**Examples**

**Command:**

*getattrib min RRSR<sub>x</sub>RSN*

**Response:**

*58*

**Command:**

*getattrib max RRSR<sub>x</sub>RSN*

**Response:**

*255*

**Command:**

*getattrib units RRSR<sub>x</sub>RSN*

**Response:**

*symbols*

**Command:**

*getattrib step RRSR<sub>x</sub>RSN*

**Response:**

*1*

---

### 4.13 *getcurrent*

#### **Description**

This command returns a snapshot of the current configuration of the modem. It is similar to the *getcurrentconfig* command but does not compress the data and it returns only the actual current configuration (without alarm information). In addition, to make the data smaller, the name of each MCP is replaced by a number that uniquely identifies each MCP. The number abbreviations are explained in Section xx.

Note that the command returns only the differences from the factory default settings. The factory default setting is listed for each MCP in Section 5.

The command does not take any parameters.

#### **Response**

The command responds with a text string listing all MCPs that have changed from their factory default settings and gives their current values. MCP names are replaced with unique numbers to minimize the size of the response.

#### **Error Messages**

Intentionally blank.

#### **Example**

**Command:**

*getcurrent*

**Response:**

230=PEP  
232=Off  
238=TakeAw ay  
245=193.25.15.1  
247=193.251.150.116  
246=255.255.255.0  
257=Iignore  
235=193.251.150.115  
236=255.255.255.0  
255=Iignore  
90=On  
201=0  
172=K32x2  
217=Turbo  
92=Closed  
96=10000000  
204=QA M16  
209=TPC  
210=R14280\_16320  
219=144

518=0.95  
 87=Turbo  
 0=Closed  
 4=10000000  
 79=TPC  
 80=R14280\_16320  
 88=144  
 89=-25  
 517=0.95  
 76=QA M16  
 222=IP  
 298=  
 299=  
 \$

#### 4.14 *getcurrentconfig*

##### **Description**

This command returns a snapshot of the current configuration of the modem plus alarm information in a compressed form.

The command does not take any parameters.

##### **Response**

The command responds with a uuencoded, gzip'd tar archive containing 4 files:

*default.conf* - Configuration memory containing the modems current configuration  
*tmp/alarmrx.conf* - Active or latched Rx alarms as returned by the alarm command  
*tmp/alarmtx.conf* - Active or latched Tx alarms as returned by the alarm command  
*tmp/alarmunit.conf* - Active or latched Unit alarms as returned by the alarm command

##### **Error Messages**

Intentionally blank.

##### **Example**

###### **Command:**

*getcurrentconfig*

###### **Response:**

```
begin 644 conf.tar.gz
M'XL(``````````^V2W6J#,!A`O>Y3B`]@$XT5H2NH^T&VL6+M`P2-16;,FL;6
M[NEGM]664==UK+) "SHV2G"\$3@1]Z>, <<UH6F=!C5J3*GP,@```. $%/#!U^_[
M/P0((<N`P+!KWS2`I:A`Z8!R(3!7584S)K[SCNU?*&+;GU=GJO^;_L;`LF7_
M3ON+_]5_`&7_+DA(BLM<G*W)#_I#8)O;_@"9:-- ,?6+)_PPI2PC=U,]F:H$I
MN+=VGX0VZJDUPP41G[O^>!I.@S%G@L4LU]OESLMZ.<+/Q%WAM:;V#XX0ZK,B
M&+M)PIL9"'2H0\?1';MMK'*#B9M3-Q;-5#`K&">M`S?SJ&K<IZ+%BTXZ^&ZU
MCBH?<YX1?N3LT// "RBO3E/!) ]DH:&[3*P77HEDG&'NL0C7YO&I71.C(A?)G%
M. ]O/V8(DA_3(\Z)3](=:]Z;^+2?SW=5UQWJ7A_V]QS+J*1*)1"*Y7-X`1+\J
```

```
%E``0````  
\  
end
```

---

#### 4.15 *gethelptext*

##### **Description**

This command allows the initiating equipment to request the 'tooltip' Help text associated with a particular MCP.

The command takes one parameter as follows:

Parameter	Action
<MCPName>	Returns the Help text associated with the selected MCP

##### **Response**

See the example below.

##### **Error Messages**

Intentionally blank.

##### **Example**

**Command:**

*gethelptext TBBTxService*

**Response:**

*Framing mode for the Tx path.*

---

#### 4.16 *getisrelevant*

##### **Description**

This command allows the initiating equipment to request the 'relevance' of a particular MCP.

Relevance is typically used to decide whether to 'gray out' or hide options that are not currently available to the user. An MCP may be irrelevant due to the hardware/software build standard of the modem not supporting the feature, or, because the modem is in a mode of operation where the MCP is not used (for example, all transmit properties are irrelevant when the transmit service is switched off).

The command takes one parameter as follow s:

Parameter	Action
<MCPName>	Returns <i>true</i> if the selected MCP is relevant and <i>false</i> otherw ise

**Response**

*true* or *false*

**Error Messages**

Error messages that can be returned are listed below .

Error Message	Description
!No such variable	The modem did not recognise the MCP name.

**Example**

**Command:**

*getisrelevant TBBTxService*

**Response:**

*true*

**4.17 getisvalid**

**Description**

This command allows the initiating equipment to request the ‘validity’ of a particular MCP.

An MCP is valid if its current value is within the range of values that allow correct system operation. This may be a subset of the overall set of values that an MCP can take, with the subset being determined by other operational settings. For example, a FEC rate of 0.667 is valid if the FEC mode is TCM but not when Viterbi is selected. Validity is typically used to identify configuration errors. Note that it differs from MCP relevance in that an MCP may be relevant but invalid and vice versa.

The command takes one parameter as follow s:

Parameter	Action
<MCPName>	Returns <i>true</i> if the selected MCP is relevant and <i>false</i> otherw ise

**Response**

*true* or *false*

## Error Messages

Error messages that can be returned are listed below .

Error Message	Description
!Variable does not exist	The modem did not recognise the MCP name.

## Example

**Command:**

*getisvalid TBBTxService*

**Response:**

*true*

## 4.18 getlabel

### Description

This command allow s the initiating equipment to request the predefined display label associated w ith a particular MCP.

This returns the display label that is show n alongside the current value of a particular MCP that is used to identify it to the user. It is typically used w hen building a user interface. The text that is returned is that w hich is used on the w eb user interface rather than the abbreviated form of this text that is used on the local user interface.

The command takes one parameter as follow s:

Parameter	Action
<MCPName>	Returns the display label associated w ith the selected MCP

### Response

See the example below .

### Error Messages

Error messages that can be returned are listed below .

Error Message	Description
!Unknown variable name. Please correct & resubmit.	The modem did not recognise the MCP name.

**Example**

**Command:**

*getlabel RBBRxClkMode*

**Response:**

*Rx-path clock source*

**4.19 getoptions**

**Description**

This command allows the initiating equipment to request the options associated with a particular MCP (such as the list of FEC rates or modulation schemes supported by the modem).

This returns both the internal value of each option and the display text shown to the user. The internal values are those that are used with the *set* command to change system operation. This command is typically used when building a user interface. The text that is returned is that which is used on the web user interface rather than the abbreviated form of this text that is used on the local user interface.

The command takes one parameter as follows:

Parameter	Action
<i>&lt;MCPName&gt;</i>	Returns a list of option values and associated display labels for the selected MCP

**Response**

Returns a list of *<option value> <label string>* pairs. The first space character terminates the option value. The label string may contain spaces and is terminated by *<cr><lf>* (carriage return/line feed).

**Error Messages**

Error messages that can be returned are listed below .

Error Message	Description
Variable name does not exist	The modem did not recognise the MCP name.

**Example**

**Command:**

*getoptions RBBRxService*

**Response:**

*Off Off*

*Closed Closed network*  
*MinOH Closed network plus ESC*  
*IBSSMS IBS/SMS*  
*IDRIDR*  
*OM73 OM-73*

(where the first word in each line is the option name and the remainder of each line is the display text, for example, *MinOH* is the value that *RBBRxService* must be set to in order to enable the Closed network plus ESC service.)

## 4.20 *getreadonly*

### Description

This command allows the initiating equipment to determine if a particular MCP can be written. Some MCP's are designated read-only as they contain values that can dynamically change (such as *RxEbNo*) or are not directly set by the user (such as *RxSymRate*).

The command takes one parameter as follows:

Parameter	Action
<i>&lt;MCPName&gt;</i>	Returns <i>true</i> if the selected MCP is read-only and <i>false</i> otherwise

### Response

*true* or *false*

### Error Messages

Error messages that can be returned are listed below .

Error Message	Description
Unknown variable name. Please correct & resubmit.	The modem did not recognise the MCP name.

### Example

**Command:**  
*getreadonly TBBTxService*

**Response:**  
*false*

---

## 4.21 *getrelevantoptions* (abbreviation: *gro*)

### Description

This command allows the initiating equipment to request only those options associated with a particular MCP that are currently relevant to system operation.

This returns a subset of the option information returned by the *getoptions* command. It is typically used when building a user interface to present only those options to a user that are currently relevant (i.e. selectable).

The command takes one parameter as follows:

Parameter	Action
<MCPName>	Returns a list of relevant option values and associated display labels for the selected MCP

### Response

Returns a list of <option value> <label string> pairs. The first space character terminates the option value. The label string may contain spaces and is terminated by <cr><lf> (carriage return/line feed).

### Error Messages

Error messages that can be returned are listed below.

Error Message	Description
Variable name does not exist	The modem did not recognise the MCP name.

### Example

#### Command:

*getoptions RBBRxClkMode*

#### Response:

*Sat Satellite*

*Tx Tx Clock In*

*Int Internal*

*RxRef Receive reference*

(where the first word in each line is the option name and the remainder of each line is the display text – in this example, no option information is returned for station clock because it is irrelevant, typically due to no clock source for station clock having been selected.)

## 4.22 *gettype*

### Description

This command allows the initiating equipment to request the type associated with a particular MCP.

The returned value can be used to determine how to present the MCP to a user when building a user interface, for example, whether to display a drop-down box with a list of options or to display an edit box that takes a numeric value.

The command takes one parameter as follows:

Parameter	Action
<MCPName>	Returns the type of the selected MCP

### Response

Returns a single value indicating the type of the MCP variable. This will be one of the following:

- *Range*
- *Group*
- *Text*
- *Float*
- *Bool*
- *DottedDecimal*
- *Alarm*

where:

- *Range* indicates the MCP is a numeric integer value (e.g. TBBTxTerrDataRate)
- *Group* indicates the MCP takes one of a set of specific values (e.g. TBBTxService)
- *Text* indicates the MCP is a text string (e.g. CPUReMConIPAddr)
- *Float* indicates the MCP is a floating point value (e.g. RxFinalBER)
- *Bool* indicates the MCP is a Boolean variable (e.g. TFECTxSpectInv)
- *DottedDecimal* indicates the MCP is a IP address or subnet mask (e.g. CPUReMConIPAddr)
- *Alarm* indicates the variable is a read-only text string representing an alarm description.

### Error Messages

Error messages that can be returned are listed below.

Error Message	Description
!Unknown variable type	The modem did not recognise the MCP name.

**Example**

**Command:**

*gettype RBBRxClkMode*

**Response:**

*Group*

**4.23 help**

**Description**

This command returns a list of most but not all PUP commands.

Some commands function at an access control level (rather than command handler level) and will not appear on the list returned by the *help* command – use this manual as a definitive guide to what is supported. Other commands that are listed by the *help* command are **not** listed in this manual – this is because they are reserved for internal use by Paradise Datacom (note that use of these reserved commands may result in unpredictable system behaviour).

The command can optionally take one parameter as follows:

Parameter	Action
<i>&lt;PUPCommandName&gt;</i>	Returns usage information associated with the selected command (returns information on all commands if no parameter is supplied)

**Response**

See example below .

**Error Messages**

Intentionally blank.

**Example**

**Command:**

*help gettype*

**Response:**

*gettype variable name*

*Returns the type of the given variable*

**Description**

This command returns a list of all PUP commands.

The command can optionally take one parameter as follows:

Parameter	Action
<i>&lt;PUPCommandName&gt;</i>	Returns usage information associated with the selected command (returns information on all commands if no parameter is supplied)

### Response

See example below .

### Error Messages

Intentionally blank.

### Example

**Command:**

*help gettype*

**Response:**

*gettype variable name*

*Returns the type of the given variable*

## 4.24 *incontrol*

### Description

This command is a query that can be used to indicate whether the initiating equipment has control of the target equipment. Control refers to the ability to be able to change the modem configuration. Only one user can be in control of the modem at any one time. The rules governing modem control are specified by the *MCP CPURUI Protocol*.

This command does not take any parameters.

### Response

*true or false.*

### Error Messages

Intentionally blank.

### Example

**Command:**

*incontrol*

**Response:***false*

---

**4.25 lang****Description**

This command is used to select the language used by the user interfaces. Note that all users and user interfaces are affected by any change in the language. Once changed, the new language will persist even after a power cycle. Note also, that this command should not be issued while the modem is on traffic, as it causes the software to reboot. Contact Customer Technical Support for an up-to-date list of the languages that are supported.

This command takes one parameter as follows:

Parameter	Action
<i>en</i>	Changes the modem user-interface language to English.
<i>fr</i>	Changes the modem user-interface language to French.
<i>de</i>	Changes the modem user-interface language to German.
<i>es</i>	Changes the modem user-interface language to Spanish.

**Response**

None, as the modem software has to restart for the change in language to be effective. This means that the current control session will be terminated.

**Error Messages**

None.

**Example****Command:***lang fr*

---

**4.26 load****Description**

This command is used to load a configuration memory into the modem's operational settings.

Configuration memories are used to store specific sets of operational settings for quick recall. The *load* command is used to recall previously stored configuration memories.

The command takes one parameter as follows:

Parameter	Action
<ConfigurationMemoryName>	Fetches the selected configuration memory and applies it to the modem hardware, replacing the current operational settings

**Response**

None.

**Error Messages**

Intentionally blank.

**Example**

**Command:**

*load QPSKvitRate12*

**Response:**

Intentionally blank.

**4.27 log**

**Description**

This command is used to display and clear the system log.

Parameter	Action
<i>show</i>	Lists all the entries currently in the log
<i>clear</i>	Deletes all the entries currently in the log
<i>auto</i>	Reserved for future use

**Response**

None.

**Error Messages**

Intentionally blank.

## Example

### Command:

*log show*

### Response:

```
Apr 11 08:44:10 (none) user.info P300[123]: mcp.xml loaded OK
Apr 11 08:44:15 (none) user.info P300[123]: RxDemodUnlockedAlarm Raised
Apr 11 08:44:18 (none) user.info P300[123]: Not starting SNMP as variable
RunSNMP is not set
Apr 11 08:45:32 (none) user.debug P300[118]: starting up pupclient server
```

---

## 4.28 login

### Description

This command is used to log in to the modem software application. A brief description of the concepts involved is given below .

#### User Names and Passwords

There are two fixed user names, namely, *admin* and *user*. The *admin* user can view and change the modem configuration, while *user* can only view the modem settings. Only *admin* can change the two passwords associated with these two user names.

Only one *admin* user can be logged in to the modem at any time but multiple users can be logged in as *user* at the same time. With remote control users, there is always an explicit login process. With the local user interface, the login is implicit (when a key is pressed). The local user interface logs in as *admin* when in Giveaway mode and there is no remote *admin* user currently logged in, otherwise the local user interface logs in as *user*.

#### Giveaway Mode

In Giveaway mode, switching between local and remote control is controlled by an M&C control. The user at the local user interface sets this to *remote* when remote control is required. A user-settable timeout controls for how long any user is logged in for without any user entry activity – when user entry is detected then the user session is extended by the length of the timeout period.

When remote control is selected, control is passed to the first *admin* user that logs in. If an attempt is made to log in as *admin* when there is already an *admin* user logged in, then the login attempt will fail, thereby ensuring there can never be two users in control of the modem at the same time.

In order to allow a switch back to local control, when there is no *admin* user logged in, the local user interface can gain control at any time simply by issuing a command from the user interface (thereby causing an implicit logout as *user* and an implicit login as *admin*). The user can then change the M&C setting back to local control, thereby locking out remote *admin* users. The local user interface never times out when local

control is set and control can be ceded to a remote interface only by changing the M&C setting to select the remote control option. During the period between an *admin* user logging out and the local user interface issuing a command to gain control, no user is in control, giving the option of another *admin* login occurring on a remote interface.

Takeaway Mode

In Takeaway mode, the user at the local user interface or any *admin* user can control the modem at any time. Although technically only one interface is in control at any time, there is no concept of a control timeout and therefore different control requests are simply interleaved with each other. Because of this, Takeaway mode is best used in circumstances where there are clear operational procedures in place to avoid conflicts arising in relation to modem control.

The command takes a single parameter, namely, a password. (There is no concept of specific users within the P3000.) In the case of the P3000, the password is unencrypted (at least at the point at which it is transferred to the target equipment).

If unsuccessful, the initiating equipment may still successfully issue commands that do not change the target equipment configuration.

This command takes one parameter as follows:

Parameter 2	Action
<Password>	Attempts to log the user in to the modem software application as the given user with the given password

**Please note that the need to provide a user name applies to the web user interface only – the underlying PUP protocol requires a login only for the admin user in order to take control of the modem, i.e. any PUP session has view-only permission by default.**

**Response**

None.

**Error Messages**

Error messages that can be returned are listed below .

Error Message	Description
!You must enter a password to login.	An attempt was made to log in without providing a password.
!User is not logged in. Please re-enter password.	An attempt was made to log in using an invalid password.

**Example**

**Command:**  
*login admin myPassword*

**Response:**  
Intentionally blank.

#### 4.29 *logout*

This command logs the user out of the modem software application.

**Response**

None.

**Error Messages**

Intentionally blank.

**Example**

**Command:**  
*logout*

**Response:**  
Intentionally blank.

#### 4.30 *monitor*

**Description**

This command allows up to one month of time-based performance data to be fetched from the modem. Data is automatically stored from power up for each of the modem's performance web graphs (such as Eb/No, Rx power level, modem temperature, etc.). It is also possible to customize the list of parameters for which data is dynamically monitored by adding to or subtracting from the list (although this does not change the web graph pages themselves).

The command takes up to three parameter as follows:

Parameter 1	Parameter 2	Parameter 3	Action
<i>list</i>			Returns a list of the modem parameters that performance data is currently being measured and stored for
<i>add</i>	<MCPName>		Adds the given modem

			parameter to a list that the modem automatically monitors on a regular basis and stores measured values for for up to 31 days
<i>remove</i>	<MCPName>		Removes the given modem parameter from the list of monitored parameters
<i>get</i>	<i>minute</i> <i>hour</i> <i>day</i> <i>month</i>	<MCPName>	Retrieve the data of the specified duration for the given modem parameter

**Response**

See below .

**Error Messages**

Error messages that can be returned are as follows.

<b>Error Message</b>	<b>Description</b>
Cannot monitor variable <MCPName>	The modem did not recognise the name of the parameter to be monitored or the parameter is not of a type that changes value dynamically.
Cannot remove variable <MCPName>	The modem did not recognise the name of the parameter to be removed from the dynamic monitor function.
Time period must either be minute,hour,day or month	The time period entered with the <i>monitor get</i> command was not recognized.

**Example**

**Command:**

*monitor get day RxPwrLevel*

**Response:**

-27.596 -28.6227 -26.9937  
 -27.5996 -28.4998 -27.0093  
 -27.6045 -28.6392 -26.9914  
 -27.5997 -28.5098 -27.1  
 -27.6013 -28.5996 -26.7649  
 -27.6041 -28.6298 -26.8727  
 -27.5943 -28.5696 -26.8005

-27.6007 -28.7035 -26.8965  
 -27.594 -28.5687 -26.8033  
 -27.6003 -28.5827 -27.0089  
 -27.5922 -28.5728 -26.9884  
 -27.5947 -28.6123 -26.8969  
 -27.5968 -28.7311 -26.977  
 -27.5888 -28.5658 -27.0065  
 -27.5946 -28.6625 -26.9111  
 -27.595 -28.5545 -26.9189  
 -27.5879 -28.5847 -26.9439  
 -27.5941 -28.5487 -26.9593  
 -27.5882 -28.5759 -26.9423  
 -27.5889 -28.5484 -26.8109  
 -27.603 -28.5149 -26.9706  
 -27.5985 -28.1791 -27.1802  
 -27.6001 -28.4018 -27.1105  
 -27.596 -28.1443 -27.0443  
 \$

---

### 4.31 oneforone

This command is used to control the modem when it is being used in a one-for-one redundancy configuration. Note that this command cannot be used to switch a modem from standby to on-traffic.

Parameter	Action
<i>switch</i>	Switches the modem from on-traffic ( <i>main</i> ) to being the standby ( <i>standby</i> ) modem in a 1-for-1 redundancy pair
<i>status</i>	Returns the current status of the modem

#### Response

See the example below .

#### Error Messages

Intentionally blank.

#### Example

**Command:**  
*oneforone status*

**Response:**  
*main*

---

### 4.32 ping

**Description**

This command is used to send an ICMP *ping* command from the modem to a given IP address.

This command takes one parameter as follows:

Parameter	Action
<IPAddress>	Issues an ICMP <i>ping</i> command from the modem to the given IP address and returns the result

**Response**

See the example below .

**Error Messages**

Error messages will be those generated by the standard ICMP *ping* command.

**Example****Command:**

```
ping 10.0.20.12
```

**Response:**

```
PING 10.0.20.12 (10.0.20.12) : 56 data bytes
--- 10.0.20.12 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max/mdev = 0.216/0.231/0.240/0.018 ms
```

---

### 4.33 prbs

**Description**

This command is used to control the built-in PRBS Bit Error Rate generator and fetch the results.

Parameter	Action
<i>reset</i>	Clears the bit error count and sets the elapsed test time to zero
<i>inject</i>	Injects one bit error into the transmitted stream
<i>sync</i>	Returns the current sync

	status (i.e. <i>OK</i> or <i>NO SYNC</i> - indicating whether synchronisation with the test pattern is being maintained)
<i>ber</i>	Returns the bit error rate (this equals the result of dividing the number of errors by the number of bits received – see the next two parameters)
<i>errors</i>	Returns the number of errors since the test started
<i>bits</i>	Returns the number of bits received since the last synchronisation with the test pattern occurred
<i>loss</i>	Returns the number of times the sync has been lost since the test started
<i>time</i>	Returns the elapsed time since the start of the test

**Response**

Intentionally blank.

**Error Messages**

Intentionally blank.

**Example**

**Command:**  
*prbs sync*

**Response:**  
*NO SYNC*

**Command:**  
*prbs ber*

**Response:**  
*<3.1E-08*

**Command:**  
*prbs time*

**Response:**  
29.4mins

---

### 4.34 reconfig

#### Description

This command is used to query the IP settings of the modem. Its primary use is when the modem is configured to obtain its IP address using DHCP.

Parameter	Action
<i>addr</i>	Returns the modems currently assigned IP address
<i>mask</i>	Returns the modems currently assigned netmask
<i>gateway</i>	Returns the modems currently assigned default gateway address

#### Response

Each of the above parameters will return an IP address in the form a.b.c.d.

#### Error Messages

If the modem does not currently have an assigned address the command will respond with an empty string.

If the modem has an assigned address but no assigned default gateway the *gateway* option will respond with 0.0.0.0.

#### Example

**Command:**  
*reconfig addr*

**Response:**  
10.0.70.1

---

### 4.35 *reset*

#### Description

This command is used to reboot the modem.

This command does not take any parameters.

#### Response

There is no response since the target equipment will close down the software and restart.

#### Error Messages

Intentionally blank.

#### Example

**Command:**

*reset*

**Response:**

Intentionally blank.

---

### 4.36 *save*

#### Description

This command is used to save the current operational modem settings to a named configuration memory.

This command takes one parameter as follows:

Parameter	Action
<ConfigurationMemoryName>	Stores the current operational settings into the selected configuration memory

#### Response

The message '*File saved OK.*' will be displayed if the save was successful.

#### Error Messages

Intentionally blank.

### Example

**Command:**  
*save memory1*

**Response:**  
Intentionally blank.

---

### 4.37 *sessionid*

#### Description

This command is a query that returns the unique session identifier associated with the current user login session. It is typically used in conjunction with the *sessions* command.

This command does not take any parameters.

#### Response

The unique login session identifier for the user issuing this command. These are random numbers that are generated by the modem software to associate different requests from a single user over time in order to provide user login session control.

#### Error Messages

Intentionally blank.

### Example

**Command:**  
*sessionid*

**Response:**  
*274079072*

---

### 4.38 *sessions*

#### Description

This command is a query that identifies which users are currently logged on.

This command does not take any parameters.

#### Response

A list of all the users that are currently logged on. Each user session is identified by a unique number as shown in the example. The local user interface is identified as *LUI*.

## Error Messages

Intentionally blank.

## Example

**Command:**

*sessions*

**Response:**

<i>ID</i>	<i>Logged In</i>	<i>Expires</i>
<i>LUI*</i>	<i>yes</i>	<i>13:11:22 - 24/4/2004</i>
<i>274079072</i>	<i>yes</i>	<i>13:13:50 - 24/4/2004</i>

*There are 2 current sessions in total*

## 4.39 set

### Description

The set command is used to set a configurable property on the target equipment. The new setting is applied immediately to the target equipment unless the optional parameter *nocommit* is appended. The new setting will then remain 'pending' until a *commit* command is issued that applies the pending changes to the modem hardware.

Chapter 5 defines the modem configurable properties.

This command takes two parameters as follows:

Parameter 1	Parameter 2	Parameter 3	Action
<MCPName>	<Value>	nocommit	Sets the current value of the selected MCP to the given value

### Response

None.

### Error Messages

Intentionally blank.

### Example

**Command:**

*set TBBTxService Closed*

**Response:**

Intentionally blank.

**Command:**

*set TBBTxTerrDataRate 2048000 nocommit*

**Response:**

Intentionally blank.

---

#### 4.40 *snmp*

##### Description

This command is used to enable the SNMP agent in the modem. Note that there are various SNMP configuration properties (listed in Chapter 5) that can be controlled using the *set* command. Note that the configuration property *RunSNMP* must be set to *true* before attempting to start SNMP.

This command takes one parameter as follows:

Parameter	Action
<i>start</i>	Starts the SNMP agent in the modem
<i>stop</i>	Reserved for future use
<i>reconfig</i>	Reserved for future use

##### Response

None.

##### Error Messages

Intentionally blank.

##### Example

**Command:**

*snmp start*

**Response:**

Intentionally blank.

---

#### 4.41 *switch*

This command is used to get the status of, and control, a one-for-n redundancy switch. A one-for-n system can contain up to 16 modems. The value of n in the following commands is an integer between 1 and 16.

Parameter 1	Parameter 2	Action
<i>status</i>	<n>	Returns the status of traffic modem n
<i>status</i>	All	Returns the status of all the modems
<i>backup</i>	<n>	Forces modem n to be backed-up by placing it into standby
<i>mask</i>	<n>	Masks the status of traffic modem n to allow it to be taken offline without causing a changeover
<i>poll</i>		Forces the switch to poll all traffic modems for their current configurations, which are stored by the switch and used in the event of having to back up one of the modems (note that configurations are polled in the background at all times anyway, no less than once per hour)
<i>unmask</i>	<n>	Removes the mask set up above
<i>reset</i>		Sets the switch to standby mode

### Response

The response can be any of the following:

Response	Meaning
<i>Masked – BackingUp</i>	The modem is being backed up and is also masked (meaning it can be removed for maintenance without reporting its status as <i>CommsFailure</i> )
<i>Masked</i>	The modem is masked and cannot cause a switchover to occur
<i>NotFitted</i>	No modem is fitted to channel n on the switch
<i>BackingUp – Standby</i>	The modem is being backed up due to being placed into the standby state
<i>BackingUp – Failed</i>	The modem is being backed up due to a fault occurring in the modem
<i>Failed</i>	The modem has failed but is not being backed up by the switch
<i>Standby</i>	The modem is in a standby state and is not passing traffic
<i>CommsFailure</i>	No response was received by the switch from modem n when it was polled
<i>OK</i>	The modem is not indicating any fault

### Error Messages

Intentionally blank.

### Example

**Command:**  
*switch status 1*

**Response:**  
*OK*

---

### 4.42 terr

#### Description

This command is used to perform real-time control the modems terrestrial interface.

This command can take one parameter as follows:

Parameter	Action
<i>centre</i>	Manually recentre the receive path Doppler buffer

#### Response

None.

#### Error Messages

Intentionally blank.

### Example

**Command:**  
*terr centre*

**Response:**  
*Intentionally blank*

---

### 4.43 time

#### Description

This command is used to retrieve or set the time and date on the modem.

This command takes two parameters as follows:

Parameter 1 (Time)	Parameter 2 (Date)	Action
<HH:MM:SS>	<DD/MM/YYYY>	When parameters are provided, sets the modem time and date to the given values, otherwise returns the current time and date in the modem

#### Response

Returns the current time and date of the modem in the format *HH:MM:SS DD/MM/YYYY*.

#### Error Messages

It should be noted that changing the modem time may cause a *Giveaway* timeout, resulting in the current control session being terminated.

#### Example

**Command:**

*time*

**Response:**

*11:03:10 25/11/2004*

**Command:**

*time 10:00:00 26/02/2005*

**Response:**

*10:00:00 26/02/2005*

## Chapter 5 Modem Configurable Properties

---

This chapter describes the modem configurable properties (MCPs). These have been collated into sections that approximate to the modem menu structure.

The **name** of each MCP appears in the section heading, e.g. TBBTxService. This is the named that is used when accessing the MCP in a PUP command, for example, 'set TBBTxService Closed'.

The **display label** is the text that appears on the web user interface alongside the MCP's current value (an abbreviated version of this text string may be displayed on the local user interface, in which case this alternative text is also defined in this document).

**Option values** indicate the actual values that the MCP can be set to, in cases where the MCP can be set to one of a number of distinct values. The option descriptions are the text strings used to describe these options as displayed on the web user interface.

The **default value** represents the factory default setting for each MCP.

The **description** field is the text that is displayed as part of the built-in Help feature for both the web and local user interfaces and provides a fuller description of each MCP.

Where an MCP can take a value within a numeric range, then the **minimum** and **maximum** values are defined, along with **units** and a **step size** that defines the smallest increment that can be made to the value.

If there are no options and no numeric range defined for an MCP then it represents a property that is set by the modem rather than the user and therefore can only be read.

Note that the PUP commands defined in Chapter 3 allow all of the above information to be retrieved dynamically from the modem.

Finally, **display rules** are defined that describe under what conditions the MCP should be displayed to the user. When the stated condition is true then the MCP (or MCP option) is relevant and when false then the MCP (or MCP option) should be grayed out or hidden.

---

## 5.1 Edit-Tx-Service

### 5.1.1 TBBTxService

**Display label:** 'Tx service type'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Closed	Closed network
	MinOH	Closed network plus ESC
	IBSSMS	IBS/SMS
	IDR	IDR
	OM73	OM-73
	DVBS2	DVBS2 ( <i>Quantum only</i> )

**Default:** Off

**Description:** Framing mode for the Tx path.

**Display rule:** CPUSAFTx is True'

**Option display rules:** IBSSMS: CPUSAFIBSSMS is True

MinOH: CPUSAFESC is True

IDR: CPUIDRFitted is True

OM73: CPUSAFOM73 is True

### 5.1.2 TBBTxServiceStrict

**Display label:** 'Tx service implementation'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Flexible
	On	Strict

**Default:** Flexible

**Description:** Controls whether framing customisation is enabled.

**Display rule:** TBBTxService is not 'Off' AND TBBTxService is not 'Closed' AND CPUUserLevel is 'Advanced'

### 5.1.3 TBBTxFlexFrmIDR

**Display label:** 'IDR overhead format'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	T1E1	Low -rate T1/E1
	T2E2	High-rate T2/E2

**Default:** Low -rate T1/E1

**Description:** Controls whether IDR framing customisation is enabled.

**Display rule:** TBBTxService is 'IDR' AND TBBTxServiceStrict is 'Off' AND CPUSAF CustFrm is True AND CPUUserLevel is 'Advanced'

---

## 5.2 Edit-Tx-Baseband

### 5.2.1 TBBTxBBMode

**Display label:** 'Baseband mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Cont	Continuous
	DI	Drop MUX
	AudioDat	Audio/data

**Default:** Continuous

**Description:** Mode selection for baseband processing.

**Display rule:** TBBTxService is not 'Off'

**Option display rules:** AudioDat: CPUSAFAudio is True AND TBBTxService is 'IDR'

DI: CPUSAFDI is True

### 5.2.2 TBBTxTerrDataRate

**Display label:** 'Tx data rate'

**Default:** 2048000

**Units:** bps

**Minimum value:** 4800

**Maximum value:** 60000000 (*modem dependent*)

**Step size:** 1

**Description:** Terrestrial bit rate. This is used in Continuous mode but is automatically set in other baseband modes.

**Display rule:** TBBTxService is not 'Off' AND TBBTxBBMode is 'Cont'

### 5.2.3 TBBTx2048kMode

**Display label:** '2048k data format'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	unformatted	Unformatted
	G732	G.732

**Default:** Unformatted

**Description:** IBS: G.732 is Intelsat N=30/1920kbps (Sat=2048k) mode, Unformatted is N=32 (Sat=2184k) mode; IDR and Min OH: G.732 aligns Sat frame with Terr' for distant end partial insert, Unformatted uses arbitrary point for frame insertion.

**Display rule:** (TBBTxService is 'IBSSMS' OR TBBTxService is 'IDR') AND TBBTxBBMode is 'Cont' AND TBBTxTerrDataRate is 2048000 AND CPUUserLevel is 'Advanced' AND TBBTxServiceStrict is 'Off'

#### 5.2.4 TBBTxG732CAS

**Display label:** 'G.732 CAS signalling'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	CAS	CAS
	NoCAS	No CAS

**Default:** No CAS

**Description:** Specifies whether Channel Associated Signalling information is present in Timeslot 16.

**Display rule:** CPUUserLevel is 'Advanced' AND (TBBTxService is 'IBSSMS' OR TBBTxService is 'IDR') AND CPUSAFExtDI is True AND TBBTxBBMode is 'Cont' AND TBBTxTerrDataRate is 2048000 AND TBBTx2048kMode is 'G732'

#### 5.2.5 TBBTxG732Map

**Display label:** 'Remap timeslot order'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	nomap	Do not map
	map	Map

**Default:** Do not map

**Description:** Controls whether timeslots can be reordered.

**Display rule:** (TBBTxService is 'IBSSMS' OR TBBTxService is 'IDR') AND CPUUserLevel is 'Advanced' AND TBBTxBBMode is 'Cont' AND TBBTx2048kMode is 'G732' AND TBBTxTerrDataRate is 2048000 AND TBBTxServiceStrict is 'Off' AND CPUSAFExtDI is True AND TBBTxG732CAS is 'NoCAS'

### 5.2.6 TBBTxBBModeDI

**Display label:** 'Drop bearer format'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	G732	G.732
	T1D4	T1-D4
	T1ESF	T1-ESF

**Default:** G.732

**Description:** Specifies the framing format for Drop MUX operation.

**Display rule:** TBBTxService is not 'Off' AND TBBTxBBMode is 'DI' AND CPUUserLevel is 'Advanced'

### 5.2.7 TBBTxDIModeG732Sig

**Display label:** 'Process CAS in TS16 & route through IBS overhead'  
(On front panel: 'Process CAS in TS16 & route thru IBS')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	NoCAS	No CAS
	CAS	CAS

**Default:** No CAS

**Description:** **Reserved for future use.** Controls whether CAS information is processed and routed through the satellite.

### 5.2.8 TBBTxDIModeT1Sig

**Display label:** 'T1 signal contains RBS'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	NoRBS	No RBS
	RBS	RBS

**Default:** No RBS

**Description:** Specifies whether Robbed Bit Signalling information is present in the traffic source.

### 5.2.9 TBBTxSatTSSeq1 to TBBTxSatTSSeq32

**Display label:** 'Timeslot n' where n is the timeslot number

**Default:** Timeslot number

**Units:**

**Minimum value:** 0  
**Maximum value:** 32  
**Step size:** 1

**Description:** Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND (TBBTxBBMode is 'DI' OR (TBBTxBBMode is 'Cont' AND TBBTxTerrDataRate is 2048000 AND TBBTx2048kMode is 'G732' AND TBBTxG732Map is 'map'))

### 5.2.10 TBBTxSatTSUsed

**Display label:** 'Number of timeslots used'  
 (On front panel: 'No. timeslots used')

**Default:** 0

**Units:**

**Minimum value:** 0

**Maximum value:** 32

**Step size:** 1

**Description:** Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite.

**Display rule:** TBBTxService is not 'Off' AND (TBBTxBBMode is 'DI' OR (TBBTxBBMode is 'Cont' AND TBBTx2048kMode is 'G732' AND TBBTxTerrDataRate is 2048000) ) AND CPUUserLevel is 'Advanced'

### 5.2.11 TBBTxDroppedTS

**Display label:** 'Dropped timeslots'

Options:	Value	Description
	Leave	Leave on bearer
	Idle	Replace with Idle code

**Default:** Leave on bearer

**Description:** Controls whether dropped timeslots are replaced with Idle code.

**Display rule:** TBBTxService is not 'Off' AND TBBTxBBMode is 'DI' AND CPUUserLevel is 'Advanced'

### 5.2.12 TBBTxSatTSId

**Display label:** 'Maintain timeslot ID over satellite'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ignore	Do not maintain TS identity
	Maintain	Maintain TS identity

**Default:** Do not maintain TS identity

**Description:** Set to on if timeslots contain different data streams; set to off if timeslots are all part of the same stream.

