

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.

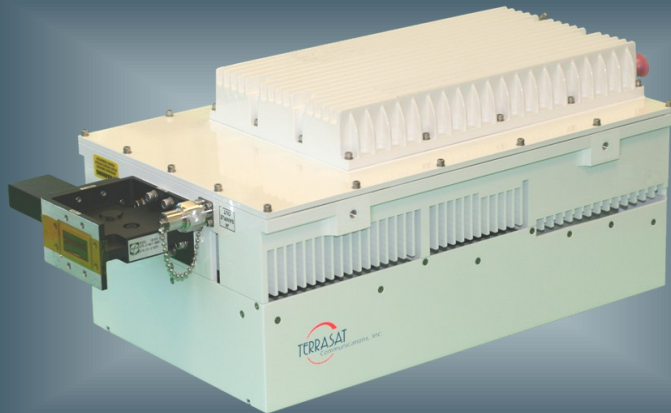
20 dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.

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

Output sample port included with 100 W - 200 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.

C-band Intelligent SSPA

RF Input/Output

Frequency range	
Band 1 Std C-Band	5850 to 6425 MHz
Band 2 Palapa/ST-1	6425 to 6725 MHz
Band 3 Insat	6725 to 7025 MHz
Band 4 Ext. C-Band	5850 to 6650 MHz
Band 5 Full C-Band	5850 to 6725 MHz
Output Power (P1dB)	
50 W	+47 dBm min
60 W	+47.8 dBm min
80 W	+49 dBm min
100 W	+50 dBm min
125 W	+51 dBm min
150 W	+51.8 dBm min
175 W	+52.4 dBm min
200 W	+53 dBm min
output power in bands 4 & 5 is reduced by 0.5 dB.	
Gain, Linear, @ minimum attenuation	
50 W	68-73 dB
60 W	69-74 dB
80 W	70-75 dB
100 W	71-76 dB
125 W	72-77 dB
150 W	73-78 dB
175 W	73-78 dB
200 W	74-79 dB
Gain Flatness	
Full band	3 dB 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 (100 W to 200 W only)	-40 dBc
Spurious	-65 dBc max @ rated P1dB
Harmonics	-50 dBc max @ rated P1dB

Noise Output	TX Band	RX Band
	-85 dBm/Hz	-145 dBm/Hz
Two Tone Intermodulation	-27 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	

Power Requirements

	DC	AC
Voltage	±48 VDC	100 to 240 VAC
Power Consumption		200-240VAC as noted
50 W	360 W	400 VA
60 W	432 W	490 VA
80 W	552 W	600 VA
100 W	700 W	800 VA
125 W	800 W	900 VA
150 W	1056 W	1200 VA, 200-240VAC
175 W	1100 W	1250 VA, 200-240VAC
200 W	1150 W	1300 VA, 200-240VAC

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
50 W	12.2x7.2x6.2 in.	12.2x7.2x6.5 in.
	18 lbs	19 lbs
60 W - 80 W	12.2x7.2x6.7 in.	12.2x7.2x7.0 in.
	18.5 lbs	19.5 lbs
100 W - 200 W	19.5x10.0x7.8 in.	19.5x10.0x7.8 in.
	32 lbs	33 lbs

Specifications are subject to change without notice

ISSPA C-band Data Sheet 09/01/10



235 Vineyard Court, Morgan Hill, CA 95037
Tel. +1 408-782-5911 Fax +1 408-782-5912
www.terrasatinc.com