STSR Series

Rack Mount SSPA

The SpacePath Communications Rack Mount Block-Up Converter Series is smaller, lighter and more powerful 50W-500W Ku-Band and 100W-800W C-Band Rack Mount BUC / SSPA. This Series allows significant high power BUC / SSPA size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF.

The new SpacePath Communications series powered by GaN technology 50W -800W BUC/ SSPA are very compact, light and extremely powerful. Using patent pending Z-combining method and advanced GaN technology the new 50W - 500W Rack Mount BUC / SSPA has truly outstanding power density - up to 500W Ku-Band Psat in 5RU and up to 400W C-Band Psat in 4RU light compact package. The SpacePath 50W - 800W Rack Mount BUC / SSPA features best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. Redundant truly hot swappable power supply gives even higher overall reliability.

Options

- Internal 10MHz reference (BUC)
- 10MHz reference auxiliary output (BUC)
- Input and Output RF sample ports
- Automatic Level Control (ALC)

Features

- Extremely high power density - up to 800W C-Band PSAT in 19" Rackmount, 6RU only!
- Extremely high power density - up to 500W Ku-Band PSAT in 19" Rackmount, 5RU only!
- Superior RF performance:
  - Phase noise 5-8dB better than IESS308/309
  - High Linearity
  - PSAT up to 57 dBm Ku-Band and up to 59dBm in C-Band
  - Wide dynamic range of Gain control
- RF Overdrive Protection
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP
- User friendly front panel with menu driven display
- Redundant Ready - No external redundancy controller required
- Built-in power metering
- Full VSWR protection

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STSR Series 100W-800W C-Band and 50W-500W Ku-Band Rack Mount SSPA/BUC Specification

Parameter	C-Band	Ku-Band
RF Performance		
RF Frequency Ranges-Available in/switched	5.85-6.425GHz (other options available)	14-14.5GHz 13.75-14.50GHz
IF Frequency Rage (BUC)	950-1525MHz (other options available)	950-1700MHz
LO Frequency C/Ku	4.9GHz/12.8GHz Single Conversion; non-inverting	
Gain	75dB min, 77dB typ	
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz	
Gain Stability over temperature	+/-1.0dB over full temperature range	
Gain Control	20dB min dynamic range	
Up-Converter Phase Noise	-68dBc/Hz @ 100Hz -80dBc/Hz @ 1kHz -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz	
Linearity: 2 tone IMD Spectral Re-growth	-24dBc at P linear -30dBc for QPSK at 1.5 x symbol rate at P linear	
Output Spurious: Non-signal related Signal related	-65dBc -60dBc	
Power		
AC Voltage Range	190-265VAC 50-60Hz Auto-Ranging PFC	
Environmental		
Cooling	Forced Air	
Operating temperature	0°C to +50°C	
Relative Humidity	Up to 99% non-condensing	
Interfaces		
IF Input Connector	N-type female rear panel	
RF Output Connector	CPR137/ WR75 grooved rear panel	
RF Sample	N-type female front panel	
AC Power In	NEMA Connector rear panel	
M&C Interface-Serial, Analog and Ethernet	DSUB Connectors, RJ45 rear panel	

SpacePath Part Number	Prated (dBm/W)	Plinear (dBm/W)	P Cons at Prated	P Cons at Plin	RU
C-Band					
STSR100CC1	50/100	47/50	400W	320W	3RU
STSR200CC1	53/200	50/100	1000W	750W	3RU
STSR250CC1	54/250	51/125	1600W	1350W	4RU
STSR300CC1	55/300	52/150	1800W	1600W	4RU
STSR400CC1	56/400	53/200	2000W	1800W	4RU
STSR800CC1	59/800	56/400	4000W	3200W	6RU
Ku-Band					
STSR50KU1	47/50	44/25	300W	260W	2RU
STSR100KU1	50/100	47/50	600W	520W	3RU
STSR125KU1	51/125	48/60	650W	540W	3RU
STSR200KU1	53/200	50/100	1100W	800W	4RU
STSR250KU1	54/250	51/125	1500W	1200W	5RU
STSR300KU1	55/300	52/150	2000W	1700W	5RU
STSR400KU1	56/400	53/200	2300W	2000W	5RU
STSR500KU1	57/500	54/250	2500W	2200W	5RU