

**C-Band Antenna-Mount SSPAs**

These high power solid-state amplifiers offer output powers of 50, 100, 125, 200, or 250 watts across the standard 5.85 to 6.425 GHz (“D”) or extended 5.85 to 6.725 GHz (“M”) satellite uplink bands. Housed in a compact weatherproof enclosure, the amplifiers can be mounted in an antenna hub or outdoors in applications where it is desirable to reduce cable losses by mounting the SSPA close to the antenna. The amplifiers feature a microprocessor-based M&C system that facilitates easy setup and control.

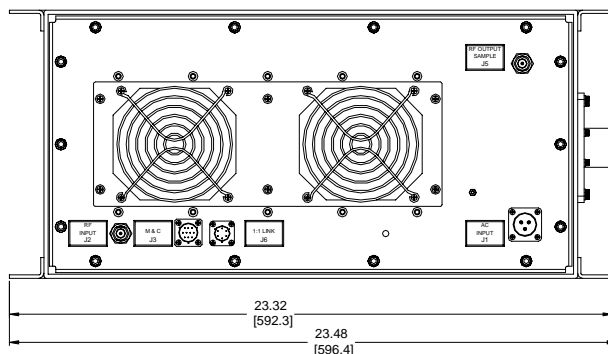
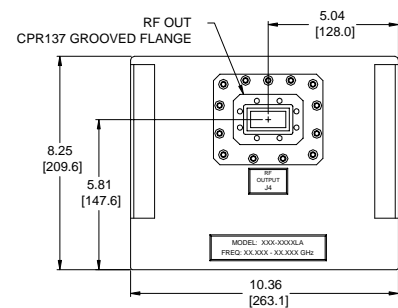
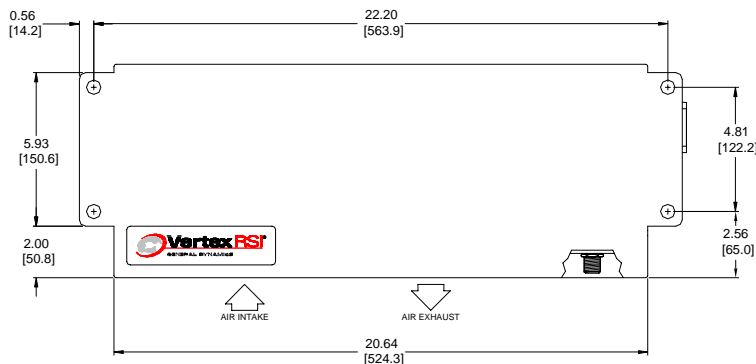
**Features**

- 50/100/125/200/250 W saturated output power
- 75 dB gain
- Built-in monitor and control
- Temperature-compensated gain from -40 to +50 °C
- Serial interface (RS-232/-422/-485)
- Output isolator for high load VSWR protection
- 20 dB range digital gain adjustment
- RF output sample port (-40 dBc)
- Output power monitor
- Extremely light weight, typically 36 lb (16 kg)
- Mounts on small antennas

**Options**

- 1:1 redundancy
- Integrated block upconverter with L-band input

**Outline Drawing**



M&C (J3) Pinout

Serial I/O Tx +	A
Serial I/O Tx -	B
Serial I/O Rx -	C
Serial I/O Rx +	D
Serial I/O Rx Termination	J
Ground	E
Service Request (Form 'C' Output)	F - Closed on Svc Req G - Common H - Open on Svc Req
no connection/Ext. Fault (Opt.)	K

- NOTES:
1. DIMENSIONS ARE IN INCHES [MM].
  2. AIR INTAKE AND EXHAUST MUST NOT BE OBSTRUCTED.
  3. APPROXIMATE WEIGHT IS 36 LB. (16 KG).

