

Using technology developed for ModuMAX™ amplifiers, these rack-mount SSPAs offer an output power of 200 watts accross the standard 14.0-14.5 GHz or extended 13.75-14.5 GHz satellite uplink bands

The SSPAs incorporate a modular architecture that includes the RF modules, power supplies, logic, fans, and front panel assembly. The amplifiers are designed for reliable service in fixed and mobile applications.

#### FEATURES:

- 200 W saturated output power
- Digital gain adjustment (20 dB range)
- Forward and reflected power monitoring
- Microprocessor based monitor and control
- Serial interface (RS-232/-422/-485) standard
- 10 Base-T network interface (SNMP, HTTP)
- RF input and output sample port
- Integral 1:1 redundancy control

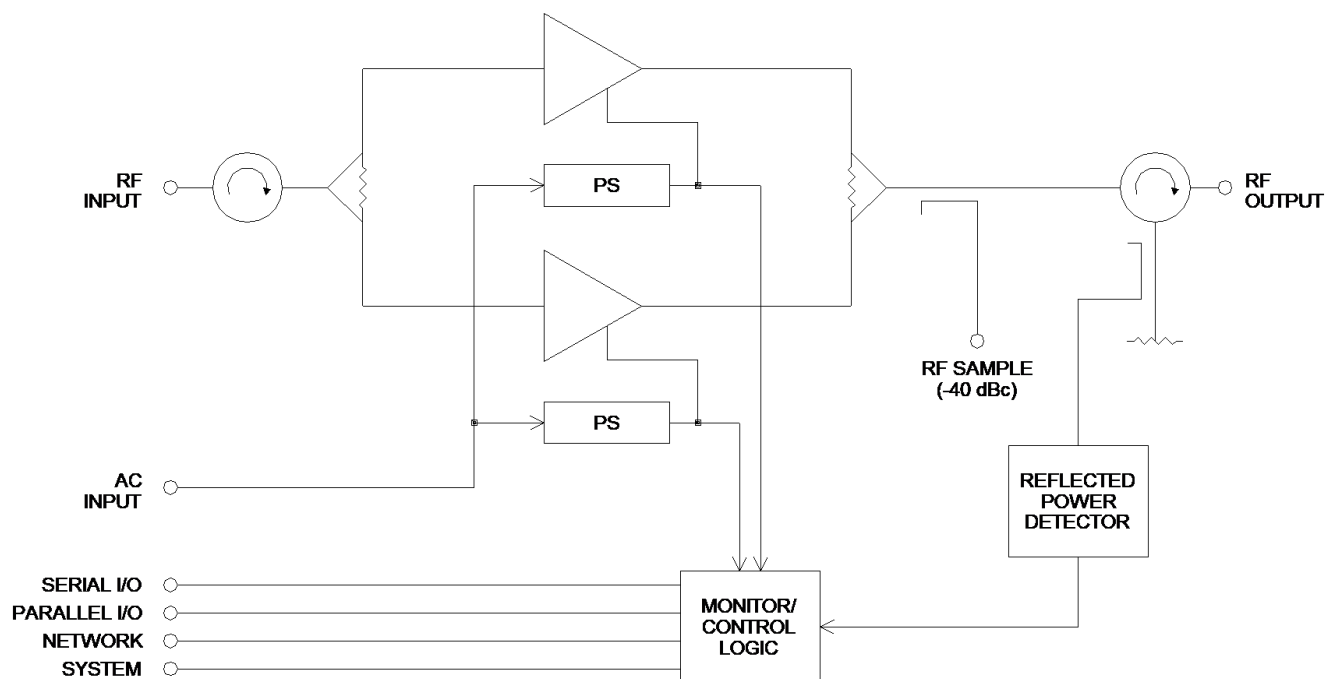
#### APPLICATIONS:

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

#### ACCESSORIES:

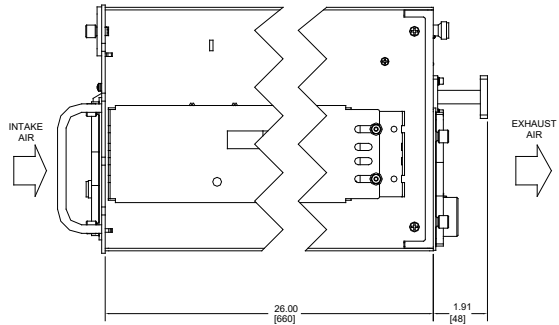
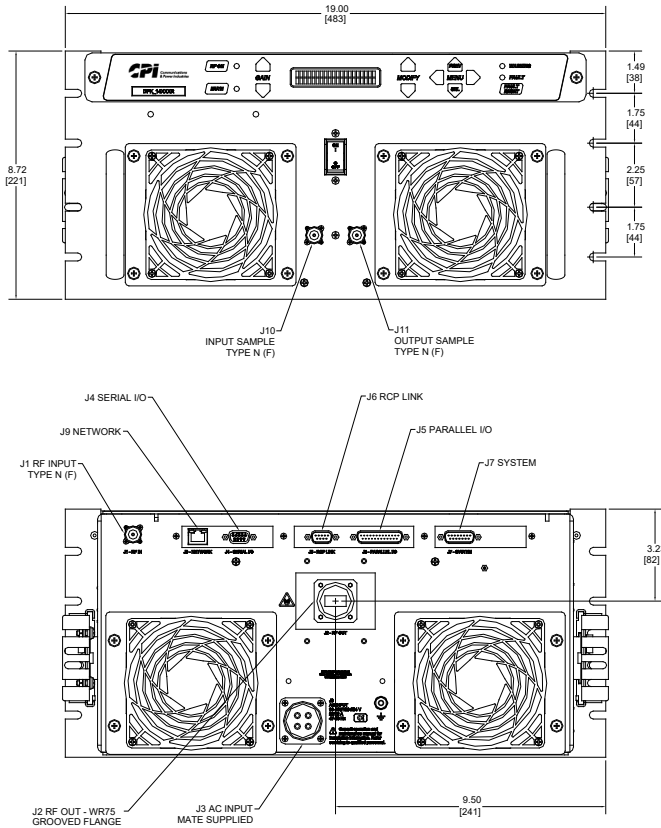
- RCP-2001 remote panel

#### Block Diagram



Parameter	Notes	Specification
<b>Frequency Range</b>	Band "M" Band "O"	14.00 to 14.50 GHz 13.75 to 14.50 GHz
<b>Gain, at Maximum Setting</b>		69 dB min., Standard
<b>Gain Adjustment Range</b>	Digital	20 dB min. in 0.1 dB steps
<b>Gain Flatness</b>		±1.0 dB over the full band; ±0.3 dB over any 40 MHz
<b>Saturated Power Output</b>		+53 dBm typ. (200 W) (1)
<b>Power Output at 1dB compression (P<sub>1dB</sub>)</b>		+52.0 dBm min. (158 W) (1)
<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>1dB</sub> )
<b>VSWR</b>	Input Output	1.25:1 typical, 1.30:1 max, 1.20:1 typical, 1.30:1 max,
<b>RF Sample Ports</b>	Input Output	-10 dB typical -40 dB typical
<b>Connectors</b>	RF Input RF Output Sample Ports Serial I/O Parallel I/O System RCP Link Network Power	Type N Female WR75G Waveguide Type N Female 9-pos D-sub Female, mate supplied 25-pos D-sub Male, mate supplied 15-pos D-sub, Male 9-pos D-sub, Male RJ-45 Jack 4-pos CE05, mate supplied
<b>Power Requirements</b>	Voltage Frequency Power Power factor corrected	90 to 135 VAC or 180 to 270 VAC 63 Hz max., 47 Hz min. 2000 W typical, 2400 W max. (2) .98 typical
<b>Cooling System</b>		Forced Air
<b>Operating Temperature Range</b>	Ambient air temperature	0°C to +50°C
<b>Dimensions</b>	See outline drawing	8.75" H x 19" W x 27.88" D; 222 mm H x 483 mm W x 708 mm D
<b>Weight</b>	Approximate	93 lb (42 kg)
(1) P <sub>OUT</sub> on between 14.0 and 14.5 GHz, 1dB lower between 13.75 and 14.0 GHz for Band "O" amplifier		
(2) Cold start, at -40 °C and P <sub>OUT</sub> in saturation		