**Display rule:** TBBTxService is not 'Off' AND TBBTxService is not 'Closed' AND TBBTxBBMode is 'DI' AND CPUSAFExtDI is True AND CPUUserLevel is 'Advanced'

### 5.2.13 TBBTxIDRESCDat

**Display label:** 'IDR 8k ESC mode'  
(On front panel: 'IDR 8k ESC')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Async	Asynchronous
	Sync	Synchronous

**Default:** Off

**Description:** Controls the operating mode of the low-rate ESC channel in IDR mode.

**Display rule:** CPUUserLevel is 'Advanced' AND TBBTxService is 'IDR' AND CPUSAFESC is True

### 5.2.14 TBBTxIBSESCDat

**Display label:** 'High-rate ESC data mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Async	Asynchronous

**Default:** Off

**Description:** Controls whether the IBS high-rate asynchronous ESC channel is enabled.

**Display rule:** CPUUserLevel is 'Advanced' AND (TBBTxService is 'IBSSMS' OR TBBTxService is 'MinOH') AND CPUSAFESC is True

### 5.2.15 TBBTxIBSESCMode

**Display label:** 'High-rate ESC overhead usage'  
(On front panel: 'High-rate ESC usage')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	P230	P230 compatible
	Max	Maximum overhead

**Default:** Maximum overhead

**Description:** Allows backward compatibility with Paradise P230 unit.

**Display rule:** TBBTxService is 'IBSSMS' AND TBBTxIBSESCDat is 'Async' AND CPUUserLevel is 'Advanced' AND CPUSAFESC is True AND CPUSAF CustFrm is True

### 5.2.16 TBBESCAsyncBaud

**Display label:** 'ESC interface baud rate'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	50	50 baud
	75	75 baud
	110	110 baud
	150	150 baud
	300	300 baud
	600	600 baud
	1200	1200 baud
	2400	2400 baud
	4800	4800 baud
	9600	9600 baud
	19200	19200 baud
	38400	38400 baud
	57600	57600 baud
	115200	115200 baud

**Default:** 9600 baud

**Description:** Sets the baud rate of the ESC UART.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TBBTxIBSESCDat is 'Async'

### 5.2.17 TBBESCAsyncChar

**Display label:** 'ESC interface character length'

Options:	Value	Description
	7	7 bits
	8	8 bits

**Default:** 8 bits

**Description:** Sets the number of bits in an ESC UART character.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TBBTxIBSESCDat is 'Async'

### 5.2.18 TBBESCAsyncParity

**Display label:** 'ESC interface parity polarity'

Options:	Value	Description
	None	None
	Even	Even
	Odd	Odd

**Default:** None

**Description:** Controls the ESC UART parity setting.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TBBTxIBSESCDat is 'Async'

### 5.2.19 TBBTxIBSAuxDat

**Display label:** 'IBS/SMS Aux data mode'

Options:	Value	Description
	Off	Off
	Intelsat	Intelsat over-sampled
	Sync	Synchronous

**Default:** Off

**Description:** Controls the operating mode of the IBS Aux channel.

**Display rule:** CPUUserLevel is 'Advanced' AND (TBBTxService is 'IBSSMS' OR TBBTxService is 'MinOH')

**Option display rules:** Sync: TBBTxService is 'MinOH' AND TBBTxServiceStrict is 'Off' AND CPUIDRFitted is True

### 5.2.20 TBBTxIDRAuxMode

**Display label:** 'IDR Aux data'

Options:	Value	Description
	Off	Off
	K32	32K
	K64	64K

**Default:** Off

**Description:** Controls the Aux channel in IDR mode. Allocates Aux data in place of one or both of the IDR voice channels if these are not used or can be used to reduce the 96k overhead to 64k or 32k.

**Display rule:** CPUUserLevel is 'Advanced' AND TBBTxService is 'IDR' AND TBBTxServiceStrict is 'Off' AND CPUSAFAux is True AND TBBTxIDRAudioMode is not 'K32x2'

**Option display rules:** K32: TBBTxIDRAudioMode is 'K16x2' OR TBBTxIDRAudioMode is 'K32' OR TBBTxIDRAudioMode is 'Off'

K64: TBBTxIDRAudioMode is 'Off'

### 5.2.21 TBBTxIDRAudioMode

**Display label:** 'IDR ESC audio data encoding'  
(On front panel: 'IDR ESC audio encoding')

Options:	Value	Description
	Off	Off
	K16x2	2x16k in V1
	K32	1x32K in V1
	K32x2	2x32K in V1,V2

**Default:** 2x32K in V1,V2

**Description:** Controls audio data format for the ESC overhead in IDR mode. 32k overhead is transmitted when set Off. The remaining overhead up to 96k can be not transmitted, allocated to voice or allocated to Aux data via the Aux controls.

**Display rule:** CPUUserLevel is 'Advanced' AND TBBTxService is 'IDR' AND TBBTxServiceStrict is 'Off' AND CPUSAF CustFrm is True

### 5.2.22 TBBESCLvCh1

**Display label:** 'ESC level ch1'

**Default:** 0

**Units:** db

**Minimum value:** 0  
**Maximum value:** 38  
**Step size:** 2

**Description:** Sets the input/output levels for the IDR audio ESC.  
**Display rule:** TBBTxService is 'IDR' AND CPUUserLevel is 'Advanced' AND TBBTxIDRAudioMode is not 'Off'

### 5.2.23 TBBESCLvIch2

**Display label:** 'ESC level ch2'  
**Default:** 0  
**Units:** db  
**Minimum value:** 0  
**Maximum value:** 38  
**Step size:** 2

**Description:** Stores the input/output levels for the IDR audio ESC.  
**Display rule:** TBBTxService is 'IDR' AND CPUUserLevel is 'Advanced' AND (TBBTxIDRAudioMode is 'K32x2' OR TBBTxIDRAudioMode is 'K16x2')

### 5.2.24 TBBTxBBModeAudioDat

**Display label:** 'Audio/data (P1348 emulation)'  
 (On front panel: 'Audio/data P1348 emulation')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	AudioOnly	Audio only(64K)
	AudioDat	Audio+data(64K+64K)

**Default:** Audio+data(64K+64K)

**Description:** Controls the audio/data baseband mode format in IBS and Closed Network + ESC. Can either generate a 64kbps data stream from the 2 32kbps ADPCM audio ports on the IDR card or a 128kbps data stream by adding to this 64kbps from the main data port.

**Display rule:** (TBBTxService is 'IBSSMS' OR TBBTxService is 'MinOH') AND TBBTxBBMode is 'AudioDat' AND CPUUserLevel is 'Advanced' AND CPUIDRFitted is True

**5.2.25 TBBTxBackAlmMode**

**Display label:** 'Backward alarm mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ext1234	Backward alarm 1-4 external
	Int1 Ext234	Backward alarm 1 internal, backward alarm 2-4 external
	Int1 OK234	Backward alarm 1 internal, backward alarm 2-4 forced okay
	Int1234	Backward alarm 1-4 internal
<b>Default:</b>	Backward alarm 1-4 external	

**Description:** Controls routing of multiple backward alarms in IDR mode. When internally linked from Rx-Fail to BA1 or BA1-4, these alarms respond similarly to the normal single backward alarm.

**Display rule:** TBBTxService is 'IDR' AND CPUUserLevel is 'Advanced' AND CPUSAFcCustFrm is True

**5.2.26 QuadE1P1DroppedTS, QuadE1P2DroppedTS, QuadE1P3DroppedTS, QuadE1P4DroppedTS**

**Display label:** 'Port n dropped timeslots'

**Default:** 00000000000000000000000000000000

**Description:** This selects the number of timeslots dropped on the specified port of the Quad E1 card. The entered value is a string with 32 positions with 0 indicating not to drop the corresponding timeslot and a 1 indicating that the corresponding timeslot should be dropped.

**5.2.27 QuadE1P1Idle, QuadE1P2Idle, QuadE1P3Idle, QuadE1P4Idle**

**Display label:** 'Port n dropped timeslots'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Leave	Leave on bearer
	Idle	Replace with Idle code

**Default:** Leave on bearer

**Description:** Controls whether Quad E1 dropped timeslots are replaced with Idle code.

**5.2.28 QuadE1P1TxTSUsed, QuadE1P2TxTSUsed, QuadE1P3TxTSUsed, QuadE1P4TxTSUsed**

**Display label:** 'Number of timeslots used'  
(On front panel: 'No. timeslots used')

**Default:** 0

**Units:**

**Minimum value:** 0

**Maximum value:** 32

**Step size:** 1

**Description:** Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite.

**5.2.29 QuadE1P1TxMode, QuadE1P2TxMode, QuadE1P3TxMode, QuadE1P4TxMode**

**Display label:** 'Port n mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	The specified Quad E1 port is not used
	E	Timeslots are configured as required for a GSM E type interface
	A	Timeslots are configured as required for a GSM A type interface
	Abis	Timeslots are configured as required for a GSM Abis type interface
	Ater	Timeslots are configured as required for a GSM Ater type interface
	Other	Timeslots are not configured and require to be configured manually

**Default:** Off

**Description:** This selects the Tx operating mode of port 1 on the Quad E1 card. It sets which timeslots are used based on the type of GSM interface being used. Selecting *Other* allows the timeslots to be configured manually.

---

### 5.3 Edit-Tx-Clocks

#### 5.3.1 TBBTxClkMode

**Display label:** 'Tx-path clock source'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ext	Tx Clock In
	Int	Internal
	RxRef	Receive reference
	Station	Station
	ETC	Hub

**Default:** Internal

**Description:** Sets the clock source for the Tx path.

**Display rule:** TBBTxService is not 'Off'

**Option display rules:** Int: TBBTxService is not 'Closed' OR TBBTxBBMode is not 'DI'  
RxRef: TBBTxService is not 'Closed' OR TBBTxBBMode is not 'DI'

---

## 5.4 Edit-Tx-Modulation

### 5.4.1 TModTxMod

**Display label:** 'Modulation'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	PSK2	BPSK
	PSK4	QPSK
	OPSK4	OQPSK
	PSK8	8PSK
	QAM16	16QAM
	QAM8	8APSK
	APSK16	16APSK

**Default:** QPSK

**Description:** Trade-off between bandwidth efficiency (most efficient is 16QAM) and resilience to noise (most resilient is BPSK).

**Display rule:** TBBTxService is not 'Off'

**Option display rules:** PSK8: CPUSAF8PSK is True

QAM16: CPUSAF16QAM is True

### 5.4.2 TFECTxIQMap

**Display label:** 'I/Q channel symbol mapping'  
(On front panel: 'I/Q symbol mapping')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	IESS	IESS compatible
	OM73	OM-73 compatible

**Default:** IESS compatible

**Description:** Determines how data is mapped to signal constellations in QPSK mode.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND CPUSAFOM73

### 5.4.3 TFECTxSwopBPSKBit Order

**Display label:** 'Tx sw ap BPSK IQ bit order'

**Default:** Off

**Description:** Controls whether I and Q bits are swapped in BPSK mode.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TModTxMod is 'PSK2'

---

## 5.5 Edit-Tx-FEC

### 5.5.1 TFECTxFECMode

**Display label:** 'FEC type'

Options:	Value	Description
	Off	Off
	Viterbi	Viterbi
	TCM	TCM
	TPC	TPC
	Sequential	Sequential
	LDPC	LDPC
	DVBS2	SmartLink ( <i>Quantum only</i> )

**Default:** Viterbi

**Description:** Controls the inner FEC mode.

**Display rule:** TBBTxService is not 'Off'

**Option display rules:** Viterbi: CPUSAFV it is True AND (TModTxMod is 'PSK2' OR TModTxMod is 'PSK4' OR TModTxMod is 'OPSK4')

TCM: CPUSAFTCM is True AND TModTxMod is 'PSK8'

TPC: CPUSAFTurbo is True

### 5.5.2 TFECTxFECRate

**Display label:** 'FEC code rate'

Options:	Value	Description
	R1210_3872	0.312(5/16)
	R12012_25168	0.477(21/44)
	R2028_4116	0.493(1/2) Paradise
	R1_2	1/2
	R2_3	2/3
	R2499_3748	0.666(2/3) Paradise
	R3_4	3/4
	R2223_2964	.75(3/4) de facto
	R3249_4116	0.789 Paradise
	R7_8	7/8
	R14280_16320	0.875(7/8) de facto

R3150_3600	0.875(7/8) Paradise
R15240_16404	.929 Paradise
R1_4	1/4 ( <i>Quantum only</i> )
R1_3	1/3 ( <i>Quantum only</i> )
R2_5	2/5 ( <i>Quantum only</i> )
R3_5	3/5 ( <i>Quantum only</i> )
R4_5	4/5 ( <i>Quantum only</i> )
R5_6	5/6 ( <i>Quantum only</i> )
R8_9	8/9 ( <i>Quantum only</i> )
R9_10	9/10 ( <i>Quantum only</i> )

**Default:** 1/2

**Description:** Sets the FEC code rate i.e. the number of bits input to the Forward Error Correction encoder relative to the number output.

**Display rule:** TBBTxService is not 'Off' AND TFECTxFECMode is not 'Off'

**Option display rule:** R1210\_3872: TFECTxFECMode is 'TPC'

R12012\_25168: TFECTxFECMode is 'TPC'

R2028\_4116: TFECTxFECMode is 'TPC'

R1\_2: TFECTxFECMode is 'Viterbi' OR TFECTxFECMode is 'Sequential'

R2\_3: TFECTxFECMode is 'TCM'

R2499\_3748: TFECTxFECMode is 'TPC'

R3\_4: TFECTxFECMode is 'Viterbi' OR TFECTxFECMode is 'Sequential'

R2223\_2964: TFECTxFECMode is 'TPC'

R3249\_4116: TFECTxFECMode is 'TPC'

R7\_8: TFECTxFECMode is 'Viterbi' OR TFECTxFECMode is 'Sequential'

R14280\_16320: TFECTxFECMode is 'TPC'

R3150\_3600: TFECTxFECMode is 'TPC'

### 5.5.3 TRSTxRSMODE

**Display label:** 'RS FEC'

Options:	Value	Description
	Off	Off

	Normal	Normal
	Other	Other
<b>Default:</b>	Off	
<b>Description:</b>	Controls whether the Reed-Solomon outer-FEC encoder is active.	
<b>Display rule:</b>	TBBTxService is not 'Off' AND (CPUSAFIntelRS is True OR CPUSAFDVBS is True)	
<b>Option display rules:</b>	Other: CPUSAFIntelRS is True AND CPUSAFCustFrm is True AND CPUUserLevel is 'Advanced'	

#### 5.5.4 TRSTxRSType

**Display label:** 'RS type'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Intelsat	Intelsat

**Default:** Intelsat

**Description:** Sets the Reed-Solomon outer-FEC scheme.

**Display rule:** TBBTxService is not 'Off' AND (CPUSAFIntelRS is True OR CPUSAFDVBS is True) AND TRSTxRSMODE is 'Other'

**Option display rules:** Intelsat: CPUSAFIntelRS is True

#### 5.5.5 TRSTxRSN

**Display label:** 'Reed-Solomon n value (codeword length)'  
(On front panel: 'RS n value')

**Default:** 126

**Units:** symbols

**Minimum value:** 58

**Maximum value:** 255

**Step size:** 1

**Description:** Reed-Solomon codeword length, i.e. k data symbols + (n - k) parity symbols, where (n - k)/2 symbol errors per codeword can be corrected.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TRSTxRSMODE is 'Other'

#### 5.5.6 TRSTxRSK

**Display label:** 'Reed-Solomon k value (data length)'

(On front panel: 'RS k value')

**Default:** 112  
**Units:** symbols  
**Minimum value:** 56  
**Maximum value:** 255  
**Step size:** 1

**Description:** Number of data symbols per Reed-Solomon codeword (range (n - 2) to (n - 20) in steps of 2).

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TRSTxRSMODE is 'Other'

### 5.5.7 TRSTxIntDepth

**Display label:** 'RS symbol interleaver depth'  
 (On front panel: 'RS interleaver depth')

Options:	Value	Description
	4	4 code-words
	8	8 code-words
	12	12 code-words

**Default:** 4 code-words

**Description:** Controls resilience to burst errors (larger depth gives best BER) through data dispersal at the expense of introducing processing delay.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced' AND TRSTxRSMODE is 'Other'

---

## 5.6 Edit-Tx-Scrambler

### 5.6.1 TBBTxScr

**Display label:** 'Scrambler mode'

Options:	Value	Description
	Off	Off
	Normal	Normal
	Other	Other

**Default:** Off

**Description:** Master control for all scramblers. In Normal mode, scrambler settings are set automatically.

**Display rule:** TBBTxService is not 'Off'

### 5.6.2 TBBTxScrType

**Display label:** 'Scrambler type'

Options:	Value	Description
	IBSSMS	IBS/SMS
	V35	V.35
	Turbo	Turbo
	OM73	OM-73
	InteIRS	Intelsat Reed-Solomon

**Default:** V.35

**Description:** Controls the type of scrambler to apply. Only available when 'Scrambler selection' is set to 'Other'.

**Display rule:** TBBTxService is not 'Off' AND TBBTxScr is 'Other'

**Option display rules:** IBSSMS: TBBTxService is 'IBSSMS' OR (TBBTxService is 'MinOH' AND TBBTxTerrDataRate >= 32000)

V35: TBBTxService is 'IBSSMS' OR TBBTxService is 'Closed' OR TBBTxService is 'MinOH' OR TBBTxService is 'IDR' OR TBBTxService is 'OM73'

OM73: TBBTxService is 'OM73' OR ((TBBTxService is 'IBSSMS' OR TBBTxService is 'Closed' OR TBBTxService is 'MinOH' OR TBBTxService is 'IDR') AND TBBTxServiceStrict is not 'On')

Turbo: CPUSAFTurbo is True AND TFECTxFECMode is 'TPC'

IntelRS: TRSTxRSMode is not 'Off' AND CPUSAFIntelRS is True

---

## 5.7 Edit-Tx-Carrier

### 5.7.1 TIFTxIFFreq

**Display label:** 'IF carrier frequency'  
(On front panel: 'IF carrier freq')

**Default:** 70.0000

**Units:** MHz

**Minimum value:** 52.0000

**Maximum value:** 176.0000

**Step size:** 0.0001

**Description:** Tx IF frequency used to transmit to satellite.

**Display rule:** TBBTxService is not 'Off'

### 5.7.2 TIFTxIFPwr

**Display label:** 'IF output power'

**Default:** -20.0

**Units:** dBm

**Minimum value:** -25.0

**Maximum value:** 0

**Step size:** 0.1

**Description:** Tx IF output power level.

**Display rule:** TBBTxService is not 'Off'

### 5.7.3 GwyTxCarrier

**Display label:** 'Carrier mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	On	On
	MuteOnBreak	On (mute if power break)
	RTS	RTS enabled
	Rx	Rx enabled
<b>Default:</b>	Off	

**Description:** Tx carrier control. Mute on power break requires confirmation of transmission following a power outage. When RTS is enabled then the carrier is controlled by the interface RTS line. When Rx enabled, then the carrier will be switched off whenever an Rx traffic fault is present in the modem.

**Display rule:** TBBTxService is not 'Off' AND CPUSAFTx is True

**Option** MuteOnBreak: TBBTxServiceStrict is 'Off'

**display rules:** RTS: TBBTxServiceStrict is 'Off'

#### 5.7.4 TFECTxSpectInv

**Display label:** 'Tx spectral inversion'

**Default:** Off

**Description:** Controls whether the I and Q channel outputs are swapped.

**Display rule:** TBBTxService is not 'Off'

---

## 5.8 Edit-Rx-Service

### 5.8.1 RBBRxService

**Display label:** 'Rx service type'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Closed	Closed network
	MinOH	Closed network plus ESC
	IBSSMS	IBS/SMS
	IDR	IDR
	OM73	OM-73
	DVBS2	DVBS2 ( <i>Quantum only</i> )

**Default:** Off

**Description:** Framing mode for the Rx path.

**Display rule:** CPUSAFRx is True AND CPURx EqTx is False

**Option display rule:** IBSSMS: CPUSAFIBSSMS is True

MinOH: CPUSAFESC is True

IDR: CPUIDRFitted is True

OM73: CPUSAFOM73 is True

### 5.8.2 RBBRxServiceStrict

**Display label:** 'Rx service implementation'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Flexible
	On	Strict

**Default:** Flexible

**Description:** Controls whether framing customisation is enabled.

**Display rule:** RBBRxService is not 'Off' AND RBBRxService is not 'Closed' AND CPUUserLevel is 'Advanced' AND CPURx EqTx is False

### 5.8.3 RBBRxFlexFrmIDR

**Display label:** 'IDR overhead format'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	T1E1	Low -rate T1/E1
	T2E2	High-rate T2/E2

**Default:** Low -rate T1/E1

**Description:** Controls whether IDR framing customisation is enabled.

**Display rule:** RBBRxService is 'IDR' AND RBBRxServiceStrict is 'Off' AND CPURxEqTx is False AND CPUSAF CustFrm is True AND CPUUserLevel is 'Advanced'

---

## 5.9 Edit-Rx-Baseband

### 5.9.1 RBBRxBBMode

**Display label:** 'Baseband mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Cont	Continuous
	DI	Insert MUX
	AudioDat	Audio/data

**Default:** Continuous

**Description:** Mode selection for baseband processing.

**Display rule:** RBBRxService is not 'Off' AND CPURx EqTx is False

**Option display rules:** AudioDat: CPUSAFAudio is True AND RBBRxService is 'IDR'

DI: CPUSAFDI is True

### 5.9.2 RBBRxTerrDataRate

**Display label:** 'Rx data rate'

**Default:** 2048000

**Units:** bps

**Minimum value:** 4800

**Maximum value:** 60000000 (*modem dependent*)

**Step size:** 1

**Description:** Terrestrial bit rate. This is used in Continuous mode but is automatically set in other baseband modes.

**Display rule:** RBBRxService is not 'Off' AND RBBRxBBMode is 'Cont' AND CPURx EqTx is False

### 5.9.3 RBBRx2048kMode

**Display label:** '2048k data format'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	unformatted	Unformatted
	G732	G.732

**Default:** Unformatted

**Description:** IBS: G.732 is Intelsat N=30/1920kbps (Sat=2048k) mode, Unformatted is N=32 (Sat=2184k) mode; IDR and Min OH: G.732 aligns Sat frame with Terr' for distant end partial insert, Unformatted uses arbitrary point for frame insertion.

**Display rule:** (RBBRxService is 'IBSSMS' OR RBBRxService is 'IDR') AND RBBRxBBMode is 'Cont' AND RBBRxTerrDataRate is 2048000 AND CPUUserLevel is 'Advanced' AND RBBRxServiceStrict is 'Off' AND CPURxEqTx is False

#### 5.9.4 RBBRxG732CAS

**Display label:** 'G.732 CAS signalling'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	CAS	CAS
	NoCAS	No CAS

**Default:** No CAS

**Description:** Specifies whether Channel Associated Signalling information is present in Timeslot 16.

**Display rule:** CPUUserLevel is 'Advanced' AND (RBBRxService is 'IBSSMS' OR RBBRxService is 'IDR') AND CPUSAFExtDI is True AND RBBRxBBMode is 'Cont' AND RBBRxTerrDataRate is 2048000 AND RBBRx2048kMode is 'G732' AND CPURxEqTx is False

#### 5.9.5 RBBRxG732Map

**Display label:** 'Reorder timeslots'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	nomap	Do not map
	map	Map

**Default:** Do not map

**Description:** Controls whether timeslots can be reordered.

**Display rule:** (RBBRxService is 'IBSSMS' OR RBBRxService is 'IDR') AND CPUUserLevel is 'Advanced' AND RBBRxBBMode is 'Cont' AND RBBRx2048kMode is 'G732' AND RBBRxTerrDataRate is 2048000 AND RBBRxServiceStrict is 'Off' AND CPUSAFExtDI is True AND RBBRxG732CAS is 'NoCAS' AND CPURxEqTx is False

### 5.9.6 RBBRxBBModeDI

**Display label:** 'Insert bearer format'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	G732	G.732
	T1D4	T1-D4
	T1ESF	T1-ESF

**Default:** G.732

**Description:** Specifies the framing format for Insert MUX operation.

**Display rule:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND RBBRxBBMode is 'DI' AND CPURxEqTx is False

### 5.9.7 RBBRxDIModeG732Sig

**Display label:** 'Process CAS in TS16 & route through IBS overhead'  
(On front panel: 'Process CAS in TS16 & route thru IBS')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	NoCAS	No CAS
	CAS	CAS

**Default:** No CAS

**Description:** **Reserved for future use.** Controls whether CAS information is received from the satellite and processed.

### 5.9.8 RBBRxDIModeT1Sig

**Display label:** 'T1 signal contains RBS'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	NoRBS	No RBS
	RBS	RBS

**Default:** No RBS

**Description:** **Reserved for future use.** Specifies whether Robbed Bit Signalling information is present in the traffic source.

### 5.9.9 RBBRxSigBlockCode

**Display label:** 'CAS action on satellite backward alarm'

Options:	Value	Description
	NormalABCD	Signalling bits abcd normal
	AISABCD	Signalling bits abcd=AI S
	B1NormalACD	Signalling bit b=1, acd normal
	AB1NormalCD	Signalling bits ab=1, cd normal

**Default:** Signalling bits abcd normal

**Description:** Determines actions to be taken with respect to Rx CAS signalling block code.

### 5.9.10 RBBRxOriginate

**Display label:** 'Generate bearer'

Options:	Value	Description
	Loop	Loop (auto-originate if bearer fails)
	Originate	Originate

**Default:** Loop (auto-originate if bearer fails)

**Description:** Controls the origination of a terrestrial bearer from the Insert MUX.

**Display rule:** RBBRxService is not 'Off' AND RBBRxBBMode is 'DI' AND CPUUserLevel is 'Advanced'

### 5.9.11 RBBRxSatTSSeq1 to RBBRxSatTSSeq32

**Display label:** 'Timeslot n' where n is the timeslot number

**Default:** Timeslot number

**Units:**

**Minimum value:** 0

**Maximum value:** 32

**Step size:** 1

**Description:** Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received.

**Display rule:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND (RBBRxBBMode is 'DI' OR (RBBRxBBMode is 'Cont' AND RBBRxTerrDataRate is 2048000 AND RBBRx2048kMode is 'G732' AND RBBRxG732Map is 'map'))

### 5.9.12 RBBRxSatTSId

**Display label:** 'Maintain timeslot ID over satellite'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ignore	Do not maintain TS identity
	Maintain	Maintain TS identity

**Default:** Do not maintain TS identity

**Description:** Set to on if timeslots contain different data streams; set to off if timeslots are all part of the same stream.

**Display rule:** RBBRxService is not 'Off' AND RBBRxService is not 'Closed' AND RBBRxBBMode is 'DI' AND CPUSAFExtDI is True AND CPUUserLevel is 'Advanced' AND CPURxEqTx is False

### 5.9.13 RBBRxPartialInsert

**Display label:** 'Partial insert'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Normal	Normal
	Partial	Partial

**Default:** Normal

**Description:** Controls whether part or all of the received data is to be inserted into the terrestrial bearer.

**Display rule:** RBBRxService is not 'Off' AND RBBRxBBMode is 'DI' AND CPUSAFExtDI is True AND CPUUserLevel is 'Advanced'

### 5.9.14 RBBRxPartialTS1 to RBBRxPartialTS32

**Display label:** 'Partial TSn' where n is the timeslot number

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ignore	Ignore
	Insert	Insert

**Default:** Ignore

**Description:** When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer.

**Display rule:** RBBRxService is not 'Off' AND RBBRxBBMode is 'DI' AND RBBRxPartialInsert is 'Partial' AND CPUUserLevel is 'Advanced'

### 5.9.15 RBBRxSatTSUsed

**Display label:** 'Number of timeslots from satellite'  
(On front panel: 'No. timeslots used')

**Default:** 0

**Units:**

**Minimum value:** 0

**Maximum value:** 32

**Step size:** 1

**Description:** Indicates the number of timeslots sent over the satellite.

**Display rule:** RBBRxService is not 'Off' AND (RBBRxBBMode is 'DI' OR (RBBRxBBMode is 'Cont' AND RBBRx2048kMode is 'G732' AND RBBRxTerrDataRate is 2048000) ) AND CPUUserLevel is 'Advanced'

### 5.9.16 RBBRxIDRAudioMode

**Display label:** 'IDR ESC audio data encoding'  
(On front panel: 'IDR ESC audio encoding')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	K16x2	2x16k in V1
	K32	1x32K in V1
	K32x2	2x32K in V1,V2

**Default:** Off

**Description:** Controls audio data format for the ESC overhead in IDR mode. 32k overhead is transmitted when set Off. The remaining overhead up to 96k can be not transmitted, allocated to voice or allocated to Aux data via the Aux controls.

**Display rule:** CPUUserLevel is 'Advanced' AND RBBRxService is 'IDR' AND RBBRxServiceStrict is 'Off' AND CPUSAFCustFrm is True AND CPURxEqTx is False

### 5.9.17 RBBESCLvIch1

**Display label:** 'ESC level ch1'

**Default:** 0

**Units:** db

**Minimum value:** -15

**Maximum value:** 6

**Step size:** 3

**Description:** Sets the input/output levels for the IDR audio ESC.  
**Display rule:** RBBRxService is 'IDR' AND CPUUserLevel is 'Advanced' AND RBBRxIDRAudioMode is not 'Off'

#### 5.9.18 RBBESCLvIch2

**Display label:** 'ESC level ch2'  
**Default:** 0  
**Units:** db  
**Minimum value:** -15  
**Maximum value:** 6  
**Step size:** 3

**Description:** Sets the input/output levels for the IDR audio ESC.  
**Display rule:** RBBRxService is 'IDR' AND CPUUserLevel is 'Advanced' AND (RBBRxIDRAudioMode is 'K32x2' OR RBBRxIDRAudioMode is 'K16x2')

#### 5.9.19 RBBRxBBModeAudioDat

**Display label:** 'Audio/data (P1348 emulation)'  
 (On front panel: 'Audio/data P1348 emulation')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	AudioOnly	Audio only(64K)
	AudioDat	Audio+data(64K+64K)

**Default:** Audio+data(64K+64K)

**Description:** Controls the audio/data baseband mode format in IBS and Closed Network + ESC. Can either generate a 64kbps data stream from the 2 32kbps ADPCM audio ports on IDR card or a 128kbps data stream by adding to this 64kbps from the main data port.

**Display rule:** (RBBRxService is 'IBSSMS' OR RBBRxService is 'MinOH') AND CPUUserLevel is 'Advanced' AND RBBRxBBMode is 'AudioDat' AND IDRfitted is True AND CPURxEqTx is False

#### 5.9.20 RBBRxIDRESCDat

**Display label:** 'Low -rate ESC mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Async	Asynchronous

Sync Synchronous  
**Default:** Off

**Description:** Controls the operating mode of the ESC channel in IDR mode.

**Display rule:** CPUUserLevel is 'Advanced' AND RBBRxService is 'IDR' AND CPUSAFESC is True AND CPURxEqTx is False

### 5.9.21 RBBRxIBSESCDat

**Display label:** 'High-rate ESC mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Async	Asynchronous
<b>Default:</b>	Off	

**Description:** Controls whether the IBS high-rate asynchronous ESC channel is enabled.

**Display rule:** CPUUserLevel is 'Advanced' AND (RBBRxService is 'IBSSMS' OR RBBRxService is 'MinOH') AND CPURxEqTx is False AND CPUSAFESC is True

### 5.9.22 RBBRxIBSESCMode

**Display label:** 'High-rate ESC overhead usage'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	P230	P230 compatible
	Max	Maximum overhead
<b>Default:</b>	Maximum overhead	

**Description:** Allow s backward compatibility with Paradise P230 unit.

**Display rule:** RBBRxService is 'IBSSMS' AND RBBRxIBSESCDat is 'Async' AND CPUUserLevel is 'Advanced' AND CPUSAFESC is True AND CPUSAFcCustFrm is True AND CPURxEqTx is False

### 5.9.23 RBBESCAsyncBaud

**Display label:** 'ESC interface baud rate'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	50	50 baud
	75	75 baud
	110	110 baud

150	150 baud
300	300 baud
600	600 baud
1200	1200 baud
2400	2400 baud
4800	4800 baud
9600	9600 baud
19200	19200 baud
38400	38400 baud
57600	57600 baud
115200	115200 baud

**Default:** 9600 baud

**Description:** Sets the baud rate of the ESC UART.

**Display rule:** CPUUserLevel is 'Advanced' AND CPURxEqTx is False AND (RBBRxService is 'IDR' AND RBBRxIDRESCDat is 'Async') OR (RBBRxService is 'IBSSMS' OR RBBRxService is 'MinOH') AND RBBRxIBSESCDat is 'Async')

#### 5.9.24 RBBESCAsyncChar

**Display label:** 'ESC interface character length'

**Options:** **Value** **Description**

7	7 bits
8	8 bits

**Default:** 8 bits

**Description:** Sets the number of bits in an ESC UART character.

**Display rule:** CPUUserLevel is 'Advanced' AND CPURxEqTx is False AND (RBBRxService is 'IDR' AND RBBRxIDRESCDat is 'Async') OR (RBBRxService is 'IBSSMS' OR RBBRxService is 'MinOH') AND RBBRxIBSESCDat is 'Async')

#### 5.9.25 RBBESCAsyncParity

**Display label:** 'ESC interface parity polarity'

**Options:** **Value** **Description**

None	None
Even	Even
Odd	Odd

**Default:** None

**Description:** Controls the ESC UART parity setting.

**Display rule:** CPUUserLevel is 'Advanced' AND CPURxEqTx is False AND (RBBRxService is 'IDR' AND RBBRxIDRESCDat is 'Async') OR (RBBRxService is 'IBSSMS' OR RBBRxService is 'MinOH') AND RBBRxIBSESCDat is 'Async')

### 5.9.26 RBBRxIDRAuxMode

**Display label:** 'IDR Aux data overhead'

**Options:** **Value** **Description**

Off	Off
K32	32K
K64	64K

**Default:** Off

**Description:** Controls the Aux channel in IDR mode. Allocates Aux data in place of one or both of the IDR voice channels if these are not used or can be used to reduce the 96k overhead to 64k or 32k.

**Display rule:** CPUUserLevel is 'Advanced' AND RBBRxService is 'IDR' AND RBBRxServiceStrict is 'Off' AND CPUSAFAux is True AND RBBRxIDRAudioMode is not 'K32x2' AND CPURxEqTx is False

**Option display rules:** K32: RBBRxIDRAudioMode is 'K16x2' OR RBBRxIDRAudioMode is 'K32' OR RBBRxIDRAudioMode is 'Off'  
K64: RBBRxIDRAudioMode is 'Off'

### 5.9.27 RBBRxIBSAuxDat

**Display label:** 'IBS/SMS Aux data mode'

**Options:** **Value** **Description**

Off	Off
Intelsat	Intelsat over-sampled
Sync	Synchronous

**Default:** Off

**Description:** Controls the operating mode of the IBS Aux channel.

**Display rule:** CPUUserLevel is 'Advanced' AND (RBBRxService is 'IBSSMS' OR RBBRxService is 'MinOH') AND CPURxEqTx is False

**Option display rules:** Sync: RBBRxService is 'MinOH' AND RBBRxServiceStrict is 'Off' AND CPUIDRFitted is True

**5.9.28 QuadE1P1InsertTS, QuadE1P2InsertTS, QuadE1P3InsertTS, QuadE1P4InsertTS**

**Display label:** 'Port n insert timeslots'

**Default:** 00000000000000000000000000000000

**Description:** This selects the number of timeslots inserted on the specified port of the Quad E1 card. The entered value is a string with 32 positions with 0 indicating not to insert the corresponding timeslot and a 1 indicating that the corresponding timeslot should be inserted.

**5.9.29 QuadE1P1Originate, QuadE1P2Originate, QuadE1P3Originate, QuadE1P4Originate**

**Display label:** 'Port n generate bearer'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Loop	Loop (auto-originate if bearer fails)
	Originate	Originate

**Default:** Loop (auto-originate if bearer fails)

**Description:** Controls the origination of a terrestrial bearer from the Insert MUX.

**5.9.30 QuadE1P1RxTSUsed, QuadE1P2RxTSUsed, QuadE1P3RxTSUsed, QuadE1P4RxTSUsed**

**Display label:** 'Number of timeslots used'  
(On front panel: 'No. timeslots used')

**Default:** 0

**Units:**

**Minimum value:** 0

**Maximum value:** 32

**Step size:** 1

**Description:** Controls the number of timeslots sent over the satellite.

**5.9.31 QuadE1P1RxMode, QuadE1P2RxMode, QuadE1P3RxMode, QuadE1P4RxMode**

**Display label:** 'Port n mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	The specified Quad E1 port is not used
	E	Timeslots are configured as required for a GSM E type interface
	A	Timeslots are configured as required for a GSM A type interface
	Abis	Timeslots are configured as required for a GSM Abis type interface
	Ater	Timeslots are configured as required for a GSM Ater type interface
	Other	Timeslots are not configured and require to be configured manually

**Default:** Off

**Description:** This selects the Rx operating mode of port 1 on the Quad E1 card. It sets which timeslots are used based on the type of GSM interface being used. Selecting *Other* allows the timeslots to be configured manually.

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## 5.10 Edit-Rx-Clocks

### 5.10.1 RBBRxClkMode

**Display label:** 'Rx-path clock source'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Sat	Satellite
	Tx	Tx Clock In
	Int	Internal
	Station	Station

**Default:** Satellite

**Description:** Sets the source of the clock for the Rx path.

**Display rule:** RBBRxService is not 'Off'

**Option display rules:** Station: GwyStatClkSrc is not 'None'

### 5.10.2 RBBRxBufferSize

**Display label:** 'Buffer size'

**Default:** 50

**Units:** ms

**Minimum value:** 0

**Maximum value:** 99

**Step size:** 1

**Description:** Buffer capacity for received data.

**Display rule:** RBBRxService is not 'Off' AND RBBRxClkMode is not 'Sat'

### 5.10.3 RBBRxBuffMFSync

**Display label:** 'Maintain multi-frame sync'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	DoNotMaintain	Do not maintain
	Maintain	Maintain

**Default:** Maintain

**Description:** **Reserved for future use.** Controls whether the Rx buffer should be increased when necessary to maintain multi-frame sync when the

buffer slips.

#### 5.10.4 RBBRxBuffAutoCent

**Display label:** 'Centre buffer after failure recovery'

**Default:** On

**Description:** **Reserved for future use.** Controls whether the Rx buffer is centred following an Rx path recovery from failure.

---

## 5.11 Edit-Rx-Demodulation

### 5.11.1 RDemRxMod

**Display label:** 'Modulation'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	PSK2	BPSK
	PSK4	QPSK
	OPSK4	OQPSK
	PSK8	8PSK
	QAM16	16QAM
	QAM8	8QAM
	APSK16	16APSK ( <i>Quantum only</i> )

**Default:** QPSK

**Description:** Trade-off between bandwidth efficiency (most efficient is 16QAM) and resilience to noise (most resilient is BPSK).

**Display rule:** RBBRxService is not 'Off' AND CPURxEqTx is False

**Option display rules:** PSK8: CPUSAF8PSK is True

QAM16: CPUSAF16QAM is True

### 5.11.2 RFECRxIQMap

**Display label:** 'I/Q channel symbol mapping'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	IESS	IESS compatible
	OM73	OM-73 compatible

**Default:** IESS compatible

**Description:** Determines how data is mapped to signal constellations in QPSK mode.

**Display rules:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND CPUSAFOM73 is True AND CPURxEqTx is False

### 5.11.3 RFECRxSwapBPSKBitOrder

**Display label:** 'Rx swap BPSK I/Q bit order'

**Default:** Off

**Description:** Controls whether I and Q bits are swapped in BPSK mode.  
**Display rule:** RBBSRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND RDemRxMod is 'PSK2' AND CPURxEqTx is False

#### 5.11.4 RDemRxSweep

**Display label:** 'Sweep mode'

Options:	Value	Description
	Normal	Normal
	Other	Other

**Default:** Normal

**Description:** Controls the Rx signal sweep configuration.

**Display rule:** RBBSRxService is not 'Off'

#### 5.11.5 RDemRxSweepWidth

**Display label:** 'Sweep width'

**Default:** 32

**Units:** kHz

**Minimum value:** 1

**Maximum value:** 250

**Step size:** 1

**Description:** Controls the Rx signal sweep width - this is a +/- setting i.e. the total width is twice the value that is entered.

