

## 8 GHz Solid-State Power Amplifier

Using technology developed for VertexRSI's ModuMAX™ amplifiers, this rack-mount SSPA offers an output power of 400 watts across the standard 7.90–8.40 GHz satellite uplink band. The SSPA incorporates a modular architecture that includes the RF modules, power supplies, logic, fans, and front panel assembly. The amplifier is designed for reliable service in fixed and mobile applications.

### Features

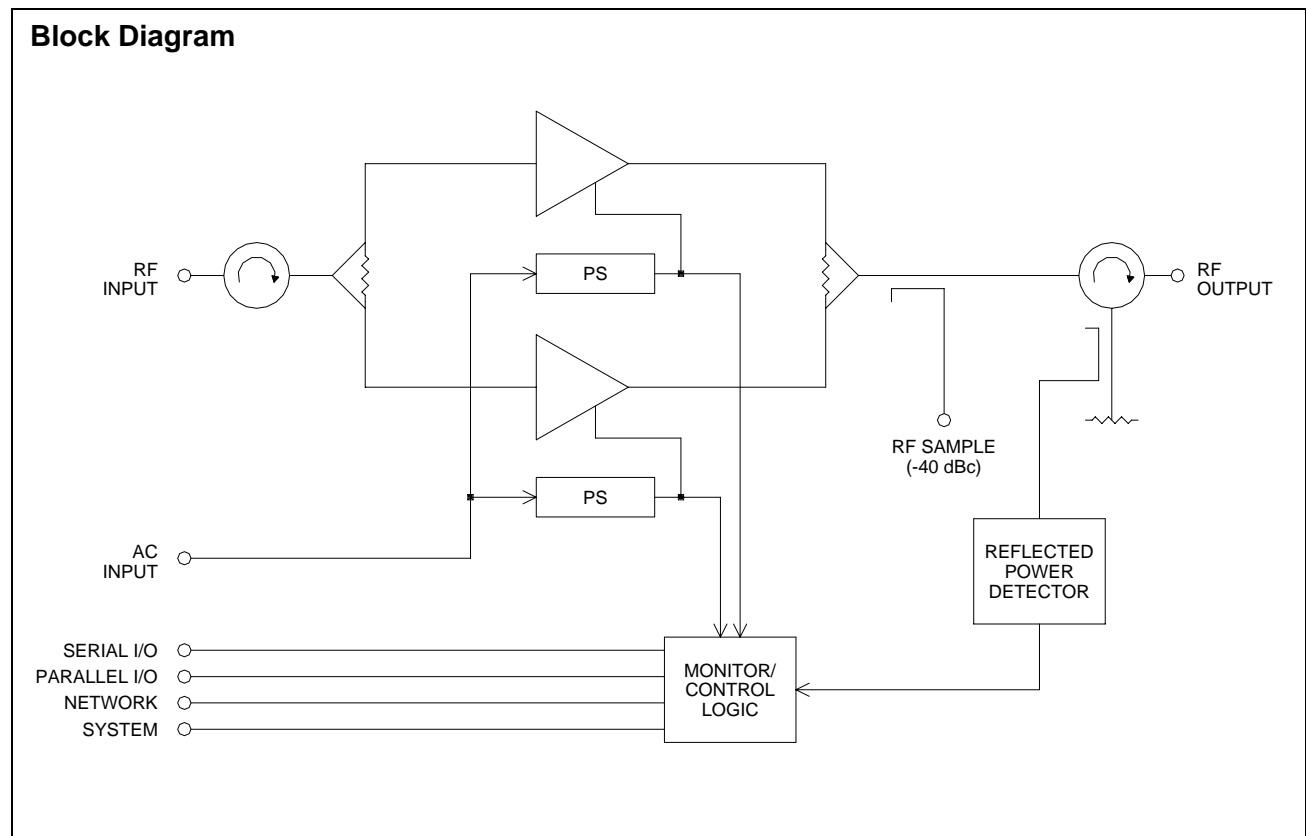
- 400 W saturated output power
- Digital gain adjustment (20 dB range)
- Forward and reflected power monitoring
- Microprocessor-based monitor and control
- Serial interface (RS232/422/485) standard
- 10 Base-T Network interface (SNMP, HTTP)
- RF input and output sample ports
- Integral 1:1 redundancy control