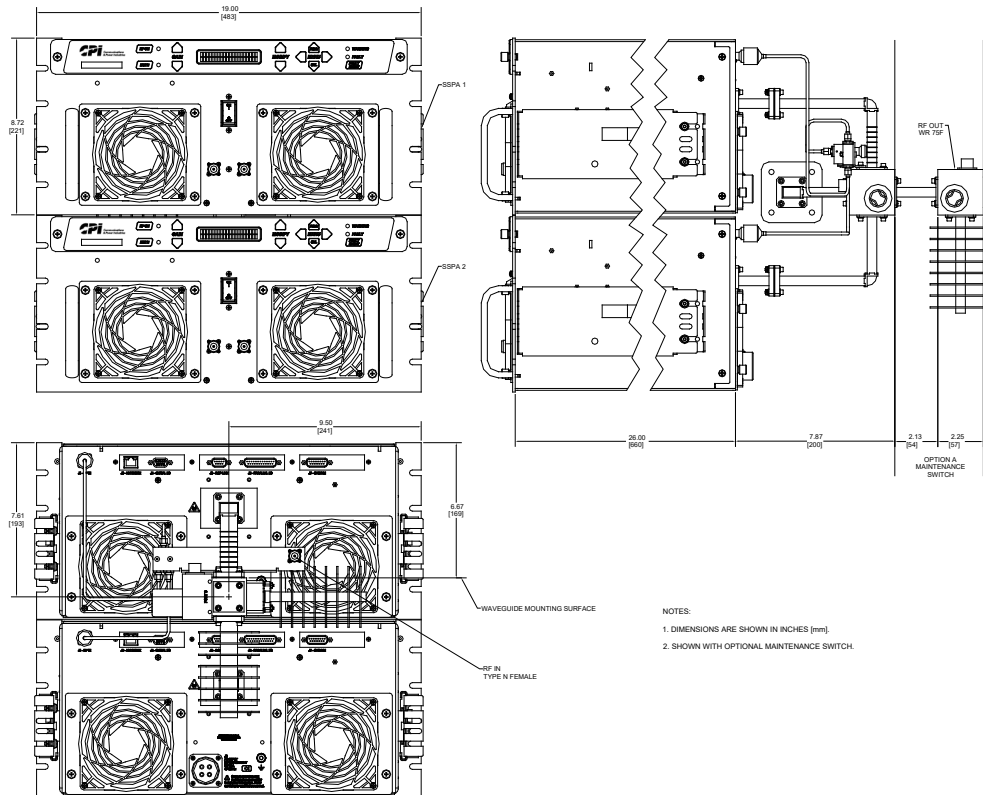
Outline Drawing, SSPA



- NOTES:
1. DIMENSIONS ARE SHOWN IN INCHES (mm).
  2. MAX. AIRFLOW: 285 cfm (480 m<sup>3</sup>/hr).
  3. NET WEIGHT APPROX: 84 lbs (38 kg).
  4. RACK SLIDES PROVIDED: INSTALLED BY CUSTOMER.

Outline 18447

Outline Drawing, Typical 1:1 System



- NOTES:
1. DIMENSIONS ARE SHOWN IN INCHES (mm).
  2. SHOWN WITH OPTIONAL MAINTENANCE SWITCH.

Outline 18834

**Connector Interface**

Ref. Des.	Function	Connector Type	Mating Connector	Comment
J1	RF Input	Type N Female	Type N Male	
J2	RF Output	WR75G Waveguide	WR75 Flange	
J3	AC In	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	
J9	Network	RJ-45 Jack	RJ-45 Plug	
J10	Input Sample	Type N Female	Type N Male	Front panel mounted
J11	Output Sample	Type N Female	Type N Male	Front panel mounted

**Part Number Ordering Information**

<p><b>SSPA:</b>  <b>Part/Model No.            DPK□14200R</b>                         14.00 -14.50 GHz = M            13.75 -14.50 GHz = O</p> <p>* 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.</p>	<p><b>1:1 Redundant System*:</b>  <b>Part/Model No.            DPRK1□200R-X</b>                         14.00 -14.50 GHz = M            13.75 -14.50 GHz = O</p> <p><b>Option:</b>  <b>Maintenance Switch .....A</b>          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.



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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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