

125 W Ku-band Appendix-30B-15 or Kx- band Outdoor Multicarrier Gen III GaN BUC

This compact and powerful 125 W Outdoor BUC, equipped with cutting-edge Gen III GaN technology, it boasts exceptional RF performance, efficiency and reliability for Single or Multicarrier Application

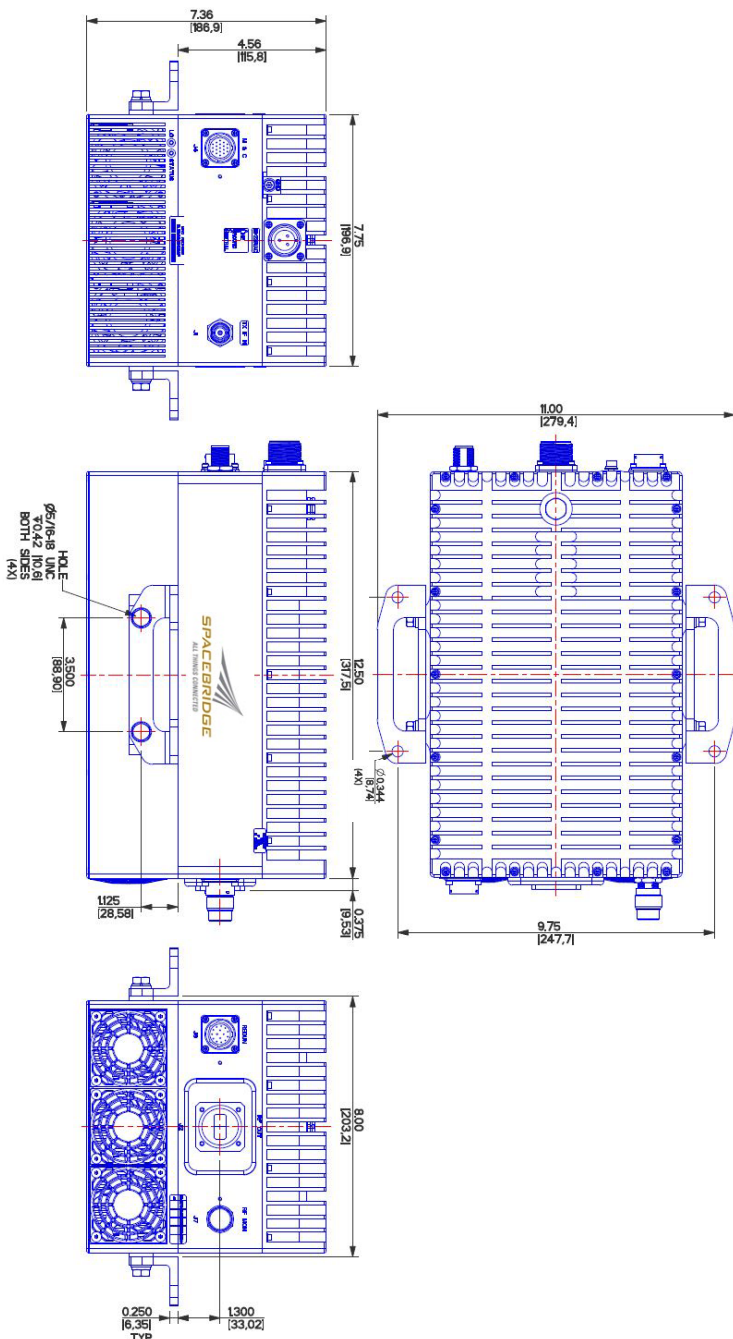
The device offers a wide range of monitoring and control capabilities, all easily accessible through Ethernet, serial RS232 and RS485 interfaces and Form-C dry contacts. It's the best-in-class solution for any demanding mobile or fixed application, designed for all-outdoor installations. This device does not require the additional air conditioning, or shelter. Therefore there is no W/G RF loss than installed in a shelter

Key Features

- Built-in 1:1 Redundancy, no External Redundancy Controller Required
- High Linearity, efficiency and MTBF
- Internal High-stability 10MHz Reference
- Built-in High Precision true RMS Power Meter
- Web Interface, Telnet, SNMP support
- Output Overdrive Protection
- Output VSWR Protection
- Thermal shutdown