### Applications

- Single-thread SSPA
- Redundant systems (1:1, 1:2)
- Fixed installations
- Mobile terminals
- Government and Military systems

### Accessories

- RCP-2001 Remote Panel



# GENERAL DYNAMICS

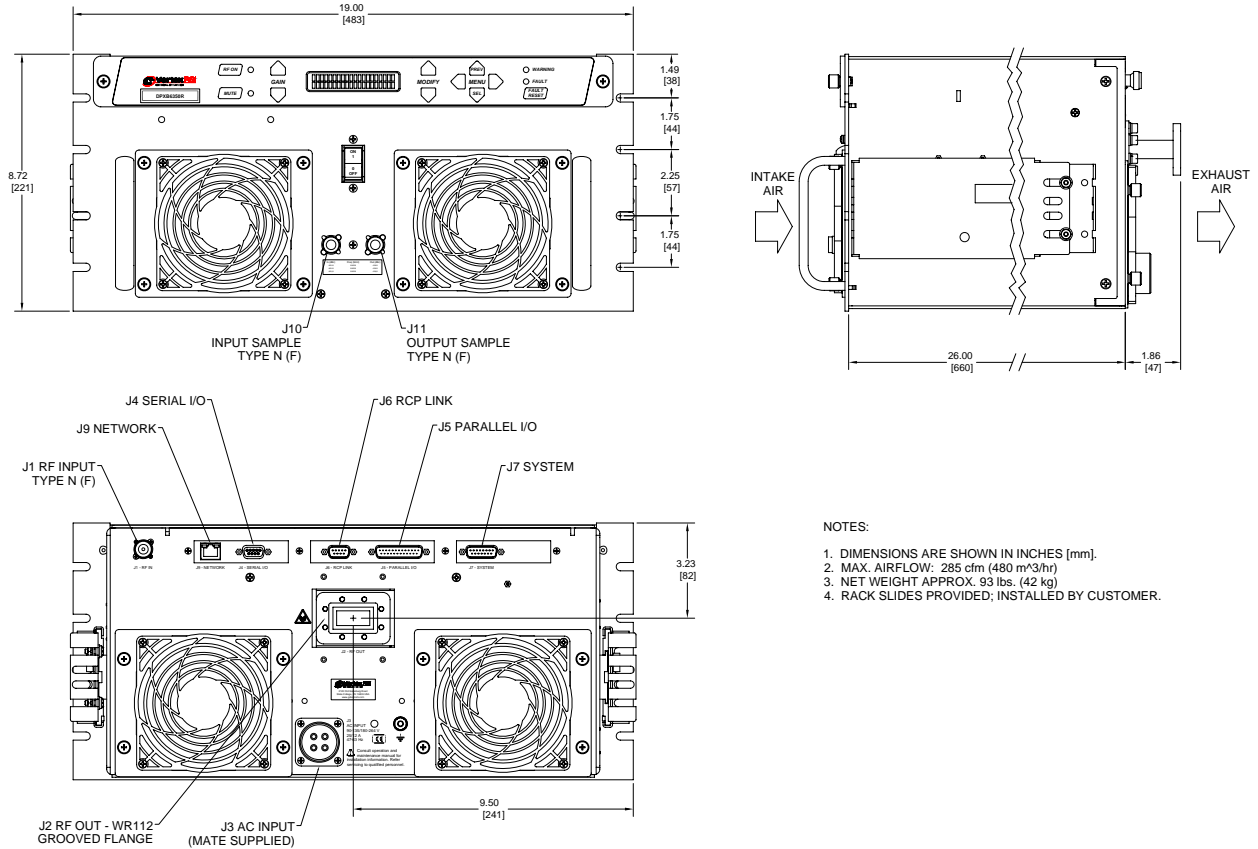
## SATCOM Technologies

Parameter	Notes	Min.	Nom./Typ. <sup>†</sup>	Max.	Units
Frequency Range		7.90		8.40	GHz
Gain, at maximum gain setting	Standard	67			dB
Gain Adjust Range	Digital, 0.1 dB steps	20			dB
Gain Flatness	Full band			±1.0	dB
	Per 40 MHz			±0.3	dB
Saturated Power Output			+56.0 (400)		dBm (W)
Power Output, at 1 dB compression ( $P_{1\text{dB}}$ )		+55.2 (335)			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 $P_{1\text{dB}}$		2.5	3.5	°/dB
VSWR	Input		1.25	1.30	:1
	Output		1.20	1.30	:1
RF Sample Ports	Input		-10		dB
	Output		-40		dB
Connectors	RF Input		Type N Female		
	RF Output		CPR112G Waveguide		
	Sample Ports		Type N Female		
	Serial I/O		9-pos D-sub Female, mate supplied		
	Parallel I/O		25-pos D-sub Male, mate supplied		
	System		15-pos D-sub, Male		
	RCP Link		9-pos D-sub, Male		
	Network		RJ-45 jack		
	Power		4-pos CE05, mate supplied		
Power Requirements	Voltage		90–135 or 180–270		Vac
	Frequency	47		63	Hz
	Power		1900	2100 <sup>A</sup>	W
	Power factor corrected		0.98		
Cooling System			Forced air		
Operating Temperature Range	Ambient air temperature	0		+50	°C
Dimensions	See outline drawing		8.75 H x 19 W x 27.88 D 222 H x 483 W x 708 D		inches mm
Weight	Approximate		93 (42)		lb (kg)

<sup>†</sup> 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 0 °C and Pout in saturation.