**Display rule:** RBBSRxService is not 'Off' AND RDemRxSweep is 'Other'

---

## 5.12 Edit-Rx-FEC

### 5.12.1 RFECRxFECCode

**Display label:** 'FEC type'

Options:	Value	Description
	Off	Off
	Viterbi	Viterbi
	TCM	TCM
	TPC	TPC
	Sequential	Sequential
	LDPC	LDPC
	DVBS2	SmartLink ( <i>Quantum only</i> )

**Default:** Viterbi

**Description:** Controls the inner FEC mode.

**Display rule:** RBBRxService is not 'Off' AND CPURxEqTx is False

**Option display rules:** Viterbi: CPUSAFViterbi is True AND (RDemRxMod is 'PSK2' OR RDemRxMod is 'PSK4' OR RDemRxMod is 'OPSK4')

TCM: CPUSAFTCM is True AND RDemRxMod is 'PSK8'

TPC: CPUSAFTurbo is True

### 5.12.2 RFECRxFECRate

**Display label:** 'FEC code rate'

Options:	Value	Description
	R1210_3872	0.312(5/16)
	R12012_25168	0.477(21/44)
	R2028_4116	0.493(1/2) Paradise
	R1_2	1/2
	R2_3	2/3
	R2499_3748	0.666(2/3) Paradise
	R3_4	3/4
	R2223_2964	.75(3/4) de facto
	R3249_4116	0.789 Paradise
	R7_8	7/8
	R14280_16320	0.875(7/8) de facto

R3150_3600	0.875(7/8) Paradise
R15240_16404	.929 Paradise
R1_4	1/4 ( <i>Quantum only</i> )
R1_3	1/3 ( <i>Quantum only</i> )
R2_5	2/5 ( <i>Quantum only</i> )
R3_5	3/5 ( <i>Quantum only</i> )
R4_5	4/5 ( <i>Quantum only</i> )
R5_6	5/6 ( <i>Quantum only</i> )
R8_9	8/9 ( <i>Quantum only</i> )
R9_10	9/10 ( <i>Quantum only</i> )

**Default:** 1/2

**Description:** Sets the FEC code rate i.e. the number of bits input to the Forward Error Correction encoder relative to the number output.

**Display rule:** RBBRxService is not 'Off' AND RFECRxFECCMode is not 'Off' AND CPURxEqTx is False

**Option display rules:** R1210\_3872: RFECRxFECCMode is 'TPC'

R12012\_25168: RFECRxFECCMode is 'TPC'

R2028\_4116: RFECRxFECCMode is 'TPC'

R1\_2: RFECRxFECCMode is 'Viterbi'

R2\_3: RFECRxFECCMode is 'TCM'

R2499\_3748: RFECRxFECCMode is 'TPC'

R3\_4: RFECRxFECCMode is 'Viterbi'

R2223\_2964: RFECRxFECCMode is 'TPC'

R3249\_4116: RFECRxFECCMode is 'TPC'

R7\_8: RFECRxFECCMode is 'Viterbi'

R14280\_16320: RFECRxFECCMode is 'TPC'

R3150\_3600: RFECRxFECCMode is 'TPC'

### 5.12.3 RRSRxRSMODE

**Display label:** 'RS FEC'

Options:	Value	Description
	Off	Off
	Normal	Normal

**Default:** Other Off Other

**Description:** Controls whether the Reed-Solomon outer-FEC encoder is active.  
**Display rule:** RBBRxService is not 'Off' AND (CPUSAFIntelRS is True OR CPUSAFDVBS is True) AND CPURxEqTx is False  
**Option display rules:** Other: CPUSAFIntelRS is True AND CPUSAFCustFrm is True AND CPUUserLevel is 'Advanced'

#### 5.12.4 RRSRxRSType

**Display label:** 'RS type'  
**Options:** Value Description  
 Intelsat Intelsat  
**Default:** Intelsat

**Description:** Sets the Reed-Solomon outer-FEC scheme.  
**Display rule:** RBBRxService is not 'Off' AND (CPUSAFIntelRS is True OR CPUSAFDVBS is True) AND CPURxEqTx is False AND TRSTxRSMode is 'Other'  
**Option display rules:** Intelsat: CPUSAFIntelRS is True

#### 5.12.5 RRSRxRSN

**Display label:** 'Reed-Solomon n value (codeword length)'  
 (On front panel: 'RS n value')  
**Default:** 126  
**Units:** symbols  
**Minimum value:** 58  
**Maximum value:** 255  
**Step size:** 1

**Description:** Reed-Solomon codeword length, i.e. k data symbols + (n - k) parity symbols, where (n - k)/2 symbol errors per codeword can be corrected.  
**Display rule:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND RRSRxRSMode is 'Other' AND CPURxEqTx is False

#### 5.12.6 RRSRxRSK

**Display label:** 'Reed-Solomon k value (data symbols per codeword)'  
 (On front panel: 'RS k value')

**Default:** 112  
**Units:** symbols  
**Minimum value:** 56  
**Maximum value:** 255  
**Step size:** 1

**Description:** Number of data symbols per Reed-Solomon codeword (range (n - 2) to (n - 20) in steps of 2).

**Display rule:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND RRSRxRSMODE is 'Other' AND CPURxEqTx is False

### 5.12.7 RRSRxIntDepth

**Display label:** 'RS de-interleaver depth'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	4	4 code-words
	8	8 code-words
	12	12 code-words

**Default:** 4 code-words

**Description:** Controls resilience to burst errors (larger depth gives best BER) through data dispersal at the expense of introducing processing delay.

**Display rule:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND RRSRxRSMODE is 'Other' AND CPURxEqTx is False

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### 5.13 Edit-Rx-Descrambler

#### 5.13.1 RBBRxScr

**Display label:** 'Scrambler mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Normal	Normal
	Other	Other

**Default:** Off

**Description:** Master control for all scramblers. In Normal mode, scrambler settings are set automatically.

**Display rule:** RBBRxService is not 'Off' AND CPURxEqTx is False

#### 5.13.2 RBBRxScrType

**Display label:** 'Scrambler type'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	IBSSMS	IBS/SMS
	V35	V.35
	Turbo	Turbo
	OM73	OM-73
	IntelRS	Intelsat Reed-Solomon

**Default:** V.35

**Description:** Controls the type of scrambler to apply. Only available when 'Scrambler selection' is set to 'Other'.

**Display rule:** RBBRxService is not 'Off' AND RBBRxScr is 'Other' AND CPURxEqTx is False

**Option display rules:** IBSSMS: RBBRxService is 'IBSSMS' OR (RBBRxService is 'MinOH' AND RBBRxTerrDataRate >= 32000)

V35: RBBRxService is 'IBSSMS' OR RBBRxService is 'Closed' OR RBBRxService is 'MinOH' OR RBBRxService is 'IDR' OR RBBRxService is 'OM73'

OM73: RBBRxService is 'OM73' OR ((RBBRxService is 'IBSSMS' OR RBBRxService is 'Closed' OR RBBRxService is 'MinOH' OR RBBRxService is 'IDR') AND RBBRxServiceStrict is not 'On')

Turbo: CPUSAFTurbo is True AND RFECRxFECCMode is 'TPC'

IntelRS: RRSRxRSMode is not 'Off' AND CPUSAFIntelRS is True

---

## 5.14 Edit-Rx-Carrier

### 5.14.1 RFECRxSpectInv

**Display label:** 'Rx spectral inversion'

**Default:** Off

**Description:** Controls whether the I and Q channel outputs are swapped.

**Display rule:** RBBRxService is not 'Off' AND CPURxEqTx is False

### 5.14.2 RIFRxIFFreq

**Display label:** 'IF carrier frequency'  
(On front panel: 'IF carrier freq')

**Default:** 70.0000

**Units:** MHz

**Minimum value:** 52.0000

**Maximum value:** 176.0000

**Step size:** 0.0001

**Description:** Rx IF frequency used to receive from satellite.

**Display rule:** RBBRxService is not 'Off'

---

## **5.15 Edit-Rx-RxEqTx**

### **5.15.1 CPURxEqTx**

**Display label:** 'Rx values track Tx'

**Default:** Off

**Description:** Controls whether specific Rx configuration parameters mirror the equivalent Tx parameters.

**Display rule:** CPUSAFRx is True AND CPUSAFTx is True

---

## **5.16 Edit-Unit-Identity**

### **5.16.1 CPUModemID**

**Display label:** 'Modem identifier'

**Default:** Paradise P3000 modem

**Description:** User-assigned field typically the unique modem name, number or location.

---

## 5.17 Edit-Unit-Interface

### 5.17.1 TerrIntfcType

**Display label:** 'Terrestrial interface type'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	RS422	RS422
	LVDS	LVDS
	RS232	RS232
	V35	V.35
	G703	G.703
	IP	IP
	Eurocom	Eurocom D1
	QUADE_RS422	Quad E1 & RS422 ( <i>requires MultiMux</i> )
	QUADE_RS232	Quad E1 & RS232 ( <i>requires MultiMux</i> )
	QUADE_V35	Quad E1 & V35 ( <i>requires MultiMux</i> )
	QUADE_IP	Quad E1 & IP ( <i>requires MultiMux</i> )
	QUADE_IP_RS422	Quad E1 & IP & RS422 ( <i>requires MultiMux</i> )
	QUADE_IP_RS232	Quad E1 & IP & RS232 ( <i>requires MultiMux</i> )
	QUADE_IP_V35	Quad E1 & IP & V35 ( <i>requires MultiMux</i> )
	ABIS	ABIS
<b>Default:</b>	RS422	

**Description:** Sets the terrestrial interface communications standard.

### 5.17.2 G703Rate

**Display label:** 'G.703 data rate'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	T1	T1
	E1	E1
	T2	T2
	E2	E2
	T3	T3
	E3	E3
<b>Default:</b>	T1	

**Description:** Sets the data rate being used in relation to the G.703 interface.

**Display rule:** TerrIntfcType is 'G703' AND CPUUserLevel is 'Advanced'

### 5.17.3 G703Impedance

**Display label:** 'G.703 line format'

Options:	Value	Description
	75	Unbalanced
	120	Balanced

**Default:** Unbalanced

**Description:** Sets the G.703 line format.

**Display rule:** TerrIntfcType is 'G703' AND CPUUserLevel is 'Advanced'

**Option display rules:**

75: G703Rate is 'E1' OR G703Rate is 'E2' OR G703Rate is 'E3' OR G703Rate is 'T3'

120: G703Rate is 'E1' OR G703Rate is 'T1' OR G703Rate is 'T2'

### 5.17.4 G703LineCode

**Display label:** 'G.703 line encoding'

Options:	Value	Description
	AMI	AMI
	B3ZS	B3ZS
	B6ZS	B6ZS
	B8ZS	B8ZS
	HDB3	HDB3

**Default:** AMI

**Description:** Sets the type of waveform pattern used to encode 1s and 0s onto the G.703 signal.

**Display rule:** TerrIntfcType is 'G703' AND CPUUserLevel is 'Advanced'

**Option display rules:**

AMI: G703Rate is 'T1'

B3ZS: G703Rate is 'T3'

B6ZS: G703Rate is 'T2'

B8ZS: G703Rate is 'T1' OR G703Rate is 'T2'

HDB3: G703Rate is 'E1' OR G703Rate is 'E2' OR G703Rate is 'E3'

### 5.17.5 G703LineLength

**Display label:** 'G.703 line length'

Options:	Value	Description
	133	133m
	266	266m
	399	399m
	533	533m
	655	655m

**Default:** 133m

**Description:** Physical length of G.703 cable for line build-out compensation.

**Display rule:** TerrIntfcType is 'G703' AND CPUUserLevel is 'Advanced' AND (G703LineCode is 'AMI' OR G703LineCode is 'B8ZS' OR G703LineCode is 'B6ZS')

### 5.17.6 CPUBxIFImpedance

**Display label:** 'IF port impedance'

Options:	Value	Description
	50	50 Ohms
	75	75 Ohms

**Default:** 50 Ohms

**Description:** Sets the IF port impedance. It is used to adjust the Tx IF power level.

### 5.17.7 BxESCIntfc

**Display label:** 'ESC interface type'  
(On front panel: 'ESC interface')

Options:	Value	Description
	RS232	RS232
	RS422	RS422
	RS485	RS485
	IP	IP
	Local	RS485 – Local
	Remote	RS485 - Remote
	Serial	IP to Serial

**Default:** RS485

**Description:** Specifies the ESC electrical interface. Note RS422 is not available on the modem back panel and RS485 is not available on the IDR card.

### 5.17.8 BxAuxIntfc

**Display label:** 'Aux interface type'  
(On front panel: 'Aux interface')

Options:	Value	Description
	RS232	RS232
	RS422	RS422
	RS485	RS485
	IP	IP

**Default:** RS232

**Description:** Specifies the Aux electrical interface. Note RS422 is not available on the modem back panel and RS485 is not available on the IDR card.

### 5.17.9 BridgeMode

**Display label:** 'Bridging mode'  
(On front panel: 'Aux interface')

Options:	Value	Description
	Bridge	Bridge mode for point-to-point IP
	Broute	Brouting mode for point-to-multipoint IP
	PEP	TCP acceleration mode
	Hub	Hub
	Leaf	Remote
	HC	Header Compression
	Mesh	Mesh
	PEP_HC	TCP acceleration + Header Compression

**Default:** Bridge

**Description:** Select Bridge for ordinary Ethernet over satellite bridging, i.e. point-to-point systems. Select Brouting for all point-to-multipoint or unidirectional IP systems. Select TCP acceleration for bridging of non-TCP packets and acceleration of TCP packets.

### 5.17.10 BridgeFiltering

**Display label:** 'Aux interface type'

(On front panel: 'Aux interface')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	On	On
<b>Default:</b>	Off	

**Description:** Controls whether the Ethernet bridge filters out all traffic other than for the local subnet.

### 5.17.11 BridgeRemCon

**Display label:** 'Bridge M&C'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	On	On
<b>Default:</b>	On	

**Description:** Select to include M&C IP interface in Ethernet bridge. Deselect to keep IP M&C and IP Traffic ports separate.

### 5.17.12 OneForOneMode

**Display Label** 'One For One Mode'

<b>Options</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	On	On

**Default** Off

**Description** Operate terrestrial interface in 1:1 or 1:N compatibility mode.

### 5.17.13 EurocomMode

**Display Label** 'Eurocom Mode'

<b>Options</b>	<b>Value</b>	<b>Description</b>
	D	D Interface
	G	G Interface

**Default** D

**Description** Sets the operational mode of the Eurcom interface.

#### 5.17.14 CPUTrafficIPAddr

**Display label:** Traffic port Ethernet IP address'

**Default:** 0.0.0.0

**Description:** Sets the IP address for the Traffic interface.

#### 5.17.15 CPUTrafficIPNetmask

**Display label:** Traffic port IP subnet mask'

**Default:** 255.255.255.255

**Description:** Sets the Traffic port IP subnet mask.

#### 5.17.16 CPUTrafficIPGateway

**Display label:** Traffic port Ethernet IP gateway'  
(On front panel: Traffic port IP gateway')

**Default:** 0.0.0.0

**Description:** Sets the IP gateway for the Traffic interface. Note that this gateway is used only when the P3714 IP Traffic option card is fitted and TCP acceleration or header compression is being used. When base modem TCP features such as TCP acceleration is being used then the CPURemConIPGateway is used instead.

---

## 5.18 Edit-Unit-M&C

### 5.18.1 CPURUIProtocol

**Display label:** 'Modem control'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Local	Local
	GiveAw ay	Giveaw ay
	TakeAw ay	Takeaw ay

**Default:** Local

**Description:** Controls modem ownership. In Local mode, the local user interface controls the modem. In Giveaw ay mode, a remote admin user may log in and control the modem until an automatic (following a timeout) or manual log out occurs. In Takeaw ay mode, the modem accepts commands from any interface at any time (relying on clear operational procedures to prevent conflicting requests).

### 5.18.2 CPURUIPassword

**Display label:** 'Remote admin passw ord'

**Default:** Paradise

**Description:** Modem passw ord for remote admin user login (login name is 'admin'). The admin user can both view and control the modem. Only one admin user can be logged in at a time.

### 5.18.3 CPURUIView OnlyPassw ord

**Display label:** 'Remote view-only user password'

**Default:** paradise

**Description:** Modem password for remote view-only user login (login name is 'user'). Multiple view-only users can be logged in at the same time.

### 5.18.4 CPUGiveAwayTimeout

**Display label:** 'User auto-logout period'  
(On front panel: 'Auto-logout period')

**Default:** 5  
**Units:** mins  
**Minimum value:** 1  
**Maximum value:** 720  
**Step size:** 1

**Description:** Specifies the period of time without any user input activity after which a user is logged out. In Giveaway mode, logging out causes ownership of the modem to be lost. This is true even for the local user interface (this has an implicit login when the operator first presses a key).

**Display rule:** CPUUserLevel is 'Advanced'

### 5.18.5 CPUSerialMode

**Display label:** 'Remote M&C interface'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	RS232	RS232
	RS485	RS485
	Forward	IP – Forward to Remote
	Local	IP – Local
	Remote	IP - Remote

**Default:** RS232

**Description:** Specifies the remote control serial interface mode. The following should be noted:

#### *IP – Local*

Only available when IP over ESC has been selected. This pushes the serial M&C data across to the distant end Modem via the IP ESC for use at the remote serial ports. This link is a serial extension for control of distant end equipments.

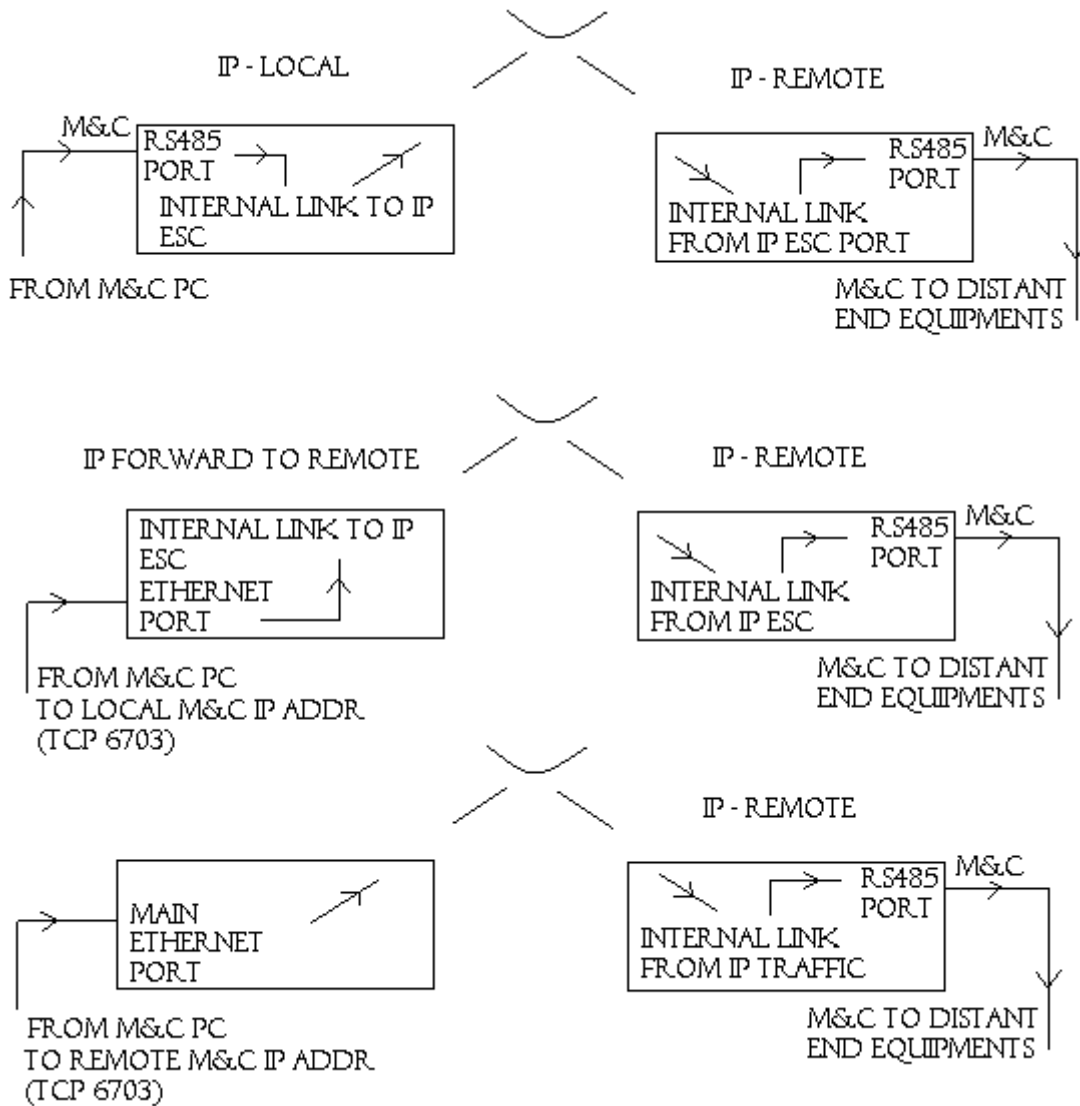
#### *IP – Remote*

This allows the serial M&C data, received via IP from the local Modem to be used at the distant end serial ports. Uses TCP port 6703. This link is a serial extension for control of distant end equipments.

#### *IP – Forward to Remote*

Only available when IP over ESC has been selected. This takes advantage of the local IP address and forwards M&C information directly to the remote Modem. Uses TCP port 6703. This link is a serial extension for control of distant end equipments.

The following diagrams show how the M&C interfaces may be configured using the IP – Local, IP - Remote and IP - forwarding options to facilitate distant end M&C. Please note, the first two options form a pipe to transfer messages to the distant end equipments and if M&C of the Modems is necessary then an alternative provision must be made. The third diagram is an alternative illustration of IP-Remote and can be facilitated by IP over the main data channel / multimux etc.



### 5.18.6 CPUSerialBaud

**Display label:** 'Baud rate'

Options:	Value	Description
	50	50 baud

75	75 baud
110	110 baud
150	150 baud
300	300 baud
600	600 baud
1200	1200 baud
2400	2400 baud
4800	4800 baud
9600	9600 baud
19200	19200 baud
38400	38400 baud
57600	57600 baud
115200	115200 baud

**Default:** 9600 baud

**Description:** Specifies the remote control serial interface baud rate.

#### 5.18.7 CPURS485Addr

**Display label:** 'RS485 address'  
**Default:** 0  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 255  
**Step size:** 1

**Description:** Specifies the unit's RS485 address.

**Display rule:** CPUSerialMode is 'RS485'

#### 5.18.8 CPURemConIPAddr

**Display label:** 'Remote control port Ethernet IP address'  
**Default:** 10.0.70.1

**Description:** Sets the IP address for the remote control interface.

#### 5.18.9 CPURemConIPNetmask

**Display label:** 'Remote control port IP subnet mask'  
(On front panel: 'Remote control port IP netmask')

**Default:** 255.255.0.0

**Description:** Sets the remote control port IP subnet mask.

#### 5.18.10 CPURemConIPGateway

**Display label:** 'Remote control port Ethernet IP gateway'  
(On front panel: 'Remote control port IP gateway')

**Default:** 0.0.0.0

**Description:** Sets the IP gateway for the remote control interface. Note that this gateway is used only when base modem TCP features such as TCP acceleration are being used. When the P3714 IP Traffic option card is fitted then the CPUTrafficIPGateway is used instead.

---

## 5.19 Edit-Unit-Clocks

### 5.19.1 GwyStatClkSrc

**Display label:** 'Station clock source'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	None	None
	BNC	BNC
	RS422	RS422

**Default:** None

**Description:** Controls the station clock source to be used in place of the internal 10MHz reference.

### 5.19.2 GwyStatClkType

**Display label:** 'Station clock use'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Int10MHz	Replace internal 10MHz reference clock
	RxRefClk	Replace only Rx reference clock

**Default:** Replace internal 10MHz reference clock

**Description:** Controls the function of the station clock i.e. whether replaces the internal 10MHz reference or is used as a Rx-only reference clock.

### 5.19.3 GwyStatClkFreq

**Display label:** 'Station clock frequency'  
(On front panel: 'Station clock freq')

**Default:** 10000

**Units:** kHz

**Minimum value:** 1

**Maximum value:** 10000

**Step size:** 1

**Description:** Indicates the frequency of the station clock reference signal.

**Display rule:** CPUUserLevel is 'Advanced'

---

## **5.20 Edit-Unit-User**

### **5.20.1 CPUUserLevel**

**Display label:** 'User level'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Basic	Basic
	Advanced	Advanced

**Default:** Basic

**Description:** Enables or disables advanced menu options.

---

## 5.21 Edit-Unit-Advanced

### 5.21.1 CPUBxBERMax

**Display label:** 'Deferred alarm BER threshold'  
(On front panel: 'BER threshold')

**Default:** 1E-4

**Units:**

**Minimum value:** 9.9E-15

**Maximum value:** 1.0E-2

**Step size:** 0.1 E1

**Description:** Sets the error-rate threshold above which a deferred alarm will be generated.

### 5.21.2 CPURxEbNoMin

**Display label:** 'Rx Eb/No deferred alarm threshold'  
(On front panel: 'EbNo threshold')

**Default:** 9.0

**Units:** dB

**Minimum value:** 0.0

**Maximum value:** 99.0

**Step size:** 0.1

**Description:** Sets the Eb/No threshold below which a deferred alarm will be generated.

### 5.21.3 CPURxMaxBufSlip

**Display label:** "Buffer slip' deferred alarm threshold'  
(On front panel: 'Buf slip threshold')

**Default:** 0

**Units:** hrs

**Minimum value:** 0

**Maximum value:** 9999

**Step size:** 1

**Description:** Sets the threshold period for consecutive buffer slips above which a

deferred alarm is generated.

#### 5.21.4 CPUTxAISAlmAct

**Display label:** 'AIS alarm action'

Options:	Value	Description
	Ignore	Ignore
	Alarm	Prompt alarm & force AIS

**Default:** Prompt alarm & force AIS

**Description:** **Reserved for future use.** Controls the action taken with respect to Alarm Indication Signal detection. It can be ignored or set to raise an alarm, regenerate AIS and send a backward alarm where possible.

#### 5.21.5 CPUTxHandshakeAlmAct

**Display label:** 'Tx handshake alarm action'

Options:	Value	Description
	Ignore	Ignore
	Alarm	Prompt alarm

**Default:** Ignore

**Description:** Controls the action taken when a terrestrial handshake signal is activated. It can be ignored or set to raise an alarm.

#### 5.21.6 CPURxAISAlmAct

**Display label:** 'AIS alarm action'

Options:	Value	Description
	Ignore	Ignore
	Alarm	Prompt alarm & force AIS

**Default:** Prompt alarm & force AIS

**Description:** **Reserved for future use.** Controls the action taken with respect to Alarm Indication Signal detection. It can be ignored or set to raise an alarm, regenerate AIS and send a backward alarm where possible.

#### 5.21.7 CPUBxBERAlmActive

**Display label:** 'BER threshold alarm'

**Default:** On

**Description:** Controls whether the BER threshold alarm is enabled.

#### 5.21.8 TFECTxDiffCoding

**Display label:** 'Tx differential coding'

**Default:** On

**Description:** Controls whether differential coding is enabled.

**Display rule:** TBBTxService is not 'Off' AND CPUUserLevel is 'Advanced'

#### 5.21.9 RFECRxDiffCoding

**Display label:** 'Rx differential coding'

**Default:** On

**Description:** Controls whether differential coding is enabled.

**Option display rules:** RBBRxService is not 'Off' AND CPUUserLevel is 'Advanced' AND CPURxEqTx is False

#### 5.21.10 CPUSafCode

**Display label:** 'Enter new SAF code'

**Default:** None

**Description:** Encrypted code for enabling Software Activated Features.

#### 5.21.11 CPURxOneForOne

**Display Label:** 'Receive Fail Switchover'

**Options**

Value	Description
Off	Off
On	On

**Default:** On

**Description:** This option enables a receive failure to cause a 1:1 switchover.

---

## 5.22 Edit-Unit-SNMP

### 5.22.1 CPUSNMPSysLocation

**Display label:** 'System location'

**Default:** Modem location

**Description:** The location of the system.

### 5.22.2 CPUSNMPAdminContact

**Display label:** 'Administrator contact information'

**Default:**

**Description:** The contact information for the administrator.

### 5.22.3 CPUSNMPROCommunity

**Display label:** 'Read-only access community name'

**Default:** public

**Description:** SNMP V1/V2c read-only access community name.

### 5.22.4 CPUSNMPROManagerIP

**Display label:** 'Read-only source identifier'

**Default:** default

**Description:** Source token. Can be a hostname, a subnet, or the word 'default'. A subnet can be specified as IP/MASK or IP/BITS.

### 5.22.5 CPUSNMPRWCommunity

**Display label:** 'Read-w rite access community name'

**Default:** private

**Description:** SNMP V1/V2c read-write access community name.

#### 5.22.6 CPUSNMPrwManagerIP

**Display label:** 'Read-w rite source identifier'

**Default:** default

**Description:** Source token. Can be a hostname, a subnet, or the word 'default'. A subnet can be specified as IP/MASK or IP/BITS.

#### 5.22.7 CPUSNMPv1TrapRcv

**Display label:** 'V1 trap receiver'

**Default:**

**Description:** An SNMP V1 trap receiver.

#### 5.22.8 CPUSNMPv1TrapCommunity

**Display label:** 'V1 trap community'

**Default:** public

**Description:** Define the hosts to receive traps.

#### 5.22.9 CPUSNMPv2TrapRcv

**Display label:** 'V2c trap receiver'

**Default:**

**Description:** Use to send SNMP V2 traps.

#### 5.22.10 CPUSNMPv2TrapCommunity

**Display label:** 'V2 trap community'

**Default:** public

**Description:** Define the hosts to receive traps.

#### 5.22.11 CPUSNMPTrapSinkCommunity

**Display label:** 'Default trap sink community'

**Default:** public

**Description:** This defines the default community string to be used when sending traps.

#### 5.22.12 RunSNMP

**Display label:** 'SNMP agent run control'

**Default:** Off

**Description:** This switches SNMP on or off.

---

## **5.23 Edit-Unit-SMTP**

### **5.23.1 CPUSMTPUserName**

**Display label:** 'Account name'  
(On front panel: 'User name')

**Default:**

**Description:** User's account name if authentication is required by the SMTP mail server.

### **5.23.2 CPUSMTPUserPassword**

**Display label:** 'Passw ord'

**Default:**

**Description:** Passw ord if authentication is required by the SMTP mail server.

### **5.23.3 CPUSMTPHost**

**Display label:** 'Outgoing mail server'

**Default:**

**Description:** Outgoing mail server name or IP address of the SMTP mail server.

### **5.23.4 CPUSMTPAuthRequired**

**Display label:** 'Authentication required'

**Default:**

**Description:** Authentication required by the SMTP mail server.

### **5.23.5 CPUSMTPRxEbNo**

**Display label:** 'Rx EbNo'

**Default:**

**Description:** Include up to 4 weeks of logged data for Eb/No.

#### 5.23.6 CPUSMTPDistantEbNo

**Display label:** 'Distant EbNo'

**Default:**

**Description:** Include up to 4 weeks of logged data for distant Eb/No.

#### 5.23.7 CPUSMTPRxPwrLevel

**Display label:** 'Rx power level'

**Default:**

**Description:** Include up to 4 weeks of logged data for receive power level.

#### 5.23.8 CPUSMTPBer

**Display label:** 'Final BER'

**Default:** Off

**Description:** Include up to 4 weeks of logged data for final BER

#### 5.23.9 CPUSMTPAUPCPwrOffset

**Display label:** 'AUPC power offset'

**Default:**

**Description:** Include up to 4 weeks of logged data for Eb/No.

#### 5.23.10 CPUSMTPCurrTemp

**Display label:** 'Modem temperature'  
(On front panel: 'Modem temperature')

**Default:**

**Description:** Include up to 4 weeks of logged data for Eb/No modem temperature.

#### 5.23.11 CPUSMTPLog

**Display label:** 'Event log'  
(On front panel: 'Log')

**Default:**

**Description:** Select to include the current event log in the email report.

#### 5.23.12 CPUSMTPSysAlarms

**Display label:** 'Current alarms'  
(On front panel: 'Alarms')

**Default:**

**Description:** Select to include the current alarms in the Email report.

#### 5.23.13 CPUSMTPConfigMems

**Display label:** 'Configuration memories'  
(On front panel: 'Memories')

**Default:**

**Description:** Select to include all of the configuration memories in the email report. Each configuration is sent as a separate attachment.

#### 5.23.14 CPUSMTPSpectData

**Display label:** 'Spectral data'  
(On front panel: 'Spectral data')

**Default:**

**Description:** Select to include spectrum data in the email report. A snapshot of the current values is sent as an attachment.

#### 5.23.15 CPUSMTPConstData

**Display label:** 'Constellation data'  
(On front panel: 'Constellation data')

**Default:**

**Description:** Select to include constellation data in the email report. A snapshot of the current values is sent as an attachment.

#### 5.23.16 CPUSMTPPRBSBER

**Display label:** 'PRBS BER'

**Default:**

**Description:** Include up to 4 weeks of logged data for Eb/No.

#### 5.23.17 CPUSMTPMode

**Display label:** 'Email report interval'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	disabled	Disabled
	minute	Every minute
	tenmins	Every 10 minutes
	thirtymins	Half hourly
	hour	Every hour
	day	Daily
	week	Week
	month	Every Month

**Default:** Disabled

**Description:** Set how often an automatic email report is generated.

#### 5.23.18 CPUSMTPUserInterval

**Display label:** "

**Default:** 20

**Units:** mins

**Minimum value:** 1

**Maximum value:** 120960

**Step size:** 1

**Description:**

#### 5.23.19 CPUSMTPRecipient

**Display label:** 'Recipient's email'

**Default:**

**Description:** The email address to which the reports are sent.

#### 5.23.20 CPUSMTPAltFrom

**Display label:** 'Bounce address'  
(On front panel: 'Reply to')

**Default:**

**Description:** Alternative email address that will receive any error messages if email fails to be delivered.

#### 5.23.21 CPUSMTPSubject

**Display label:** 'Subject'

**Default:** Paradise modem - auto status report

**Description:** Text to be used as the emails subject line.

#### 5.23.22 CPUSMTPAlarm Event

**Display label:** 'Unit faults'

**Default:**

**Description:** When selected units faults are emailed immediately.

#### 5.23.23 CPUSMTPRxFreqOffset

**Display label:** 'Rx Frequency Offset'

**Default:**

**Description:** Include up to 4 weeks of logged data for receive frequency offset.

---

## 5.24 Edit-Unit-Routes

### 5.24.1 route0, route1, ... route63

**Display label:** 'Static route'

**Default:**

**Description:** Static route.

### 5.24.2 hcroute0, hcroute1, ... route15

**Display Label** 'Header Compressed Route'

**Default**

**Description** Header Compressed Route

## **5.25 View-Unit**

### **5.25.1 ManufacturerID**

**Display label:** 'Manufacturer ID'  
(On front panel: 'Manf. ID')

**Default:** Paradise Datacom

**Description:** Manufacturer identity number.

### **5.25.2 ModelNumber**

**Display label:** 'Model number'  
(On front panel: 'Model')

**Default:** P3120

**Description:** Modem model number.

### **5.25.3 SerialNumber**

**Display label:** 'Modem serial number'  
(On front panel: 'S/N')

**Default:** (Unique to each unit)

**Description:** Indicates the internal modem serial number.

### **5.25.4 SoftwareVersion**

**Display label:** 'Software version'  
(On front panel: 'S/w ver')

**Default:** (Unique to each version)

**Description:** Version number for the modem software.

#### 5.25.5 FirmwareVersion

**Display label:** 'Firmware version'  
(On front panel: 'F/w ver')

**Default:** (Unique to each version)

**Description:** Version number for the modem firmware.

#### 5.25.6 BxBoardConfig

**Display label:** 'Modem configuration'

**Default:** Unknown

**Description:** Identifies the modem physical configuration.

#### 5.25.7 CPUSwitchModeStatus

**Display label:** 'Status of the Switch'

**Default:** Off

**Description:** Status of the Switch.

---

## 5.26 View-Unit-SAF

### 5.26.1 CPUSafFeaturesEnabled

**Display label:** 'SAF features enabled'  
**Default:** (Unique to each modem)

**Description:** Indicates which Software Activated Features are currently switched on.

### 5.26.2 CPUSafFeaturesNotEnabled

**Display label:** 'SAF features not enabled'  
**Default:** (Unique to each modem)

**Description:** Indicates which Software Activated Features are currently switched off.

### 5.26.3 CPUDemoTimeRemaining

**Display label:** 'SAF time remaining'  
**Default:** 0.0  
**Units:** hours

**Description:** Indicates the time for which temporarily-enabled Software Activated Features will remain switched on.

### 5.26.4 CPUDemoShotsRemaining

**Display label:** 'Demo test shots remaining'  
(On front panel: 'SAF test shots remaining')  
**Default:** 3.0  
**Units:**

**Description:** Indicates the number of times Software Activated Features can be enabled temporarily for free.

## 5.27 View-Unit-Monitor

### 5.27.1 TxBBDataRate

**Display label:** 'Tx baseband data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the output of the baseband unit.

**Display rule:** TBBTxService is not 'Off'

### 5.27.2 RxBBDataRate

**Display label:** 'Rx baseband data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the input to the baseband unit.

**Display rule:** RBBRxService is not 'Off'

### 5.27.3 TxFRMDataRate

**Display label:** 'Tx framer data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the output of the framing unit.

**Display rule:** TBBTxService is not 'Off'

### 5.27.4 RxFRMDataRate

**Display label:** 'Rx deframer data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the input to the deframing unit.

**Display rule:** RBBRxService is not 'Off'

#### 5.27.5 TxRSDataRate

**Display label:** 'Tx RS data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the output of the Reed-Solomon encoder.

**Display rule:** TBBTxService is not 'Off'

#### 5.27.6 RxRSDataRate

**Display label:** 'Rx RS data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the input to the Reed-Solomon decoder.

