

Using technology developed for ModuMAX™ amplifiers, these outdoor SSPAs feature a modular architecture with field-replaceable RF assemblies and offer output powers of up to 250 Watts accross the standard 5.850 - 6.425 GHz or the extended 5.850 - 6.725 GHz satellite uplink bands.

Housed in a weatherproof NEMA 4X 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. Built for reliable, trouble-free service, the amplifiers incorporate a microprocessor-based monitor and control system.

#### FEATURES:

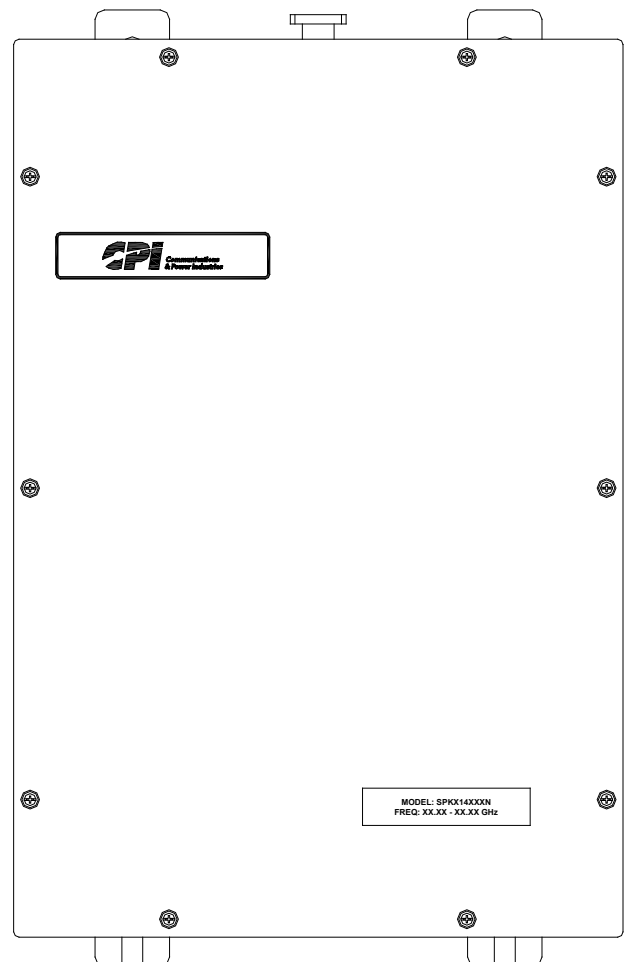
- Field replaceable RF assembly
- 100/125/200/250 W saturated output power
- Microprocessor based monitor and control
- Serial interface (RS-232/-422/-485)
- Output isolator for high load VSWR protection
- 20 dB range digital gain adjustment
- RF output sample port
- Reflected power monitoring

