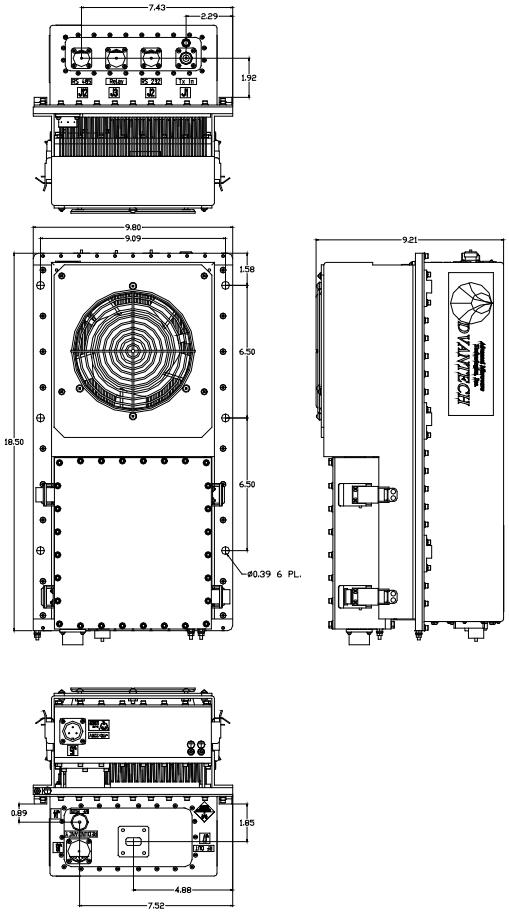
Ku-Band Hubmount SSPB GaN

150W to 200W
SSPB 3200-G series



Features

- Full range of output power of 150W, 180W and 200W in a single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Built-in 70 dB Receive Reject Filter
- Detachable power supply module
- Weatherproof construction
- CE marking

Overview

Based on GaN technology the new G-Series Ku-Band BUCs provide high power density in a compact size. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience.

Options

- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

- Mounting kits
- External Receive Reject Filter
- External Transmit Reject Filter (for RX path)
- Remote M&C panel with optional SNMP
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames
- High power terminations
- Replacement fans

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General Specifications

	KS	KX
Operating Frequency	14.0 – 14.5 GHz	13.75 – 14.5 GHz
L-Band input (BUC)	950 – 1450 MHz	950 – 1700 MHz
Output Power		
150W	P_{SAT} +52.0 dBm $P_{LINEAR\ 1}$ 48.0 dB $P_{LINEAR\ 2}$ + 49.5 dBm	
180W	P_{SAT} +52.5 dBm $P_{LINEAR\ 1}$ 48.5 dB $P_{LINEAR\ 2}$ + 50.0 dBm	
200W	P_{SAT} +53 dBm $P_{LINEAR\ 1}$ 49.0 dBm $P_{LINEAR\ 2}$ + 50.5.dBm	
	$P_{LINEAR\ 1}$ is the power at which the IMD specs are met	
	$P_{LINEAR\ 2}$ is the power at which the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for QPSK/OQPSK/8PSK modulation	
Gain		
SSPA	62 ± 3 dB	
SSPB (BUC)	72 ± 3 dB	
Gain adjustment range	20 dB in 0.1 dB steps	
Gain flatness over full band	SSPA 2dB p-p max SSPB (BUC) 3 dB p-p max	
Gain slope over 40 MHz	± 0.3 dB max SSPB (BUC) ± 0.5 dB max	
Gain variation over temperature	± 1.5 dB max	
Input Impedance and VSWR	50 Ω SSPA 1.3:1 SSPB (BUC) 1.4:1	
Output VSWR	1.3:1	
Noise power density	-70 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (10.95 GHz – 12.75 GHz)	
Spurious at $P_{LINEAR\ 1}$	SSPA: -65 dBc max SSPB (BUC): -55 dBc max	
Harmonics	-50 dBc @ $P_{LINEAR\ 2}$	
AM/PM conversion	2.5º/dB $P_{LINEAR\ 2}$	
Third order intermod (two tones)	-25 dBc two signal 5 MHz apart at P_{LINEAR}	
Group delay	Ripple 1 nsec p-p max over any 40 MHz band	
Residual AM Noise	0 – 10 kHz -45 dBc 10 kHz – 500 kHz -20 (1.25 + log F) dBc F = Frequency in kHz 500 kHz – 1 MHz -80 dBc	
SSPB (BUC)		
Local Oscillator freq.	13.05 GHz 12.8 GHz	
Internal Reference frequency (optional)	10 MHz Aging/day $\pm 2^{-10}$ Aging/year $\pm 5^{-8}$ Stability $\pm 2^{-8}$ over temp range	
Phase Noise	-53 dBc/Hz at 10Hz -83 dBc/Hz at 10 kHz -63 dBc/Hz at 100Hz -95 dBc/Hz at 100 kHz -73 dBc/Hz at 1000Hz	
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -155 dBc/Hz at 10 kHz -135 dBc/Hz at 100Hz -160 dBc/Hz at 100 kHz -150 dBc/Hz at 1000Hz	
Weight & Dimensions		
Dimensions	L x W x H 18.5" x 9.8" x 9.21" (470x254x229 mm)	
Weight	48 lbs (22 kg)	
AC input voltage	90 – 265 VAC (47-63 Hz)	
Power consumption	950W (nominal)	
Interfaces	Input (RF or L-Band) N type female AC line MS3102 type Output Sample Port N type female RF output WR75 Cover RS485/Ethernet MS3112 type	
Environmental	Temperature Operating -30ºC to +55 ºC Option 1 -40ºC to +55 ºC Option 2 -50ºC to +50 ºC Storage -55ºC to +85 ºC Humidity 100% condensing Altitude 10,000' AMSL, derated by 2 ºC/1000> from AMSL	