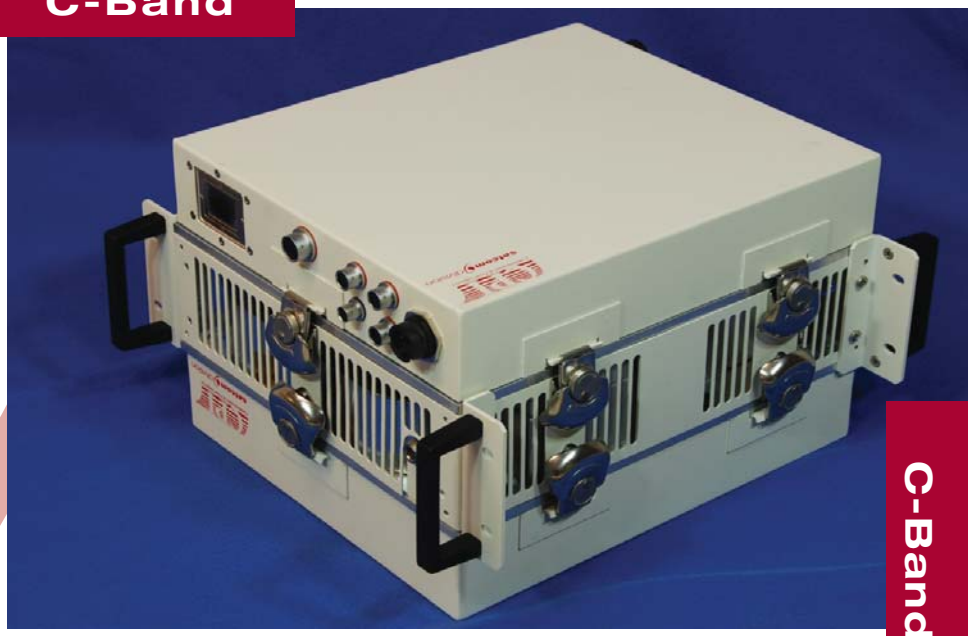
125W Outdoor SSPA

CPI Solid Inside and Out

C-Band



High Power SSPA

Model S4CO 125 W C-band Solid State Power Amplifier—Environmentally sealed compact design for outdoor operation

CPI-Built RF Brick Inside

With CPI-built RF brick inside and plenty of thermal margin, this SSPA is rock-solid, highly efficient and easy to maintain.

Multi-Carrier Digital Operation

Highly linear: excellent AM/PM, phase noise and spectral regrowth performance.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated RS-232 or RS422/485 computer interface, basic Ethernet interface and digitally controlled attenuator.

Easy Maintenance

Highly modular design enables fan, power supply and SSPA brick replacements in less than 30 minutes. RF Module can be replaced with X- or Ku-band module in minutes.

Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements.

Worldwide Support

Backed by over three decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes sixteen regional factory service centers.

C-Band

125W Outdoor SSPAs

satcom division

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C-Band

SPECIFICATIONS, S4CO Outdoor-Mount SSPA

Electrical

Frequency Range	5.850 - 6.425 GHz (5.850 - 6.725 GHz opt.)
RF Output	
Saturated, min.	125 W (50.97 dBm), 100 W with extended band option
P1dB, min.	100 W (50.00 dBm), 80 W with extended band option
Small Signal Gain (at max.	70 dB min. (at max. gain setting)
Gain Adjustment Range	23 dB
Gain Setting Resolution	±0.1 dB
Gain Stability	
Over -30°C to +50°C	±1.5 dB
at constant temp. and drive	±0.25 dB
Small Signal Gain Slope	±0.04 dB/MHz max.
Small Signal Gain Variation	±0.3 dB pk-pk across any 40 MHz band; ±1.5 dB pk-pk across frequency band
Input VSWR	1.3:1 max.
Output VSWR	1.3:1 max.
3rd Order Intermod	-25 dBc max. at 3 dB total backoff from P1dB
Harmonic Output	-60 dBc max. at P1dB
Spurious	-60 dBc max. at P1 dB
Residual AM	-50 dBc below 10 kHz -20 [1 + log F(kHz)] dBc, 10 kHz to 500 kHz -85 dBc above 500 kHz
Noise Power Density	-70 dBW/4 kHz in transmit band
Phase Noise	12 dB below IESS phase noise profile, max.
AM/PM Conversion	2.5°/dB max. at 3dB backoff from P1dB

Electrical (continued)

Group Delay (in any 80 MHz band)	0.03 ns/MHz linear max. 0.003 ns/MHz^2 parabolic max. 1.0 ns pk-pk ripple max.
Primary Power	100-240 VAC ±10%, single phase; 47-63 Hz
Power Consumption	800 W typ.
Power Factor	0.95 min.
RF Output Monitor	-30 dB ±2 nom. wrt output

Environmental (Operating)

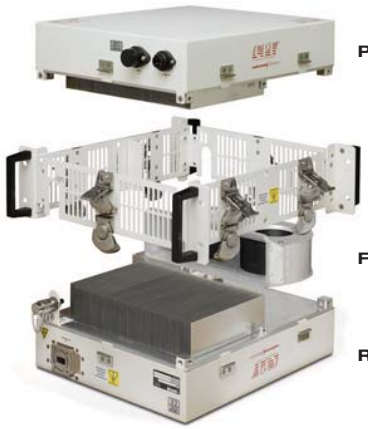
Ambient Temperature	-40°C to +60°C operating
Relative Humidity	100% condensing
Altitude	10,000 ft. max. operating
Shock and Vibration	20 g peak, 11 msec, 1/2 sine 2.1 g_{rms}, 5 to 500 Hz

Mechanical

Cooling	Forced air with integral blower
RF Input Connection	Type N female
RF Output Connection	CPR-137 waveguide flange, grooved
RF Output Monitor	Type N female
M&C Interface	Serial and basic Ethernet std.
Dimensions (W x H x D)	12.0 x 9.1 x 14.0 in. (305 x 232 x 356 mm)
Weight	43 lbs (19.5 kg) typ, no options

OPTIONS:

- *Remote Control Panel*
- *Integrated 1:1 Switch Control*
- *Redundant Switch Subsystems*
- *L-Band BUC*
- *Wideband: 5.850 to 6.725 GHz*
- *Dry Contact M&C Interface*
- *Advanced Ethernet Interface*



Field Replaceable Modules (FRMs) Enable Easy Maintenance and Frequency Flexibility

ISO 9001 Certificate Number: 30515

NASDAQ GLOBAL SELECT

For more detailed information, please refer to the corresponding CPI Technical Description.

Note: *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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