

Intelligent SSPA Advantages

All models available with integral AC power supply or separate DC power supply.

NMS-friendly interfaces enable remote management of your earth station RF.

Embedded web pages provide management for networks using any web browser.

AGC or ALC circuits hold gain or output level constant.

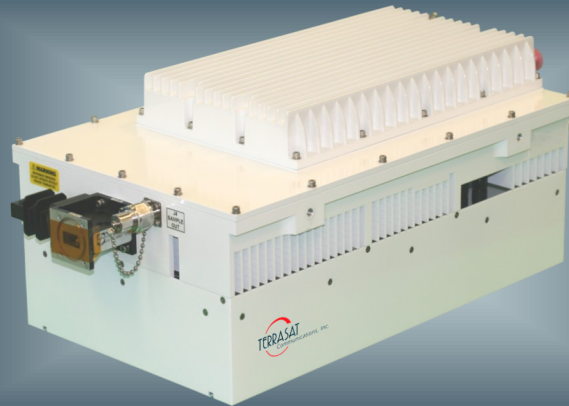
20 dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.

1+1 switching logic and drivers built into the SSPA eliminate expensive external switching controller.

Output sample port included with 60 W - 80 W units.

Advanced user interfaces:

- TCP/IP HTTP with embedded web pages.
- SNMP
- TELNET through TCP/IP
- RS232/485 serial port.
- Handheld terminal



The revolutionary **Terrasat Intelligent SSPA** has advanced features to take your network to new heights.

Intelligent SSPA offers significant benefits:

- Low terminal cost
- Simple design and installation
- Superior RF performance
- Simplified 1+1 configuration

New interfaces connect you to the **Intelligent SSPA's** extensive M&C facilities for network management or local access. This powerful new M&C enables:

- **Trouble free commissioning** with easy, point-and-click installation/configuration
- Continuous **verification** of performance with time-stamped alarm history
- Simplified **troubleshooting** of terminal faults

Intelligent SSPA comes with a complete set of diagnostic tools including:

- Input voltage and current monitoring
- Transmit input level detector
- Transmit RF output level detector
- User configurable thresholds and alarms

Unique in the **Intelligent SSPA** are internal AGC and ALC functions to satisfy demanding applications with stringent specifications.

Ku-Band Intelligent SSPA

RF Input/Output

Frequency range		
Band 1 Std Ku	14.00 to 14.50 GHz	
Band 2 Full Ku	13.75 to 14.50 GHz	
Band 3 Low Ku	12.75 to 13.25 GHz, 40-50 W only	
Output Power (P1dB)	Band 1 & 3	Band 2
40 W	+46 dBm min	+46 dBm min
50 W	+47 dBm min	+47 dBm min
60 W	+47.8 dBm min	+47.5 dBm min
80 W	+49.0 dBm min	+48.5 dBm min

Noise Output	TX Band	RX Band
	-89 dBm/Hz	-145 dBm/Hz
Two Tone Intermodulation	-24 dBc max@3 dB total BO	
AM to PM Conversion	3.0 deg/dB @ rated P1dB	
Group Delay/40 MHz		
Linear	± 0.03 ns/MHz	
Parabolic	± 0.003 ns/MHz ²	
Ripple	1.0 ns p-p	

Gain, Linear, @ minimum attenuation		
40 W	67-72 dB	
50 W	68-73 dB	
60 W	69-74 dB	
80 W	70-75 dB	
Gain Flatness		
Full band	3dB p-p max	
Gain Slope	± 0.5 dB max, 40 MHz	
Gain Stability, over temperature		
Open Loop	3 dB p-p max	
AGC Mode	1 dB p-p max	

Output Level Stability, over temperature		
ALC Mode	1 dB p-p max	
Gain Control	Typ 20 dB, 0.1 dB steps	
Input VSWR	1.3:1 max	
Output VSWR	1.3:1 max	

Noise Figure	10 dB typ. @ max gain	
Max input power w/o damage	+ 10 dBm	

Input Power Detector Range	-25 dBm to -5 dBm	
Output Power Detector Range	Rated power to -20 dB	
Output Power Sample (60 W to 80 W only)	-40 dBc	

Spurious	-65 dBc max @ rated P1dB	
Harmonics	-50 dBc max @ rated P1dB	

Power Requirements

	DC	AC
Voltage	±48 VDC	100 to 240 VAC
Power Consumption		
40 W	400 W	456 VA
50 W	550 W	600 VA
60 W	750 W	850 VA
80 W	850 W	900 VA

Monitor and Control

FSK (multiplexed on TX IFL), **RS232/485**

Hand-held Terminal, TCP / IP (HTTP, Telnet, SNMP)

Interfaces

RF input	Type N(f), 50 Ohms
RF Output	CPR137G
Output Sample	Type N(f), 50 Ohms
M&C	MS3112E-14-19S
AC	Amphenol C016 20C003 100 12
DC	Amphenol ACS02E14S-6P

Environmental

Operating temperature	-40°C to +55°C
Relative humidity	100% condensing
Altitude	10,000 ft., (3,000m) ASL

Mechanical

	DC powered	AC powered
40 W - 50 W	12.2x7.2x6.7 in.	12.2x7.2x7.0 in.
	18.5 lbs	19.5 lbs
60 W - 80 W	19.5x10.0x7.8 in.	19.5x10.0x7.8 in.
	32 lbs	33 lbs

Specifications are subject to change without notice

ISSPA Ku-band Data Sheet 08/06/10



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