

The SpacePath Communications 90W BUC / SSPB / SSPA powered by GaN technology super compact series are *revolutionary in size*, weight and power density. This series offers superior performance in an extremely compact package that can fit in your palm! Weighing at only 4.5KG, our feature-rich GaN unit is exceptionally powerful for its size: up to 90W Psat. Built in DC or AC power supply provides the customer with the simplest and least expensive plug-into-the wall solution.

SpacePath Communications GaN super compact features best in class RF characteristics, embedded WG circulator, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. This series remarkably small size and low power consumption results in better heat extraction that leads to overall system size and cost reduction making it the ideal candidate for portable, mobile and VSAT on the move applications. Its small size and weight allows direct feed horn mounting, which makes it a most economical solution for

## Options

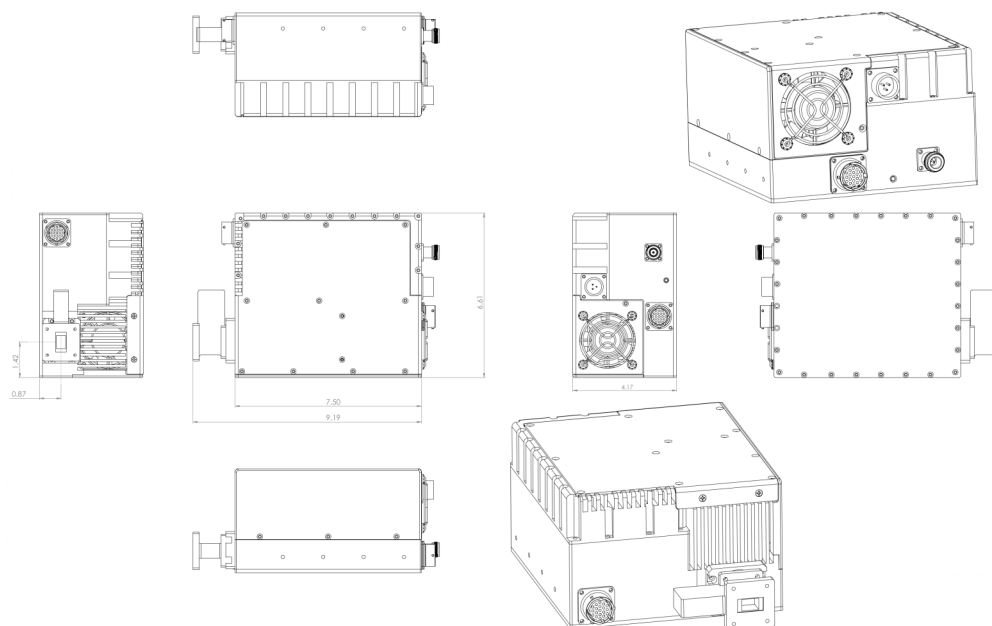
- Internal / Autosense 10MHz reference
- True RMS detector
- Antenna Mounting kit

## Features

- Up to 90W PSAT Output power in this super-compact light weight package  
19x16.75x10.5cms
- Only 500W power consumption at 90W output
- 400W power consumption at 3dB back off
- Switchable LO—Standard and Extended Ku-Band in one unit
- RF overdrive protection

- Superior RF Performance
  - Phase noise 6dB better than IESS308/309
  - High Linearity
  - Spurious below -60dBc
  - Wide dynamic range of Gain Control
- Built in WG Circulator provides full output VSWR Protection
- Configuration via RS-232 serial console, packet protocol RS-485 and User friendly Ethernet HTTP based GUI and SNMP support
- Redundancy Ready—No external redundancy controller required
- Field replaceable fans
- Field upgradable software

## Outline



## 90W L-Band to Ku-Band Block-Up-Converter Specification

Parameter	90W
<b>RF Performance</b>	
RF Frequency Ranges-Available in/switched	14-14.5GHz 13.75-14.5GHz
IF Frequency Range	950-1450MHz 950-1700MHz
LO Frequency	13.05GHz 12.8GHz
Conversion	Single Conversion; non-inverting
Saturated Power	49.6dBm typ.
Linear Power	46.6dBm typ.
Conversion Gain	72dB min, 75dB 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	-70dBc/Hz @ 100Hz -80dBc/Hz @ 1kHz -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz
Linearity:	
2 tone IMD	-25dBc at 3dB total power back off from rated power -30dBc at 6dB total power back off from rated power
Spectral Re-growth	-30dBc for QPSK at 1.5 x symbol rate at 3dB back off from rated power
Noise Power Density: Transmit Band	-85dBm/Hz max
Receive Band	-140dBm/Hz max
Output Spurious: Non-signal related	-60dBc
Signal related	-55dBc
<b>Power</b>	
48VDC Voltage Range	36-72VDC Isolated
AC Voltage Range (optional)	90-265VAC 50-60Hz Auto-Ranging
Power Consumption DC Power In (@P <sub>sat</sub> / @P <sub>lin</sub> )	500W / 470W typ.
Power Consumption AC Power In (@P <sub>sat</sub> / @P <sub>lin</sub> )	470W / 450W typ.
<b>Mechanical</b>	
Size	19x16.75x10.5cms
Weight	4.5KG
Cooling	Forced Air
Operating temperature	-40°C to +55°C
Relative Humidity	Up to 100% condensing
<b>Options</b>	
Transmit Key Line	Transmit Key Line (iDirect X7 compatible)
EIRP Power Indication	Using an Antenna Gain and IFL Calculation
<b>Interfaces</b>	
IF Input Connector	N-type female
RF Output Connector	WR75 grooved
Power In	MS3112E12-3P
RS485-RS232-Ethernet-SNMP	MS3112E14-19S