**Display rule:** RBBRxService is not 'Off'

#### 5.27.7 TxFECDataRate

**Display label:** 'Tx FEC data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the output of the inner-FEC encoder.

**Display rule:** TBBTxService is not 'Off'

#### 5.27.8 RxFECDataRate

**Display label:** 'Rx FEC data rate'

**Default:** 0.0

**Units:** bps

**Description:** Data rate at the input to the inner-FEC decoder.

**Display rule:** RBBRxService is not 'Off'

### 5.27.9 BxCurrTemp

**Display label:** 'Modem temperature'  
(On front panel: 'Modem temp')

**Default:** 0.0

**Units:** Degrees(C)

**Description:** Current modem internal operating temperature.

### 5.27.10 BxPSULevels

**Display label:** 'PSU levels'

**Default:** 0

**Description:** Current PSU power level.

### 5.27.11 LoopbackStatus

**Display label:** 'Loopback status'

**Default:** Off

**Description:** Status of the loopback circuit.

**Display rule:** CPULoopback is not 'Off'

### 5.27.12 TxMaxESCRate

**Display label:** 'Max ESC rate'

**Default:** 110

**Units:** baud

**Description:** Maximum ESC input baud rate.

**5.27.13 RxMaxESCRate**

**Display label:** 'Max ESC rate'

**Default:** 110

**Units:** baud

**Description:** Maximum ESC output baud rate.

**5.27.14 BxPSULevelsOFN**

**Display label:** 'PSU levels'  
(On front panel: 'PSU')

**Default:** 0

**Description:** Current PSU power level. This refers to the redundant supply in the Redundancy Switch.

---

## 5.28 Test

### 5.28.1 CPULoopback

**Display label:** 'Loopback'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Int	Interface (local and remote)
	DI	Drop and insert (local)
	Frm	Framer/deframer (local)
	RS	RS (local)
	FEC	FEC (local)
	IF	IF (local)

**Default:** Off

**Description:** Loopback selection.

**Display rule:** CPUSAFRx is True AND CPUSAFTx is True

### 5.28.2 TFECTxModCW

**Display label:** 'Modulator CW'

**Default:** Off

**Description:** Test mode.

**Display rule:** TFECTxModAlt10 is False

### 5.28.3 TFECTxModAlt10

**Display label:** 'Modulator alternate 1,0'

**Default:** Off

**Description:** Test mode.

**Display rule:** TFECTxModCW is False

### 5.28.4 TBBTxPRBSChannel

**Display label:** 'PRBS channel'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Main	Main channel
	ESC	ESC channel
	Aux	Aux channel

**Default:** ESC channel

**Description:** Controls the location where the Tx PRBS signal is injected.

**Display rule:** TBBTxPRBSMode is not 'Off'

### 5.28.5 TBBTxPRBSMode

**Display label:** 'PRBS mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	On	On

**Default:** Off

**Description:** Controls the PRBS mode.

**Display rule:** CPUSAFPRBS is True

### 5.28.6 TBBTxPRBSPattern

**Display label:** 'PRBS pattern'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	11	$2^{11}-1$
	15	$2^{15}-1$
	20	$2^{20}-1$

**Default:**  $2^{15}-1$

**Description:** Controls the pattern length used for PRBS testing.

**Display rule:** TBBTxPRBSMode is not 'Off'

### 5.28.7 RBBRxPRBSChannel

**Display label:** 'PRBS channel'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Main	Main channel
	ESC	ESC channel
	Aux	Aux channel

**Default:** ESC channel

**Description:** Controls the location where the Rx monitors the PRBS.

**Display rule:** RBBRxPRBSMode is not 'Off' AND CPURxEqTx is False

#### 5.28.8 RBBRxPRBSMode

**Display label:** 'PRBS mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	On	On

**Default:** Off

**Description:** Controls the PRBS mode.

**Display rule:** CPUSAFPRBS is True AND CPURxEqTx is False

#### 5.28.9 RBBRxPRBSPattern

**Display label:** 'PRBS BER pattern'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	11	PRBS 11
	15	PRBS 15
	20	PRBS 20-O151
	ALL0	All 0
	ALL1	All 1
	ALT10	Alt 10
	ALT1100	Alt 1100
	1IN4	1 in 4
	1IN8	1 in 8
	2IN8	2 in 8
	1IN16	1 in 16
	3IN24	3 in 24
	6	PRBS 6
	7	PRBS 7
	9	PRBS 9
	19	PRBS 19
	20_O153	PRBS 20-O153
	23	PRBS 23
	QRSS	QRSS
	User	User

**Default:** PRBS 20-O151

**Description:** Controls the pattern length used for PRBS testing.

**Display rule:** RBBRxPRBSMode is not 'Off' AND CPURxEqTx is False

#### 5.28.10 CPUWideSpectrum

**Display label:** 'Enable wide spectral graph'

**Default:** Off

**Description:** Controls whether wide spectral mode is enabled.

#### 5.28.11 RxPRBSBER

**Display label:** 'PRBS BER'

**Default:** 0.0

**Units:**

**Description:** The BER measured by the BERT facility

---

## 5.29 Miscellaneous-Lband

### 5.29.1 TLBTxRFFreq

**Display label:** 'L-band carrier frequency'  
(On front panel: 'Lband carrier freq')

**Default:** 950.0000

**Units:** MHz

**Minimum value:** 950.0000

**Maximum value:** 2050.0000 (*1950.0000 as standard*)

**Step size:** 0.0001

**Description:** Tx L-band frequency used to transmit to satellite.

### 5.29.2 TLBTxRFPwr

**Display label:** 'L-band output power'  
(On front panel: 'RF output power')

**Default:** -30.0

**Units:** dBm

**Minimum value:** -30.0

**Maximum value:** -5.0

**Step size:** 0.1

**Description:** RF transmitted power level.

### 5.29.3 RLBRxRFFreq

**Display label:** 'L-band carrier frequency'  
(On front panel: 'Lband carrier freq')

**Default:** 950.0000

**Units:** MHz

**Minimum value:** 950.0000

**Maximum value:** 2050.0000 (*1950.0000 as standard*)

**Step size:** 0.0001

**Description:** Rx L-band frequency used to receive from satellite.

#### 5.29.4 RL BRxDCVoltage

**Display label:** 'DC voltage'

Options:	Value	Description
	Off	Off
	V15	15V
	V24	24V
	V24Multiswitch	Multiswitch

**Default:** Off

**Description:** Controls the source of DC supplies to the Rx IF module. Note that the Multiswitch option selects the Global Communications LNB Multiswitch, allowing selection of a high-band/low-band LO and horizontal/vertical polarization.

#### 5.29.5 RL BRx10MHzRef

**Display label:** 'Rx 10MHz reference'  
(On front panel: 'Rx 10MHz ref')

**Default:** Off

**Description:** Controls the source of 10MHz reference to the Rx IF module.

#### 5.29.6 CPURxLNBDCAlarmAct

**Display label:** 'DC alarm enable'

Options:	Value	Description
	Ignore	Ignore
	Alarm	Display fault when active

**Default:** Display fault when active

**Description:** Indicates whether the combined over/under-current, over-temperature alarm for the Rx DC switch is considered a fault or not.

#### 5.29.7 CPURxSHFFreqOffset

**Display label:** 'Frequency offset'

**Default:** 0.000

**Units:** GHz

**Minimum value:** -99.999

**Maximum value:** 99.999

**Step size:** 0.0000001

**Description:** Down-converter conversion frequency, allowing Tx IF frequency to be displayed/edited in direct SHF frequencies.

#### 5.29.8 CPUTxBUCDCCurrentMin

**Display label:** 'DC current minimum'  
(On front panel: 'DC current min')

**Default:** 0.1

**Units:** A

**Minimum value:** 0.1

**Maximum value:** 6.0

**Step size:** 0.01

**Description:** Trip threshold at which a fault is declared when the current drawn by the Tx ODU is outside the limit.

#### 5.29.9 CPUTxBUCDCCurrentMax

**Display label:** 'DC current maximum'  
(On front panel: 'DC current max')

**Default:** 0.1

**Units:** A

**Minimum value:** 0.1

**Maximum value:** 6.0

**Step size:** 0.01

**Description:** Trip threshold at which a fault is declared when the current drawn by the Tx ODU is outside the limit.

#### 5.29.10 CPUTxSHFPwrOffset

**Display label:** 'Tx power offset'

**Default:** 0.0

**Units:** dB

**Minimum value:** -99.9

**Maximum value:** 99.9

**Step size:** 0.1

**Description:** Defines a transmit power offset, used when displaying and editing

transmit power.

#### 5.29.11 CPUTxSHFFreqOffset

**Display label:** 'SHF freq offset'  
**Default:** 0.000  
**Units:** GHz  
**Minimum value:** -99.999  
**Maximum value:** 99.999  
**Step size:** 0.0000001

**Description:** Up-converter conversion frequency, allowing Tx IF frequency to be displayed/edited in direct SHF frequencies.

#### 5.29.12 CPUTxSHFPwrUnits

**Display label:** 'Tx power units'  
**Options:**

Value	Description
dBm	dBm
dBW	dBW

**Default:** dBm

**Description:** Specifies the Tx SHF power units as dBm or dBW.

#### 5.29.13 CPUTxSHFPwrRadiated

**Display label:** 'Tx power type'  
**Options:**

Value	Description
TxPwr	Tx power
EIRP	EIRP

**Default:** Tx power

**Description:** Specifies the TX SHF Power Radiated display. This is a display feature only and does not adjust the actual power.

#### 5.29.14 TLBTxDCVoltage

**Display label:** 'DC supply voltage'  
**Default:** Off

**Description:** Controls the source of DC supplies to the Tx IF module.

#### 5.29.15 TLBTxBUCVoltage

**Display label:** 'BUC PSU'

**Default:** ?

**Description:** The supply voltage of the BUC PSU

#### 5.29.16 TLBTx10MHzRef

**Display label:** '10MHz reference'

**Default:** Off

**Description:** Controls the 10MHz reference to the Tx IF module.

#### 5.29.17 TLBTxBUCCarrier

**Display label:** 'BUC carrier'

**Default:** Off

**Description:** Controls whether the BUC carrier is switched on.

#### 5.29.18 TLBTxBUCAtten

**Display label:** 'BUC attenuation'

**Default:** -30

**Units:** dB

**Minimum value:** -30

**Maximum value:** 0

**Step size:** 1

**Description:** Controls the level of attenuation applied from the modem output to the BUC.

#### 5.29.19 CPUTxBUCDCAlmAct

**Display label:** 'DC alarm enable'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
-----------------	--------------	--------------------



F10000	Ku 10.9 - 11.7GHz
F10250	Ku 11.2 - 11.7GHz
F10750	Ku 11.7 - 12.2GHz
F11300	Ku 12.2 - 12.7GHz
None	None
Other	Other
F9750	Universal 10.7 - 12.75GHz Lo
F10600	Universal 10.7 - 12.75GHz Hi

**Default:** None

**Description:** Indicates type of LNB fitted.

#### 5.29.22 TLBTxBUCFreq

**Display label:** 'BUC carrier frequency'  
(On front panel: 'BUC carrier freq')

**Default:** 0.0

**Units:** GHz

**Minimum value:** 0.0

**Maximum value:** 99.999

**Step size:** 0.0000001

**Description:** BUC frequency used to transmit to satellite.

#### 5.29.23 RLBRxLNBFreq

**Display label:** 'LNB carrier frequency'  
(On front panel: 'LNB carrier freq')

**Default:** 0.0

**Units:** GHz

**Minimum value:** 0.0

**Maximum value:** 99.999

**Step size:** 0.0000001

**Description:** LNB frequency used to receive from satellite.

#### 5.29.24 TLBTxBUCPwr

**Display label:** 'BUC output power'

**Default:** 0.0

**Units:**

**Minimum value:** -99.9

**Maximum value:** 99.9

**Step size:** 0.1

**Description:** BUC transmitted power level.

**5.29.25 BLBBxServices**

**Display label:** 'Mute Services In Standby'

**Default:** Off

**Description** This options controls whether the modem mutes the services (DC & 10MHz) when in 1:1 standby. Select this option when you want the services to switch on 1: changeover.

---

### 5.30 Miscellaneous-AUPC

#### 5.30.1 CPUTxAUPCMode

**Display label:** 'AUPC operational mode'  
(On front panel: 'AUPC Mode')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Monitor	Monitor remote Eb/No
	Maintain	Maintain remote Eb/No

**Default:** Off

**Description:** Setting to Maintain means the modem will attempt to maintain the remote Eb/No at the target level. Setting to Monitor will allow the remote modem to be monitored without making any changes to the Tx power level.

**Display rule:** CPUUserLevel is 'Advanced' AND CPUSAFAUPC is True

#### 5.30.2 CPUTxTargetDistantEbNo

**Display label:** 'Target distant Eb/No'  
(On front panel: 'Target remote EbNo')

**Default:** 3.0

**Units:** dB

**Minimum value:** 0.1

**Maximum value:** 9.9

**Step size:** 0.1

**Description:** This is the distant Eb/No that AUPC tries to maintain by adjusting the Tx power level.

**Display rule:** CPUTxAUPCMode is 'Maintain' AND CPUUserLevel is 'Advanced'

#### 5.30.3 CPUTxPositivePwrOffset

**Display label:** 'Maximum AUPC power offset'  
(On front panel: 'Max power offset')

**Default:** 1

**Units:** DBm  
**Minimum value:** 0  
**Maximum value:** 9.9  
**Step size:** 0.1

**Description:** This is the maximum increase in Tx power level that AUPC can make to maintain distant Eb/No.

**Display rule:** CPUTxAUPCMode is 'Maintain' AND CPUUserLevel is 'Advanced'

#### 5.30.4 CPUTxNegativePwrOffset

**Display Label** Maximum negative AUPC power offset  
**Default** 1  
**Units** dBm  
**Minimum Value** 0  
**Maximum Value** 9.9  
**Step Size** 0.1

**Description** This is the maximum decrease in Tx power level that AUPC can make to maintain distant Eb/No.

#### 5.30.5 AUPCPwrOffset

**Display label:** 'Current AUPC Tx power level offset'  
(On front panel: 'AUPC Tx Offset')  
**Default:** 0.0  
**Units:** dB

**Description:** Current offset applied to Tx power level to maintain target Eb/No.

#### 5.30.6 RxRemoteEbNo

**Display label:** 'Remote Eb/No'  
**Default:** 0.0  
**Units:** DB

**Description:** The Eb/No measured by the remote modem when AUPC is enabled.

### 5.30.7 CPURxDeferredDistantEbNo

<b>Display Label</b>	'Deferred distant Eb/No'
<b>Default</b>	0.0
<b>Units</b>	dB
<b>Minimum Value</b>	0.1
<b>Maximum Value</b>	9.9
<b>Step Size</b>	0.1
<b>Description</b>	This is the distant Eb/No threshold below which a deferred alarm will be raised.

---

## 5.31 Miscellaneous-Build

### 5.31.1 CPUG703Fitted

**Display label:** 'G.703 card fitted'  
**Default:** Off

**Description:** Indicates whether G.703 card is fitted.

### 5.31.2 CPUHSSI Fitted

**Display label:** 'HSSI card fitted'  
**Default:** Off

**Description:** Indicates whether HSSI card is fitted.

### 5.31.3 CPUIDR Fitted

**Display label:** 'IDR card fitted'  
**Default:** Off

**Description:** Indicates whether IDR card is fitted.

#### 5.31.4 CPULVDSFitted

**Display label:** 'LVDS card fitted'

**Default:** Off

**Description:** Indicates whether LVDS card is fitted.

#### 5.31.5 CPURIFFitted

**Display label:** 'Rx IF card fitted'

**Default:** Off

**Description:** Indicates whether Rx IF card is fitted.

#### 5.31.6 CPUTIFFitted

**Display label:** 'Tx IF card fitted'

**Default:** Off

**Description:** Indicates whether Tx IF card is fitted.

#### 5.31.7 CPURLBFitted

**Display label:** 'Rx L-band card fitted'

**Default:** Off

**Description:** **Reserved for future use.** Indicates whether Rx L-band card is fitted.

#### 5.31.8 CPUTLBFitted

**Display label:** 'Tx L-band card fitted'

**Default:** Off

**Description:** **Reserved for future use.** Indicates whether Tx L-band card is fitted.

### 5.31.9 CPUQUADEFitted

**Display Label** 'Quad E1 card fitted'

**Default** Off

**Description** Indicates whether Quad E1 card is fitted.

### 5.31.10 CPUEurocomFitted

**Display Label** 'Eurocom card fitted'

**Default** Off

**Description** Indicates whether Eurocom card is fitted.

### 5.31.11 MotherboardSerialNumber

**Display label:** 'Motherboard serial number'  
(On front panel: 'S/N')

**Default:** 0

**Description:** Indicates the motherboard serial number.

### 5.31.12 CPUOFNFitted

**Display label:** '1:N hardware fitted'

**Default:**

**Description:** Indicates whether 1:N is fitted.

---

## 5.32 Miscellaneous-Compatibility

### 5.32.1 TBBTxMinOHMultBAMode

**Display label:** 'Min overhead multiple back alarm mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Single	Single
	Multiple	Multiple

**Default:** Single

**Description:** **Reserved for future use.** Provides backward compatibility with Paradise P300 satellite modem.

### 5.32.2 RBBRxMinOHMultBAMode

**Display label:** 'Min overhead multiple back alarm mode'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Single	Single
	Multiple	Multiple

**Default:** Single

**Description:** **Reserved for future use.** Provides backward compatibility with Paradise P300 satellite modem.

### 5.32.3 TBBTxMinOHMultBAsEq

**Display label:** 'Min overhead multi-back alarm sequence'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	4	4
	8	8
	16	16
	32	32
	64	64

**Default:** 64

**Description:** **Reserved for future use.** Provides backward compatibility with Paradise P300 satellite modem.

#### 5.32.4 RBBRxMinOHMultBAsEq

**Display label:** 'Min overhead multi-back alarm sequence'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	4	4
	8	8
	16	16
	32	32
	64	64

**Default:** 64

**Description:** **Reserved for future use.** Provides backward compatibility with Paradise P300 satellite modem.

---

### 5.33 Miscellaneous-Misc

#### 5.33.1 TBBTxIBSX50Stuff

**Display label:** 'Stuff 48/56k to 64kbps before framing'

**Default:** Off

**Description:** **Reserved for future use.** Controls whether additional bits are added to the traffic source to force frame synchronisation.

#### 5.33.2 TBBTxTRSpooF

**Display label:** 'SpooF 2M AIS & BA transparency with fractional sat. link'  
(On front panel: 'SpooF 2M AIS & BA transparency')

**Options:**

Value	Description
-------	-------------

Normal	No
SpooF	Yes

**Default:** No

**Description:** **Reserved for future use.** Controls spoofing of PCM bearer transparency over a thin route IDR (IBS o/h) link, giving the appearance of complete PCM bearer connectivity over the satellite, even if only a single timeslot is actually conveyed over satellite.

#### 5.33.3 TBBTxTS0G732Spares

**Display label:** 'G.732 (FAS TS0) spare bits'

**Options:**

Value	Description
-------	-------------

High	Fix high
Transparent	Transparent

**Default:** Fix high

**Description:** **Reserved for future use.** ITU recommend that spare bits of TS0 are fixed high as they cross country borders.

#### 5.33.4 TBBTxG732TerrCRC

**Display label:** 'Processing of bearer CRC'  
(On front panel: 'Process bearer CRC')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ignore	Ignore CRC
	Check	Check CRC

**Default:** Ignore CRC

**Description:** Specifies whether the terrestrial G.732 frame contains a checksum that should be checked. If it is checked, then if enough errors accumulate then a Tx Drop MUX BER alarm will be raised (*'Input BER > 1E-3'*).

#### 5.33.5 TBBTxG732Timeout

**Display label:** 'Frame re-acquisition on CRC loss'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Normal	Normal
	Resync	Resync if CRC lost for 8ms

**Default:** Normal

**Description:** Controls response to loss of G.732 frame synchronisation. Can be used to specify that re-acquisition of the terrestrial Drop/Insert frame synchronization should occur if CRC synchronization cannot be achieved within 8ms.

#### 5.33.6 TBBTxV35ScrType

**Display label:** 'V.35 scrambler type'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	CCITT	CCITT
	Intelsat	Intelsat (normal)
	FDC	Fairchild
	Linkabit	Linkabit

**Default:** Intelsat (normal)

**Description:** Sets the V.35 scrambler type.

### 5.33.7 TBBTxMaxMFPeriod

**Display label:** 'Maximum multi-frame period'  
(On front panel: 'multi-frame max')

**Default:** 2000

**Units:** ms

**Minimum value:** 100

**Maximum value:** 15000

**Step size:** 1

**Description:** **Reserved for future use.** Sets a maximum multi-frame frame period that is used in determining the frame length in Min O/H mode. It is the maximum value that the frame is allowed to extend to (this affects frame acquisition time).

### 5.33.8 TBBTxIBSCustAlm

**Display label:** 'IBS custom alarm'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	None	No backward alarm
	Single	Single backward alarm
	Four	Four backward alarms

**Default:** No backward alarm

**Description:** **Reserved for future use.** Controls backward alarm reporting in IBS/SMS custom mode.

**Display rule:** CPUUserLevel is 'Advanced' AND (CPUSAF CustFrm is True OR CPUSAFESC is True) AND (TBBTxService is 'IBSSMS' OR TBBTxService is 'MinOH')

### 5.33.9 RBBRxIBSX50Stuff

**Display label:** 'Destuff from 64kbps after deframing'

**Default:** Off

**Description:** **Reserved for future use.** Indicates whether additional bits have been added to the traffic source to force frame synchronisation.

### 5.33.10 RBBRxTRSpooF

**Display label:** 'SpooF 2M AIS & BA transparency with fractional sat. link'  
(On front panel: 'SpooF 2M AIS & BA transparency')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Normal	Normal
	SpooF	Thin route spooF

**Default:** Normal

**Description:** **Reserved for future use.** Controls spoofing of PCM bearer transparency over a thin route IDR (IBS o/h) link, giving the appearance of complete PCM bearer connectivity over the satellite, even if only a single timeslot is actually conveyed over satellite.

### 5.33.11 RBBRxG732TerrCRC

**Display label:** 'Processing of bearer CRC & return of E-bits for CRC errors'  
(On front panel: 'Process bearer CRC')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Ignore	Do not generate CRC
	NoEbits	Generate CRC but not E-bits
	Ebits	Generate CRC & return E-bits

**Default:** Do not generate CRC

**Description:** **Reserved for future use.** Specifies generation of checksum for terrestrial G.732 frame and controls E-bit processing.

### 5.33.12 RBBRxG732Timeout

**Display label:** 'Frame re-acquisition on CRC loss'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Normal	Normal
	Resync	Resync if CRC lost for >8ms

**Default:** Normal

**Description:** **Reserved for future use.** Controls response to loss of G.732 frame synchronisation.

### 5.33.13 RBBRxV35ScrType

**Display label:** 'V.35 scrambler type'

Options:	Value	Description
	CCITT	CCITT
	Intelsat	Intelsat (normal)
	FDC	Fairchild
	Linkabit	Linkabit

**Default:** Intelsat (normal)

**Description:** **Reserved for future use.** Sets the V.35 scrambler type.

### 5.33.14 RBBRxMaxMFPeriod

**Display label:** 'Max MF period'  
(On front panel: 'multi-frame max')

**Default:** 2000

**Units:** ms

**Minimum value:** 100

**Maximum value:** 15000

**Step size:** 1

**Description:** **Reserved for future use.** Sets a maximum multi-frame frame period that is used in determining the frame length in Min O/H mode. It is the maximum value that the frame is allowed to extend to (this affects frame acquisition time).

### 5.33.15 RBBRxTS0G732Spares

**Display label:** 'G.732 (FAS TS0) spare bits'

Options:	Value	Description
	High	Set high
	Transparent	Transparent

**Default:** Set high

**Description:** **Reserved for future use.** ITU recommend that spare bits of TS0 are fixed high as they cross country borders.

**5.33.16 RBBRxIBSCustAlm**

**Display label:** 'IBS custom alarm'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	None	No backward alarm
	Single	Single backward alarm
	Four	Four backward alarms

**Default:** No backward alarm

**Description:** **Reserved for future use.** Controls backward alarm reporting in IBS/SMS custom mode.

**Display rule:** Sync: RBBRxService is 'MinOH' AND RBBRxServiceStrict is 'Off' AND CPUIDRFitted is True

**5.33.17 CPUTxDMXErrMonSrc**

**Display label:** 'Drop-MUX BER monitor source'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Auto	Automatic
	FAS	FAS
	CRC	CRC
	Ebits	E-bits

**Default:** Automatic

**Description:** **Reserved for future use.** Controls how the terrestrial error rate is monitored at the input to the Drop MUX. The most appropriate source is selected if set to Automatic.

**5.33.18 TBBTxIBSStatID**

**Display label:** 'IBS/SMS station ID'

**Default:** 255

**Units:**

**Minimum value:** 0

**Maximum value:** 255

**Step size:** 1

**Description:** **Reserved for future use.** Sets station ID transmitted by the IBS/SMS framing unit.

**5.33.19 TBBTxIBSChanID**

**Display label:** 'IBS/SMS channel ID'  
**Default:** 255  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 255  
**Step size:** 1

**Description:** **Reserved for future use.** Sets channel ID transmitted by the IBS/SMS framing unit.

**5.33.20 TBBTxIBSSpareID**

**Display label:** 'IBS/SMS spare ID'  
**Default:** 255  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 255  
**Step size:** 1

**Description:** **Reserved for future use.** Sets spare ID transmitted by the IBS/SMS framing unit.

**5.33.21 CPUSMBxComstreamSeqMode**

**Display label:** 'Comstream Sequential compatibility mode'  
**Default:** Off

**Description:** **Reserved for future use.** Sets the Sequential decoder to be compatible with 3/4 rate Comstream equipment (1/2 rate is okay by default).

**5.33.22 CPUSMBxX50AIS**

**Display label:** 'AIS reporting range for X.50 stuffing'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	48/56kbps AIS
	On	64kbps AIS

**Default:** 48/56kbps AIS

**Description:** **Reserved for future use.** Sets the range for which the Alarm Indication Signal alarm is active with respect to X.50 bit stuffing.

#### 5.33.23 RBBRxIBSChanID

**Display label:** 'IBS/SMS channel ID'

**Default:** 255

**Units:**

**Minimum value:** 0

**Maximum value:** 255

**Step size:** 1

**Description:** **Reserved for future use.** Sets channel ID transmitted by the IBS/SMS framing unit.

#### 5.33.24 RBBRxIBSStatID

**Display label:** 'IBS/SMS station ID'

**Default:** 255

**Units:**

**Minimum value:** 0

**Maximum value:** 255

**Step size:** 1

**Description:** **Reserved for future use.** Sets station ID transmitted by the IBS/SMS framing unit.

#### 5.33.25 RBBRxIBSSpareID

**Display label:** 'IBS/SMS spare ID'

**Default:** 255

**Units:**

**Minimum value:** 0

**Maximum value:** 255

**Step size:** 1

**Description:** **Reserved for future use.** Sets spare ID transmitted by the IBS/SMS framing unit.

### 5.33.26 CPURxIMXErrMonSrc

**Display label:** 'Insert-MUX BER monitor source'

Options:	Value	Description
	Off	Off
	Auto	Automatic
	FAS	FAS
	CRC	CRC
	Ebits	E-bits

**Default:** FAS

**Description:** **Reserved for future use.** Controls how the terrestrial error rate is monitored at the input to the Insert MUX. The most appropriate source is selected if set to Automatic.

---

## 5.34 Miscellaneous-Log

### 5.34.1 CPUAutoLogPeriod

**Display label:** 'Period between auto-log entries'  
(On front panel: 'Auto-log period')

**Default:** 0

**Units:** min

**Minimum value:** 0

**Maximum value:** 1440

**Step size:** 1

**Description:** **Reserved for future use.** Sets the period between consecutive automatic updates to the traffic log.

### 5.34.2 CPUAutoLogBufFill

**Display label:** 'Auto-log buffer fill state'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of buffer-fill state to the traffic log.

### 5.34.3 CPUAutoLogEbNo

**Display label:** 'Auto-log Rx Eb/No'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case Eb/No to the traffic log.

### 5.34.4 CPUAutoLogFinalBER

**Display label:** 'Auto-log Rx final BER'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case Rx final BER to the traffic log.

### 5.34.5 CPUAutoLogPRBSTester

**Display label:** 'Auto-log PRBS signal BER'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case PRBS signal BER to the traffic log.

### 5.34.6 CPUAutoLogTxTerBER

**Display label:** 'Auto-log Tx terrestrial BER'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case Tx terrestrial BER to the traffic log.

### 5.34.7 CPUAutoLogRxTerBER

**Display label:** 'Auto-log Rx terrestrial BER'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case Rx terrestrial BER to the traffic log.

#### 5.34.8 CPUAutoLogDistEbNo

**Display label:** 'Auto-log distant Eb/No'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case distant Eb/No to the traffic log.

#### 5.34.9 CPUAutoLogAUPCDeltaPwr

**Display label:** 'Auto-log AUPC delta power'

**Default:** Off

**Description:** **Reserved for future use.** Controls automatic logging of the mean and worst-case AUPC delta power to the traffic log.

#### 5.34.10 CPUAutoLogActive

**Display label:** 'Auto-log'

**Default:** Off

**Description:** **Reserved for future use.** Controls whether automatic logging of information to the traffic log is enabled.

---

### 5.35 Miscellaneous-Status

#### 5.35.1 RxBufferFill

**Display label:** 'Rx buffer fill status'  
(On front panel: 'Buffer status')  
**Default:** 0  
**Units:** %  
**Minimum value:** 0  
**Maximum value:** 100  
**Step size:** 1

**Description:** Rx buffer fill status.

#### 5.35.2 BxMaxTemp

**Display label:** 'Max operating temperature'  
**Default:** 70.0  
**Units:** Degrees

**Description:** Maximum operating temperature of the modem, above which a fault is generated.

#### 5.35.3 BxMinTemp

**Display label:** 'Min operating temperature'  
**Default:** 0.0  
**Units:** Degrees

**Description:** Minimum operating temperature of the modem.

#### 5.35.4 BxMaxTempWarn

**Display label:** 'Operating temperature warning threshold'  
(On front panel: 'Temperature warning threshold')  
**Default:** 60.0  
**Units:** Degrees

**Description:** Threshold that indicates that the modem is approaching its maximum operating temperature.

#### 5.35.5 GwyTxCarrierStatus

**Display label:** 'Tx carrier status'

**Default:** Off

**Description:** Tx carrier status.

**Display rule:** TBBTxService is not 'Off'

#### 5.35.6 TxSym Rate

**Display label:** 'Tx symbol rate'

**Default:** 0.0

**Units:** Symbols/s

**Description:** Transmit data rate in symbols.

**Display rule:** TBBTxService is not 'Off'

#### 5.35.7 RxSym Rate

**Display label:** 'Rx symbol rate'

**Default:** 0.0

**Units:** Symbols/s

**Description:** Receive data rate in symbols.

**Display rule:** RBBRxService is not 'Off'

#### 5.35.8 UnitSetupComplete

**Display label:** 'Unit set-up complete'

**Default:** On

**Description:** Indicates when the modem has completed re-configuration following a change.

#### 5.35.9 RxEbNo

**Display label:** 'Rx Eb/No'  
(On front panel: 'Eb/No')

**Default:** 0.0

**Units:** dB

**Description:** Demodulator Energy per bit/Noise power density ratio, calculated from the Es/No measured by the demodulator.

#### 5.35.10 RxEsNo

**Display label:** 'Demodulator Es/No'  
(On front panel: 'Es/No')

**Default:** 0.0

**Units:** dB

**Description:** Received Energy per Symbol/Noise power density ratio as measured by the demodulator.

#### 5.35.11 RxFreqOffset

**Display label:** 'Rx frequency offset'  
(On front panel: 'Rx freq offset')

**Default:** 0.0

**Units:** Hz

**Description:** When the demodulator is locked this is the carrier offset frequency, measured as an offset from the programmed Rx carrier frequency.

#### 5.35.12 RxPwrLevel

**Display label:** 'Rx power level'

**Default:** 0

**Units:** dBm

**Description:** Estimate of the Rx input requested power level (i.e. the power level of the channel selected by the user).

**5.35.13 DemodLocked**

**Display label:** 'Demodulator status'

**Default:** On

**Description:** Current status of the demodulator, indicating whether it is currently locked to the carrier.

**5.35.14 RxInsertTSUsed**

**Display label:** 'Number of timeslots used from the satellite frame'  
(On front panel: 'Num. of insert timeslots')

**Default:** 0.0

**Units:**

**Description:** Number of timeslots inserted into terrestrial bearer from satellite frame. Equal to number of satellite timeslots unless partial insert is being used.

**5.35.15 RxFinalBER**

**Display label:** 'Final BER'

**Default:** 0.0

**Units:**

**Description:** Final BER at the output of the modem.

**5.35.16 RelayStatus**

**Display label:** 'Relay status'

**Default:** Off

**Description:** Relay status.

**5.35.17 CPUKbdLock**

**Display label:** 'Keyboard locked'

**Default:** Off

**Description:** Sets the state of the keyboard (can be locked to prevent inadvertent use).

---

## **5.36 Miscellaneous-SAF**

### **5.36.1 CPUSAFTx**

**Display label:** 'SAF for Tx path'

**Default:** Set independently for each modem

**Description:** Softw are-activated feature.

### **5.36.2 CPUSAFRx**

**Display label:** 'SAF for Rx path'

**Default:** Set independently for each modem

**Description:** Softw are-activated feature.

### **5.36.3 CPUSAFDataRate0**

**Display label:** 'SAF for 0 to 2Mbps data rate'

**Default:** Set independently for each modem

**Description:** Softw are-activated feature.

### **5.36.4 CPUSAFDataRate1L**

**Display label:** 'SAF for 2 to 5Mbps data rate'

**Default:** Set independently for each modem

**Description:** Softw are-activated feature.

### **5.36.5 CPUSAFDataRate1H**

**Display label:** 'SAF for 5 to 8.448Mbps data rate'

**Default:** Set independently for each modem

**Description:** Softw are-activated feature.

#### 5.36.6 CPUSAFDataRate2

**Display label:** 'SAF for 8.448 to 16.896Mbps data rate'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.7 CPUSAFDataRate3

**Display label:** 'SAF for 16.896 to 25Mbps data rate'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.8 CPUSAFDataRate4

**Display label:** 'SAF for 25 to 45Mbps data rate'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.9 CPUSAFDataRate5

**Display label:** 'SAF for 45 to 52Mbps data rate'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.10 CPUSAFIBSSMS

**Display label:** 'SAF for IBS/SMS'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.11 CPUSAFDI

**Display label:** 'SAF for basic Drop/Insert'  
(On front panel: 'SAF for Drop/Insert')

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.12 CPUSAFExtDI

**Display label:** 'SAF for extended Drop/Insert'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.13 CPUSAFTurboL

**Display label:** 'Low -rate Turbo FEC SAF'

**Default:** Off

**Description:** Software-activated feature.

#### 5.36.14 CPUSAFInteIRS

**Display label:** 'SAF for Intelsat Reed-Solomon'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.15 CPUSAFWideIF

**Display label:** 'SAF for wideband IF frequencies (above 88MHz)'  
(On front panel: 'SAF for wideband IF frequencies')

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.16 CPUSAFTurbo**

**Display label:** 'SAF for Turbo FEC mode'  
**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.17 CPUSAF16QAM**

**Display label:** 'SAF for 16QAM modulation'  
**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.18 CPUSAFESC**

**Display label:** 'SAF for ESC channel'  
**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.19 CPUSAFAux**

**Display label:** 'SAF for Aux channel'  
**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.20 CPUSAF CustFrm**

**Display label:** 'SAF for custom features'  
**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.21 CPUSAF AUPC**

**Display label:** 'SAF for AUPC'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.22 CPUSAFPRBS

**Display label:** 'SAF for PRBS test mode'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.23 CPUSAFDVBS

**Display label:** 'SAF for DVB-S mode (reserved)'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.24 CPUSAFDVBS2

**Display label:** 'SAF for DVB-S2 (reserved)'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.25 CPUSAFFSK

**Display label:** 'SAF for FSK (reserved)'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.36.26 CPUSAFTCP

**Display label:** 'SAF for TCP acceleration'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.27 CPUSAFTCP16**

**Display label:** 'SAF for higher rate TCP acceleration'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.28 CPUSAFVIt**

**Display label:** 'SAF for Viterbi FEC mode'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.29 CPUSAF8PSK**

**Display label:** 'SAF for 8PSK modulation mode'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.30 CPUSAFOM73**

**Display label:** 'SAF for OM-73 support'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.31 CPUSAFAudio**

**Display label:** 'SAF for audio support'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.32 CPUSAFTCM**

**Display label:** 'SAF TCM'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.33 CPUSAFHCP**

**Display label:** 'SAF header compression'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.34 CPUSAFBrouting**

**Display label:** 'SAF for Ethernet brouting mode'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.35 CPUSAFTCP25**

**Display label:** 'SAF for higher rate TCP acceleration'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.36 CPUSAFTCP55**

**Display label:** 'SAF for higher rate TCP acceleration'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.37 CPUSAF2E1**

**Display label:** 'Quad E1 port 2'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.38 CPUSAF3E1**

**Display label:** 'Quad E1 port 3'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

**5.36.39 CPUSAF4E1**

**Display label:** 'Quad E1 port 4'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

---

## 5.37 Miscellaneous-Switch

### 5.37.1 CPUSwitchAddress

**Display label:** '1:N Address'

**Default:** 1

**Units:**

**Minimum value:** 1

**Maximum value:** 16

**Step size:** 1

**Description:** Sets the RS485 address when used with 1:N switch.

### 5.37.2 CPUModemPriority1, CPUModemPriority2, ... CPUModemPriority16

**Display label:** 'Modem Priority'

**Options:**

Value	Description
-------	-------------

P1	Low
----	-----

P2	Medium
----	--------

P3	High
----	------

**Default:** Low

**Description:** Sets the priority of the specified modem when used with 1:N switch.

---

## 5.38 Miscellaneous-NewMCPs

### 5.38.1 Alarm Summary

**Display label:** 'Alarm summary'

**Description:** String that returns summary of all current alarms in a very bandwidth efficient manner. It is a series of hex characters representing the status of all alarms in the system with 1 bit per alarm, with 1 meaning the corresponding alarm is active. The order of the alarms is as returned by the *alarm show all* command. The alarms are numbered from the left hand side of the string and are represented by hex digits. The first alarm reported by the *alarm show all* command is represented by an 8 in the first character position. Since the alarms are represented by hex digits, the total number represented by the string is also a multiple of 4. If the actual number of alarms is not an exact multiple of 4 then 1 to 3 extra zeros will be present in the rightmost hex digit.

### 5.38.2 TBBTxSatTimeslots, RBBRxSatTimeslots

**Display label:** 'Tx/Rx timeslots'

**Description:** This is a string representing a series of comma separated numbers each of which represents a timeslot number. When used with the *set* command, the numbers will be programmed into TBBTxSatTSSeq1 (or RBBRxSatTSSeq1 for Rx timeslots) onwards so for example '0,1,2,3' would set timeslots 1 to 3 only. This gives an efficient way of setting or reading all Tx or Rx timeslots with a single command.

### 5.38.3 AUPCMethod

**Display label:** 'AUPC method'

Options:	Value	Description
	Normal	Normal
	P300	P300
	Self	Self

**Default:** Normal

**Description:** Sets the AUPC method. *Normal* should be used when Quantum/Evolution modems are used at each end of the satellite link.

*P300* should be used when the distant-end modem is a *P300*. *Self* should be used when there is no return path from the distant modem and instead the local modem monitors its own transmission, adjusting transmit power accordingly.