Options

- REST API
- Handheld Terminal
- Automatic Output Level Control (ALC)



Technical Specifications

RF CHARACTERISTICS		
Frequency Band	Ku-band Appendix-30B-15	Kx-band
P _{Sat} , Rated Output Power	51 dBm / 125 W min	
P _{Lin} , Linear Power as defined by MIL-STD-188-164C	48 dBm / 62.5 W min	
Small Signal Gain	71 dB min, 75 dB typ	
Gain Flatness over full frequency range	± 1.5 dB max	
Gain Flatness over any 40 MHz	± 0.5 dB max	
Gain Control	20 dB min dynamic range, 0.1 dB steps	
Gain Stability over full Temperature range	± 1.5 dB max	
P _{Out} stability with ALC, over temperature and P _{in} variation	± 0.5 dB max	
RF Frequency range	12.75-13.25 GHz	13.75-14.5 GHz
IF Frequency Range	950-1450 MHz	950-1700 MHz
LO Frequency	11.8 GHz	12.8 GHz/13.05 GHz, selectable
External Reference Frequency	10 MHz, sinusoidal, multiplexed with L-band (IF In)	
External Reference Level	-5 dBm to +5 dBm	
External Reference SSB Phase Noise, max	-110 dBc/Hz @ 10 Hz; -125 dBc/Hz @ 100 Hz; -140 dBc/Hz @ 1 kHz; -155 dBc/Hz @ 10 kHz; -165 dBc/Hz @ 100 kHz; -165 dBc/Hz @ 1 MHz;	
Up-Converter SSB Phase Noise, max	-50 dBc/Hz @ 10 Hz; -65 dBc/Hz @ 100 Hz; -80 dBc/Hz @ 1 kHz; -90 dBc/Hz @ 10 kHz; -100 dBc/Hz @ 100 kHz; -115 dBc/Hz @ 1 MHz	
Integrated Double-Sided Phase Noise	2° RMS max	
Output Spurious: In-band	<-65dBc	
Out-of-band	Complies with ETSI EN 301 428/430 and MIL-STD188-164C	
Harmonics at P _{Lin}	<-60 dBc	
Linearity: IMD measured with 2 equal tones 5 MHz and 100MHz apart	< -24 dBc at total combined Power=P _{Lin} <-30 dBc at 6dB total power back-off from P _{Sat}	
Spectral Regrowth at P _{Lin}	<-30 dBc for QPSK/OQPSK MODCODs at 1.0xSymbol Rate away with 35% Roll-off	
AM/PM Conversion	2.0°/dB max at P _{Lin}	
Noise Power Density	Tx passband (12.75-13.25 GHz)< - 80 dBm/Hz Rx band (10.7-12.25 GHz) <- 150 dBm/Hz	Tx passband (13.75-14.5 GHz)< - 80 dBm/Hz Rx band (10.7-12.75 GHz) <- 155 dBm/Hz
POWER		
AC Voltage Range	85-265VAC	
Frequency Range	47Hz-63Hz	
Power Consumption at P _{Sat}	575W	
Power Consumption at P _{Lin}	475W	
ENVIRONMENTAL		
Cooling systems	Forced Air	
Operating (Storage) Temperature	-40°C to +55°C (-55°C to +85°C)	
Relative Humidity	100%, up to 4”of rain precipitation/hour	
Altitude	10,000 ft (3,000 m) AMSL	
Adiabatic Derating (Altitude Temperature Derating Factor)	2°C/1000 ft	
Environmental Rating (Ingress Protection)	IP67	
Mean Time Before Failure (MTBF)	>75,000h, as per Telcordia SR 332, Issue 4, Ground Benign	
INTERFACES		
IF Input connector	50 Ohm N-type (F)	
Input VSWR	1.5:1 max	
RF Output Connector	WR75 grooved, UNC 2B 6-32 threaded holes	
Output VSWR	1.3:1 max	
RF Sample	N-type (F)	
AC Power In	MS3102R16-10P	
M&C Interfaces: Ethernet, Serial RS-242 & RS-485, Form-C	MS3100A18-19P	
Redundancy	MS3112E14-15P	
MECHANICAL		
Dimensions (LxWxH)	12.5”x 8.0”x 7.36”	
Weight	18 lb	