#### APPLICATIONS:

- Stand-alone SSPA
- 1:1 and 1:2 redundant systems

#### OPTIONS:

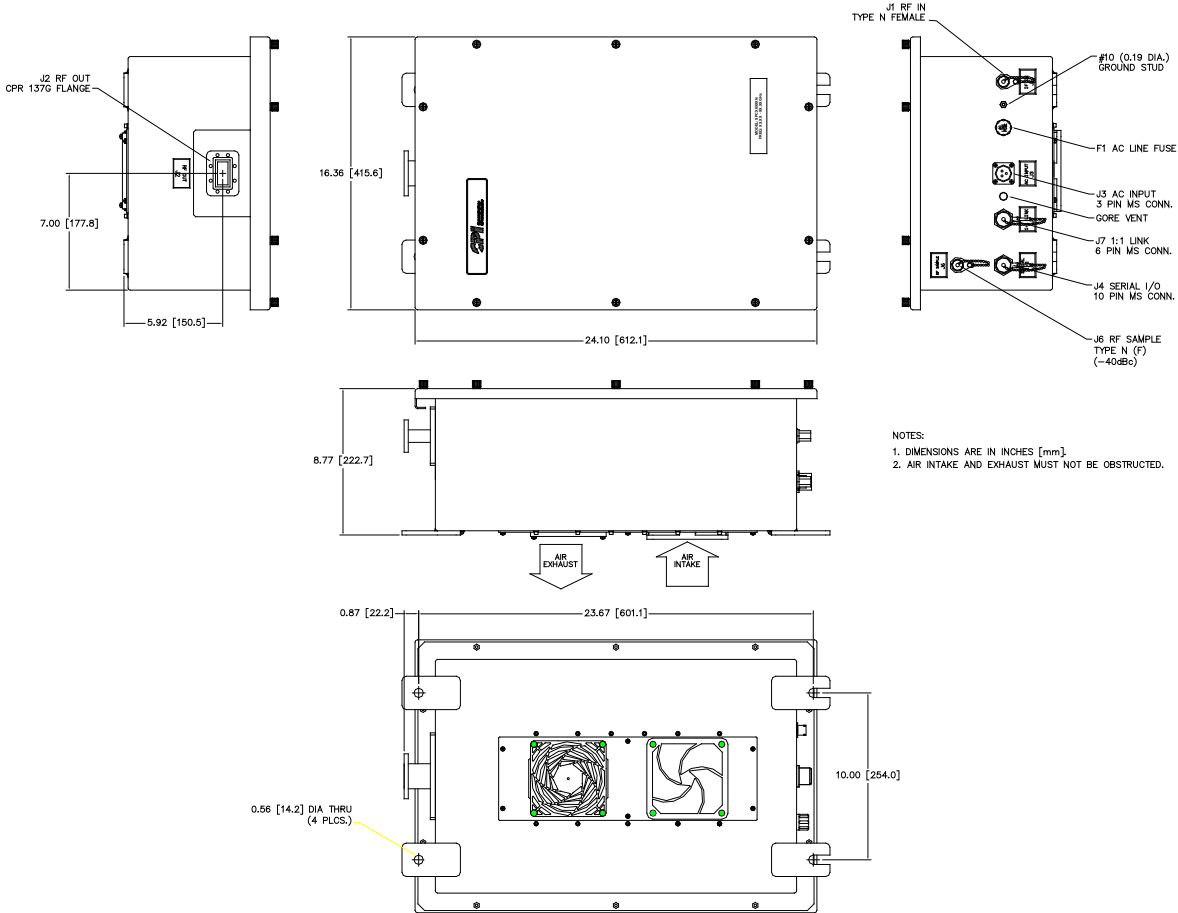
- Block upconverter



Parameter	Notes	Specification
<b>Frequency Range</b>	Band "D" Band "M"	5.850 to 6.425 GHz 5.850 to 6.725 GHz
<b>Input Frequency Range with Option 7, Block Upconverter</b>	Band "D" Band "M"	950 MHz min., 1525 MHz max. 950 MHz min., 1825 MHz max.
<b>Gain, at Maximum Setting</b>		70 dB min.
<b>Gain Adjustment Range</b>		20 dB min.
<b>Gain Flatness</b>		±1.0 dB over the full band, standard; ±1.5 dB full band, with Option 7 ±0.3 dB per 40 MHz, standard, ±0.5 dB per 40 MHz, with Option 7
<b>Gain Stability vs. Temperature</b>	-40 to +50°C, standard -40 to +50°C, with Option 7	±1.0 dB typical, ±1.5 dB max. ±2.0 dB typical, ±2.5 dB max.
<b>Saturated Power Output</b>	100 W 125 W 200 W 250 W	+50 dBm typ. (100 W) +51 dBm typ. (125 W) +53 dBm typ. (200 W) +54 dBm typ. (250 W)
<b>Power Output at 1dB compression (P<sub>1 dB</sub>)</b>	100 W 125 W 200 W 250 W	+49.5 dBm min. (89 W) +50.5 dBm min. (112 W) +52.0 dBm min. (158 W) +53.0 dBm min. (200 W)
<b>Two Tone Intermodulation</b>		-25 dBc max., -30 dBc typical at 3 dB total backoff from 1dB compression point