#### 5.38.4 CPURxCarrierLossAction

**Display label:** 'Carrier loss action'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Freeze	Freeze at current value
	Nominal	Set to nominal
	Max	Set to max

**Default:** Set to nominal

**Description:** Sets the action when the carrier is lost during AUPC operation.

#### 5.38.5 CPUQoS

**Display label:** 'Weighted QoS'

**Default:** Off

**Description:** When *Off*, forces strict priority queuing of Ethernet frames that have IEEE 802.1p priority tags. Packets are filtered into one of three queues according to priority as indicated by the tag. High priority is level 7, medium priority is levels 6 and 5 and low priority is levels 4 to 0. With strict priority queuing, all packets from the High priority queue are processed before any from the Medium priority queue, which in turn is processed before any packets from the Low priority queue. When *On*, fair-weighted queuing is applied whereby when contention arises four packets are processed from the High priority queue for every two packets from the Medium priority queue and one packet from the Low priority queue.

#### 5.38.6 CPUEnableVLAN

**Display label:** 'Enable VLAN filtering'

**Default:** Off

**Description:** In Ethernet Bridge mode, IEEE 802.1q VLAN frames are passed transparently. VLAN filtering (*On*) can be used with point-to-multipoint topology to separate traffic flows as long as there is a return path. In point-to-multipoint operation, each remote modem receives all of the

data and use of VLAN tags over just the satellite portion of the link is a useful way of being able to filter out unwanted traffic at the remotes. A VLAN id is assigned by the user to each remote modem. The hub Tx modem automatically learns what VLAN tags are associated with each remote. It also learns the location of every device connected to each remote. As data is received at the hub, the Tx modem adds a VLAN tag with the id of the remote for which it is destined. At the remote, unwanted data is filtered out and discarded. The VLAN tag is also removed from wanted packets that have been received at the remote before they are forwarded onto the local terrestrial IP network. Note that the use of point-to-multipoint VLAN filtering relies on the modem generating and removing VLAN tags and it cannot therefore be used in situations where VLAN tags are already present in the data at the point at which it is passed to the modem for transmission.

### 5.38.7 CPUVLANID

**Display label:** 'VLAN ID'  
**Default:** 0  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 4094  
**Step size:** 1

**Description:** See *CPUEnableVLAN*. This option is used to set the modem-specific identifier (VLAN tag) to be used with VLAN filtering.

### 5.38.8 TLBTxPowerClass

**Display label:** 'Power if over 170W'  
**Default:** 0  
**Units:** W  
**Minimum value:** 0  
**Maximum value:** 999  
**Step size:** 1

**Description:** This tells the modem what the BUC power class is. It can be ignored unless a CO has been selected with a power output greater than 170W.

### 5.38.9 TModTxRollOff, RDem RxRollOff

**Display label:** 'Filter roll-off'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	20	20%
	25	25%
	35	35%

**Default:** 35%

**Description:** Sets the spectral mask roll-off factor. This affects carrier spacing and occupied bandwidth.

### 5.38.10 QuadE1P3TxDataRate, QuadE1P3RxDataRate, QuadE1P4TxDataRate, QuadE1P4RxDataRate

**Display label:** 'Tx/Rx data rate'

**Default:** 0

**Units:** bps

**Minimum value:** 0

**Maximum value:** 2048000

**Step size:** 64000

**Description:** When the Quad E1 MultiMux feature is being used, it is possible to replace ports 3 and 4 of the Quad E1 with two other interfaces (serial and IP). These parameters allow the data rates of these interfaces to be set for Tx and Rx respectively. No data is actually passed through the Quad E1 port 3 or 4 in this situation – instead the data is multiplexed in from the serial or IP interface.

### 5.38.11 TBBTxAsyncClk

**Display label:** 'Asynchronous data'

**Default:** Off

**Description:** Enables clocking of asynchronous serial data into the modem.

### 5.38.12 TBBTxIBSBackAlm, RBBRxIBSBackAlm

**Display label:** 'Enable backward alarm'

**Default:** On

**Description:** Controls whether the BA bit in the frame overhead carries the BA signal or is used to carry ESC information.

#### 5.38.13 CPUSAFMUX

**Display label:** 'MultiMux SAF'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.38.14 CPUWebProxy

**Display label:** 'Web acceleration'

**Default:** Off

**Description:** When *Off*, acceleration of HTTP requests is switched off. When *On*, inline content of web pages is prefetched over satellite prior to the browser requesting the data, thereby reducing the average time to display a web page. The feature makes use of the fact that web browsers request the content (such as inline images) of web pages in a largely serial manner. By requesting all of the page content in parallel, the delay caused by one or more round trips over satellite can be avoided.

#### 5.38.15 CPUDNSAddress

**Display label:** 'DNS IP addr'

**Default:** 0.0.0.0

**Description:** This is the IP address of a DNS server, which is used to resolve domain names in conjunction with use of the HTTP acceleration feature.

#### 5.38.16 CPUSAFWEB

**Display label:** 'Web proxy SAF'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.38.17 RLBRxServices

**Display label:** 'Mute services in Standby'

**Default:** Off

**Description:** This options controls whether the modem mutes DC and 10MHz services when in 1:1 standby. Select this option when you want the services to switch on 1:1 changeover.

#### 5.38.18 PUPCommand

**Display label:** 'PUP'

**Default:**

**Description:** When using SNMP to control the modem, problems are caused by the fact that some control and status is accessible only via PUP commands. *PUPCommand* is a string that can be set via SNMP to be any PUP command. This command is executed whenever the string is set. The next time the string is read it will have the response to the previous command. For example, the string could be set to *'gettype RBBRxClkMode'* and when read back will contain the response *'Group'*.

#### 5.38.19 Q323EmuSw 1, Q323EmuSw 2, Q323EmuSw 3, Q323EmuSw 4

**Display label:** 'Invert data (Q323 Switch 1)'  
'TS0 bit 0 CRC4 (Q323 Switch 2)'  
'TS16 transparent (Q323 Switch 3)'  
'Invert bit 1,2,5 & 6 (Q323 Switch 4)'

**Default:** Off

**Description:** These options provide backwards compatibility with the P300 Q323 option card as follows.  
Q323 Emulation Switch 1, off = normal operation, on = ts 1 to 31 are inverted  
Q323 Emulation Switch 2, off = TS0 transparent, on = TS 0 bit 0 overwritten with CRC4 multiframe with regenerated CRC (E bits set to 1)  
Q323 Emulation Switch 3, If switch 1 is on then off = TS16 inverted, on

= TS16 transparent (not inverted)  
Q323 Emulation Switch 4, If switch 1 is on then off = All bits inverted,  
on = bits 1,2,5 and 6 are inverted

#### 5.38.20 RDemAcqHoldoff

**Display label:** 'Reacquisition holdoff time '  
**Default:** 0  
**Units:** s  
**Minimum value:** 0  
**Maximum value:** 1000  
**Step size:** 1

**Description:** Sets the time in seconds the demodulator will delay after losing the signal before sweeping to re-acquire it.

#### 5.38.21 CPUMILModem

**Display label:** 'MIL modem'  
**Default:**

**Description:** This read-only status indicates whether the modem is a MIL-STD-188-165A compliant modem.

#### 5.38.22 RxCompPwrLevel

**Display label:** 'Composite power level'  
**Units:** dBm

**Description:** This floating point read-only status indicates the composite power level being received by the modem. It is valid only for MIL-STD-188-165A compliant modems.

#### 5.38.23 GwyStatClkRef

**Display label:** 'Lock high stability oscillator to the station clock'  
**Default:** Off

**Description:** This option locks the high stability oscillator to the station clock. It is valid only for MIL-STD-188-165A compliant modems.

#### 5.38.24 CPUSAFWRF

**Display label:** 'Wide RF SAF'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.38.25 CPUSAFIPT

**Display label:** 'IP Traffic SAF'

**Default:** Set independently for each modem

**Description:** Software-activated feature.

#### 5.38.26 CPUSAFSeq

**Display label:** 'Sequential FEC SAF'

**Default:** Off

**Description:** Software-activated feature.

#### 5.38.27 TBBTxG703Ref

**Display label:** 'Use G703 as clock reference'

Options:	Value	Description
	Off	Off
	T1	T1
	E1	E1

**Default:** Off

**Description:** Allows the clock recovered from the incoming G703 signal to be used as the internal reference.

#### 5.38.28 RBBRxG703Ref

**Display label:** 'Gen G703 as clock extension ref'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	T1	T1
	E1	E1
<b>Default:</b>	Off	

**Description:** Allows the outgoing G703 signal to locked to the recovered satellite clock.

#### 5.38.29 CPUSAFClk

**Display label:** 'G703 Clock Extension SAF'  
**Default:**

**Description:** Software-activated feature.

#### 5.38.30 TBBTxIBSCust

**Display label:** 'Custom IBS'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Off
	Multi	Multiframe
	Single	Without Multiframe
<b>Default:</b>	Off	

**Description:** Enables custom IBS mode.

#### 5.38.31 TBBTxIBSESCOh

**Display label:** 'ESC overhead'  
**Default:** 0  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 255  
**Step size:** 1

**Description:** Selects which bits in overhead to use for ESC.

### 5.38.32 TBBTxIBSAuxOh

**Display label:** 'Aux overhead'  
**Default:** 0  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 31  
**Step size:** 1

**Description:** Selects which bits in overhead to use for Aux.

### 5.38.33 RBBRxIBSCust

**Display label:** 'Custom IBS'  
**Options:**

Value	Description
Off	Off
Multi	Multiframe
Single	Without Multiframe

**Default:** Off

**Description:** Enables custom IBS mode.

### 5.38.34 RBBRxIBSESCOh

**Display label:** 'ESC overhead'  
**Default:** 0  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 255  
**Step size:** 1

**Description:** Selects which bits in overhead to use for ESC.

### 5.38.35 RBBRxIBSAuxOh

**Display label:** 'Aux overhead'  
**Default:** 0  
**Units:**  
**Minimum value:** 0  
**Maximum value:** 31

**Step size:** 1

**Description:** Selects which bits in overhead to use for Aux.

### 5.38.36 CPUTxOneForOne

**Display label:** 'Transmit fail sw itchover'

**Default:** On

**Description:** This option enables a transmit failure to cause a 1:1 sw itchover.

### 5.38.37 CPUSAFPreDistort

**Display label:** 'Pre-distorter SAF'

**Default:**

**Description:** Software-activated feature.

### 5.38.38 IPMode

**Display label:** 'IP traffic mode'  
(On front panel: 'IP mode')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Bridge	Bridge mode
	Routing	Routing mode

**Default:** Bridge mode

**Description:** Indicates how, and at what level, IP traffic is forwarded.

### 5.38.39 HeaderCompression

**Display label:** 'Header compression'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	On	Header compression
	Off	No header compression

**Default:** No header compression

**Description:** Switches header compression off and on.

#### 5.38.40 CPUSatIPAddr

**Display label:** 'Satellite port IP address'

**Default:** 0.0.0.0

**Description:** In routing mode, assigns an IP address to the satellite interface.

#### 5.38.41 CPUSatIPNetmask

**Display label:** 'Satellite port IP netmask'

**Default:** 255.255.255.255

**Description:** In routing mode, assigns an IP subnet mask address to the satellite interface.

#### 5.38.42 CPUSatIPGateway

**Display label:** 'Satellite port IP gateway'

**Default:** 0.0.0.0

**Description:** In routing mode, assigns an IP gateway address to the satellite interface. This is essentially redundant as only one gateway can be defined per TCP/IP stack and in general the IP Traffic gateway address should be used instead.

#### 5.38.43 UseRIPEn DefCfg

**Display label:** 'Enable default RIP configuration'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Yes	Use RIP enabled default
	No	Disable RIP

**Default:** Disable RIP

**Description:** Enables RIP dynamic routing with default configuration.

#### 5.38.44 UseOSPFEn DefCfg

**Display label:** 'Enable default OSPF configuration'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Yes	Use OSPF enabled default

**Default:** No Disable OSPF  
Disable OSPF

**Description:** Enables OSPF dynamic routing with default configuration.

#### 5.38.45 TCPAcceleration

**Display label:** 'TCP acceleration mode'  
(On front panel: 'TCP acceleration')

**Default:**

**Description:**

#### 5.38.46 CPUSAFRouting

**Display label:** 'Routing mode SAF'

**Default:**

**Description:** Software-activated feature.

#### 5.38.47 CPUIPTrafficFitted

**Display label:** 'IP traffic card fitted'

**Default:**

**Description:** Indicates if a IP traffic card is fitted

#### 5.38.48 TxBUCIntfc

**Display label:** 'BUC interface'

Options:	Value	Description
	RS485	RS485
	FSK	FSK

**Default:** RS485

**Description:** Selects the interface used to connect to the BUC.

#### 5.38.49 CPUVisionFitted

**Display label:** 'Vision card fitted'

**Default:**

**Description:** Indicates if a Vision card is fitted

#### 5.38.50 CPUSAFShaping

**Display label:** 'Shaping SAF'

**Default:**

**Description:** Software-activated feature.

#### 5.38.51 QoS Scheme

**Display label:** 'Quality of service scheme'  
(On front panel: 'QoS scheme')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Diffserv_DSCP	Diffserv DSCP
	IEEE_802_1p	IEEE 802.1p
	MPLS_EXP	MPLS EXP
	IP_Address	IP Address

**Default:** Diffserv DSCP

**Description:** Determines which classification scheme is used with IP traffic shaping. The classification scheme is used to identify individual data streams within the overall IP stream. It is then possible to apply different quality levels to each stream including setting a guaranteed bandwidth, a maximum bandwidth (if excess is available) and a priority. Classification schemes can be based on IP address, the three-bit MPLS header 'EXP' field, the three-bit IEEE 802.1p priority tag field within the IEEE 802.1p header and the top three bits of the six-bit Diffserv DSCP field within the IP header.

#### 5.38.52 EnableShaping

**Display label:** 'Enable shaping'

**Default:** Off

**Description:** Switches IP traffic shaping off and on.

### 5.38.53 IPAddrClass

**Display label:** 'QoS IP address class'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Source_address_only	Source address only
	Destination_address_only	Destination address only
	Source_address_port	Source address + port
	Destination_address_port	Destination address + port

**Default:** Source address only

**Description:** This refines the IP traffic shaping classification scheme when IP addressing is used as the means of identifying individual data streams within the overall IP stream.

### 5.38.54 TxCIR00, TxCIR01, ... TxCIR15

**Display label:** 'Shaping Committed Information Rate'  
(On front panel: 'CIR')

**Default:** 0  
**Units:** bps  
**Minimum value:** 0  
**Maximum value:** 55000000  
**Step size:** 1

**Description:** Shaping Committed Information Rate

### 5.38.55 TxCIRTot

**Display label:** 'Shaping Committed Information Rate total'  
(On front panel: 'CIR total')

**Default:** 0  
**Units:** bps  
**Minimum value:** 0  
**Maximum value:** 880000000  
**Step size:** 1

**Description:** Shaping Committed Information Rate total

**5.38.56 TxBIR00, TxBIR01,... TxBIR15**

**Display label:** 'Shaping Burst Information Rate'  
(On front panel: 'BIR')

**Default:** 0

**Units:** bps

**Minimum value:** 0

**Maximum value:** 55000000

**Step size:** 1

**Description:** Shaping Burst Information Rate

**5.38.57 PrioCI00, PrioCI01,... PrioCI15**

**Display label:** 'Shaping Priority Data'  
(On front panel: 'Priority')

**Options:** **Value** **Description**

0 0

1 1

2 2

3 3

4 4

5 5

6 6

7 7

**Default:** 0

**Description:**

**5.38.58 ShapIPAddr00, ShapIPAddr01,... ShapIPAddr15**

**Display label:** 'Shaping Address'

**Default:** 0.0.0.0

**Description:**

**5.38.59 ShapIPMask00, ShapIPMask01,... ShapIPMask15**

**Display label:** 'Shaping IP Mask'

**Default:** 255.255.255.255

**Description:**

**5.38.60 ShapPort00, ShapPort01,... ShapPort15**

**Display label:** 'Shaping port'  
**Default:** 0  
**Units:** port  
**Minimum value:** 0  
**Maximum value:** 65535  
**Step size:** 1

**Description:**

**5.38.61 TIFTxBUCAddr**

**Display label:** 'IF FSK BUC address'  
**Default:** 1  
**Units:**  
**Minimum value:** 1  
**Maximum value:** 15  
**Step size:** 1

**Description:** Sets the address used when talking to the IF FSK BUC (transceiver).

**5.38.62 CPUSNMPv3User**

**Display label:** 'V3 username'  
**Default:**

**Description:** SNMP v3 username.

**5.38.63 CPUSNMPv3Password**

**Display label:** 'V3 password'  
**Default:**

**Description:** SNMP v3 password.

#### 5.38.64 CPUSNMPv3Encryption

**Display label:** 'Enable V3 encryption'

**Default:**

**Description:** Enable SNMP v3 DES encryption.

#### 5.38.65 CPUSNMPv3Authentication

**Display label:** 'V3 authentication'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	MD5	MD5
	SHA	SHA

**Default:** MD5

**Description:** SNMP v3 authentication algorithm.

#### 5.38.66 CPUSAF8APSK

**Display label:** '8APSK SAF'

**Default:**

**Description:** Software-activated feature.

#### 5.38.67 TxFECFrm Size

**Display label:** 'FEC frame size'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Short	Short
	Long	Normal

**Default:** Short

**Description:** Controls the FEC frame size

#### 5.38.68 RxFECFrm Size

**Display label:** 'FEC frame size'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
-----------------	--------------	--------------------

Short    Short  
Long    Normal

**Default:**    Short

**Description:**    Controls the inner FEC mode.

#### 5.38.69    TxPLPilot

**Display label:**    'Pilot tones'

**Default:**

**Description:**    Sends small bursts of unmodulated symbols to help Rx to lock onto signal.

#### 5.38.70    RxPLPilot

**Display label:**    'Pilot tones'

**Default:**

**Description:**    Receives small bursts of unmodulated symbols to help Rx to lock onto signal.

#### 5.38.71    EncapsulationType

**Display label:**    'IP encapsulation type'

**Options:**    **Value**    **Description**

ULE    ULE

MPE    MPE

PXE    PXE

**Default:**    ULE

**Description:**    Sets the protocol used to encapsulate/decapsulate IP packets/Ethernet frames into/from 188-byte MPEG2 transport stream packets.

#### 5.38.72    CPUSAFTXDV BS2

**Display label:**    'DVB-S2 Tx SAF'

**Default:**    Off

**Description:** Software-activated feature.

#### 5.38.73 CPUSAFRXDV BS2

**Display label:** 'DVB-S2 Rx SAF'

**Default:** Off

**Description:** Software-activated feature.

#### 5.38.74 CPUSAFDVBIP

**Display label:** 'DVB IP encapsulation SAF'

**Default:**

**Description:** Software-activated feature.

#### 5.38.75 CPUABISFitted

**Display label:** 'ABIS card fitted'

**Default:**

**Description:** Indicates if an ABIS card is fitted.

#### 5.38.76 RLBRxLNBControl

**Display label:** 'LNB control'  
(On front panel: 'LNB control')

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Off	Disabled
	0	13V/0Hz
	1	13V/22KHz
	2	18V/0Hz
	3	18V/22KHz
	4	0V/0Hz

**Default:** Disabled

**Description:** Control external LNB services switch.

**5.38.77 RLBRxLNBPolarization**

**Display label:** 'LNB polarization'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Vertical	Vertical
	Horizontal	Horizontal

**Default:** Vertical

**Description:**

**5.38.78 TBBTxPRBSUserPattern**

**Display label:** 'BER user pattern'

**Default:**

**Description:** 32-bit user defined numeric value used as the PRBS BER test data pattern.

**5.38.79 TBBTxPRBSInvert**

**Display label:** 'BER data invert'

**Default:** Off

**Description:** Invert the values of the PRBS BER test data.

**5.38.80 RBBRxPRBSUserPattern**

**Display label:** 'BER user pattern'

**Default:**

**Description:** 32-bit user defined numeric value used as the PRBS BER test data pattern.

**5.38.81 RBBRxPRBSInvert**

**Display label:** 'BER data invert'

**Default:** Off

**Description:** Invert the values of the PRBS BER test data.

**5.38.82 RBBRxPRBSThreshold**

**Display label:** 'BER sync loss threshold'

Options:	Value	Description
	auto	Auto
	10_100	10/100
	20_100	20/100
	25_100	25/100
	100_300	100/300
	100_1000	100/1.0E03
	200_1000	200/1.0E03
	250_1000	250/1.0E03
	1000_3000	1.0E03/3.0E03
	1000_10000	1.0E03/1.0E04
	2000_10000	2.0E03/1.0E04
	2500_10000	2.5E03/1.0E04
	10000_30000	1.0E04/3.0E04
	10000_100000	1.0E04/1.0E05
	20000_100000	2.0E04/1.0E05
	25000_100000	2.5E04/1.0E05
	100000_300000	1.0E05/3.0E05

**Default:** Auto

**Description:** Error threshold above which a loss of synchronization is declared.

**5.38.83 RBBRxPRBSAction**

**Display label:** 'BER sync loss action'

Options:	Value	Description
	cont	Continue
	freeze	Freeze
	reset	Reset

**Default:** Reset

**Description:** Action to be taken when loss of synchronization occurs.

#### 5.38.84 TBBTxPRBSDirection

**Display label:** 'Direction'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Sat	Tow ards Satellite
	Terr	Tow ards Terrestrial

**Default:** Tow ards Satellite

**Description:** Direction in which to transmit or receive PRBS BER test data stream.

#### 5.38.85 RBBRxPRBSDirection

**Display label:** 'Direction'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	Sat	From Satellite
	Terr	From Terrestrial

**Default:** From Satellite

**Description:**

#### 5.38.86 TLBTxPolarisation

**Display label:** 'Tx polarisation'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	A	A
	B	B

**Default:** A

**Description:** Ensures that on a switchover, the backup modem RF path is switched to use the same transponder polarisation as the failed modem. The switch itself is agnostic as to the actual underlying A and B settings as to whether these represent transponder linear (vertical, horizontal) or circular (clockwise, counterclockwise) polarization.

#### 5.38.87 RLBRxPolarisation

**Display label:** 'Rx polarisation'

<b>Options:</b>	<b>Value</b>	<b>Description</b>
	A	A

**Default:**     B        B  
                  A

**Description:** Ensures that on a sw itchover, the backup modem RF path is sw itched to use the same transponder polarisation as the failed modem. The sw itch itself is agnostic as to the actual underlying A and B settings as to w hether these represent transponder linear (vertical, horizontal) or circular (clockw ise, counterclockwise) polarization.

### 5.38.88     PCMACanceller

**Display label:**   'PCMA Enable'

**Default:**

**Description:**    Enables Paired Carrier operation.

### 5.38.89     PCMASatLongitude

**Display label:**   'Satellite            longitude'  
                          (On front panel: 'Satellite lon')

**Default:**            0.0

**Units:**             Degs

**Minimum value:**   -180

**Maximum value:**   180

**Step size:**         0.01

**Description:**    Longitude of satellite.

### 5.38.90     PCMAEarthLongitude

**Display label:**   'Earth        station        longitude'  
                          (On front panel: 'Earth station lon')

**Default:**            0.0

**Units:**             Degs

**Minimum value:**   -180

**Maximum value:**   180

**Step size:**         0.01

**Description:**    Longitude of earth station ( modem).

#### 5.38.91 PCMAEarthLatitude

**Display label:** 'Earth station latitude'  
(On front panel: 'Earth station lat')  
**Default:** 0.0  
**Units:** Degs  
**Minimum value:** -90  
**Maximum value:** 90  
**Step size:** 0.01

**Description:** Latitude of earth station (modem).

#### 5.38.92 CPUSAFPCMA

**Display label:** 'Paired Carrier SAF'  
**Default:** Off

**Description:** Software-activated feature.

#### 5.38.93 PCMAminDelay

**Display label:** 'Min round trip delay'  
(On front panel: 'Min delay')  
**Default:** 0.0  
**Units:** ms  
**Minimum value:** 0.0  
**Maximum value:** 300.0  
**Step size:** 0.01

**Description:** Minimum round trip delay to satellite.

#### 5.38.94 PCMAmaxDelay

**Display label:** 'Max round trip delay'  
(On front panel: 'Max delay')  
**Default:** 0.0  
**Units:** ms  
**Minimum value:** 0.0  
**Maximum value:** 300.0  
**Step size:** 0.01

**Description:** Maximum round trip delay to satellite.

#### 5.38.95 CPUSwitchPollDelay

**Display label:** 'Switch poll rate'

**Default:** 60

**Units:** mins

**Minimum value:** 1

**Maximum value:** 999999

**Step size:** 1

**Description:** Rate at which the Switch (re)learns the configuration of the on-line modems.

#### 5.38.96 CPUSatMACAddr

**Display label:** 'Satellite port MA C address'

**Default:** 00:00:00:00:00:00

**Description:** This is used for Rx filtering of MPE packets. Requires MA C address to have been added to MPE header on Tx.

## Chapter 6 Modem Alarms

This section lists of all the alarms that can occur in the modem.

Alarm Name	Description
TxClockFailureAlarm	Tx fault: External Tx dock selected, but no clock from interface.
TxDataMarginalAlarm	Tx warning: Data clock inverted, data changing state on wrong edge.
TxDPLLLostLockAlarm	Tx fault: Modulator DPLL has lost lock.
TxDRIAlarm	Tx fault: Data Ready Input inactive.
TxSAIAlarm	Tx fault: Signal Accept Input active.
TxSVIAlarm	Tx fault: Signal Valid Input inactive.
IFTxSynthLostLockAlarm	Unit fault: Tx Synth has lost lock.
TxConfigAlarm	Tx warning: Maximum multiframe period too small. Framer failed to find a frame length to support TS ID maintenance. Try reducing ESC baud rate or increasing maximum multiframe period.
RxDeinterleaverSyndLostAlarm	Rx fault: RS de-interleaver unable to sync to decoded data. Check RS settings.
RxDemodUnlockedAlarm	Rx fault: Demodulator unlocked. Check modem settings.
RxClockFailureAlarm	Rx warning: Selected Rx output dock has failed.
RxDemodFIFOOverflowAlarm	Rx warning: Demodulator FIFO overflowed.
IFRxSynthLostLockAlarm	Unit fault: Rx Synth has lost lock.
RxConfigAlarm	Rx warning: Maximum multiframe period too small. Deframer failed to find a frame length to support TS ID maintenance. Try reducing ESC baud rate or increasing maximum multiframe period.
BUCCommunicationsFailureAlarm	Unit fault: Communications with the BUC have failed. Check connections.
BUCPLLAlarm	Unit fault: BUC PLL failure.
BUCTemperatureAlarm	Unit fault: BUC over-temperature failure.
InternalFaultAlarm	An internal fault has occurred. Please consult factory.
MuteOnBreakAlarm	Unit warning: Carrier muted due to power outage. Acknowledge power-up to enable.
PowerSupplyAlarm	Unit fault: One or more PSU rails are out of range.
StationClockFailureAlarm	Unit warning: Station dock has failed. Check clock source.
TemperatureAlarm	Unit warning: Operating temperature exceeded.
AUPCAlarm	Unit warning: AUPC at maximum power offset.
TxTerrAISAlarm	Tx fault: Data input is all ones (AIS), indicating upstream equipment fault.
TxDropMuxSyndLossAlarm	Tx fault: Frame sync lost on Tx input. Check bearer type and AIS.
TxDropMuxAISAlarm	Tx fault: Dropped data is all ones (AIS), indicating upstream equipment fault.
TxTerrBackwardAlarm	Tx warning: Frame backward alarm detected at Tx input, indicating Rx output or downstream Rx equipment fault.
TxTerrMFBackwardAlarm	Tx warning: TS16 MF backward alarm detected at Tx input, indicating equipment downstream of Rx has failed to find MF sync.
RxDeframerSyndLossAlarm	Rx fault: Cannot find frame sync on Rx data - check Rx Service settings.

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<b>Alarm Name</b>	<b>Description</b>
RxDeframerT S32SyncLossAlarm	Rx fault: Cannot find IBST S32 multiframe sync on Rx data.
RxDeframerCASSyncLossAlarm	Rx fault: CAS multiframe sync lost.
RxIBSBackwardAlarm	Rx warning: Backward alarm from satellite detected at Rx input, indicating Tx or downstream of Tx equipment fault.
RxCASBackwardAlarm	Rx warning: CAS multiframe backward alarm from satellite, indicating equipment downstream of Tx has failed to find CAS MF sync.
RxIDRBackwardAlarm1	Rx warning: Backward alarm 1 from satellite, indicating equipment downstream of Tx has failed.
RxIDRBackwardAlarm2	Rx warning: Backward alarm 2 from satellite, indicating equipment downstream of Tx has failed.
RxIDRBackwardAlarm3	Rx warning: Backward alarm 3 from satellite, indicating equipment downstream of Tx has failed.
RxIDRBackwardAlarm4	Rx warning: Backward alarm 4 from satellite, indicating equipment downstream of Tx has failed.
RxInsertMuxBackwardAlarm	Rx warning: Backward alarm at Insert MUX, indicating equipment downstream of Rx has failed.
RxSymRateAlarm	Rx warning: Rx symbol rate outside range..
TxSymRateAlarm	Tx warning: Tx symbol rate outside range.
TxDataRateAlarm	Tx warning: Tx data rate outside interface range.
RxDataRateAlarm	Rx warning: Rx data rate outside interface range.
TxDataRate4M5Alarm	Tx warning: Tx exceeds 4.5Mbps limit in TPC 5/16.
TxDataRate6M5Alarm	Tx warning: Tx exceeds 6.5Mbps limit in TPC 21/44 or 2/3.
TxDataRate7M7Alarm	Tx warning: Tx exceeds 7.7Mbps limit in TPC 1/2.
TxDataRate12MAlarm	Tx warning: Tx exceeds 12Mbps limit in TPC 7/8.
RxDataRate4M5Alarm	Rx warning: Rx exceeds 4.5Mbps limit in TPC 5/16.
RxDataRate6M5Alarm	Rx warning: Rx exceeds 6.5Mbps limit in TPC 21/44 or 2/3.
RxDataRate7M7Alarm	Rx warning: Rx exceeds 7.7Mbps limit in TPC 1/2.
RxDataRate12MAlarm	Rx warning: Rx exceeds 12Mbps limit in TPC 7/8.
RxTerrAISAlarm	Rx fault: Data input is all ones (AIS), indicating upstream equipment fault.
RxInsertMuxAISAlarm	Rx fault: Insert data is all ones (AIS), indicating upstream equipment fault.
RxBufferSlipAlarm	Rx warning: The minimum period between buffer slips is less than the user threshold set for the deferred alarm.
RxBERAboveThresholdAlarm	Rx warning: The final BER is worse than the user threshold set for the deferred alarm.
RxEbNoBelowThresholdAlarm	Rx warning: The receive Eb/No is worse than the user threshold set for the deferred alarm.
FanFailureAlarm	Unit warning: One or more of the cooling fans have failed.
RxBufferSizeAlarm	Rx warning: Doppler buffer max limited Rx data rate above 42Mbps.
TxBUCPSUAlarm	Tx warning: BUC PSU outside limits.
PowerSupplyAlarmOFN	Unit warning: One or more PSU rails are out of range.
RxFECSyncAlarm	Rx fault: FEC Decoder synchronisation lost.
TxIFFreqAlarm	Tx carrier frequency out of range for current symbol rate.
TxBUCPowerAlarm	Tx warning: Cannot hold/reach power set at BUC.
TxChannelDPLLAlarm	Tx warning: Tx Channel DPLL Unlocked.
TxTerrestrialDPLLAlarm	Tx warning: Tx Terrestrial DPLL Unlocked.
TxG703CarrierAlarm	Tx warning: G703 Carrier Lost.
TxDataRate33MAlarm	Tx warning: Tx exceeds 33Mbps limit in TCM 2/3.
RxDataRate33MAlarm	Rx warning: Rx exceeds 33Mbps limit in TCM 2/3.
BackupRxClockFailureAlarm	Unit fault: Rx backup dock has failed.

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Alarm Name	Description
TxDropMuxMFSyncLossAlarm	Tx fault: TS16 MF sync lost on Tx input.
TxCRCSyncLossAlarm	Tx fault: CRC sync loss on Tx input.
TxDropMuxBERAlarm	Tx fault: Input BER > 1E-3
TxLineCodeViolationAlarm	Tx warning: Line Code Violation detected.
RxBERAlarm	Rx fault: Final BER > 1E-3.
RxBearerLoopFailureAlarm	Rx fault: No insert bearer, generating.
RxDistantEbNoAlarm	Rx warning: The distant Eb/No has fallen below the user threshold.
RxTerrestrialDPLLAlarm	Rx Terrestrial DPLL Unlocked.
TxDataRate37MAlarm	Tx warning: Tx exceeds 37Mbps limit in TPC 0.93.
RxDataRate37MAlarm	Rx warning: Rx exceeds 37Mbps limit in TPC 0.93.
TxDataRate10MAlarm	Tx warning: Tx exceeds 10Mbps limit in RS.
RxDataRate10MAlarm	Rx warning: Rx exceeds 10Mbps limit in RS.
QuadE1Alarm	Quad E1 ports have active alarms ...
TxQuadE1SyncLossAlarm	Frame sync lost on ports ...
TxQuadE1AISAlarm	Data input all ones on ports ...
TxQuadE1BearerAlarm	No bearer detected on ports ...
RxQuadE1InsertMuxAlarm	Insert mux fault on ports ...
RxQuadE1UnderFlowAlarm	Rx FIFO Underflow on ports ...
RxQuadE1OverFlowAlarm	Rx FIFO Overflow on ports ...
RxQuadE1SyncLossAlarm	Rx SM sync loss.
TxQuadE1UnderFlowAlarm	Tx FIFO Underflow on ports ...
TxQuadE1OverFlowAlarm	Tx FIFO Overflow on ports ...
TxQuadE1DropMuxAlarm	Drop mux fault on ports ...
TxQuadE1ClockAlarm	Invalid dock on ports ...
RxPwrAlarm	Wanted Rx input power out of range.
RxCompPwrAlarm	Composite Rx input power out of range.
RxPwrRatioAlarm	Composite to wanted power level ratio >37dBc.

## Chapter 7 Management Information Base

The modem uses two Management Information Bases (MIBs). The Paradise MIB is common to all Paradise Datacom equipment and defines the top-level object identifiers for each piece of equipment (such as modems, SSPAs, etc.). The modem MIB defines the object identifiers that are specific to the modem M&C controls. Both are defined below and are available in electronic form on the CD provided with the modem. Updates are available from the Paradise Datacom web site (<http://www.paradisedata.com>) or alternatively by contacting Technical Customer Support.