Outline 16328

# GENERAL DYNAMICS

## SATCOM Technologies

### Part Number/Ordering Information

#### SSPAs

Part/Model No.: **PC**  **6S**  **LA-XX**

5.850–6.425 GHz = D      50 watts = 050  
 5.850–6.725 GHz = M      100 watts = 100  
    125 watts = 125  
    200 watts = 200  
    250 watts = 250\*

#### Options:

**1:1 Redundancy** ..... 4  
 Redundant Capability  
 (Required for units in 1:1 systems)

**Block Upconverter** ..... 7  
 L-Band IF Input

**Redundant Systems** (Consists of 1:1 switching assembly, two SSPAs, and interconnecting cables)

Part/Model No.: **PRC1**   **LA-XX**

5.850–6.425 GHz = D      50 watts = 050  
 5.850–6.725 GHz = M      100 watts = 100  
    125 watts = 125  
    200 watts = 200  
    250 watts = 250\*

#### Options:

**Block Upconverter** ..... 7  
 L-Band IF Input

**Maintenance Switch** ..... A  
 Selects antenna or dummy load at system output.

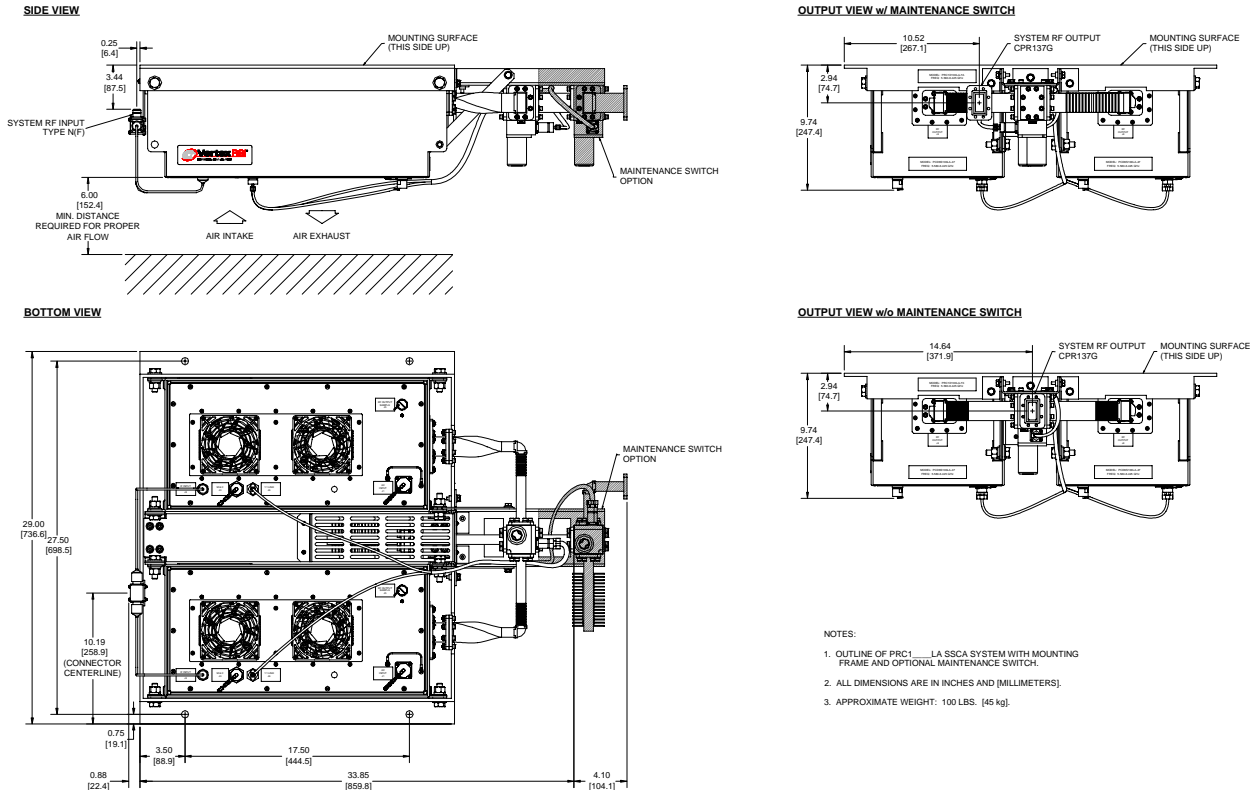
\* Consult factory for Band "M" (5.850-6.725 GHz).