<b>Group Delay</b>	Linear Parabolic Ripple	0.03 ns/MHz 0.003 ns/MHz <sup>2</sup> 1.0 ns peak to peak
<b>AM/PM Conversion</b>		2.5°/dB typical, 3.5°/dB max. at (P <sub>1 dB</sub> )
<b>Noise Figure</b>		8 dB typical at maximum gain, standard 20 dB typical at maximum gain, with Option 7
<b>VSWR</b>	Input, Standard Input, with Option 7 Output	1.20:1 typical, 1.30:1 max. 1.35:1 typical, 1.50:1 max. 1.20:1 typical, 1.30:1 max.
<b>Output Sample Port</b>		-40 dBc typical
<b>Connectors</b>	Input Output Sample Port Serial I/O 1:1 Link Power	Type N Female CPR137G Waveguide Type N Female 10-pos MS, mate supplied 6-pos MS, mate supplied 3-pos MS, mate supplied
<b>Power Requirements</b>	Voltage Frequency Power, 100 W Power, 125 W Power, 200 W Power 250 W Power factor corrected	90 to 135 VAC or 180 to 265 VAC 47 Hz min., 63 Hz max. 650 W typical, 900 W max. (1) 800 W typical, 1200 W max. (1) 950 W typical, 1400 W max. (1) 1000 W typical, 1500 W max. (1) 0.97 typical
<b>Cooling System</b>		Forced Air
<b>Operating Temperature Range</b>	Ambient air temperature	-40°C to +50°C
<b>Dimensions</b>	See outline drawing	25.67" H x 16.36" W x 9.52" D; 651.9 mm H x 415.6 mm W x 241.8 mm D
<b>Weight</b>		53 lb, 24 kg)