### 7.1 Paradise MIB

```
IPOS-MIB DEFINITIONS ::= BEGIN

IMPORTS
    enterprises, OBJECT-TYPE, IpAddress, Counter, Gauge, TimeTicks FROM RFC1155-SMI;

paradiseDatacom OBJECT IDENTIFIER ::= { enterprises 20712 }

deviceInfo OBJECT IDENTIFIER ::= { paradiseDatacom 1 }
deviceID OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE (0..20))
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "Device ID string"
    ::= { deviceInfo 1 }

deviceLocation OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE (0..20))
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        "Device Location Info"
    ::= { deviceInfo 2 }

deviceFirmwareRev OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE (0..20))
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "Device firmware rev info"
    ::= { deviceInfo 3 }

deviceMAC OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE (0..6))
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "Device MAC address"
    ::= { deviceInfo 4 }

-- Paradise Datacom specific MIBs.

devices OBJECT IDENTIFIER ::= { paradiseDatacom 2 }

-- The Devices group.

rmSSPA OBJECT IDENTIFIER ::= { devices 1 }
coSSPA OBJECT IDENTIFIER ::= { devices 2 }
rcp OBJECT IDENTIFIER ::= { devices 3 }
buc OBJECT IDENTIFIER ::= { devices 4 }
modem OBJECT IDENTIFIER ::= { devices 5 }
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
--RM SSPA Settings tree
rmsspaSettings OBJECT IDENTIFIER ::= { rmSSPA 1 }
```

```
rmSettingsOpMode OBJECT-TYPE
  SYNTAX INTEGER {
    standAlone(1),
    redundancy1 1(2),
    redundancy1 2(3)
  }
  ACCESS read-write
  STATUS mandatory
  DESCRIPTION
    "SSPA operation mode.
     @GET_FUNC=get_opMode
     @SET_FUNC=set_opMode"
 ::= { rmsspaSettings 1 }
```

```
rmSettingsSwMode OBJECT-TYPE
  SYNTAX INTEGER {
    manual(1),
    auto(2)
  }
  ACCESS read-write
  STATUS mandatory
  DESCRIPTION
    "Type of redundant systems switchover.
     @GET_FUNC=get_swMode
     @SET_FUNC=set_swMode"
 ::= { rmsspaSettings 2 }
```

```
rmSettingsCtrlMode OBJECT-TYPE
  SYNTAX INTEGER {
    localOn(1),
    localOff(2)
  }
  ACCESS read-write
  STATUS mandatory
  DESCRIPTION
    "Type of SSPA control.
     @GET_FUNC=get_ctrlMode
     @SET_FUNC=set_ctrlMode"
 ::= { rmsspaSettings 3 }
```

```
rmSettingsLCDLight OBJECT-TYPE
  SYNTAX INTEGER {
    off(1),
    low(2),
    medium(3),
    high(4)
  }
  ACCESS read-write
  STATUS mandatory
  DESCRIPTION
    "LCD backlight intensity.
     @GET_FUNC=get_LCDlite
     @SET_FUNC=set_LCDlite"
 ::= { rmsspaSettings 4 }
```

```
rmSettingsMute OBJECT-TYPE
  SYNTAX INTEGER {
    off(1),
    on(2)
  }
  ACCESS read-write
  STATUS mandatory
  DESCRIPTION
    "SSPA Mute state control.
     @GET_FUNC=get_Mute
     @SET_FUNC=set_Mute"
 ::= { rmsspaSettings 5 }
```

```
rmSettingsSerialProtocol OBJECT-TYPE
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
SYNTAX INTEGER {
    normal(1),
    terminal(2),
    locus(3)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA serial interface protocol selection
    @GET_FUNC=get_Protocol
    @SET_FUNC=set_Protocol"
::= { rmsspaSettings 6 }

rmSettingsSerialBaud OBJECT-TYPE
SYNTAX INTEGER {
    baud9600(1),
    baud2400(2),
    baud4800(3),
    baud19200(4),
    baud38400(5)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA serial interface baud rate.
    @GET_FUNC=get_Baud
    @SET_FUNC=set_Baud"
::= { rmsspaSettings 7 }

rmSettingsNetAddress OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA serial network address.
    @GET_FUNC=get_Address
    @SET_FUNC=set_Address"
::= { rmsspaSettings 8 }

rmSettingsRemoteInterface OBJECT-TYPE
SYNTAX INTEGER {
    serialRS232(1),
    serialRS485(2),
    ethernetUDP(3),
    ethernetSNMP(4),
    ethernetHTTP(5)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA remote control interface.
    @GET_FUNC=get_Interface
    @SET_FUNC=set_Interface"
::= { rmsspaSettings 9 }

rmSettingsAuxFaultHandle OBJECT-TYPE
SYNTAX INTEGER {
    disabled(1),
    major(2),
    minor(3),
    majorMute(4)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Auxiliary fault handling setup.
    @GET_FUNC=get_Aux_Handle
    @SET_FUNC=set_Aux_Handle"
::= { rmsspaSettings 10 }

rmSettingsAuxFaultLogic OBJECT-TYPE
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
SYNTAX INTEGER {
    faultOnHigh(1),
    faultOnLow(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Auxiliary fault logic setup.
    @GET_FUNC=get_Aux_Logic
    @SET_FUNC=set_Aux_Logic"
::= { rmsspaSettings 11 }

rmSettingsRFSWFaultHandle OBJECT-TYPE
SYNTAX INTEGER {
    disabled(1),
    major(2),
    minor(3)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "RF Switch fault handling setup.
    @GET_FUNC=get_RFSW_Handle
    @SET_FUNC=set_RFSW_Handle"
::= { rmsspaSettings 12 }

rmSettingsFaultLatch OBJECT-TYPE
SYNTAX INTEGER {
    off(1),
    on(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Fault latch.
    @GET_FUNC=get_Fault_Latch
    @SET_FUNC=set_Fault_Latch"
::= { rmsspaSettings 13 }

rmSettingsBUCFaultHandle OBJECT-TYPE
SYNTAX INTEGER {
    disabled(1),
    major(2),
    minor(3),
    majorMute(4)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "BUC Fault Handling setup.
    @GET_FUNC=get_BUC_Handle
    @SET_FUNC=set_BUC_Handle"
::= { rmsspaSettings 14 }

rmSettingsBUCFaultLogic OBJECT-TYPE
SYNTAX INTEGER {
    faultOnHigh(1),
    faultOnLow(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "BUC fault logic setup.
    @GET_FUNC=get_BUC_Logic
    @SET_FUNC=set_BUC_Logic"
::= { rmsspaSettings 15 }

rmSettingsIcIPassword OBJECT-TYPE
SYNTAX INTEGER (0..255)
ACCESS read-write
STATUS mandatory
DESCRIPTION
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
"Front panel menu password.
  @GET_FUNC=get_password
  @SET_FUNC=set_password"
::= { rmsspaSettings 16 }

rmSettingsStandbySelect OBJECT-TYPE
SYNTAX INTEGER {
    online(1),
    standby(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA standby select.
     @GET_FUNC=get_stby_select
     @SET_FUNC=set_stby_select"
::= { rmsspaSettings 17 }

rmSettingsBuzzer OBJECT-TYPE
SYNTAX INTEGER {
    on(1),
    off(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA alarm buzzer setup.
     @GET_FUNC=get_buzzer
     @SET_FUNC=set_buzzer"
::= { rmsspaSettings 18 }

rmSettingsPasswordEnable OBJECT-TYPE
SYNTAX INTEGER {
    off(1),
    on(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Menu password setup.
     @GET_FUNC=get_password_enbl
     @SET_FUNC=set_password_enbl"
::= { rmsspaSettings 19 }

rmSettingsStbyMode OBJECT-TYPE
SYNTAX INTEGER {
    stbyHot(1),
    stbyCold(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Standby mode select.
     @GET_FUNC=get_stby_mode
     @SET_FUNC=set_stby_mode"
::= { rmsspaSettings 21 }

rmSettingsHPAStatus OBJECT-TYPE
SYNTAX INTEGER {
    hpa1(1),
    hpa2(2)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Redundancy topological factor.
     @GET_FUNC=get_HPA_status
     @SET_FUNC=set_HPA_status"
::= { rmsspaSettings 22 }

rmSettingsLowRFFaultHandling OBJECT-TYPE
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
SYNTAX INTEGER {
    disabled(1),
    major(2),
    minor(3)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Low RF Fault Handling setup.
    @GET_FUNC=get_LowRF_Handle
    @SET_FUNC=set_LowRF_Handle"
::= { rmsspaSettings 24 }

rmSettingsHighVSWRFaultHandling OBJECT-TYPE
SYNTAX INTEGER {
    disabled(1),
    major(2),
    minor(3)
}
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "High VSWR Fault Handling setup.
    @GET_FUNC=get_VSWR_Handle
    @SET_FUNC=set_VSWR_Handle"
::= { rmsspaSettings 25 }

rmSettingsAttenuation OBJECT-TYPE
SYNTAX INTEGER (0..200)
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA Attenuation setup.
    @GET_FUNC=get_attenuation
    @SET_FUNC=set_attenuation"
::= { rmsspaSettings 26 }

rmSettingsFrwdRFThreshold OBJECT-TYPE
SYNTAX INTEGER (0..80)
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "Low forward RF fault threshold in dBm.
    @GET_FUNC=get_lowRF_threshold
    @SET_FUNC=set_lowRF_threshold"
::= { rmsspaSettings 27 }

rmSettingsRefRFThreshold OBJECT-TYPE
SYNTAX INTEGER (0..80)
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "High Reflected RF fault threshold in dBm.
    @GET_FUNC=get_VSWR_threshold
    @SET_FUNC=set_VSWR_threshold"
::= { rmsspaSettings 28 }

rmSettingsIPAddress OBJECT-TYPE
SYNTAX IpAddress
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA IP address
    @GET_FUNC=get_IP_address
    @SET_FUNC=set_IP_address"
::= { rmsspaSettings 29 }

rmSettingsIPGateway OBJECT-TYPE
SYNTAX IpAddress
ACCESS read-write
STATUS mandatory
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
DESCRIPTION
    "SSPA IP Gateway address
    @GET_FUNC=get_Gateway_address
    @SET_FUNC=set_Gateway_address"
::= { rmsspaSettings 30 }

rmSettingsSubnetMask OBJECT-TYPE
SYNTAX IPAddress
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA IP subnet mask
    @GET_FUNC=get_Subnet_mask
    @SET_FUNC=set_Subnet_mask"
::= { rmsspaSettings 31 }

rmSettingsIPLock OBJECT-TYPE
SYNTAX IPAddress
ACCESS read-write
STATUS mandatory
DESCRIPTION
    "SSPA IP lock address
    @GET_FUNC=get_IPLock
    @SET_FUNC=set_IPLock"
::= { rmsspaSettings 32 }

--RM SSPA Thresholds tree
rmsspaThresholds OBJECT IDENTIFIER ::= { rmSSPA 3 }

--Forward RF power construct
rmsspaFrwrdrf OBJECT IDENTIFIER ::= { rmsspaThresholds 1 }

rmsspaForwardRFValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA current level of Forward RF power in dBm x 10 (0.1dBm per 1 value).
    @GET_FUNC=get_Frwrdrf"
    ::= { rmsspaFrwrdrf 1 }

--Reflected RF power construct
rmsspaForwardRFValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
    false(2)
}
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_Frwrdrf_validate"
    ::= { rmsspaFrwrdrf 2 }

rmsspaReflectedRF OBJECT IDENTIFIER ::= { rmsspaThresholds 2 }

rmsspaReflectedRFValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA current level of Reflected RF power in dBm x 10 (0.1dBm per 1 value).
    @GET_FUNC=get_VSWR_RF"
    ::= { rmsspaReflectedRF 1 }

rmsspaReflectedRFValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
    false(2)
}
ACCESS read-only
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_VSWR_RF_validate"
 ::= { rmsspaReflectedRF 2}

--DC current construct
rmsspaDCCurrent OBJECT IDENTIFIER ::= { rmsspaThresholds 3}

rmsspaDCCurrentValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA DC Current in mA.
    @GET_FUNC=get_DC_Current"
 ::= { rmsspaDCCurrent 1}

rmsspaDCCurrentValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
    false(2)
}
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_DC_Current_validate"
 ::= { rmsspaDCCurrent 2}

--PS1 voltage construct
rmsspaPS1Voltage OBJECT IDENTIFIER ::= { rmsspaThresholds 4}

rmsspaPS1VoltageValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA PS1 voltage in mV.
    @GET_FUNC=get_PS1_value"
 ::= { rmsspaPS1Voltage 1}

rmsspaPS1VoltageValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
    false(2)
}
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_PS1_validate"
 ::= { rmsspaPS1Voltage 2}

--PS2 voltage construct
rmsspaPS2Voltage OBJECT IDENTIFIER ::= { rmsspaThresholds 5}

rmsspaPS2VoltageValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA PS2 voltage in mV.
    @GET_FUNC=get_PS2_voltage"
 ::= { rmsspaPS2Voltage 1}

rmsspaPS2VoltageValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
        false(2)
    }
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_PS2_validate"
::= { rmsspaPS2Voltage 2}

--Booster1 voltage construct
rmsspaBooster1Voltage OBJECT IDENTIFIER ::= { rmsspaThresholds 6 }

rmsspaBooster1VoltageValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA Booster1 voltage in mV.
    @GET_FUNC=get_Booster1_value"
::= {rmsspaBooster1Voltage 1}

rmsspaBooster1VoltageValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
    false(2)
}
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_Booster1_validate"
::= { rmsspaBooster1Voltage 2}

--Booster2 voltage construct
rmsspaBooster2Voltage OBJECT IDENTIFIER ::= { rmsspaThresholds 7 }

rmsspaBooster2VoltageValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA Booster2 voltage in mV.
    @GET_FUNC=get_Booster2_value"
::= {rmsspaBooster2Voltage 1}

rmsspaBooster2VoltageValidation OBJECT-TYPE
SYNTAX INTEGER {
    true(1),
    false(2)
}
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_Booster2_validate"
::= { rmsspaBooster2Voltage 2}

--SSPA Core temperature construct
rmsspaCoreTemperature OBJECT IDENTIFIER ::= { rmsspaThresholds 8 }

rmsspaCoreTemperatureValue OBJECT-TYPE
SYNTAX INTEGER
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "Value of SSPA core temperature in C
    @GET_FUNC=get_Temp_value"
::= {rmsspaCoreTemperature 1}
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
rmsspaCoreTemperatureValidation OBJECT-TYPE
  SYNTAX INTEGER {
    true(1),
    false(2)
  }
  ACCESS read-only
  STATUS mandatory
  DESCRIPTION
    "Value indicates if true value of parameter indicated
    or parameter currently invalid
    @GET_FUNC=get_Temp_validate"
  ::= { rmsspaCoreTemperature 2}

--RM SSPA Conditions tree
rmsspaConditions OBJECT IDENTIFIER ::= { rmSSPA 4 }

--SummaryFault construct
rmsspaSummaryFault OBJECT IDENTIFIER ::= { rmsspaConditions 1 }

rmsspaSummaryFaultValue OBJECT-TYPE
  SYNTAX INTEGER {
    normal(1),
    fault(2)
  }
  ACCESS read-only
  STATUS mandatory
  DESCRIPTION
    "Current state of SSPA summary fault
    @GET_FUNC=get_Summary_Fault"
  ::= { rmsspaSummaryFault 1}

rmsspaSummaryFaultCounter OBJECT-TYPE
  SYNTAX Counter
  ACCESS read-only
  STATUS mandatory
  DESCRIPTION
    "Amount of summary fault transitions from normal to
    fault state since last device reset
    @GET_FUNC=get_Summary_Fault_count"
  ::= { rmsspaSummaryFault 2}

END
```

---

## 7.2 Modem MIB

The vast majority of definitions in the following MIB (available in electronic form from Paradise) are valid for both Quantum and Evolution series modems. However, certain menu options, status and alarms are available on the Quantum only – these are denoted as ‘Quantum only’ in the user handbook. There is also an Evolution-only MIB (please contact Customer Technical Support for a copy) that is still maintained and this can be used to determine differences from the amalgamated Quantum/Evolution MIB if necessary.

QUANTUM-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE,  
Integer32, Unsigned32, mib-2  
FROM SNMPv2-SMI

RowStatus, TimeInterval, DateAndTime, StorageType, DisplayString, TruthValue  
FROM SNMPv2-TC

Float  
FROM NET-SNMP-TC

MODULE-COMPLIANCE, OBJECT-GROUP, NOTIFICATION-GROUP  
FROM SNMPv2-CONF

OBJECT-TYPE, IpAddress, Counter, Gauge, TimeTicks  
FROM RFC1155-SMI

InetAddress, InetAddressType  
FROM INET-ADDRESS-MIB

paradiseDataComModem  
FROM IPOS-MIB;

p3000 OBJECT IDENTIFIER ::= { modem 1 }

mcp OBJECT IDENTIFIER ::= { p3000 1 }

mcp-Edit OBJECT IDENTIFIER ::= { mcp 1 }

Edit-Tx OBJECT IDENTIFIER ::= { mcp-Edit 1 }

Tx-Service OBJECT IDENTIFIER ::= { Edit-Tx 1 }

TBBTxService OBJECT-TYPE

SYNTAX INTEGER {

Off(1)  
Closed(2)  
MinOH(3)  
IBSSMS(4)  
IDR(5)  
OM73(6)  
DVBS2(7)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Framing mode for the Tx path."

::= { Tx-Service 1 }

TBBTxServiceStrict OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX INTEGER {  
Off(1)  
On(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether framing customisation is enabled."  
::= { Tx-Service 2}

TBBTxFlexFrmIDR OBJECT-TYPE  
SYNTAX INTEGER {  
T1E1(1)  
T2E2(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "The frame format for IDR varies with data rate. T1/E1 rates use one format and T2/E2 use another. This option allows a choice of frame format regardless of the data rate."  
::= { Tx-Service 3}

Tx-Baseband OBJECT IDENTIFIER ::= { Edit-Tx2 }

TBBTxBBMode OBJECT-TYPE  
SYNTAX INTEGER {  
Cont(1)  
DI(2)  
AudioDat(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Mode selection for baseband processing."  
::= { Tx-Baseband 4}

TBBTxT errDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Terrestrial bit rate. This is used in Continuous mode but is automatically set in other baseband modes."  
::= { Tx-Baseband 5}

TBBTx2048kMode OBJECT-TYPE  
SYNTAX INTEGER {  
unformatted(1)  
G732(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "IBS: G.732 is Intelsat N=30/1920kbps (Sat=2048k) mode, Unformatted is N=32 (Sat=2184k) mode; IDR and Min OH: G.732 aligns Sat frame with Terr' for distant end partial insert, Unformatted uses arbitrary point for frame insertion."  
::= { Tx-Baseband 6}

TBBTxG732CAS OBJECT-TYPE  
SYNTAX INTEGER {  
CAS(1)  
NoCAS(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Specifies whether Channel Associated Signalling information is present in Timeslot 16."  
::= { Tx-Baseband 7}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TBBTxG732Map OBJECT-TYPE

```
SYNTAX INTEGER {  
  nomap(1)  
  map(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether timeslots can be reordered."

::= { Tx-Baseband 8}

TBBTxBBModeDl OBJECT-TYPE

```
SYNTAX INTEGER {  
  G732(1)  
  T1D4(2)  
  T1ESF(3)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Specifies the framing for mat for Drop MUX operation."

::= { Tx-Baseband 9}

TBBTxDIModeG732Sig OBJECT-TYPE

```
SYNTAX INTEGER {  
  NoCAS(1)  
  CAS(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether CAS information is processed and routed through the satellite."

::= { Tx-Baseband 10}

TBBTxDIModeT1Sig OBJECT-TYPE

```
SYNTAX INTEGER {  
  NoRBS(1)  
  RBS(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Specifies whether Robbed Bit Signalling information is present in the traffic source."

::= { Tx-Baseband 11}

TBBTxSatTSSeq1 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 12}

TBBTxSatTSSeq2 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 13}

TBBTxSatTSSeq3 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 14}

TBBTxSatTSSeq4 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 15}

TBBTxSatTSSeq5 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 16}

TBBTxSatTSSeq6 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 17}

TBBTxSatTSSeq7 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 18}

TBBTxSatTSSeq8 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 19}

TBBTxSatTSSeq9 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 20}

TBBTxSatTSSeq10 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 21}

TBBTxSatT SSeq11 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 22}

TBBTxSatT SSeq12 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 23}

TBBTxSatT SSeq13 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 24}

TBBTxSatT SSeq14 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 25}

TBBTxSatT SSeq15 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 26}

TBBTxSatT SSeq16 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 27}

TBBTxSatT SSeq17 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 28}

TBBTxSatT SSeq18 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 29}

TBBTxSatT SSeq19 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 30}

TBBTxSatT SSeq20 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 31}

TBBTxSatT SSeq21 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 32}

TBBTxSatT SSeq22 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 33}

TBBTxSatT SSeq23 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 34}

TBBTxSatT SSeq24 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 35}

TBBTxSatT SSeq25 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 36}

TBBTxSatT SSeq26 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order.

For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 37}

TBBTxSatT SSeq27 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 38}

TBBTxSatT SSeq28 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 39}

TBBTxSatT SSeq29 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 40}

TBBTxSatT SSeq30 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 41}

TBBTxSatT SSeq31 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 42}

TBBTxSatTSSeq32 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are dropped and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be sent."

::= { Tx-Baseband 43}

TBBTxSatTSUsed OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite."

::= { Tx-Baseband 44}

TBBTxDroppedTS OBJECT-TYPE

SYNTAX INTEGER {

Leave(1)

Idle(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether dropped timeslots are replaced with Idle code."

::= { Tx-Baseband 45}

TBBTxSatTSId OBJECT-TYPE

SYNTAX INTEGER {

Ignore(1)

Maintain(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Set to on if timeslots contain different data streams; set to off if timeslots are all part of the same stream."

::= { Tx-Baseband 46}

TBBTxIDRESCDat OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

Async(2)

Sync(3)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the operating mode of the low-rate IDR ESC channel."

::= { Tx-Baseband 47}

TBBTxIBSESCDat OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

Async(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether the IBS high-rate asynchronous ESC channel is enabled."

::= { Tx-Baseband 48}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TBBTxIBSESCMode OBJECT-TYPE

```
SYNTAX INTEGER {  
  P230(1)  
  Max(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Allows backward compatibility with Paradise P230 unit."

::= { Tx-Baseband 49}

TBBESCAsyncBaud OBJECT-TYPE

```
SYNTAX INTEGER {  
  110(1)  
  150(2)  
  300(3)  
  600(4)  
  1200(5)  
  2400(6)  
  4800(7)  
  9600(8)  
  19200(9)  
  38400(10)  
  57600(11)  
  115200(12)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the baud rate of the ESC UART."

::= { Tx-Baseband 50}

TBBESCAsyncChar OBJECT-TYPE

```
SYNTAX INTEGER {  
  7(1)  
  8(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the number of bits in an ESC UART character."

::= { Tx-Baseband 51}

TBBESCAsyncParity OBJECT-TYPE

```
SYNTAX INTEGER {  
  None(1)  
  Even(2)  
  Odd(3)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the ESC UART parity setting."

::= { Tx-Baseband 52}

TBBTxIBSAuxDat OBJECT-TYPE

```
SYNTAX INTEGER {  
  Off(1)  
  IntelSat(2)  
  Sync(3)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the operating mode of the IBS Aux channel."

::= { Tx-Baseband 53}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TBBTxIDRAuxMode OBJECT-TYPE

```
SYNTAX INTEGER {  
  Off(1)  
  K32(2)  
  K64(3)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the Aux channel in IDR mode. Allocates Aux data in place of one or both of the IDR voice channels if these are not used or can be used to reduce the 96k overhead to 64k or 32k"

::= { Tx-Baseband 54}

TBBTxIDRAudioMode OBJECT-TYPE

```
SYNTAX INTEGER {  
  Off(1)  
  K16x2(2)  
  K32(3)  
  K32x2(4)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls audio data format for the ESC overhead in IDR mode. 32k overhead is transmitted when set Off. The remaining overhead up to 96k can not be transmitted, allocated to voice or allocated to Aux data via the Aux controls."

::= { Tx-Baseband 55}

TBBESCLVCh1 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the input/output levels for the IDR audio ESC."

::= { Tx-Baseband 56}

TBBESCLVCh2 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Stores the input/output levels for the IDR audio ESC."

::= { Tx-Baseband 57}

TBBTxBBModeAudioData OBJECT-TYPE

```
SYNTAX INTEGER {  
  AudioOnly(1)  
  AudioData(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the audio/data baseband mode format in IBS and Closed Network + ESC. Can either generate a 64kbps data stream from the 232kbps ADPCM audio ports on the IDR card or a 128kbps data stream by adding to this 64kbps from the main data port."

::= { Tx-Baseband 58}

TBBTxBackAlmMode OBJECT-TYPE

```
SYNTAX INTEGER {  
  Ext1234(1)  
  Int1Ext234(2)  
  Int1OK234(3)  
  Int1234(4)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls routing of multiple backward alarms in IDR mode. When internally linked from Rx-Fail to BA1 or BA1-4, these alarms respond similarly to the normal single backward alarm."

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { Tx-Baseband 59}

QuadE1P1DroppedTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the number of timeslots dropped on port 1 of the Quad E1 card."  
::= { Tx-Baseband 60}

QuadE1P2DroppedTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the number of timeslots dropped on port 2 of the Quad E1 card."  
::= { Tx-Baseband 61}

QuadE1P3DroppedTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the number of timeslots dropped on port 3 of the Quad E1 card."  
::= { Tx-Baseband 62}

QuadE1P4DroppedTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the number of timeslots dropped on port 4 of the Quad E1 card."  
::= { Tx-Baseband 63}

QuadE1P1Idle OBJECT-TYPE  
SYNTAX INTEGER {  
 Leave(1)  
 Idle(2)  
}  
  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls whether dropped timeslots are replaced with Idle code."  
::= { Tx-Baseband 64}

QuadE1P2Idle OBJECT-TYPE  
SYNTAX INTEGER {  
 Leave(1)  
 Idle(2)  
}  
  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls whether dropped timeslots are replaced with Idle code."  
::= { Tx-Baseband 65}

QuadE1P3Idle OBJECT-TYPE  
SYNTAX INTEGER {  
 Leave(1)  
 Idle(2)  
}  
  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls whether dropped timeslots are replaced with Idle code."  
::= { Tx-Baseband 66}

QuadE1P4Idle OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX INTEGER {  
Leave(1)  
Idle(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls whether dropped timeslots are replaced with Idle code."  
::= { Tx-Baseband 67}

QuadE1 P1T xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite."  
::= { Tx-Baseband 68}

QuadE1 P2T xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite."  
::= { Tx-Baseband 69}

QuadE1 P3T xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite."  
::= { Tx-Baseband 70}

QuadE1 P4T xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the number of timeslots dropped off the terrestrial bearer and sent over the satellite."  
::= { Tx-Baseband 71}

QuadE1 P1T xMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
E(2)  
A(3)  
Abis(4)  
Ater(5)  
Other(6)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the operating mode of port 1 on the Quad E1 card."  
::= { Tx-Baseband 72}

QuadE1 P2T xMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
E(2)  
A(3)  
Abis(4)  
Ater(5)  
Other(6)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the operating mode of port 2 on the Quad E1 card."

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { Tx-Baseband 73}

QuadE1P3TxMode OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

E(2)

A(3)

Abis(4)

Ater(5)

Other(6)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "This selects the operating mode of port 3 on the Quad E1 card."

::= { Tx-Baseband 74}

QuadE1P4TxMode OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

E(2)

A(3)

Abis(4)

Ater(5)

Other(6)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "This selects the operating mode of port 4 on the Quad E1 card."

::= { Tx-Baseband 75}

Tx-Clocks OBJECT IDENTIFIER ::= { Edit-Tx3 }

TBBTxCLKMode OBJECT-TYPE

SYNTAX INTEGER {

Ext(1)

Int(2)

RxRef(3)

Station(4)

ETC(5)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the clock source for the Tx path."

::= { Tx-Clocks 76}

Tx-Modulation OBJECT IDENTIFIER ::= { Edit-Tx4 }

TModTxMod OBJECT-TYPE

SYNTAX INTEGER {

PSK2(1)

PSK4(2)

OPSK4(3)

PSK8(4)

QAM16(5)

QAM8(6)

APSK16(7)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Trade-off between bandwidth efficiency (most efficient is 16QAM) and resilience to noise (most resilient is BPSK)."

::= { Tx-Modulation 77}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TFECTxQMap OBJECT-TYPE

```
SYNTAX INTEGER {  
  IESS(1)  
  OM73(2)  
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Determines how data is mapped to signal constellations in QPSK mode."

::= { Tx-Modulation 78}

TFECTxSwopBPSKBitOrder OBJECT-TYPE

```
SYNTAX TruthValue
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether I and Q bits are swapped in BPSK mode."

::= { Tx-Modulation 79}

Tx-FEC OBJECT IDENTIFIER ::= { Edit-Tx5 }

TFECTxFECMode OBJECT-TYPE

```
SYNTAX INTEGER {
```

Off(1)

Viterbi(2)

TCM(3)

TPC(4)

Sequential(5)

LDPC(6)

DVBS2(7)

```
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the inner FEC mode."

::= { Tx-FEC 80}

TFECTxFECRate OBJECT-TYPE

```
SYNTAX INTEGER {
```

R1210-3872(1)

R12012-25168(2)

R2028-4116(3)

R1-2(4)

R2-3(5)

R2499-3748(6)

R3-4(7)

R2223-2964(8)

R3249-4116(9)

R7-8(10)

R14280-16320(11)

R3150-3600(12)

R15240-16404(13)

R1-4(14)

R1-3(15)

R2-5(16)

R3-5(17)

R4-5(18)

R5-6(19)

R8-9(20)

R9-10(21)

```
}
```

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the FEC code rate i.e. the number of bits input to the Forward Error Correction encoder relative to the number output."

::= { Tx-FEC 81}

TRSTxRSMODE OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX INTEGER {  
Off(1)  
Normal(2)  
Other(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether the Reed-Solomon outer-FEC encoder is active."  
::= { Tx-FEC 82}

TRSTxRSType OBJECT-TYPE  
SYNTAX INTEGER {  
Intelsat(1)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the Reed-Solomon outer-FEC scheme."  
::= { Tx-FEC 83}

TRSTxRSN OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Reed-Solomon codeword length, i.e. k data symbols + (n - k) parity symbols, where (n - k)/2 symbol errors per codeword can be corrected."  
::= { Tx-FEC 84}

TRSTxRSK OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Number of data symbols per Reed-Solomon codeword (range (n - 2) to (n - 20) in steps of 2)."  
::= { Tx-FEC 85}

TRSTxIntDepth OBJECT-TYPE  
SYNTAX INTEGER {  
4(1)  
8(2)  
12(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls resilience to burst errors (larger depth gives best BER) through data dispersal at the expense of introducing processing delay."  
::= { Tx-FEC 86}

Tx-Scrambler OBJECT IDENTIFIER ::= { Edit-Tx 6 }

TBBTxScr OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
Normal(2)  
Other(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Master control for all scramblers. In Normal mode, scrambler settings are set automatically."  
::= { Tx-Scrambler 87}

TBBTxScrType OBJECT-TYPE  
SYNTAX INTEGER {  
IBSSMS(1)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

V35(2)  
Turbo(3)  
OM73(4)  
IntelRS(5)  
LDPC(6)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the type of scrambler to apply. Only available when 'Scrambler selection' is set to 'Other'."  
::= { Tx-Scrambler 88}

Tx-Carrier OBJECT IDENTIFIER ::= { Edit-Tx 7 }

TIFTxIFFreq OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "TxIF frequency used to transmit to satellite."  
::= { Tx-Carrier 89}

TIFTxIFPwr OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "TxIF output power level."  
::= { Tx-Carrier 90}

GwyTxCarrier OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
On(2)  
MuteOnBreak(3)  
RTS(4)  
Rx(5)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Tx carrier control. Mute on power break requires confirmation of transmission following a power outage. When RTS is enabled then the carrier is controlled by the interface RTS line."  
::= { Tx-Carrier 91}

TFECTxSpectInv OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether the I and Q channel outputs are swapped."  
::= { Tx-Carrier 92}

Edit-Rx OBJECT IDENTIFIER ::= { mcp-Edit 2 }

Rx-Service OBJECT IDENTIFIER ::= { Edit-Rx 1 }

RBBRxService OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
Closed(2)  
MinOH(3)  
IBSSMS(4)  
IDR(5)  
OM73(6)  
DVBS2(7)  
}

ACCESS read-write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Framing mode for the Rx path."  
::= { Rx-Service 93}

RBBRxServiceStrict OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
On(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether framing customisation is enabled."  
::= { Rx-Service 94}

RBBRxFlexFrmlDR OBJECT-TYPE  
SYNTAX INTEGER {  
T1E1(1)  
T2E2(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "The frame format for IDR varies with data rate. T1/E1 rates use one format and T2/E2 use another. This option allows a choice of frame format regardless of the data rate."  
::= { Rx-Service 95}

Rx-Baseband OBJECT IDENTIFIER ::= { Edit-Rx2 }

RBBRxBBMode OBJECT-TYPE  
SYNTAX INTEGER {  
Cont(1)  
DI(2)  
AudioDat(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Mode selection for baseband processing."  
::= { Rx-Baseband 96}

RBBRxTerraDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Terrestrial bit rate. This is used in Continuous mode but is automatically set in other baseband modes."  
::= { Rx-Baseband 97}

RBBRx2048kMode OBJECT-TYPE  
SYNTAX INTEGER {  
unformatted(1)  
G732(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "IBS: G.732 is Intel at N=30/1920kbps (Sat=2048k) mode, Unformatted is N=32 (Sat=2184k) mode; IDR and Min OH: G.732 aligns Sat frame with Terra for distant end partial insert, Unformatted uses arbitrary point for frame insertion."  
::= { Rx-Baseband 98}

RBBRxG732CAS OBJECT-TYPE  
SYNTAX INTEGER {  
CAS(1)  
NoCAS(2)  
}

ACCESS read-write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Specifies whether Channel Associated Signalling information is present in Timeslot 16."  
::= { Rx-Baseband 99}

RBBRxG732Map OBJECT-TYPE  
SYNTAX INTEGER {  
noMap(1)  
map(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether timeslots can be reordered."  
::= { Rx-Baseband 100}

RBBRxBBModeDI OBJECT-TYPE  
SYNTAX INTEGER {  
G732(1)  
T1D4(2)  
T1ESF(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Specifies the framing format for Insert MUX operation."  
::= { Rx-Baseband 101}

RBBRxDModeG732Sig OBJECT-TYPE  
SYNTAX INTEGER {  
NoCAS(1)  
CAS(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether CAS information is received from the satellite and processed."  
::= { Rx-Baseband 102}

RBBRxDModeT1Sig OBJECT-TYPE  
SYNTAX INTEGER {  
NoRBS(1)  
RBS(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Specifies whether Robbed Bit Signalling information is present in the traffic source."  
::= { Rx-Baseband 103}

RBBRxSigBlockCode OBJECT-TYPE  
SYNTAX INTEGER {  
NormalABCD(1)  
AISABCD(2)  
B1NormalACD(3)  
AB1NormalCD(4)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Determines actions to be taken with respect to Rx CAS signalling blockcode."  
::= { Rx-Baseband 104}

RBBRxOriginate OBJECT-TYPE  
SYNTAX INTEGER {  
Loop(1)  
Originate(2)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the origination of a terrestrial bearer from the Insert MUX."  
::= { Rx-Baseband 105}

RBBRxSatTSSeq1 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."  
::= { Rx-Baseband 106}

RBBRxSatTSSeq2 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."  
::= { Rx-Baseband 107}

RBBRxSatTSSeq3 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."  
::= { Rx-Baseband 108}

RBBRxSatTSSeq4 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."  
::= { Rx-Baseband 109}

RBBRxSatTSSeq5 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."  
::= { Rx-Baseband 110}

RBBRxSatTSSeq6 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."  
::= { Rx-Baseband 111}

RBBRxSatTSSeq7 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 112}

RBBRxSatTSeq8 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 113}

RBBRxSatTSeq9 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 114}

RBBRxSatTSeq10 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 115}

RBBRxSatTSeq11 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 116}

RBBRxSatTSeq12 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 117}

RBBRxSatTSeq13 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 118}

RBBRxSatTSeq14 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 119}

RBBRxSatTSSeq15 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 120}

RBBRxSatTSSeq16 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 121}

RBBRxSatTSSeq17 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 122}

RBBRxSatTSSeq18 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 123}

RBBRxSatTSSeq19 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 124}

RBBRxSatTSSeq20 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 125}

RBBRxSatTSSeq21 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 126}

RBBRxSatTSeq22 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 127}

RBBRxSatTSeq23 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 128}

RBBRxSatTSeq24 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 129}

RBBRxSatTSeq25 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 130}

RBBRxSatTSeq26 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 131}

RBBRxSatTSeq27 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 132}

RBBRxSatTSeq28 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 133}

RBBRxSatTSSeq29 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 134}

RBBRxSatTSSeq30 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 135}

RBBRxSatTSSeq31 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 136}

RBBRxSatTSSeq32 OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls which timeslots are inserted and in which order. For G.732 operation elements 1-32 are used, and for T1-D4 and T1-ESF, elements 1-24 are used. Elements must be filled sequentially with the number of the timeslot to be received."

::= { Rx-Baseband 137}

RBBRxSatTSId OBJECT-TYPE

SYNTAX INTEGER {

Ignore(1)

Maintain(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Set to on if timeslots contain different data streams; set to off if timeslots are all part of the same stream."

::= { Rx-Baseband 138}

RBBRxPartialInsert OBJECT-TYPE

SYNTAX INTEGER {

Normal(1)

Partial(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether part or all of the received data is to be inserted into the terrestrial bearer."

::= { Rx-Baseband 139}

RBBRxPartialTS1 OBJECT-TYPE

SYNTAX INTEGER {

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```
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 140}
```

```
RBBRxPartialTS2 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 141}
```

```
RBBRxPartialTS3 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 142}
```

```
RBBRxPartialTS4 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 143}
```

```
RBBRxPartialTS5 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 144}
```

```
RBBRxPartialTS6 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
```

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DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 145}

RBBRxPartialTS7 OBJECT-TYPE  
SYNTAX INTEGER {  
  Ignore(1)  
  Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 146}

RBBRxPartialTS8 OBJECT-TYPE  
SYNTAX INTEGER {  
  Ignore(1)  
  Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 147}

RBBRxPartialTS9 OBJECT-TYPE  
SYNTAX INTEGER {  
  Ignore(1)  
  Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 148}

RBBRxPartialTS10 OBJECT-TYPE  
SYNTAX INTEGER {  
  Ignore(1)  
  Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 149}

RBBRxPartialTS11 OBJECT-TYPE  
SYNTAX INTEGER {  
  Ignore(1)  
  Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 150}

RBBRxPartialTS12 OBJECT-TYPE  
SYNTAX INTEGER {

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```
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 151}
```

```
RBBRxPartialTS13 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 152}
```

```
RBBRxPartialTS14 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 153}
```

```
RBBRxPartialTS15 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 154}
```

```
RBBRxPartialTS16 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 155}
```

```
RBBRxPartialTS17 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
```

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DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 156}

RBBRxPartialTS18 OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 157}

RBBRxPartialTS19 OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 158}

RBBRxPartialTS20 OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 159}

RBBRxPartialTS21 OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 160}

RBBRxPartialTS22 OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 161}

RBBRxPartialTS23 OBJECT-TYPE  
SYNTAX INTEGER {

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```
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 162}
```

```
RBBRxPartialTS24 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 163}
```

```
RBBRxPartialTS25 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 164}
```

```
RBBRxPartialTS26 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 165}
```

```
RBBRxPartialTS27 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."
::= { Rx-Baseband 166}
```

```
RBBRxPartialTS28 OBJECT-TYPE
SYNTAX INTEGER {
Ignore(1)
Insert(2)
}
```

```
ACCESS read-write
STATUS mandatory
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 167}

RBBRxPartialTS29 OBJECT-TYPE

SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 168}

RBBRxPartialTS30 OBJECT-TYPE

SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 169}

RBBRxPartialTS31 OBJECT-TYPE

SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 170}

RBBRxPartialTS32 OBJECT-TYPE

SYNTAX INTEGER {  
Ignore(1)  
Insert(2)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "When Partial Insert is active, controls whether the timeslot from the satellite is to be inserted into the terrestrial bearer."  
::= { Rx-Baseband 171}

RBBRxSatTSUsed OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Indicates the number of timeslots sent over the satellite."  
::= { Rx-Baseband 172}

RBBRxDRAudioMode OBJECT-TYPE

SYNTAX INTEGER {  
Off(1)  
K16x2(2)  
K32(3)  
K32x2(4)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls audio data format for the ESC overhead in IDR mode. 32k overhead is transmitted when set Off. The remaining overhead up to 96k can not be transmitted, allocated to voice or allocated to Aux data via the Aux controls."  
::= { Rx-Baseband 173}

RBBESCLVCh1 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the input/output levels for the IDR audio ESC."  
::= { Rx-Baseband 174}

RBBESCLVCh2 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the input/output levels for the IDR audio ESC."  
::= { Rx-Baseband 175}

RBBRxBBModeAudioDat OBJECT-TYPE  
SYNTAX INTEGER {  
AudioOnly(1)  
AudioDat(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the audio/data baseband mode format in IBS and Closed Network+ ESC. Can either generate a 64kbps data stream from the 232kbps ADPCM audio ports on IDR card or a 128kbps data stream by adding to this 64kbps from the main data port."  
::= { Rx-Baseband 176}

RBBRxIDRESCDat OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
Async(2)  
Sync(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the operating mode of the IDR ESC channel."  
::= { Rx-Baseband 177}

RBBRxIBSESCDat OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
Async(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls whether the IBS high-rate asynchronous ESC channel is enabled."  
::= { Rx-Baseband 178}

RBBRxIBSESCMode OBJECT-TYPE  
SYNTAX INTEGER {  
P230(1)  
Max(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Allows backward compatibility with Paradise P230 unit."

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { Rx-Baseband 179}

RBBESCAsyncBaud OBJECT-TYPE

SYNTAX INTEGER {

110(1)  
150(2)  
300(3)  
600(4)  
1200(5)  
2400(6)  
4800(7)  
9600(8)  
19200(9)  
38400(10)  
57600(11)  
115200(12)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the baud rate of the ESC UART."

::= { Rx-Baseband 180}

RBBESCAsyncChar OBJECT-TYPE

SYNTAX INTEGER {

7(1)  
8(2)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the number of bits in an ESC UART character."

::= { Rx-Baseband 181}

RBBESCAsyncParity OBJECT-TYPE

SYNTAX INTEGER {

None(1)  
Even(2)  
Odd(3)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the ESC UART parity setting."