## Outline Drawing, SSPA

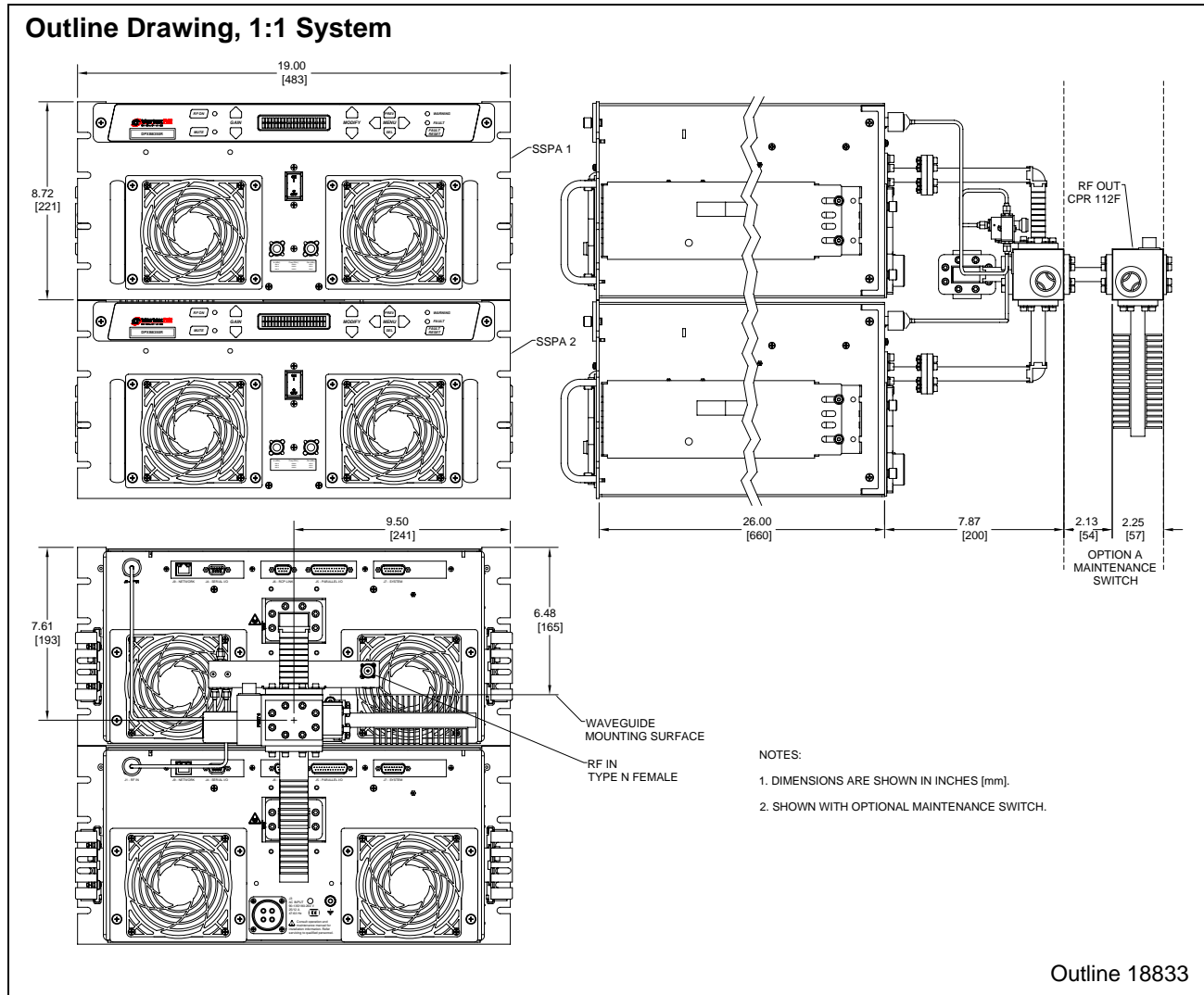


- NOTES:
1. DIMENSIONS ARE SHOWN IN INCHES [mm].
  2. MAX. AIRFLOW: 285 cfm (480 m<sup>3</sup>/hr)
  3. NET WEIGHT APPROX. 93 lbs. (42 kg)
  4. RACK SLIDES PROVIDED; INSTALLED BY CUSTOMER.

Outline 18446

## Connector Interface

Ref. Des.	Function	Connector Type	Mating Connector	Comment
J1	RF Input	Type N Female	Type N Male	
J2	RF Output	CPR112G Waveguide	CPR112 Flange	
J3	AC Input	4-pos CE05, Male	4-pos MS or CE05, Female	Mate supplied
J4	Serial I/O	9-pos D-sub, Female	9-pos D-sub, Male	Mate supplied
J5	Parallel I/O	25-pos D-sub, Male	25-pos D-sub, Female	Mate supplied
J6	RCP Link	9-pos D-sub, Male	9-pos D-sub, Female	
J7	System	15-pos D-sub, Male	15-pos D-sub, Female	
J8	Network	RJ-45 Jack	RJ-45 Plug	
J9	RF Input Sample	Type N Female	Type N Male	Front panel
J10	RF Output Sample	Type N Female	Type N Male	Front panel



### Part Number/Ordering Information

<p><b>SSPAs:</b></p> <p style="text-align: center;"><b>DPXB8400R</b></p> <p style="text-align: center;">7.90–8.40 GHz = B</p> <p style="text-align: center;">400 Watts = 400</p>	<p><b>1:1 Redundant Systems:</b></p> <p style="text-align: center;"><b>DPRX1B400R-X</b></p> <p style="text-align: center;">7.90–8.40 GHz = B</p> <p style="text-align: center;">400 Watts = 400</p> <p><b>Option: Maintenance Switch</b> Select antenna or dummy load at system output    A</p>
<p><b>Related Accessory: RCP-2001 SSPA Remote Control Panel</b> 1U-high rack-mounted panel. Can be located up to 1.3 km (400 ft.) away from the SSPA.</p>	



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Specifications subject to change at VertexRSI's discretion.