### Related Accessories:

**RCP-2001**      SSPA Remote Control Panel  
 1U-high rack-mount panel duplicates all menus and functions available at SSPA front panel. Can be located up to 1.3 km (4000 ft.) away and interconnects with inexpensive cable.

**AMSETUP**      Antenna-Mount SSPA configuration software (supplied with each unit). WIN98/2000/XP compatible.

### 1:1 System Outline Drawing



Outline 21185

Parameter	Notes	Min	Nom/Typ*	Max	Units
Frequency Range	Band "D"	5.850		6.425	GHz
	Band "M"	5.850		6.725	GHz
Input Frequency Range with Option 7, Block Upconverter	Band "D"	950		1525	MHz
	Band "M"	950		1825	MHz
Gain, at maximum gain setting		75			dB
Gain Adjust Range		20			dB
Gain Flatness	Full band, standard			±1.0	dB
	Full band, with Option 7			±1.5	dB
	Per 40 MHz, standard			±0.3	dB
	Per 40 MHz, with Option 7			±0.5	dB
Gain Stability vs. Temperature	-40 to +50 °C, standard		±1.0	±1.5	dB
	-40 to +50 °C, with Option 7		±2.0	±2.5	dB
Saturated Power Output	50 W		+47 (50)		dBm (W)
	100 W		+50 (100)		dBm (W)
	125 W		+51 (125)		dBm (W)
	200 W		+53 (200)		dBm (W)
	250 W		+54 (250)		dBm (W)
Power Output, at 1 dB compression (P <sub>1dB</sub> )	50 W	+46.5 (45)			dBm (W)
	100 W	+49.5 (89)			dBm (W)
	125 W	+50.5 (112)			dBm (W)
	200 W	+52.0 (158)			dBm (W)
	250 W	+53.0 (200)			dBm (W)
Two-tone Intermodulation	At 3 dB total backoff from 1 dB compression point		-30	-25	dBc
Group Delay	Linear			0.03	ns/MHz
	Parabolic			0.003	ns/MHz <sup>2</sup>
	Ripple			1.0	ns p-p
AM/PM Conversion	At P <sub>1dB</sub>		2.5	3.5	°/dB
Noise Figure	At maximum gain, standard		8		dB
	At max. gain, with Option 7		20		dB
VSWR	Input		1.20	1.30	:1
	Input, with Option 7		1.35	1.50	:1
	Output		1.20	1.30	:1
Output Sample Port Connectors			-40		dBc
	Input		Type N Female		
	Output		CPR137G Waveguide		
	Sample Port		Type N Female		
	I/O		10-pin MS, mate supplied		
	Power		3-pin MS, mate supplied		
Power Requirements	Voltage		90-135 or 180-265		Vac
	Frequency	47		63	Hz
	Power, 50 W		450	500	W
	Power, 100 W		650	900	W
	Power, 125 W		750	1000	W
	Power, 200 W		950	1400 <sup>A</sup>	W
	Power, 250 W		1000	1500 <sup>A</sup>	W
	Power factor corrected		0.97		
Cooling System			Forced air		
Operating Temperature Range	Ambient air temperature	-40		+50	°C
Weight			36 (16)		lb (kg)
Dimensions	See outline drawing		8.25 x 23.48 x 10.36 210 x 596 x 263		inches mm

\* When there is only one value on a line, this column is a nominal value. Otherwise it is a typical value. Typical values are intended to illustrate typical performance, but are not guaranteed.

<sup>A</sup> Cold start, at -40 °C and P<sub>OUT</sub> in saturation.

## OTHER VertexRSI PRODUCTS

- Low Noise Amplifiers and LNA Systems
- Solid-State Power Amplifiers and SSPA Systems
- General Purpose Converters
- Satellite Communications Equipment
- Custom Subsystems



16668 Rev. C ECR 8521 11/14/07 MSI  
Specifications are subject to change at VertexRSI's discretion.