::= { Rx-Baseband 182}

RBBRxIDRAuxMode OBJECT-TYPE

SYNTAX INTEGER {

Off(1)  
K32(2)  
K64(3)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the Aux channel in IDR mode. Allocates Aux data in place of one or both of the IDR voice channels if these are not used or can be used to reduce the 96k overhead to 64k or 32k"

::= { Rx-Baseband 183}

RBBRxBSAuxDat OBJECT-TYPE

SYNTAX INTEGER {

Off(1)  
IntelSat(2)  
Sync(3)  
}

ACCESS read-write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Controls the operating mode of the IBS Aux channel."  
::= { Rx-Baseband 184}

QuadE1P1InsertTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the timeslots inserted on port 1 of the Quad E1 card."  
::= { Rx-Baseband 185}

QuadE1P2InsertTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the timeslots inserted on port 2 of the Quad E1 card."  
::= { Rx-Baseband 186}

QuadE1P3InsertTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the timeslots inserted on port 3 of the Quad E1 card."  
::= { Rx-Baseband 187}

QuadE1P4InsertTS OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the timeslots inserted on port 4 of the Quad E1 card."  
::= { Rx-Baseband 188}

QuadE1P1Originate OBJECT-TYPE  
SYNTAX INTEGER {  
Loop(1)  
Originate(2)  
}  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the origination of a terrestrial bearer from the Insert MUX."  
::= { Rx-Baseband 189}

QuadE1P2Originate OBJECT-TYPE  
SYNTAX INTEGER {  
Loop(1)  
Originate(2)  
}  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the origination of a terrestrial bearer from the Insert MUX."  
::= { Rx-Baseband 190}

QuadE1P3Originate OBJECT-TYPE  
SYNTAX INTEGER {  
Loop(1)  
Originate(2)  
}  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the origination of a terrestrial bearer from the Insert MUX."  
::= { Rx-Baseband 191}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

QuadE1 P4Originate OBJECT-TYPE  
SYNTAX INTEGER {  
Loop(1)  
Originate(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Controls the origination of a terrestrial bearer from the Insert MUX."  
 ::= { Rx-Baseband 192}

QuadE1 P1R xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Indicates the number of timeslots sent over the satellite."  
 ::= { Rx-Baseband 193}

QuadE1 P2R xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Indicates the number of timeslots sent over the satellite."  
 ::= { Rx-Baseband 194}

QuadE1 P3R xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Indicates the number of timeslots sent over the satellite."  
 ::= { Rx-Baseband 195}

QuadE1 P4R xTSUsed OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Indicates the number of timeslots sent over the satellite."  
 ::= { Rx-Baseband 196}

QuadE1 P1R xMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
E(2)  
A(3)  
Abis(4)  
Ater(5)  
Other(6)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This selects the operating mode of port 1 on the Quad E1 card."  
 ::= { Rx-Baseband 197}

QuadE1 P2R xMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
E(2)  
A(3)  
Abis(4)  
Ater(5)  
Other(6)  
}

ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "This selects the operating mode of port 2 on the Quad E1 card."  
::= { Rx-Baseband 198}

QuadE1P3RxMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
E(2)  
A(3)  
Abis(4)  
Ater(5)  
Other(6)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "This selects the operating mode of port 3 on the Quad E1 card."  
::= { Rx-Baseband 199}

QuadE1P4RxMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
E(2)  
A(3)  
Abis(4)  
Ater(5)  
Other(6)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "This selects the operating mode of port 4 on the Quad E1 card."  
::= { Rx-Baseband 200}

Rx-Clocks OBJECT IDENTIFIER ::= { Edit-Rx3 }

RBBRxClockMode OBJECT-TYPE  
SYNTAX INTEGER {  
Sat(1)  
Tx(2)  
Int(3)  
Station(4)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the source of the clock for the Rx path."  
::= { Rx-Clocks 201}

RBBRxBufferSize OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Buffer capacity for received data."  
::= { Rx-Clocks 202}

RBBRxBuffMFSync OBJECT-TYPE  
SYNTAX INTEGER {  
DoNotMaintain(1)  
Maintain(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether the Rx buffer should be increased when necessary to maintain multi-frame sync when the buffer slips."  
::= { Rx-Clocks 203}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RBBRxBuffAutoCent OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether the Rxbuffer is centred following an Rxpath recovery from failure."

::= { Rx-Clocks 204 }

Rx-Demodulation OBJECT IDENTIFIER ::= { Edit-Rx 4 }

RDemRxMod OBJECT-TYPE

SYNTAX INTEGER {

PSK2(1)

PSK4(2)

OPSK4(3)

PSK8(4)

QAM16(5)

QAM8(6)

APSK16(7)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Trade-off between bandwidth efficiency (most efficient is 16QAM) and resilience to noise (most resilient is BPSK)."

::= { Rx-Demodulation 205 }

RFECRxQMap OBJECT-TYPE

SYNTAX INTEGER {

IESS(1)

OM73(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Determines how data is mapped to signal constellations in QPSK mode."

::= { Rx-Demodulation 206 }

RFECRxSwopBPSKBitOrder OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether I and Q bits are swapped in BPSK mode."

::= { Rx-Demodulation 207 }

RDemRxSweep OBJECT-TYPE

SYNTAX INTEGER {

Normal(1)

Other(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the Rx signal sweep configuration."

::= { Rx-Demodulation 208 }

RDemRxSweepWidth OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the Rx signal sweep width - this is a +/- setting i.e. the total width is twice the value that is entered."

::= { Rx-Demodulation 209 }

Rx-FEC OBJECT IDENTIFIER ::= { Edit-Rx 5 }

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RFECRxFECMode OBJECT-TYPE

SYNTAX INTEGER {

Off(1)  
Viterbi(2)  
TCM(3)  
TPC(4)  
Sequential(5)  
LDPC(6)  
DVBS2(7)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the inner FEC mode."

::= { Rx-FEC 210}

RFECRxFECRate OBJECT-TYPE

SYNTAX INTEGER {

R1210-3872(1)  
R12012-25168(2)  
R2028-4116(3)  
R1-2(4)  
R2-3(5)  
R2499-3748(6)  
R3-4(7)  
R2223-2964(8)  
R3249-4116(9)  
R7-8(10)  
R14280-16320(11)  
R3150-3600(12)  
R15240-16404(13)  
R1-4(14)  
R1-3(15)  
R2-5(16)  
R3-5(17)  
R4-5(18)  
R5-6(19)  
R8-9(20)  
R9-10(21)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the FEC code rate i.e. the number of bits input to the Forward Error Correction encoder relative to the number output."

::= { Rx-FEC 211}

RRSRxRSMODE OBJECT-TYPE

SYNTAX INTEGER {

Off(1)  
Normal(2)  
Other(3)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether the Reed-Solomon outer-FEC encoder is active."

::= { Rx-FEC 212}

RRSRxRSType OBJECT-TYPE

SYNTAX INTEGER {

IntelSat(1)  
}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the Reed-Solomon outer-FEC scheme."

::= { Rx-FEC 213}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

### RRSRxRSN OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Reed-Solomon codeword length, i.e. k data symbols + (n - k) parity symbols, where (n - k)/2 symbol errors per codeword can be corrected."

::= { Rx-FEC 214}

### RRSRxRSK OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Number of data symbols per Reed-Solomon codeword (range (n - 2) to (n - 20) in steps of 2)."

::= { Rx-FEC 215}

### RRSRxIntDepth OBJECT-TYPE

SYNTAX INTEGER {

4(1)

8(2)

12(3)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Controls resilience to burst errors (larger depth gives best BER) through data dispersal at the expense of introducing processing delay."

::= { Rx-FEC 216}

Rx-Descrambler OBJECT IDENTIFIER ::= { Edit-Rx 6 }

### RBBRxScr OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

Normal(2)

Other(3)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Master control for all scramblers. In Normal mode, scrambler settings are set automatically."

::= { Rx-Descrambler 217}

### RBBRxScrType OBJECT-TYPE

SYNTAX INTEGER {

IBSSMS(1)

V35(2)

Turbo(3)

OM73(4)

IntelRS(5)

LDPC(6)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Controls the type of scrambler to apply. Only available when 'Scrambler selection' is set to 'Other'."

::= { Rx-Descrambler 218}

Rx-Carrier OBJECT IDENTIFIER ::= { Edit-Rx 7 }

### RFECRxSpecInV OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Controls whether the I and Q channel outputs are swapped."

::= { Rx-Carrier 219}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RIFRxlFFreq OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Rx IF frequency used to receive from satellite."

::= { Rx-Carrier 220}

Rx-RxEqTx OBJECT IDENTIFIER ::= { Edit-Rx 8 }

CPURxEqTx OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Controls whether specific Rx configuration parameters mirror the equivalent Tx parameters."

::= { Rx-RxEqTx 221}

Edit-Unit OBJECT IDENTIFIER ::= { mcp-Edit 3 }

Unit-Identity OBJECT IDENTIFIER ::= { Edit-Unit 1 }

CPUModelID OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "User-assigned field typically the unique modem name, number or location."

::= { Unit-Identity 222}

Unit-Interface OBJECT IDENTIFIER ::= { Edit-Unit 2 }

TerrIntfcType OBJECT-TYPE

SYNTAX INTEGER {

RS422(1)

LVDS(2)

RS232(3)

V35(4)

G703(5)

IP(6)

HSSI(7)

QUADE(8)

Eurocom(9)

QUADE-RS422(10)

QUADE-RS232(11)

QUADE-V35(12)

QUADE-IP(13)

QUADE-IP-RS422(14)

QUADE-IP-RS232(15)

QUADE-IP-V35(16)

ABIS(17)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Sets the terrestrial interface communications standard."

::= { Unit-Interface 223}

G703Rate OBJECT-TYPE

SYNTAX INTEGER {

T1(1)

E1(2)

T2(3)

E2(4)

T3(5)

E3(6)

}

ACCESS read- write

STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Sets the data rate being used in relation to the G.703 interface."  
::= { Unit-Interface 224}

G703Impedance OBJECT-TYPE  
SYNTAX INTEGER {  
75(1)  
120(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the G.703 line format."  
::= { Unit-Interface 225}

G703LineCode OBJECT-TYPE  
SYNTAX INTEGER {  
AMI(1)  
B3ZS(2)  
B6ZS(3)  
B8ZS(4)  
HDB3(5)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the type of waveform pattern used to encode 1s and 0s onto the G.703 signal."  
::= { Unit-Interface 226}

G703LineLength OBJECT-TYPE  
SYNTAX INTEGER {  
133(1)  
266(2)  
399(3)  
533(4)  
655(5)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Physical length of G.703 cable for line build-out compensation."  
::= { Unit-Interface 227}

CPUBxIF Impedance OBJECT-TYPE  
SYNTAX INTEGER {  
50(1)  
75(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the IF port impedance."  
::= { Unit-Interface 228}

BxESCIntfc OBJECT-TYPE  
SYNTAX INTEGER {  
RS232(1)  
RS422(2)  
RS485(3)  
IP(4)  
Local(5)  
Remote(6)  
Serial(7)  
}

ACCESS read-write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Specifies the ESC electrical interface. Note RS422 is not available on the modem backpanel and RS485 is not available on the IDR card."  
::= { Unit-Interface 229}

BxAuxIntfc OBJECT-TYPE  
SYNTAX INTEGER {  
RS232(1)  
RS422(2)  
RS485(3)  
IP(4)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Specifies the Aux electrical interface. Note RS422 is not available on the modem back panel and RS485 is not available on the IDR card."  
::= { Unit-Interface 230}

BridgeMode OBJECT-TYPE  
SYNTAX INTEGER {  
Bridge(1)  
Broute(2)  
PEP(3)  
Hub(4)  
Leaf(5)  
HC(6)  
Mesh(7)  
PEP-HC(8)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Select Bridge for ordinary ethernet over satellite bridging, i.e. point-to-point systems. Select Brouting for all point-to-multi point or unidirectional IP systems. Select TCP acceleration for bridging of non-TCP packets and acceleration of TCP packets."  
::= { Unit-Interface 231}

BridgeFiltering OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether the Ethernet bridge filters out all traffic other than for the local subnet."  
::= { Unit-Interface 232}

BridgeRemCon OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Include M&C IP interface in bridge. Deselect to keep M&C & Traffic separate."  
"  
::= { Unit-Interface 233}

OneForOneMode OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Operate terrestrial interface in 1:1 or 1:N compatibility mode."  
::= { Unit-Interface 234}

EurocomMode OBJECT-TYPE  
SYNTAX INTEGER {  
D(1)  
G(2)  
C(3)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the operational mode of the Eurcom interface."  
::= { Unit-Interface 235}

CPUTrafficIPAddr OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the IP address for the traffic interface."  
::= { Unit-Interface 236}

CPUTrafficIPNetmask OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the traffic port IP subnet mask."  
::= { Unit-Interface 237}

CPUTrafficIPGateway OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the IP gateway for the traffic interface."  
::= { Unit-Interface 238}

Unit-MandC OBJECT IDENTIFIER ::= { Edit-Unit 3 }

CPURUIProtocol OBJECT-TYPE  
SYNTAX INTEGER {  
Local(1)  
GiveAway(2)  
TakeAway(3)  
}  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls modem ownership. In Local mode, the local user interface controls the modem. In Giveaway mode, a remote admin user may log in and control the modem until an automatic (following a timeout) or manual log out occurs. In Takeaway mode, the modem accepts commands from any interface at any time (relying on clear operational procedures to prevent conflicting requests)."  
::= { Unit-MandC 239}

CPURUIPassword OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Modem password for remote admin user login (login name is 'admin'). The admin user can both view and control the modem. Only one admin user can be logged in at a time."  
::= { Unit-MandC 240}

CPURUIViewOnlyPassword OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Modem password for remote view-only user login (login name is 'user'). Multiple view-only users can be logged in at the same time."  
::= { Unit-MandC 241}

CPUGiveAwayTimeout OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Specifies the period of time without any user input activity after which a user is logged out. This is true even for the local user interface (this has an implicit login when the operator first presses a key). In Gi veaway mode, logging out causes ownership of the modem to be lost."

::= { Unit-MandC 242}

CPUSerialMode OBJECT-TYPE

SYNTAX INTEGER {

RS232(1)

RS485(2)

Forward(3)

Local(4)

Remote(5)

Remote1(6)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Specifies the remote control serial interface mode."

::= { Unit-MandC 243}

CPUSerialBaud OBJECT-TYPE

SYNTAX INTEGER {

50(1)

75(2)

110(3)

150(4)

300(5)

600(6)

1200(7)

2400(8)

4800(9)

9600(10)

19200(11)

38400(12)

57600(13)

115200(14)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Specifies the remote control serial interface baud rate."

::= { Unit-MandC 244}

CPURS485Addr OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Specifies the unit's RS485 address."

::= { Unit-MandC 245}

CPURemConIPAddr OBJECT-TYPE

SYNTAX InetAddress

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the IP address for the remote control interface."

::= { Unit-MandC 246}

CPURemConIPNetmask OBJECT-TYPE

SYNTAX InetAddress

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the remote control port IP subnet mask."

::= { Unit-MandC 247}

CPURemConIPGateway OBJECT-TYPE

SYNTAX InetAddress

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the IP gateway for the remote control interface."  
::= { Unit-MandC 248}

Unit-Clocks OBJECT IDENTIFIER ::= { Edit-Unit 4 }

GwyStatClkSrc OBJECT-TYPE  
SYNTAX INTEGER {  
None(1)  
BNC(2)  
RS422(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the station clock source to be used in place of the internal 10MHz reference."  
::= { Unit-Clocks 249}

GwyStatClkType OBJECT-TYPE  
SYNTAX INTEGER {  
Int10MHz(1)  
RxRefClk(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the function of the station clock i.e. whether replaces the internal 10MHz reference or is used as a Rx-only reference clock."  
::= { Unit-Clocks 250}

GwyStatClkFreq OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Indicates the frequency of the station clock reference signal."  
::= { Unit-Clocks 251}

Unit-User OBJECT IDENTIFIER ::= { Edit-Unit 5 }

CPUUserLevel OBJECT-TYPE  
SYNTAX INTEGER {  
Basic(1)  
Advanced(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Enables or disables advanced menu options."  
::= { Unit-User 252}

Unit-Advanced OBJECT IDENTIFIER ::= { Edit-Unit 6 }

CPUBxBERMax OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the error-rate threshold above which a deferred alarm will be generated."  
::= { Unit-Advanced 253}

CPURxEbNoMin OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the Eb/No threshold below which a deferred alarm will be generated."  
::= { Unit-Advanced 254}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

CPURxMaxBufSlip OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the threshold period for consecutive buffer slips above which a deferred alarm is generated."

::= { Unit-Advanced 255}

CPUTxAISAlmAct OBJECT-TYPE

SYNTAX INTEGER {

Ignore(1)

Alarm(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the action taken with respect to Alarm Indication Signal detection. It can be ignored or set to raise an alarm, regenerate AIS and send a backward alarm where possible."

::= { Unit-Advanced 256}

CPUTxHandshakeAlmAct OBJECT-TYPE

SYNTAX INTEGER {

Ignore(1)

Alarm(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the action taken when a terrestrial handshake signal is activated. It can be ignored or set to raise an alarm."

::= { Unit-Advanced 257}

CPURxAISAlmAct OBJECT-TYPE

SYNTAX INTEGER {

Ignore(1)

Alarm(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls the action taken with respect to Alarm Indication Signal detection. It can be ignored or set to raise an alarm, regenerate AIS and send a backward alarm where possible."

::= { Unit-Advanced 258}

CPUBxBERAlmActive OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether the BER threshold alarm is enabled."

::= { Unit-Advanced 259}

TFECTxDiffCoding OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether differential coding is enabled."

::= { Unit-Advanced 260}

RFECRxDiffCoding OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether differential coding is enabled."

::= { Unit-Advanced 261}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

CPUSafCode OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Encrypted code for enabling Software Activated Features."  
 ::= { Unit-Advanced 262}

CPURxOneForOne OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "This option enables a receive failure to cause a 1:1 switchover."  
"  
 ::= { Unit-Advanced 263}

Unit-SNMP OBJECT IDENTIFIER ::= { Edit-Unit 7 }

CPUSNMPSys Location OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "The location of the system."  
 ::= { Unit-SNMP 264}

CPUSNMPAdminContact OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "The contact information for the administrator."  
 ::= { Unit-SNMP 265}

CPUSNMPCOMMUNITY OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "SNMP V1/V2c read-only access community name."  
 ::= { Unit-SNMP 266}

CPUSNMPManagerIP OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Source token. Can be a hostname, a subnet, or the word 'default'. A subnet can be specified as IP/MASK or IP/BITS."  
 ::= { Unit-SNMP 267}

CPUSNMPRWCommunity OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "SNMP V1/V2c read-write access community name."  
 ::= { Unit-SNMP 268}

CPUSNMPRWManagerIP OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Source token. Can be a hostname, a subnet, or the word 'default'. A subnet can be specified as IP/MASK or IP/BITS."  
"  
 ::= { Unit-SNMP 269}

CPUSNMPv1TrapRcv OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Defines trap receiver host name or IP address."  
::= { Unit-SNMP 270}

CPUSNMPv1TrapCommunity OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Define the community to be used when sending traps."  
::= { Unit-SNMP 271}

CPUSNMPv2TrapRcv OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Defines trap receiver host name or IP address."  
::= { Unit-SNMP 272}

CPUSNMPv2TrapCommunity OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Define the community to be used when sending traps."  
::= { Unit-SNMP 273}

CPUSNMPTrapSinkCommunity OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "This defines the default community string to be used when sending traps."  
::= { Unit-SNMP 274}

RunSNMP OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "SNMP agent run control"  
::= { Unit-SNMP 275}

Unit-SMTP OBJECT IDENTIFIER ::= { Edit-Unit 8 }

CPUSMTPUserName OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "User's account name if authentication is required by the SMTP mail server."  
::= { Unit-SMTP 276}

CPUSMTPUserPassword OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Password if authentication is required by the SMTP mail server."  
::= { Unit-SMTP 277}

CPUSMTPHost OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Outgoing mail server name or IP address of the SMTP mail server."  
::= { Unit-SMTP 278}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

CPUSMTPAuthRequired OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Authentication required by the SMTP mail server."

::= { Unit-SMTP 279}

CPUSMTPRxEbNo OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for Eb/No."

::= { Unit-SMTP 280}

CPUSMTPDistantEbNo OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for distant Eb/No."

::= { Unit-SMTP 281}

CPUSMTPRxEbNo OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for receive power level."

::= { Unit-SMTP 282}

CPUSMTPBer OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for final BER"

"

::= { Unit-SMTP 283}

CPUSMTPAUPCPwrOffset OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for Eb/No."

::= { Unit-SMTP 284}

CPUSMTPCurrTemp OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for Eb/No modem temperature."

::= { Unit-SMTP 285}

CPUSMTPLog OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Select to include the current event log in the email report."

::= { Unit-SMTP 286}

CPUSMTPSysAlarms OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Select to include the current alarms in the email report."

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { Unit-SMTP 287}

CPUSMTPConfigMems OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Select to include all of the configuration memories in the email report. Each configuration is sent as a separate attachment."

::= { Unit-SMTP 288}

CPUSMTPSpectData OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Select to include spectrum data in the email report. A snapshot of the current values is sent as an attachment."

::= { Unit-SMTP 289}

CPUSMTPConstData OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Select to include constellation data in the email report. A snapshot of the current values is sent as an attachment."

::= { Unit-SMTP 290}

CPUSMTPPRBSBER OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Include up to 4 weeks of logged data for Eb/No."

::= { Unit-SMTP 291}

CPUSMTPMode OBJECT-TYPE

SYNTAX INTEGER {

disabled(1)

minute(2)

tenmins(3)

thirtymins(4)

hour(5)

day(6)

week(7)

month(8)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Set how often an automatic email report is generated."

::= { Unit-SMTP 292}

CPUSMTPUserInterval OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION ""

::= { Unit-SMTP 293}

CPUSMTPRecipient OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "The email address to which the reports are sent."

"

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { Unit-SMTP 294}

CPUSMTPAltFrom OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Alternative email address that will receive any error messages if email fails to be delivered."  
::= { Unit-SMTP 295}

CPUSMTPSubject OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Text to be used as the email's subject line."  
::= { Unit-SMTP 296}

CPUSMTPAlarmEvent OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "When selected units faults are emailed immediately."  
::= { Unit-SMTP 297}

CPUSMTPRxFreqOffset OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Include up to 4 weeks of logged data for receive frequency offset."  
::= { Unit-SMTP 298}

Unit-Routes OBJECT IDENTIFIER ::= { Edit-Unit 9 }

route0 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 299}

route1 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 300}

route2 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 301}

route3 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 302}

route4 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 303}

route5 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 304}

route6 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 305}

route7 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 306}

route8 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 307}

route9 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 308}

route10 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 309}

route11 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 310}

route12 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 311}

route13 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 312}

route14 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 313}

route15 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 314}

route16 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 315}

route17 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 316}

route18 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 317}

route19 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 318}

route20 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 319}

route21 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 320}

route22 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 321}

route23 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 322}

route24 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 323}

route25 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 324}

route26 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 325}

route27 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 326}

route28 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 327}

route29 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 328}

route30 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 329}

route31 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 330}

route32 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 331}

route33 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 332}

route34 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 333}

route35 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 334}

route36 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 335}

route37 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 336}

route38 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 337}

route39 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 338}

route40 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 339}

route41 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 340}

route42 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 341}

route43 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 342}

route44 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 343}

route45 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 344}

route46 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 345}

route47 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 346}

route48 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 347}

route49 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 348}

route50 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 349}

route51 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 350}

route52 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 351}

route53 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 352}

route54 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 353}

route55 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 354}

route56 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 355}

route57 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 356}

route58 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 357}

route59 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 358}

route60 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 359}

route61 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 360}

route62 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 361}

route63 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Static route."  
::= { Unit-Routes 362}

hcroute0 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 363}

hcroute1 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 364}

hcroute2 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 365}

hcroute3 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 366}

hcroute4 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 367}

hcroute5 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 368}

hcroute6 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 369}

hcroute7 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 370}

hcroute8 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 371}

hcroute9 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 372}

hcroute10 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 373}

hcroute11 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 374}

hcroute12 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 375}

hcroute13 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 376}

hcroute14 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 377}

hcroute15 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Header compressed route"  
::= { Unit-Routes 378}

mcp-View OBJECT IDENTIFIER ::= { mcp 2 }

View-Unit OBJECT IDENTIFIER ::= { mcp-View 1 }

ManufacturerID OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Manufacturer identity number."  
::= { View-Unit 379}

ModelNumber OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Modem model number."  
::= { View-Unit 380}

SerialNumber OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates the internal modem serial number."  
::= { View-Unit 381}

SoftwareVersion OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Version number for the modem software."  
::= { View-Unit 382}

FirmwareVersion OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Version number for the modem firmware."  
::= { View-Unit 383}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

BxBoardConfig OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Identifies the modem physical configuration."  
 ::= { View-Unit 384}

CPUSwitchModeStatus OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Status of the Switch."  
 ::= { View-Unit 385}

View-SAF OBJECT IDENTIFIER ::= { mcp-View2 }

CPUaSafFeaturesEnabled OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates which Software Activated Features are currently switched on."  
 ::= { View-SAF 386}

CPUaSafFeaturesNotEnabled OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates which Software Activated Features are currently switched off."  
 ::= { View-SAF 387}

CPUdDemoTimeRemaining OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates the time for which temporarily-enabled Software Activated Features will remain switched on."  
 ::= { View-SAF 388}

CPUdDemoShotsRemaining OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates the number of times Software Activated Features can be enabled temporarily for free."  
 ::= { View-SAF 389}

View-Monitor OBJECT IDENTIFIER ::= { mcp-View3 }

TxBBDDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the output of the baseband unit."  
 ::= { View-Monitor 390}

RxBBDDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the input to the baseband unit."  
 ::= { View-Monitor 391}

TxFRMDDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Data rate at the output of the framing unit."  
::= { View-Monitor 392}

RxFRMDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the input to the deframing unit."  
::= { View-Monitor 393}

TxRSDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the output of the Reed-Solomon encoder."  
::= { View-Monitor 394}

RxRSDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the input to the Reed-Solomon decoder."  
::= { View-Monitor 395}

TxFECDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the output of the inner-FEC encoder."  
::= { View-Monitor 396}

RxFECDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Data rate at the input to the inner-FEC decoder."  
::= { View-Monitor 397}

BxCurrTemp OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Current modem internal operating temperature."  
::= { View-Monitor 398}

BxPSULevels OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Current PSU power level."  
::= { View-Monitor 399}

LoopbackStatus OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Status of the loopback circuit."  
::= { View-Monitor 400}

TxMaxESCRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Maximum ESC input baud rate."  
::= { View-Monitor 401}

RxMaxESCRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Maximum ESC output baud rate."  
::= { View-Monitor 402}

BxPSULevelsOFN OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Current PSU power level. This refers to the redundant supply in the Redundancy Switch."  
::= { View-Monitor 403}

View-Alarms OBJECT IDENTIFIER ::= { mcp-View 4 }

TxClockFailureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 404}

TxClockFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2404}

TxDATAMarginalAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 405}

TxDATAMarginalAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2405}

TxDPLLOstLockAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 406}

TxDPLLOstLockAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2406}

TxDRIAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 407}

TxDRIAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2407}

TxSAIAlarm NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { View-Alarms 408}

TxSAIAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2408}

TxSVIAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 409}

TxSVIAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2409}

IFTxSynthLostLockAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 410}

IFTxSynthLostLockAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2410}

TxConfigAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 411}

TxConfigAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2411}

RxDeinterleaverSyncLostAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 412}

RxDeinterleaverSyncLostAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2412}

RxDemodUnlockedAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 413}

RxDemodUnlockedAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2413}

RxClockFailureAlarm NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { View-Alarms 414}

RxClockFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2414}

RxDemodFIFOOverFlowAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 415}

RxDemodFIFOOverFlowAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2415}

IFRSynthLostLockAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 416}

IFRSynthLostLockAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2416}

RxConfigAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 417}

RxConfigAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2417}

BUCCommunicationsFailureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 418}

BUCCommunicationsFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2418}

BUCPLLAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 419}

BUCPLLAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2419}

BUCTemperatureAlarm NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { View-Alarms 420}

BUCTemperatureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2420}

InternalFaultAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 421}

InternalFaultAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2421}

MuteOnBreakAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 422}

MuteOnBreakAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2422}

PowerSupplyAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 423}

PowerSupplyAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2423}

StationClockFailureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 424}

StationClockFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2424}

TemperatureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 425}

TemperatureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2425}

AUPCArm NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { View-Alarms 426}

AUPCArmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2426}

TxTerrAISAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 427}

TxTerrAISAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2427}

TxDropMuxSyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 428}

TxDropMuxSyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2428}

TxDropMuxAISAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 429}

TxDropMuxAISAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2429}

TxTerrBackwardAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 430}

TxTerrBackwardAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2430}

TxTerrMFBackwardAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 431}

TxTerrMFBackwardAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2431}

RxDeframerSyncLossAlarm NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { View-Alarms 432}

RxDframerSyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2432}

RxDframerTS32SyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 433}

RxDframerTS32SyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2433}

RxDframerCASSyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 434}

RxDframerCASSyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2434}

RxBsBackwardAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 435}

RxBsBackwardAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2435}

RxCASBackwardAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 436}

RxCASBackwardAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2436}

RxDReBackwardAlarm1 NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 437}

RxDReBackwardAlarm1Cleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2437}

RxDReBackwardAlarm2 NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { View-Alarms 438}

RxDReversedAlarm2Cleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2438}

RxDReversedAlarm3 NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 439}

RxDReversedAlarm3Cleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2439}

RxDReversedAlarm4 NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 440}

RxDReversedAlarm4Cleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2440}

RxInsertMuxReversedAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 441}

RxInsertMuxReversedAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2441}

RxInternalFrmMode OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION ""  
::= { View-Alarms 442}

RxSymRateAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 443}

RxSymRateAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2443}

TxSymRateAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 444}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxSymRateAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2444}

TxDataRateAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 445}

TxDataRateAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2445}

RxDataRateAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 446}

RxDataRateAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2446}

TxDataRate4M5Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 447}

TxDataRate4M5AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2447}

TxDataRate6M5Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 448}

TxDataRate6M5AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2448}

TxDataRate7M7Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 449}

TxDataRate7M7AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2449}

TxDataRate12MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 450}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxDatRate12MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2450}

RxDatRate4M5Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 451}

RxDatRate4M5AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2451}

RxDatRate6M5Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 452}

RxDatRate6M5AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2452}

RxDatRate7M7Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 453}

RxDatRate7M7AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2453}

RxDatRate12MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 454}

RxDatRate12MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2454}

RxTerrAISAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 455}

RxTerrAISAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2455}

RxInsertMuxAISAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 456}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxInsertMuxAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2456}

RxBufferSlipAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 457}

RxBufferSlipAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2457}

RxBERAboveThresholdAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 458}

RxBERAboveThresholdAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2458}

RxEbNoBelowThresholdAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 459}

RxEbNoBelowThresholdAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2459}

FanFailureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 460}

FanFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2460}

RxBufferSizeAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 461}

RxBufferSizeAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2461}

TxBUCPSUAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 462}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxBUCPSU AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2462}

PowerSupplyAlarmOFN NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 463}

PowerSupplyAlarmOFNCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2463}

RxFECSSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 464}

RxFECSSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2464}

TxFFreqAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION "Tx carrier frequency out of range for current symbol rate"  
::= { View-Alarms 465}

TxFFreqAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION "Tx carrier frequency out of range for current symbol rate"  
::= { View-Alarms 2465}

TxBUCPowerAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 466}

TxBUCPowerAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2466}

TxChannelDPLLAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 467}

TxChannelDPLLAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2467}

TxTerrestrialDPLLAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 468}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxTerrestrialDPLAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2468}

TxG703CarrierAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 469}

TxG703CarrierAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2469}

TxDataRate33MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 470}

TxDataRate33MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2470}

RxDataRate33MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 471}

RxDataRate33MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2471}

BackupRxClockFailureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 472}

BackupRxClockFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2472}

TxDropMuxMFSyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 473}

TxDropMuxMFSyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2473}

TxCRCSyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 474}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxCRCSyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2474}

TxDropMuxBERAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 475}

TxDropMuxBERAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2475}

TxLineCodeViolationAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 476}

TxLineCodeViolationAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2476}

RxBERAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 477}

RxBERAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2477}

RxBearerLoopFailureAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 478}

RxBearerLoopFailureAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2478}

RxDistantEbNoAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 479}

RxDistantEbNoAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2479}

RxTerrestrialDPLLAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 480}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxTerrestrialDPLAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2480}

TxDataRate37MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 481}

TxDataRate37MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2481}

RxDataRate37MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 482}

RxDataRate37MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2482}

TxDataRate10MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 483}

TxDataRate10MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2483}

RxDataRate10MAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 484}

RxDataRate10MAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2484}

QuadE1 Alarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 485}

QuadE1 AlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { View-Alarms 2485}

mcp-Test OBJECT IDENTIFIER ::= { mcp 3 }

CPULoopback OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
Int(2)
Frm(3)
RS(4)
FEC(5)
IF(6)
Rem(7)
}
```

```
ACCESS read- write
STATUS mandatory
DESCRIPTION "Loopback selection."
::= { mcp-Test 486}
```

```
TFECTxModCW OBJECT-TYPE
SYNTAX TruthValue
ACCESS read- write
STATUS mandatory
DESCRIPTION "Test mode."
::= { mcp-Test 487}
```

```
TFECTxModAlt10 OBJECT-TYPE
SYNTAX TruthValue
ACCESS read- write
STATUS mandatory
DESCRIPTION "Test mode."
::= { mcp-Test 488}
```

```
TBBTxPRBSChannel OBJECT-TYPE
SYNTAX INTEGER {
Main(1)
ESC(2)
Aux(3)
}
}
```

```
ACCESS read- write
STATUS mandatory
DESCRIPTION "Controls the location where the Tx BER signal is injected."
::= { mcp-Test 489}
```

```
TBBTxPRBSMode OBJECT-TYPE
SYNTAX INTEGER {
Off(1)
On(2)
}
}
```

```
ACCESS read- write
STATUS mandatory
DESCRIPTION "Controls the BER mode."
::= { mcp-Test 490}
```

```
TBBTxPRBSPattern OBJECT-TYPE
SYNTAX INTEGER {
11(1)
15(2)
20(3)
ALL0(4)
ALL1(5)
ALT10(6)
ALT1100(7)
1IN4(8)
1IN8(9)
2IN8(10)
1IN16(11)
3IN24(12)
6(13)
7(14)
9(15)
}
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

19(16)  
20-O153(17)  
23(18)  
QRSS(19)  
User(20)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the pattern length used for BER testing."  
::= { mcp-Test 491}

RBBRxPRBSChannel OBJECT-TYPE  
SYNTAX INTEGER {  
Main(1)  
ESC(2)  
Aux(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the location where the Rx monitors the BER."  
::= { mcp-Test 492}

RBBRxPRBSMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
On(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the BER mode."  
::= { mcp-Test 493}

RBBRxPRBSPattern OBJECT-TYPE  
SYNTAX INTEGER {  
11(1)  
15(2)  
20(3)  
ALL0(4)  
ALL1(5)  
ALT10(6)  
ALT1100(7)  
1IN4(8)  
1IN8(9)  
2IN8(10)  
1IN16(11)  
3IN24(12)  
6(13)  
7(14)  
9(15)  
19(16)  
20-O153(17)  
23(18)  
QRSS(19)  
User(20)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the pattern length used for BER testing."  
::= { mcp-Test 494}

CPUWideSpectrum OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION "Controls whether wide spectral mode is enabled."  
::= { mcp-Test 495}

RxPRBSBER OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "The BER measured by the BERT facility"  
::= { mcp-Test 496}

mcp-Miscellaneous OBJECT IDENTIFIER ::= { mcp 4 }

Miscellaneous-Lband OBJECT IDENTIFIER ::= { mcp-Miscellaneous 1 }

TLBTxRFFreq OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Tx L-band frequency used to transmit to satellite."  
::= { Miscellaneous-Lband 497}

TLBTxRFPwr OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "RF transmitted power level."  
::= { Miscellaneous-Lband 498}

RLBRxRFFreq OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Rx L-band frequency used to receive from satellite."  
::= { Miscellaneous-Lband 499}

RLBRxDCVoltage OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
V15(2)  
V24(3)  
V24-Multiswitch(4)  
}  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the source of DC supplies to the Rx IF module."  
::= { Miscellaneous-Lband 500}

RLBRx10MHzRef OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the source of 10MHz reference to the Rx IF module."  
::= { Miscellaneous-Lband 501}

CPURxLNBDCAlmAct OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Alarm(2)  
}  
ACCESS read-write  
STATUS mandatory

DESCRIPTION "Indicates whether the combined over/under-current, over-temperature alarm for the Rx DC switch is considered a fault or not."

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { Miscellaneous-Lband 502}

CPURxSHFFreqOffset OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Down-converter conversion frequency, allowing TxIF frequency to be displayed/edited in direct SHF frequencies."

::= { Miscellaneous-Lband 503}

CPUTxBUCDCCurrentMin OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Trip threshold at which a fault is declared when the current drawn by the Tx ODU is outside the limit."

::= { Miscellaneous-Lband 504}

CPUTxBUCDCCurrentMax OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Trip threshold at which a fault is declared when the current drawn by the Tx ODU is outside the limit."

::= { Miscellaneous-Lband 505}

CPUTxSHFPwrOffset OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Defines a transmit power offset, used when displaying and editing transmit power."

::= { Miscellaneous-Lband 506}

CPURxSHFFreqOffset OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "Up-converter conversion frequency, allowing TxIF frequency to be displayed/edited in direct SHF frequencies."

::= { Miscellaneous-Lband 507}

CPUTxSHFPwrUnits OBJECT-TYPE

SYNTAX INTEGER {

dBm(1)

dBW(2)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Specifies the TxSHF power units as dBm or dBW."

::= { Miscellaneous-Lband 508}

CPUTxSHFPwrRadiated OBJECT-TYPE

SYNTAX INTEGER {

TxPwr(1)

EIRP(2)

}

ACCESS read- write

STATUS mandatory

DESCRIPTION "Specifies the TX SHF Power Radiated display. This is a display feature only and does not adjust the actual power."

