

High Power C-Band Rack-Mount SSPAs

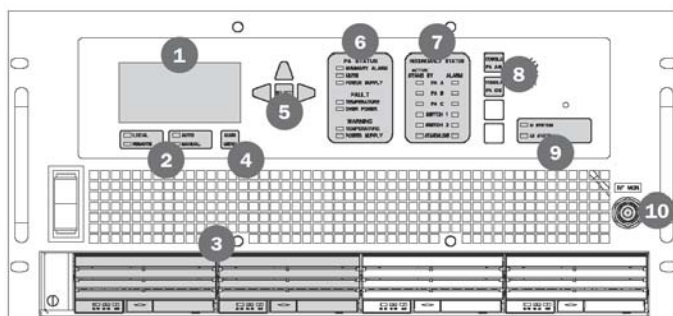


Uniquely designed to be a high quality, but cost-effective solution for the satellite communications market, this line of high power rack-mount SSPAs sets the standard for the satellite industry.

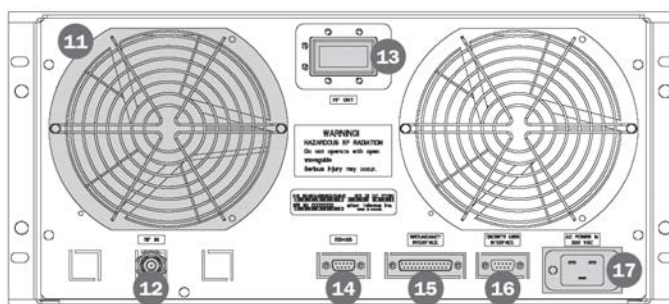
The series of high power Rack-mount SSPAs is designed for use primarily in satellite communications applications.

C Band R-M SSPA Panel Features

Item	Description	Item	Description
1	VFD Display Screen	11	Cooling Fan
2	Mode selection push button & LED display	12	RF IN
3	Power Supply Modules	13	CPRG137 RF OUT
4	MAIN MENU push button control	14	9-pin male RS-485 D-subminiature connector
5	Menu navigation & select push buttons	15	25-pin female Redundancy Interface D-subminiature connector
6	PA status LED display	16	9-pin female Discrete User Interface D-subminiature connector
7	Redundancy Status LED display	17	IEC 60320 type C20 220VAC Power IN Connector
8	PA Toggle push button controls		
9	System configuration LED display		
10	RF Monitor Port		



(Front Panel)



(Rear Panel)

High Power C-Band Rack-Mount SSPAs (cont.)

Key features

- Light weight and compact
- 1:1 and 1:2 Built-in Redundant Operations.
No additional controller needed for 1:1 and 1:2 redundant systems
- Flexible system configuration, various RF power levels and up-converters (optional) available in the same package size
- Extensive user-settable system control available from the front panel display including redundancy telemetry, alarm log, gain and power alarm threshold
- RF Sample Port
- Full complement of monitor and control functions
- Remote control available through Analog and Serial Interface ports
- High thermal dissipation efficiency resulting in "Best in Class" MTBF
- Over temperature shutdown
- System reverts to last state after power on
- Field hot-swappable modular power supply solution (Optional redundant P/S configuration)
- User configurable RF overdrive alarm

Options

- RF operating frequency
- RF Monitor for input power
- Monitoring of RF forward & reflected power
- 48 VDC input power options (for 60 W, 100 W and 125 W SSPAs)
- Command-line or Windows™ based serial control
- Extended Warranty

Electrical Characteristics

Part No.	Power Level	Output @P1dB min.	Size*	Power Consumption
WPA-596447-75-IS-XX	60 W	47 dBm	4U	500 W
WPA-596449-75-IS-XX	100 W	49 dBm	4U	600 W
WPA-596450-75-IS-XX	125 W	50 dBm	4U	750 W
WPA-596451-75-IS-XX	150 W	51 dBm	5U	900 W
WPA-596452-75-IS-XX	200 W	52 dBm	5U	1000 W
WPA-596453-75-IS-XX	250 W	53 dBm	5U	1500 W
WPA-596454-75-IS-XX	300 W	54 dBm	5U	2000 W
WPA-596455-75-IS-XX	400 W	55 dBm	5U	2500 W
WPA-596456-75-IS-XX	500 W	56 dBm	6U	3000 W

High Power C-Band Rack-Mount SSPAs (cont.)

Electrical Characteristics (cont.)

Technical Specification

Frequency range	5.850 – 6.425 GHz (other options available)
Gain at rated power	75 dB nominal
Max. input power without damage	10 dBm
Gain flatness over full band	+/- 1 dB max
Gain slope	+/- 0.3 dB /40 MHz
Gain variation over temperature	+/- 1 dB
Gain adjustment range / Step size	20 dB / 0.1 dB
Input return loss	-18 dB max
Output return loss	-18 dB max.
Noise Figure	10 dB at maximum gain setup
Spurious at P1dB	-65 dBc max.
Harmonics at P1dB	-55 dBc max
AM/PM conversion	2.0 deg./ dB max. @ P1dB
Third order IMD (two equal tones 5Mhz apart)	-26 dBc max @ 3 dB total back-off from P1dB
Group delay: Linear	+/- 0.1 ns/ MHz max.
Parabolic	+/- 0.003 ns/ MHz ² max.
Ripple	1.0 ns p-p

Power Requirements

AC input voltage	90-260 VAC power factor corrected (other options available) 220 VAC only for 200W or higher
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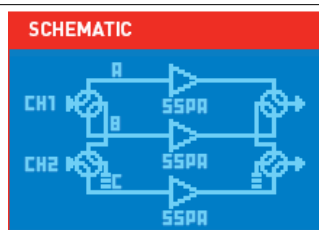
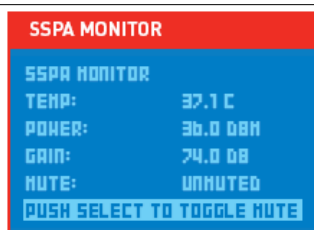
Mechanical Characteristics

Size*:	Enclosure	4U-6U (H) x 19 in rack mount (W) x 28 in (D)
Interfaces:	RF input RF output RF output sample Discrete port Series port (RS 232/ RS 485) Redundant port (Optional)	N-type Female CPR 137 N Female DB-9 DB-9 DB-25

Environmental Conditions

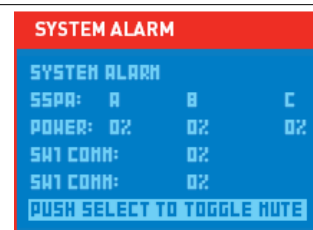
Operating Temperature	0 - 50 °C
Storage	-40 - +85°C
Humidity	95% non-condensing
Altitude	10,000 ft (3000m) max. (Derate 2°C per 1000ft)

C Band R-M SSPA Display information

SSPA MONITOR

SSPA MONITOR
TEMP: 37.1 C
POWER: 36.0 DBM
GAIN: 74.0 DB
MUTE: UNMUTED
PUSH SELECT TO TOGGLE MUTE



SYSTEM ALARM

SYSTEM ALARM
SSPA: A B C
POWER: 0% 0% 0%
SW1 COMM: 0% 0%
PUSH SELECT TO TOGGLE MUTE