(1) Cold start at -40 °C and P<sub>OUT</sub> in saturation

Outline Drawing SSPA



Outline 18951

Part Number Ordering Information

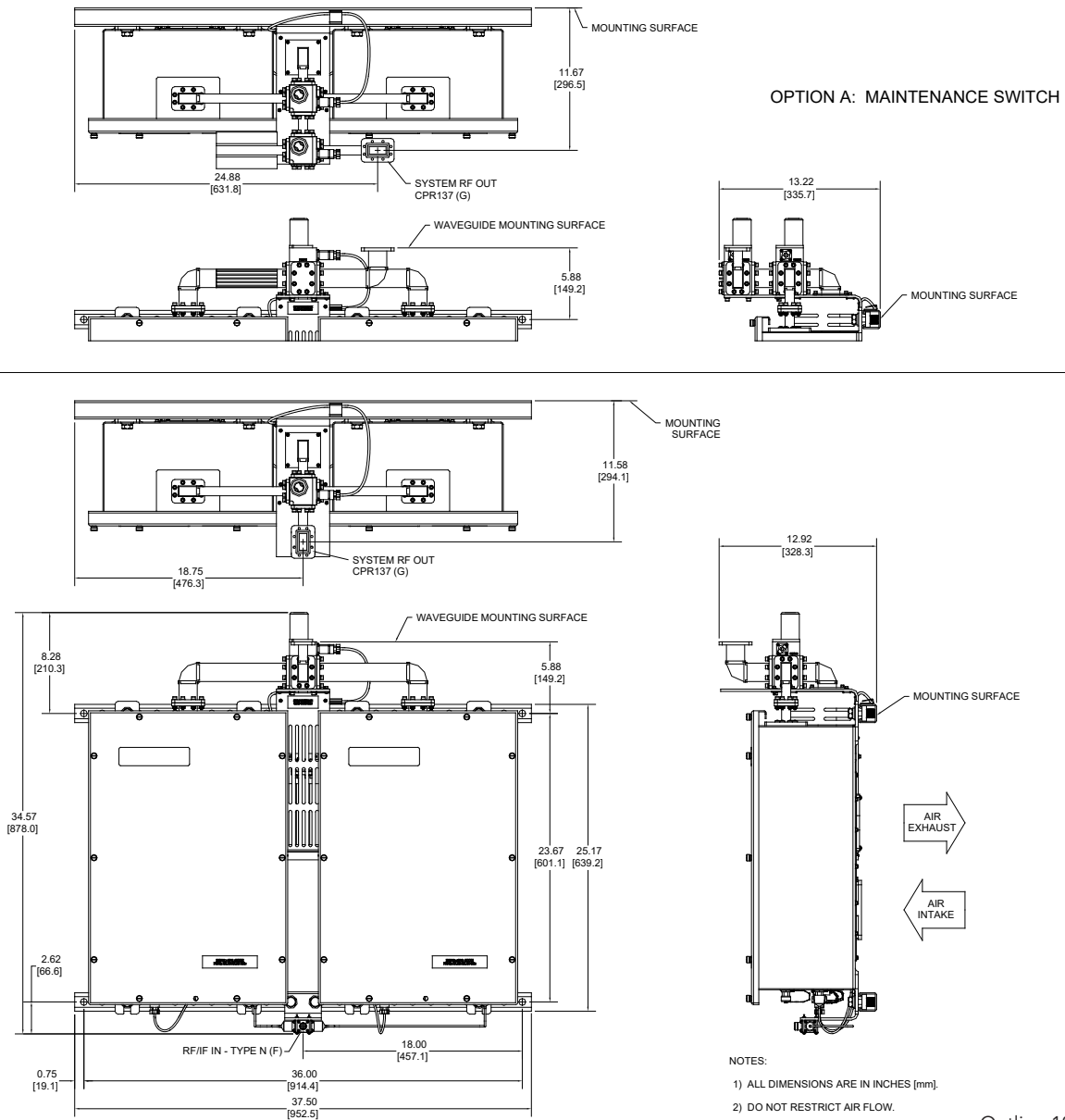
<p><b>SSPA:</b></p> <p><b>Part/Model No. SPC</b> <input type="checkbox"/> <b>6</b> <input type="checkbox"/> <b>N-X</b></p> <p>5.850–6.425 GHz = D              5.850–6.725 GHz = M</p> <p>100 Watts = 100              125 Watts = 125              200 Watts = 200              250 Watts = 250</p> <p><b>Options:</b>  <b>Block Upconverter</b>.....7  <b>L-Band IF Input</b></p> <p><small>*Performance specifications of a redundant system depend on the installed configuration and optional accessories. Contact the factory for more information and for 1:2 system capabilities.</small></p>	<p><b>Redundant Systems*:</b> Consists of 1:1 switching assembly, two SSPAs, and interconnecting cables</p> <p><b>Part/Model No. SPRC1</b> <input type="checkbox"/> <input type="checkbox"/> <b>N-XX</b></p> <p>5.850–6.425 GHz = D              5.850–6.725 GHz = M</p> <p>100 Watts = 100              125 Watts = 125              200 Watts = 200              250 Watts = 250</p> <p><b>Options:</b>  <b>Block Upconverter</b>.....7  <b>L-Band IF Input</b>  <b>Maintenance Switch</b>.....A              Selects antenna or dummy load at system output</p>
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Related Accessory:

RCP-2001, SSPA Remote Control Panel

1U-high rack-mount panel enables remote manual control of the SSPA. Can be located up to 1.3 km (4000 ft.) away and interconnects with inexpensive cable.

Typical 1:1 System Outline Drawing



Connector Interface

Ref. Des.	Function	Connector Type	Mating Connector	Comment
J1	RF/IF Input	Type N Female	Type N Male	
J2	RF Output	CPR137G Waveguide	CPR137 Flange	
J3	AC In	3-pos MS, Male	3-pos MS, Female	Mate supplied
J4	Serial I/O	10-pos MS, Female	10-pos MS, Male	Mate supplied
J6	Output Sample	Type N Female	Type N Male	
J7	1:1 Link	6-pos MS, Female	6-pos MS, Male	Mate supplied



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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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