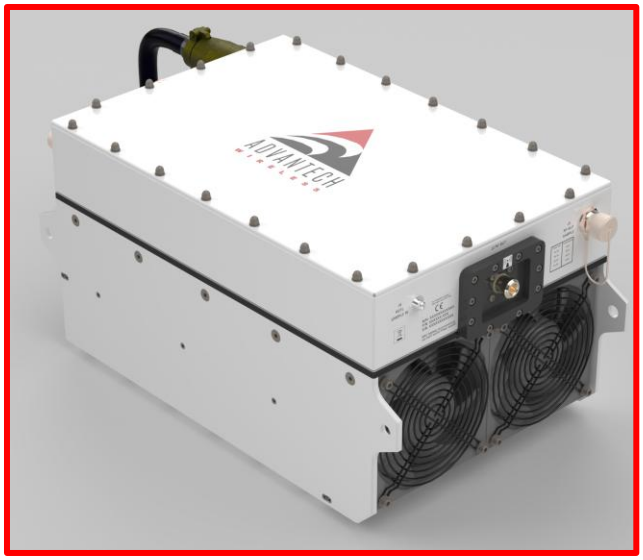
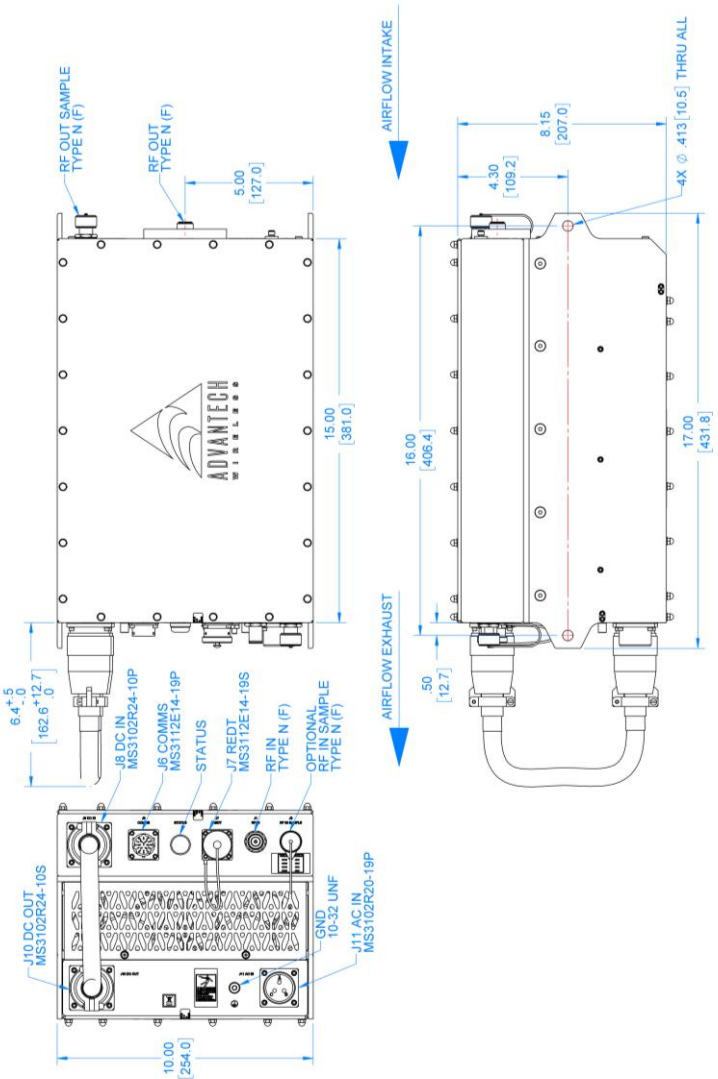
ADVANTECH WIRELESS
A Baylin Technologies Company

200W
SH-Band GaN SSPA

The **Genesis-Series** SH-Band SSPAs represent the latest advancements in hardware and software technology, delivering one of the most feature-rich satellite communications amplifier platforms available for satellite TT&C and deep-space communication applications. Designed for mission-critical environments, the Genesis-Series incorporates advanced protection features, including automatic over-temperature shutdown and high reflected-power protection, ensuring dependable, trouble-free performance while delivering the premium functionality and operational flexibility that discerning satellite operators demand.



200W SH-band GaN SSPA (Model #: GENESISA1-200SH)



Features

- Field replaceable power supply module
- Redundant ready with no external controller
- Full featured embedded web server
- Secure SNMPv3 interface (10/100 Ethernet)
- Serial Protocol over RS232/RS485/UDP
- Discrete Alarm Interface
- Status LED indicator
- Forward 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

CE (EN 61000-4, EN 61000-3, EN 55011, EN 61010-1)

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200W
SH-Band GaN SSPA

General Specifications	
	200W
	SSPA
Operating Frequency	2.2 – 2.4 GHz
Output Power P_{SAT}*	+53.0 dBm
Output Power P_{LINEAR}	+49.0 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)	65 dB min
Gain adjustment range	20 dB in 0.1 dB steps
Gain flatness over full band	2.5dB p-p max
Gain slope	0.06 dB/ MHz max
Gain variation over temperature	± 1.5 dB max
Input Impedance and VSWR	50 Ω 1.5:1
Output Impedance and VSWR	50 Ω 1.3:1
Noise power density	-80 dBm/Hz max in TX band
Spurious at P_{LINEAR}	-60 dBc max
Harmonics	-60 dBc @ P_{LINEAR}
AM/PM conversion	<1.0°/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
Residual AM Noise	– 10 kHz -45 dBc 10 kHz – 500 kHz -20 (1.25 + log F) dBc F = Frequency in kHz 500 kHz – 1 MHz -80 dBc

Mechanical, Environmental, Power	
Dimensions	L x W x H: 15" x 10" x 8.15" (381 x 254 x 207 mm)
Weight	46 lbs. (20.8 kg)
AC input voltage	90 – 265 VAC (47-63 Hz) 0.95 Power Factor @ 220VAC
Power consumption at P_{Linear}	1400W
Interfaces	Input (L/S-Band): N type female AC line: MS3102 type (See outline for details) Output Sample Port: N type female RF output: N type female Interface Port: MS3112 type (See outline for details)
Environmental	IP65 Compliance 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

Note: specifications subject to change without notice.

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