STS1000TR
Troposcatter
GaN Powered BUC / SSPA

The SpacePath Communications 000W Troposcatter series are very compact, lightweight and extremely powerful. Weighing only 46KG at 1000W output power, this series is the most powerful and feature rich for its size.

Smaller, lighter and more Powerful, 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. That's why SpacePath Communications offers 3 years warranty for this product line!

Using patent pending Z-combining method and advanced GaN technology this new SpacePath Communications 1000W Tropo SSPA/SSPB / BUC has truly outstanding power density.

This series 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.

The 1000W Tropo series remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile and fixed applications.

Options

- Internal / Autosense 10MHz Reference
- Automated Level Control (ALC)
- BUC or SSPA
- Antenna Mounting Kit
- External Rackmount Remote M&C Panel

Features

- Extremely High Power Density— 1000W PSAT in 52x46x27cms
- RF Overdrive Protection
- Input and Output True RMS Power Detection
- Superior RF Performance
  - Phase noise 8-10dB better than IESS308/309
  - Psat up to 60dBm
  - Spurious below –60dBc
  - Wide dynamic range of Gain Control
  - High Linearity
- Configuration via RS-232 serial console, packet protocol RS-485—User friendly HTTP based GUI and SNMP
- Redundant Ready– No External Redundancy Controller Required
- Status LED
- Field Upgradable Software

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500W to 1000W Troposcatter Block-Up-Converter GaN Specification

RF Performance	
RF Frequency Range	4.4-5.0GHz
IF Frequency Rage	950-1550MHz
LO Frequency	5.95GHz
Conversion	Single Conversion; inverting
Conversion Gain	75dB min, 78dB typ.
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz
Gain Stability	+/-1.5dB over full temperature range
Gain Control	20dB min dynamic range
External Reference Frequency	10MHz multiplexed with IF In
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz -140dBc/Hz @ 1kHz -150dBc/Hz @ 10kHz -155dBc/Hz @ 100kHz
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	-25dBc max at Plinear -26dBc for QPSK at 1.5 x symbol rate at Pout=(Plinear+1dB)
Noise Power Density:	-70dBm/Hz max
Spurious Emission: Non-signal related Signal related	-65dBc -60dBc
Power	
AC Voltage Range	180-265VAC 50-60Hz PFC
Mechanical	
Size	52x46x27cms
Weight	46KG
Cooling	Forced Air
Operating temperature	-40°C to +55°C
Relative Humidity	Up to 100% condensing
Interfaces	
IF Input Connector	N-type female
RF Output Connector	CPR187 grooved; Quick disconnect WR187 optional
RF Sample	N-type female
AC Power In	3 pin MS style
M&C Interface – Serial, Ethernet	MS3112E14-19S

SpacePath Part Number	Prated (dBm/W)	Plinear (dBm/W)	P Cons at Prated	P Cons at Plin
STS1000TR-OPT**xx**	60/1000	57/500	3300W	2000W

* xx To be replace by 2 digit code based on configuration

Specifications are subject to change without notice