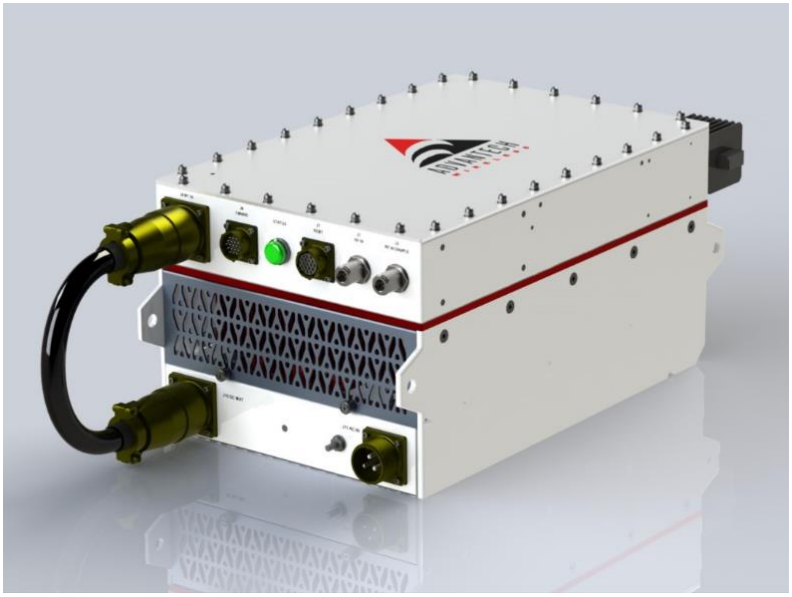
GENESIS

Ku 100W/125W/150W/200W/250W GaN SSPA/SSPB

Overview

The new Genesis-Series of Ku-band SSPA/SSPBs from Advantech Wireless Technologies epitomizes the latest in hardware and software technologies, making it the most feature-rich satcom SSPA in the industry. Initially available in 100W, 125W, 150W, 200W and 250W Ku-band variants, the Genesis-Series SSPA/SSPB delivers the high-end features discriminating users have come to expect.



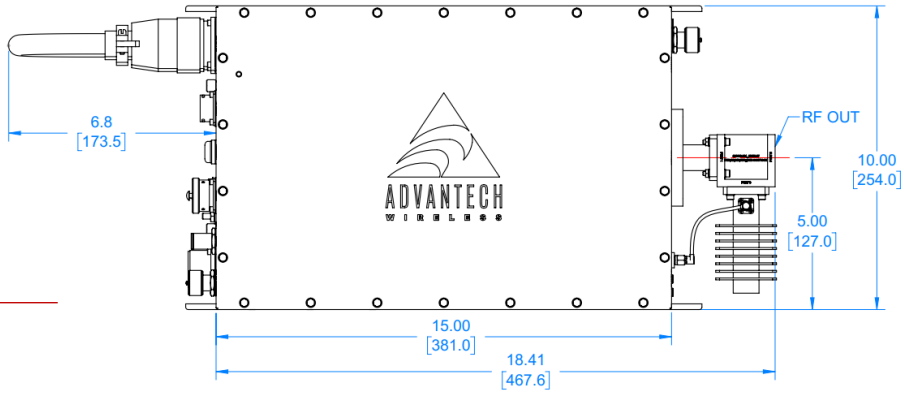
Features

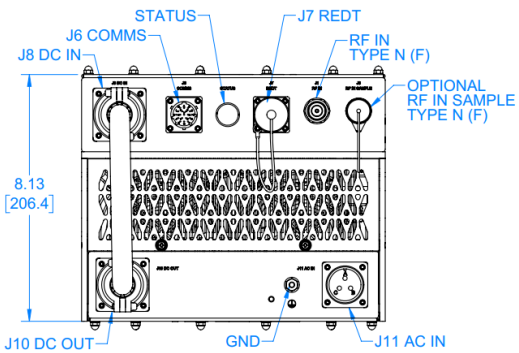
- 100W, 125W, 150W, 200W and 250W in a single package
- SSPA or SSPB option
- Soft-fail ready
- Internal/External reference with autosense
- Field replaceable power supply module
- Redundant ready with no external controller
- Full featured embedded web server
- Secure SNMPv3 interface
- Discrete alarm interface
- Status LED indicator
- Forward and Reflected power monitoring
- True RMS power detection
- Calibrated Output RF sample port
- Field replaceable fan assembly
- Weatherproof construction
- 20dB gain adjustment (minimum)