::= { Miscellaneous-Lband 509}

TLBTxDCVoltage OBJECT-TYPE

SYNTAX TruthValue

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the source of DC supplies to the TxIF module."  
::= { Miscellaneous-Lband 510}

TLBTxBUCVoltage OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "The supply voltage of the BUC PSU"  
::= { Miscellaneous-Lband 511}

TLBTx10MHzRef OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the 10MHz reference to the TxIF module."  
::= { Miscellaneous-Lband 512}

TLBTxBUCCarrier OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether the BUC carrier is switched on."  
::= { Miscellaneous-Lband 513}

TLBTxBUCAtten OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the level of attenuation applied from the modem output to the BUC."  
::= { Miscellaneous-Lband 514}

CPUTxBUCDCAlmAct OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Alarm(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether the combined over/under-current, over-temperature alarm for the TxDC switch is considered a fault or not."  
::= { Miscellaneous-Lband 515}

TLBTxBUCType OBJECT-TYPE  
SYNTAX INTEGER {  
F490(1)  
F5475(2)  
F5775(3)  
F13050(4)  
F12800(5)  
None(6)  
Other(7)  
D-15450(8)  
F0(9)  
C4900(10)  
C13050(11)  
C12800(12)  
D4900(13)  
F13050-0(14)  
F12800-0(15)  
D0(16)  
D6950(17)  
F6950(18)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Indicates type of BUC fitted."  
::= { Miscellaneous-Lband 516 }

RLBRxLNBT<sub>ype</sub> OBJECT-TYPE  
SYNTAX INTEGER {  
F5150(1)  
F10000(2)  
F10250(3)  
F10750(4)  
F11300(5)  
None(6)  
Other(7)  
F9750(8)  
F10600(9)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Indicates type of LNB fitted."  
::= { Miscellaneous-Lband 517 }

TLBTxBUCFreq OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "BUC frequency used to transmit to satellite."  
::= { Miscellaneous-Lband 518 }

RLBRxLNBFreq OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "LNB frequency used to receive from satellite."  
::= { Miscellaneous-Lband 519 }

TLBTxBUCP<sub>wr</sub> OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "BUC transmitted power level."  
::= { Miscellaneous-Lband 520 }

TLBTxBUCControlMode OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Enable terminal mode control of BUC, modem automatically compensates for cross site cable losses."  
::= { Miscellaneous-Lband 521 }

BLBBxServices OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "This options controls whether the modem mutes the services (DC & 10MHz) when in 1:1 standby. Select this option when you want the services to switch on 1: changeover."  
::= { Miscellaneous-Lband 522 }

Miscellaneous-AUPC OBJECT IDENTIFIER ::= { mc-p-Miscellaneous 2 }

CPUTxAUPCMode OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
Monitor(2)
Maintain(3)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION "Setting to Maintain means the modem will attempt to maintain the remote Eb/No at the target level. Setting to Monitor will allow the remote modem to be monitored without making any changes to the Tx power level."
::= { Miscellaneous-AUPC 523}
```

```
CPUTxTargetDistantEbNo OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-write
STATUS mandatory
DESCRIPTION "This is the distant Eb/No that AUPC tries to maintain by adjusting the Tx power level."
::= { Miscellaneous-AUPC 524}
```

```
CPUTxPositivePwrOffset OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-write
STATUS mandatory
DESCRIPTION "This is the maximum increase in Tx power level that AUPC can make to maintain distant Eb/No."
::= { Miscellaneous-AUPC 525}
```

```
AUPCPwrOffset OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION "Current offset applied to Tx power level to maintain target Eb/No."
::= { Miscellaneous-AUPC 526}
```

```
RxRemoteEbNo OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION "The Eb/No measured by the remote modem when AUPC is enabled."
::= { Miscellaneous-AUPC 527}
```

```
CPURxDeferredDistantEbNo OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-write
STATUS mandatory
DESCRIPTION "This is the distant Eb/No threshold below which a deferred alarm will be raised."
::= { Miscellaneous-AUPC 528}
```

```
CPUTxNegativePwrOffset OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-write
STATUS mandatory
DESCRIPTION "This is the maximum decrease in Tx power level that AUPC can make to maintain distant Eb/No."
::= { Miscellaneous-AUPC 529}
```

```
Miscellaneous-Build OBJECT IDENTIFIER ::= { mcp-Miscellaneous 3 }
```

```
CPUG703Fitted OBJECT-TYPE
SYNTAX TruthValue
ACCESS read-only
STATUS mandatory
DESCRIPTION "Indicates whether G.703 card is fitted."
::= { Miscellaneous-Build 530}
```

```
CPUHSSIFitted OBJECT-TYPE
SYNTAX TruthValue
ACCESS read-only
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Indicates whether HSSI card is fitted."  
::= { Miscellaneous-Build 531}

CPUIDRFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether IDR card is fitted."  
::= { Miscellaneous-Build 532}

CPULVDSFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether LVD S card is fitted."  
::= { Miscellaneous-Build 533}

CPURIFFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether Rx IF card is fitted."  
::= { Miscellaneous-Build 534}

CPUTIFFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether Tx IF card is fitted."  
::= { Miscellaneous-Build 535}

CPURLBFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether Rx L-band card is fitted."  
::= { Miscellaneous-Build 536}

CPUTLBFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether Tx L-band card is fitted."  
::= { Miscellaneous-Build 537}

MotherboardSerialNumber OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates the motherboard serial number."  
::= { Miscellaneous-Build 538}

CPUOFNFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether 1:N is fitted."  
::= { Miscellaneous-Build 539}

CPUQUADEFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Indicates whether Quad E1 card is fitted."  
::= { Miscellaneous-Build 540}

CPUEurocomFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether Eurocom card is fitted."  
::= { Miscellaneous-Build 541}

Miscellaneous-Compatibility OBJECT IDENTIFIER ::= { mcp-Miscellaneous 4 }

TBBTMinOHMultBAMode OBJECT-TYPE  
SYNTAX INTEGER {  
Single(1)  
Multiple(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Provides backward compatibility with Paradise P300 satellite modem."  
::= { Miscellaneous-Compatibility 542}

RBBRMinOHMultBAMode OBJECT-TYPE  
SYNTAX INTEGER {  
Single(1)  
Multiple(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Provides backward compatibility with Paradise P300 satellite modem."  
::= { Miscellaneous-Compatibility 543}

TBBTMinOHMultBASeq OBJECT-TYPE  
SYNTAX INTEGER {  
4(1)  
8(2)  
16(3)  
32(4)  
64(5)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Provides backward compatibility with Paradise P300 satellite modem."  
::= { Miscellaneous-Compatibility 544}

RBBRMinOHMultBASeq OBJECT-TYPE  
SYNTAX INTEGER {  
4(1)  
8(2)  
16(3)  
32(4)  
64(5)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Provides backward compatibility with Paradise P300 satellite modem."  
::= { Miscellaneous-Compatibility 545}

Miscellaneous-Misc OBJECT IDENTIFIER ::= { mcp-Miscellaneous 5 }

CPUMCPHide OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Internal property used to control access to options that have not yet been released."  
::= { Miscellaneous-Misc 546}

TBBTxB50Stuff OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls whether additional bits are added to the traffic source to force frame synchronisation."  
::= { Miscellaneous-Misc 547}

TBBTxTRSpoof OBJECT-TYPE  
SYNTAX INTEGER {  
Normal(1)  
Spoof(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls spoofing of PCM bearer transparency over a thin route IDR (IBS o/h) link, giving the appearance of complete PCM bearer connectivity over the satellite, even if only a single timeslot is actually conveyed over satellite."  
::= { Miscellaneous-Misc 548}

TBBTxT S0G732Spares OBJECT-TYPE  
SYNTAX INTEGER {  
High(1)  
Transparent(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "ITU recommend that spare bits of TS0 are fixed high as they cross country borders."  
::= { Miscellaneous-Misc 549}

TBBTxG732TerrCRC OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
Check(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Specifies whether the terrestrial G.732 frame contains a checksum."  
::= { Miscellaneous-Misc 550}

TBBTxG732Timeout OBJECT-TYPE  
SYNTAX INTEGER {  
Normal(1)  
Resync(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls response to loss of G.732 frame synchronisation."  
::= { Miscellaneous-Misc 551}

TBBTxV35ScrType OBJECT-TYPE  
SYNTAX INTEGER {  
CCITT(1)  
Intelat(2)  
FDC(3)  
Linkabit(4)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the V.35 scrambler type."  
::= { Miscellaneous-Misc 552}

TBBT $\times$ M $\times$ MFP<sub>Period</sub> OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets a maximum multi-frame frame period that is used in determining the frame length in Min O/H mode. It is the maximum value that the frame is allowed to extend to (this affects frame acquisition time)."  
::= { Miscellaneous-Misc 553}

TBBT $\times$ IBSC<sub>ustAl<sub>m</sub></sub> OBJECT-TYPE  
SYNTAX INTEGER {  
None(1)  
Single(2)  
Four(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls backward alarm reporting in IBS/SMS custom mode."  
::= { Miscellaneous-Misc 554}

RBBR $\times$ BSX50<sub>Stuff</sub> OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Indicates whether additional bits have been added to the traffic source to force frame synchronisation."  
::= { Miscellaneous-Misc 555}

RBBR $\times$ TRS<sub>poof</sub> OBJECT-TYPE  
SYNTAX INTEGER {  
Normal(1)  
Spoof(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls spoofing of PCM bearer transparency over a thin route IDR (IBS o/h) link, giving the appearance of complete PCM bearer connectivity over the satellite, even if only a single timeslot is actually conveyed over satellite."  
::= { Miscellaneous-Misc 556}

RBBR $\times$ G732<sub>TerrCRC</sub> OBJECT-TYPE  
SYNTAX INTEGER {  
Ignore(1)  
NoEbits(2)  
Ebits(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Specifies generation of checksum for terrestrial G.732 frame and controls E-bit processing."  
::= { Miscellaneous-Misc 557}

RBBR $\times$ G732<sub>Timeout</sub> OBJECT-TYPE  
SYNTAX INTEGER {  
Normal(1)  
Resync(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls response to loss of G.732 frame synchronisation."  
::= { Miscellaneous-Misc 558}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RBBRxV35ScrType OBJECT-TYPE

```
SYNTAX INTEGER {  
  CCITT(1)  
  Intelsat(2)  
  FDC(3)  
  Linkabit(4)  
}
```

ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { Miscellaneous-Misc 559}

RBBRxMaxMFPPeriod OBJECT-TYPE

```
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets a maximum multi-frame period that is used in determining the frame length in Min O/H mode. It is the maximum value that the frame is allowed to extend to (this affects frame acquisition time)."  
 ::= { Miscellaneous-Misc 560}
```

RBBRxTS0G732Spares OBJECT-TYPE

```
SYNTAX INTEGER {  
  High(1)  
  Transparent(2)  
}
```

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "ITU recommend that spare bits of TSO are fixed high as they cross country borders."  
 ::= { Miscellaneous-Misc 561}

RBBRxIBSCustAlm OBJECT-TYPE

```
SYNTAX INTEGER {  
  None(1)  
  Single(2)  
  Four(3)  
}
```

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls backward alarm reporting in IBS/SMS custom mode."  
 ::= { Miscellaneous-Misc 562}

CPUTxDMXErrMonSrc OBJECT-TYPE

```
SYNTAX INTEGER {  
  Off(1)  
  Auto(2)  
  FAS(3)  
  CRC(4)  
  Ebits(5)  
}
```

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls how the terrestrial error rate is monitored at the input to the Drop MUX. The most appropriate source is selected if set to Automatic."  
 ::= { Miscellaneous-Misc 563}

TBBTxIBSStatID OBJECT-TYPE

```
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets station ID transmitted by the IBS/SMS framing unit."  
 ::= { Miscellaneous-Misc 564}
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TBBTxIBSC hanID OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets channel ID transmitted by the IBS/SMS framing unit."

::= { Miscellaneous-Misc 565}

TBBTxIBS SpareID OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets spare ID transmitted by the IBS/SMS framing unit."

::= { Miscellaneous-Misc 566}

CPUSMBxComstreamSeqMode OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the Sequential decoder to be compatible with Comstream equipment (1/2 rate is okay by default)."

::= { Miscellaneous-Misc 567}

CPUSMBxX50AIS OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

On(2)

}

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets the range for which the Alarm Indication Signal alarm is active with respect to X.50 bit stuffing."

::= { Miscellaneous-Misc 568}

RBBRxIBSChanID OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets channel ID transmitted by the IBS/SMS framing unit."

::= { Miscellaneous-Misc 569}

RBBRxIBSStatID OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets station ID transmitted by the IBS/SMS framing unit."

::= { Miscellaneous-Misc 570}

RBBRxIBSSpareID OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-write

STATUS mandatory

DESCRIPTION "Sets spare ID transmitted by the IBS/SMS framing unit."

::= { Miscellaneous-Misc 571}

CPURxMXErrMonSrc OBJECT-TYPE

SYNTAX INTEGER {

Off(1)

Auto(2)

FAS(3)

CRC(4)

Ebits(5)

}

ACCESS read-write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Controls how the terrestrial error rate is monitored at the input to the Insert MUX. The most appropriate source is selected if set to Automatic."  
::= { Miscellaneous-Misc 572}

CPUEmulationMode OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { Miscellaneous-Misc 573}

Miscellaneous-Log OBJECT IDENTIFIER ::= { mcp-Miscellaneous 6 }

CPUAutoLogPeriod OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the period between consecutive automatic updates to the traffic log."  
::= { Miscellaneous-Log 574}

CPUAutoLogBufFill OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls automatic logging of buffer-fill state to the traffic log."  
::= { Miscellaneous-Log 575}

CPUAutoLogEbNo OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls automatic logging of the mean and worst-case Eb/No to the traffic log."  
::= { Miscellaneous-Log 576}

CPUAutoLogFinalBER OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls automatic logging of the mean and worst-case Rx final BER to the traffic log."  
::= { Miscellaneous-Log 577}

CPUAutoLogPRBStester OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls automatic logging of the mean and worst-case PRBS signal BER to the traffic log."  
::= { Miscellaneous-Log 578}

CPUAutoLogTxTerBER OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls automatic logging of the mean and worst-case Tx terrestrial BER to the traffic log."  
::= { Miscellaneous-Log 579}

CPUAutoLogRxTerBER OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls automatic logging of the mean and worst-case Rx terrestrial BER to the traffic log."  
::= { Miscellaneous-Log 580}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

CPUAutoLogDistEbNo OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls automatic logging of the mean and worst-case distant Eb/No to the traffic log."

::= { Miscellaneous-Log 581}

CPUAutoLogAUPCDeltaPwr OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls automatic logging of the mean and worst-case AUPC delta power to the traffic log."

::= { Miscellaneous-Log 582}

CPUAutoLogActive OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-write

STATUS mandatory

DESCRIPTION "Controls whether automatic logging of information to the traffic log is enabled."

::= { Miscellaneous-Log 583}

Miscellaneous-Status OBJECT IDENTIFIER ::= { mcp-Miscellaneous 7 }

RxBufferFill OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Rx buffer fill status."

::= { Miscellaneous-Status 584}

BxMaxTemp OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Maximum operating temperature of the modem, above which a fault is generated."

::= { Miscellaneous-Status 585}

BxMinTemp OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Minimum operating temperature of the modem."

::= { Miscellaneous-Status 586}

BxMaxTempWarn OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Threshold that indicates that the modem is approaching its maximum operating temperature."

::= { Miscellaneous-Status 587}

GwTxCarrierStatus OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Tx carrier status."

::= { Miscellaneous-Status 588}

TxSymRate OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Transmit data rate in symbols."

::= { Miscellaneous-Status 589}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxSymRate OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Receive data rate in symbols."

::= { Miscellaneous-Status 590}

UnitSetupComplete OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-only

STATUS mandatory

DESCRIPTION "Indicates when the modem has completed re-configuration following a change."

::= { Miscellaneous-Status 591}

RxEbNo OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Demodulator Energy per bit/Noise power density ratio, calculated from the Es/No measured by the demodulator."

::= { Miscellaneous-Status 592}

RxEsNo OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Received Energy per Symbol/Noise power density ratio as measured by the demodulator."

::= { Miscellaneous-Status 593}

RxFreqOffset OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "When the demodulator is locked this is the carrier offset frequency, measured as an offset from the programmed Rx carrier frequency."

::= { Miscellaneous-Status 594}

RxPwrLevel OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Estimate of the Rx input requested power level (i.e. the power level of the channel selected by the user)."

::= { Miscellaneous-Status 595}

DemodLocked OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-only

STATUS mandatory

DESCRIPTION "Current status of the demodulator, indicating whether it is currently locked to the carrier."

::= { Miscellaneous-Status 596}

RxInsertTSUsed OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

STATUS mandatory

DESCRIPTION "Number of timeslots inserted into terrestrial bearer from satellite frame. Equal to number of satellite timeslots unless partial insert is being used."

::= { Miscellaneous-Status 597}

RxFinalBER OBJECT-TYPE

SYNTAX DisplayString

ACCESS read-only

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Final BER at the output of the modem."  
::= { Miscellaneous-Status 598}

RelayStatus OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Relay status."  
::= { Miscellaneous-Status 599}

CPUKbdLock OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the state of the keyboard (can be locked to prevent inadvertent use)."  
::= { Miscellaneous-Status 600}

Miscellaneous-SAF OBJECT IDENTIFIER ::= { mcp-Miscellaneous 8 }

CPUSAFTx OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 601}

CPUSAFRx OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 602}

CPUSAFDataRate0 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 603}

CPUSAFDataRate1 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 604}

CPUSAFDataRate2 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 605}

CPUSAFDataRate3 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 606}

CPUSAFDataRate4 OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 607}

CPUSAFDataRate5 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 608}

CPUSAFIBSSMS OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 609}

CPUSAFDI OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 610}

CPUSAFExtDI OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 611}

CPUSAFTurboL OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 612}

CPUSAFIntelRS OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 613}

CPUSAFWideIF OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 614}

CPUSAFTurbo OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 615}

CPUSAF16QAM OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 616}

CPUSAFESC OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 617}

CPUSAFAux OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 618}

CPUSAFcstFrm OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 619}

CPUSAFAPC OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 620}

CPUSAFPRBS OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 621}

CPUSAFDVBS OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 622}

CPUSAFDVBS2 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 623}

CPUSAFFSK OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 624}

CPUSAFTCP OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 625}

CPUSAFVIT OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 626}

CPUSAF8PSK OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 627}

CPUSAFOM73 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 628}

CPUSAFAudio OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 629}

CPUSAFTCM OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 630}

CPUSAFHCP OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 631}

CPUSAFBrouting OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 632}

CPUSAFTCP25 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 633}

CPUSAF2E1 OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 634}

CPUSAF3E1 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 635}

CPUSAF4E1 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 636}

CPUSAFDataRate1L OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 637}

CPUSAFDataRate1H OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 638}

CPUSAFTCP16 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 639}

CPUSAFTCP55 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { Miscellaneous-SAF 640}

Miscellaneous-Switch OBJECT IDENTIFIER ::= { mcp-Miscellaneous 9 }

CPUSwitchAddress OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the RS485 address when used with 1:N switch."  
::= { Miscellaneous-Switch 641}

CPUModemPriority1 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 642}

CPUModemPriority2 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 643}

CPUModemPriority3 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 644}

CPUModemPriority4 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 645}

CPUModemPriority5 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 646}

CPUModemPriority6 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 647}

CPUModemPriority7 OBJECT-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
 ::= { Miscellaneous-Switch 648}

CPUModemPriority8 OBJECT-TYPE

SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
 ::= { Miscellaneous-Switch 649}

CPUModemPriority9 OBJECT-TYPE

SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
 ::= { Miscellaneous-Switch 650}

CPUModemPriority10 OBJECT-TYPE

SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
 ::= { Miscellaneous-Switch 651}

CPUModemPriority11 OBJECT-TYPE

SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
 ::= { Miscellaneous-Switch 652}

CPUModemPriority12 OBJECT-TYPE

SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read-write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 653}

CPUModemPriority13 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 654}

CPUModemPriority14 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 655}

CPUModemPriority15 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 656}

CPUModemPriority16 OBJECT-TYPE  
SYNTAX INTEGER {  
P1(1)  
P2(2)  
P3(3)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Sets the priority of the specified modem when used with 1:N switch."  
::= { Miscellaneous-Switch 657}

mcp-NewMCPs OBJECT IDENTIFIER ::= { mcp 5 }

TxQuadE1 SyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 658}

TxQuadE1 SyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2658}

TxQuadE1 AISAlarm NOTIFICATION-TYPE

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 659}

TxQuadE1 AISAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2659}

TxQuadE1 BearerAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 660}

TxQuadE1 BearerAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2660}

AlarmSummary OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Summary status of all alarms"  
::= { mcp-NewMCPs 661}

TBBTxSatTimeslots OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Timeslots dropped from terrestrial bearer onto satellite"  
::= { mcp-NewMCPs 662}

RBBRxSatTimeslots OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Timeslots inserted onto terrestrial bearer from satellite"  
::= { mcp-NewMCPs 663}

CPUTxAUPCMethod OBJECT-TYPE  
SYNTAX INTEGER {  
Normal(1)  
P300(2)  
Self(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Select method AU PC uses to fetch Eb/No"  
::= { mcp-NewMCPs 664}

CPURxCarrierLossAction OBJECT-TYPE  
SYNTAX INTEGER {  
Freeze(1)  
Nominal(2)  
Max(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Action when communications to remote is lost."  
::= { mcp-NewMCPs 665}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

CPUQoSscheme OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Selects Fair Weighted Queuing Qos"  
 ::= { mcp-NewMCPs 666}

CPUEnableVLAN OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Enables VLAN filtering."  
 ::= { mcp-NewMCPs 667}

CPUVLANID OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Select ID to be used with VLAN filtering."  
 ::= { mcp-NewMCPs 668}

TLBTxPowerClass OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Selects Power Class when greater than 170W."  
 ::= { mcp-NewMCPs 669}

TModTxRollOff OBJECT-TYPE  
SYNTAX INTEGER {  
 20(1)  
 25(2)  
 35(3)  
 }  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Select filter roll-off."  
 ::= { mcp-NewMCPs 670}

RDemRxRollOff OBJECT-TYPE  
SYNTAX INTEGER {  
 20(1)  
 25(2)  
 35(3)  
 }  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Select filter roll-off."  
 ::= { mcp-NewMCPs 671}

CPUMODFitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates whether MOD card is fitted."  
 ::= { mcp-NewMCPs 672}

RxQuadE1InsertMuxAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 673}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxQuadE1InsertMuxAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2673}

RxQuadE1UnderFlowAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 674}

RxQuadE1UnderFlowAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2674}

RxQuadE1OverflowAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 675}

RxQuadE1OverflowAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2675}

RxQuadE1SyncLossAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 676}

RxQuadE1SyncLossAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2676}

TxQuadE1UnderFlowAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 677}

TxQuadE1UnderFlowAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2677}

TxQuadE1OverflowAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 678}

TxQuadE1OverflowAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2678}

TxQuadE1DropMuxAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 679}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TxQuadE1DropMuxAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2679}

QuadE1P4TxDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 680}

QuadE1P4RxDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 681}

CPUSAFMUX OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 682}

TxQuadE1ClockAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 683}

TxQuadE1ClockAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2683}

CPUWebProxy OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Enables acceleration of HTTP requests."  
::= { mcp-NewMCPs 684}

CPUDNSAddr OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the IP address of the DNS server."  
::= { mcp-NewMCPs 685}

CPUSAFWEB OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 686}

QuadE1P3TxDataRate OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 687}

QuadE1P3RxDataRate OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION ""

::= { mcp-NewMCPs 688}

TBBTxAsyncClock OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Enables asynchronous clocking of data into the modem."

::= { mcp-NewMCPs 689}

TBBTxIBSBackAlm OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Controls whether the BA bit in the frame overhead carries the BA signal or is used to carry ESC information."

::= { mcp-NewMCPs 690}

RBBRxIBSBackAlm OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Controls whether the BA bit in the frame overhead carries the BA signal or is used to carry ESC information."

::= { mcp-NewMCPs 691}

RLBRxServices OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "This option controls whether the modem mutes the services (DC & 10MHz) when in 1:1 standby. Select this option when you want the services to switch on 1: changeover."

::= { mcp-NewMCPs 692}

PUPCommand OBJECT-TYPE

SYNTAX DisplayString

ACCESS read- write

STATUS mandatory

DESCRIPTION "SNMP executes the PUP command written to this MCP."

::= { mcp-NewMCPs 693}

Q323EmuSw1 OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Q323 Emulation Switch 1, off = normal operation, on = ts 1 to 31 are inverted"

::= { mcp-NewMCPs 694}

Q323EmuSw2 OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandatory

DESCRIPTION "Q323 Emulation Switch 2, off = TS0 transparent, on = TS 0 bit 0 overwritten with CRC4 multiframe with regenerated CRC (E bits set to 1)"

::= { mcp-NewMCPs 695}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

Q323EmuSw3 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Q323 Emulation Switch 3, If switch 1 is on then off = TS16 inverted, on = TS16 transparent (not inverted)"  
 ::= { mcp-NewMCPs 696}

Q323EmuSw4 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Q323 Emulation Switch 4, If switch 1 is on then off = All bits inverted, on = bits 1,2,5 and 6 are inverted"  
 ::= { mcp-NewMCPs 697}

RDemAcqHoldoff OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sets the time in seconds the demodulator will delay after loosing the signal before sweeping to re-acquire it."  
 "  
 ::= { mcp-NewMCPs 698}

CPUMILModem OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates unit is a MIL modem."  
 ::= { mcp-NewMCPs 699}

RxCompPwrLevel OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Composite power received by modem."  
 "  
 ::= { mcp-NewMCPs 700}

RxPwrAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 701}

RxPwrAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 2701}

RxCompPwrAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 702}

RxCompPwrAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 2702}

RxPwrRatioAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 703}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

RxPwrRatioAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2703}

GwyStatClkRef OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Locks the high stability oscillator to the station clock."  
::= { mcp-NewMCPs 704}

CPUSAFWRF OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 705}

CPUSAFIPT OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 706}

CPUSAFSeq OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 707}

TBBTxG703Ref OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
T1(2)  
E1(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Allows the clock recovered from the incoming G703 signal to be used as the internal reference."  
::= { mcp-NewMCPs 708}

RBBRxG703Ref OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
T1(2)  
E1(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Allows the outgoing G703 signal to be locked to the recovered satellite clock."  
::= { mcp-NewMCPs 709}

CPUSAFClk OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 710}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TBBTxIBSCust OBJECT-TYPE

SYNTAX INTEGER {  
Off(1)  
Multi(2)  
Single(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Enables custom IBS mode."  
 ::= { mcp-NewMCPs 711}

TBBTxIBSESCOh OBJECT-TYPE

SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Selects which bits in overhead to use for ESC."  
 ::= { mcp-NewMCPs 712}

TBBTxIBSAuxOh OBJECT-TYPE

SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Selects which bits in overhead to use for Aux."  
 ::= { mcp-NewMCPs 713}

RBBRxIBSCust OBJECT-TYPE

SYNTAX INTEGER {  
Off(1)  
Multi(2)  
Single(3)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Enables custom IBS mode."  
 ::= { mcp-NewMCPs 714}

RBBRxIBSESCOh OBJECT-TYPE

SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Selects which bits in overhead to use for ESC."  
 ::= { mcp-NewMCPs 715}

RBBRxIBSAuxOh OBJECT-TYPE

SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Selects which bits in overhead to use for Aux."  
 ::= { mcp-NewMCPs 716}

CPUTxOneForOne OBJECT-TYPE

SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "This option enables a transmit failure to cause a 1:1 switchover."  
"  
 ::= { mcp-NewMCPs 717}

CPUSAFPreDistort OBJECT-TYPE

SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 718}

IPMode OBJECT-TYPE  
SYNTAX INTEGER {  
Bridge(1)  
Routing(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Indicates how, and at what level, IP traffic is forwarded."  
::= { mcp-NewMCPs 719}

HeaderCompression OBJECT-TYPE  
SYNTAX INTEGER {  
On(1)  
Off(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 720}

CPUstIPAddr OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 721}

CPUstIPNetmask OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 722}

CPUstIPGateway OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 723}

UseRIPenable OBJECT-TYPE  
SYNTAX INTEGER {  
Yes(1)  
No(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 724}

UseOSPFenable OBJECT-TYPE  
SYNTAX INTEGER {  
Yes(1)  
No(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 725}

TCPAccelerati on OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

STATUS mandator y

DESCRIPTION ""

::= { mcp-NewMCPs 726}

CPUSAFRouting OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-only

STATUS mandator y

DESCRIPTION "Software-activated feature."

::= { mcp-NewMCPs 727}

CPUIPTrafficFitted OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-only

STATUS mandator y

DESCRIPTION "Indicates if a IP traffic card is fitted"

::= { mcp-NewMCPs 728}

TxBUCIntfc OBJECT-TYPE

SYNTAX INTEGER {

RS485(1)

FSK(2)

}

ACCESS read- write

STATUS mandator y

DESCRIPTION "Selects the interface used to connect to the BUC."

::= { mcp-NewMCPs 729}

CPUVisionFitted OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-only

STATUS mandator y

DESCRIPTION "Indicates if a Vision card is fitted"

::= { mcp-NewMCPs 730}

CPUSAFShaping OBJECT-TYPE

SYNTAX TruthValue

ACCESS read-only

STATUS mandator y

DESCRIPTION "Software-activated feature."

::= { mcp-NewMCPs 731}

QoSScheme OBJECT-TYPE

SYNTAX INTEGER {

Diffserv-DSCP(1)

IEEE-802-1p(2)

MPLS-EXP(3)

IP-Address(4)

}

ACCESS read- write

STATUS mandator y

DESCRIPTION ""

::= { mcp-NewMCPs 732}

EnableShaping OBJECT-TYPE

SYNTAX TruthValue

ACCESS read- write

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 733}

IPAddrClass OBJECT-TYPE  
SYNTAX INTEGER {  
Source-address-only(1)  
Destination-address-only(2)  
Source-address-port(3)  
Destination-address-port(4)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 734}

TxCIR00 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 735}

TxCIR01 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 736}

TxCIR02 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 737}

TxCIR03 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 738}

TxCIR04 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 739}

TxCIR05 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 740}

TxCIR06 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 741}

TxCIR07 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 742}

TxCIR08 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 743}

TxCIR09 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 744}

TxCIR10 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 745}

TxCIR11 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 746}

TxCIR12 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 747}

TxCIR13 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 748}

TxCIR14 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"  
::= { mcp-NewMCPs 749}

TxCIR15 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate"

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 750}

TxCIRTot OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Committed Information Rate Total"  
::= { mcp-NewMCPs 751}

TxBIR00 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 752}

TxBIR01 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 753}

TxBIR02 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 754}

TxBIR03 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 755}

TxBIR04 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 756}

TxBIR05 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 757}

TxBIR06 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 758}

TxBIR07 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 759}

TxBIR08 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 760}

TxBIR09 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 761}

TxBIR10 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 762}

TxBIR11 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 763}

TxBIR12 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 764}

TxBIR13 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 765}

TxBIR14 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 766}

TxBIR15 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Shaping Burst Information Rate"  
::= { mcp-NewMCPs 767}

PrioCI00 OBJECT-TYPE  
SYNTAX INTEGER {  
0(1)  
1(2)  
2(3)}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 768}
```

```
PrioCI01 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 769}
```

```
PrioCI02 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 770}
```

```
PrioCI03 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 771}
```

```
PrioCI04 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
}
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 772}
```

```
PrioCI05 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 773}
```

```
PrioCI06 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 774}
```

```
PrioCI07 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 775}
```

```
PrioCI08 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 776}
```

```
PrioCI09 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 777}
```

```
PrioCI10 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 778}
```

```
PrioCI11 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 779}
```

```
PrioCI12 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

```
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 780}
```

```
PrioCI13 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 781}
```

```
PrioCI14 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 782}
```

```
PrioCI15 OBJECT-TYPE
SYNTAX INTEGER {
0(1)
1(2)
2(3)
3(4)
4(5)
5(6)
6(7)
7(8)
}
```

```
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
::= { mcp-NewMCPs 783}
```

```
ShapIPAddr 00 OBJECT-TYPE
SYNTAX InetAddress
ACCESS read-write
STATUS mandatory
DESCRIPTION ""
```

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 784}

ShapIPAddr 01 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 785}

ShapIPAddr 02 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 786}

ShapIPAddr 03 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 787}

ShapIPAddr 04 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 788}

ShapIPAddr 05 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 789}

ShapIPAddr 06 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 790}

ShapIPAddr 07 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 791}

ShapIPAddr 08 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""  
::= { mcp-NewMCPs 792}

ShapIPAddr 09 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandator y  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 793}

ShapIPAddr 10 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 794}

ShapIPAddr 11 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 795}

ShapIPAddr 12 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 796}

ShapIPAddr 13 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 797}

ShapIPAddr 14 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 798}

ShapIPAddr 15 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 799}

ShapIPMask00 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 800}

ShapIPMask01 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 801}

ShapIPMask02 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 802}

ShapIPMas k03 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 803}

ShapIPMas k04 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 804}

ShapIPMas k05 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 805}

ShapIPMas k06 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 806}

ShapIPMas k07 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 807}

ShapIPMas k08 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 808}

ShapIPMas k09 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 809}

ShapIPMas k10 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 810}

ShapIPMas k11 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 811}

ShapIPMask12 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 812}

ShapIPMask13 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 813}

ShapIPMask14 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 814}

ShapIPMask15 OBJECT-TYPE  
SYNTAX InetAddress  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 815}

ShapPort00 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 816}

ShapPort01 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 817}

ShapPort02 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 818}

ShapPort03 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 819}

ShapPort04 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 820}

ShapPort05 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 821}

ShapPort06 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 822}

ShapPort07 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 823}

ShapPort08 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 824}

ShapPort09 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 825}

ShapPort10 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 826}

ShapPort11 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 827}

ShapPort12 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 828}

ShapPort13 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 829}

ShapPort14 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 830}

ShapPort15 OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 831}

RxLDPCSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 832}

RxLDPCSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2832}

TIFTxBUCAaddr OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Set the address used when talking to the IF FSK BUC"  
::= { mcp-NewMCPs 833}

CPUSNMPv3User OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "SNMP v3 Username"  
::= { mcp-NewMCPs 834}

CPUSNMPv3Password OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "SNMP v3 Password"  
::= { mcp-NewMCPs 835}

CPUSNMPv3Encryption OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "Enable SNMP v3 DES Encryption"  
::= { mcp-NewMCPs 836}

CPUSNMPv3Authentication OBJECT-TYPE  
SYNTAX INTEGER {  
MD5(1)  
SHA(2)  
}  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION "SNMP v3 Authentication Algorithm"

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

::= { mcp-NewMCPs 837}

CPUSAF8APSK OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 838}

TxFECFrmSize OBJECT-TYPE  
SYNTAX INTEGER {  
Short(1)  
Long(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the FEC frame size"  
::= { mcp-NewMCPs 839}

RxFECFrmSize OBJECT-TYPE  
SYNTAX INTEGER {  
Short(1)  
Long(2)  
}

ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Controls the inner FEC mode."  
::= { mcp-NewMCPs 840}

TxPLPilot OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Sends small bursts of BPSK modulated symbols to help Rx to lock onto signal."  
::= { mcp-NewMCPs 841}

RxPLPilot OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 842}

RxPLSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 843}

RxPLSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2843}

RxTrafficAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 844}

RxTrafficAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""

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::= { mcp-NewMCPs 2844}

RxBBSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 845}

RxBBSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2845}

RxBBCRCAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 846}

RxBBCRCAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2846}

RxMPGSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 847}

RxMPGSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2847}

RxMPGCRCAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 848}

RxMPGCRCAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2848}

TxModOutputAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 849}

TxModOutputAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2849}

TxModTSBufferAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 850}

TxModTSBufferAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""

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::= { mcp-NewMCPs 2850}

TxModMPEGSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 851}

TxModMPEGSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2851}

TxModMPEGSyncLostAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 852}

TxModMPEGSyncLostAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2852}

TxModEncSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 853}

TxModEncSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2853}

TxModFrameSyncAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 854}

TxModFrameSyncAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2854}

TxModFrameBufferAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 855}

TxModFrameBufferAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
::= { mcp-NewMCPs 2855}

EncapsulationType OBJECT-TYPE  
SYNTAX INTEGER {  
ULE(1)  
MPE(2)  
PXE(3)  
}

ACCESS read-write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION ""  
::= { mcp-NewMCPs 856}

CPUSAFDXDVB S2 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 857}

CPUSAFRXDVB S2 OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 858}

CPUSAFDVBIP OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
::= { mcp-NewMCPs 859}

CPUABISfitted OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Indicates if a ABIS card is fitted"  
::= { mcp-NewMCPs 860}

RLBRxLNBControl OBJECT-TYPE  
SYNTAX INTEGER {  
Off(1)  
0(2)  
1(3)  
2(4)  
3(5)  
4(6)  
}  
  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION "Control external LNB services switch"  
::= { mcp-NewMCPs 861}

RLBRxLNBPolarization OBJECT-TYPE  
SYNTAX INTEGER {  
Vertical(1)  
Horizontal(2)  
}  
  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 862}

TBBTxPRBSUserPattern OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 863}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

TBBTxPRBSInvert OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 864}

RBBRxPRBSUserPattern OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 865}

RBBRxPRBSInvert OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 866}

RBBRxPRBSThreshold OBJECT-TYPE  
SYNTAX INTEGER {  
 auto(1)  
 10-100(2)  
 20-100(3)  
 25-100(4)  
 100-300(5)  
 100-1000(6)  
 200-1000(7)  
 250-1000(8)  
 1000-3000(9)  
 1000-10000(10)  
 2000-10000(11)  
 2500-10000(12)  
 10000-30000(13)  
 10000-100000(14)  
 20000-100000(15)  
 25000-100000(16)  
 100000-300000(17)  
 }

ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 867}

RBBRxPRBSAction OBJECT-TYPE  
SYNTAX INTEGER {  
 cont(1)  
 freeze(2)  
 reset(3)  
 }

ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 868}

TBBTxPRBSDirection OBJECT-TYPE  
SYNTAX INTEGER {  
 Sat(1)  
 Terr(2)  
 }

ACCESS read- write  
STATUS mandatory

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

DESCRIPTION ""  
::= { mcp-NewMCPs 869}

RBBRxPRBSDirection OBJECT-TYPE  
SYNTAX INTEGER {  
Sat(1)  
Terr(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 870}

TLBTxPol arisation OBJECT-TYPE  
SYNTAX INTEGER {  
A(1)  
B(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 871}

RLBRxPolarisati on OBJECT-TYPE  
SYNTAX INTEGER {  
A(1)  
B(2)  
}

ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 872}

PCMACanceller OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 873}

PCMASatLongitude OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 874}

PCMAEarthLongitude OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 875}

PCMAEarthLatitude OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read- write  
STATUS mandatory  
DESCRIPTION ""  
::= { mcp-NewMCPs 876}

## Remote M&C Protocol for Quantum and Evolution Series Satellite Modems

CPUSAFPCMA OBJECT-TYPE  
SYNTAX TruthValue  
ACCESS read-only  
STATUS mandatory  
DESCRIPTION "Software-activated feature."  
 ::= { mcp-NewMCPs 877}

PCMAMinDelay OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 878}

PCMAMaxDelay OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 879}

RxPCMAUnlockedAlarm NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 880}

RxPCMAUnlockedAlarmCleared NOTIFICATION-TYPE  
STATUS current  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 2880}

CPUSwitchPollDelay OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 881}

CPUSatMACAddr OBJECT-TYPE  
SYNTAX DisplayString  
ACCESS read-write  
STATUS mandatory  
DESCRIPTION ""  
 ::= { mcp-NewMCPs 882}

END