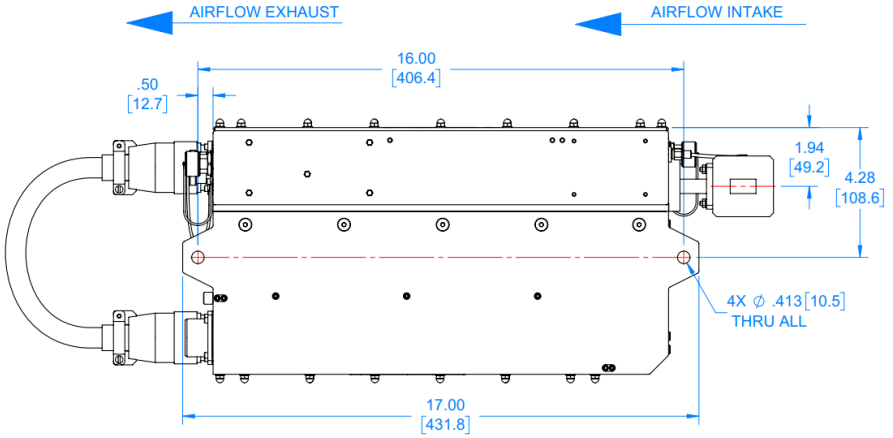
Options

- 1:1, 1:2, N+1 redundant configurations
- Calibrated Input RF sample port

Outline







Ref.: 000119-001 Rev 2

GENESIS Ku 100W/125W/150W/200W/250W GaN SSPA/SSPB

General Specifications

	100W	125W	150W	200W	250w
Operating Frequency	Standard: 14.0 – 14.5 GHz Extended: 13.75 – 14.5 GHz				
L-Band input (BUC)	Standard: 950 – 1450 MHz Extended: 950 – 1700 MHz				
Output Power P_{LINEAR}	+47 dBm	+48dBm	+48.8dBm	+50.0 dBm	+51.0 dBm
	P_{LINEAR} is the power at which the IMD=-25 dBc for two CW signals 5 MHz apart and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate tested with a single QPSK, 2MS/s SR, 0.35 roll-off				
Gain (with 0dB attenuation)	75 dB				
Gain adjustment range	20 dB in 0.1 dB steps				
Gain flatness over full band	SSPA: 2dB p-p max	SSPB: 4dB p-p max			
Gain slope over 40 MHz	SSPA: ± 0.3 dB max	SSPB: ± 0.5 dB max			
Gain variation over temperature	± 1.5 dB max				
Input Impedance and VSWR	50 Ω	SSPA: 1.3:1	SSPB: 1.5:1		
Output VSWR	1.3:1				
Signal Related Spurious at $P_{LINEAR\ 1}$	SSPA: -65 dBc max	SSPB: -55 dBc max			
Harmonics	-50 dBc @ P_{LINEAR}				
AM/PM conversion	<1°/dB P_{LINEAR}				
Third order IMD (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			
Local Oscillator freq.	Standard: 13.05 GHz Extended: 12.8 GHz				
Internal Reference frequency		Aging/day: ±1 x 10^{-9} Aging/year: ±10 x 10^{-8} Stability: ±1 x 10^{-7} over temp range			
Max Phase Noise	-37 dBc/Hz at 10Hz -67 dBc/Hz at 100Hz	-77 dBc/Hz at 1 kHz -87 dBc/Hz at 10 kHz	-97 dBc/Hz at 100 kHz -107 dBc/Hz at 1 MHz		
External Reference Input Power Frequency phase noise (max)	10 MHz -5dBm to +5dBm -120 dBc/Hz at 10Hz -140 dBc/Hz at 100Hz	-155 dBc/Hz at 1 kHz -160 dBc/Hz at 10 kHz	-165 dBc/Hz at 100 kHz		
Dimensions	L x W x H: 18.4" x 10" x 8.1" (467x254x206 mm)				
Weight	44.5 lbs. (20 kg)				
AC input voltage	90 – 265 VAC (47-63 Hz) 0.95 Power Factor @ 220VAC				
Power consumption at P_{Linear}	600W	800W	1100W	1100W	1600W
Interfaces	Input (RF or L-Band): N type female Output Sample Port: N type female Interface Port: MS3112 type		AC line: MS3102 type RF output: WR75 Cover with Groove		
Environmental	Temperature: Operating: -40°C to +55 °C Storage: -55°C to +85 °C Humidity: 100% condensing Altitude: 10,000' AMSL, de-rated by 2 °C/1000> from AMSL				

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