

# 700W L/S-band GaN SSPA

The new **Genesis-HP Series** L/S-Band SSPAs from Advantech Wireless represents the cutting edge of satcom amplifier design, combining advanced hardware and intelligent software to deliver one of the most feature-rich solutions in the industry. Engineered for demanding applications such as satellite TT&C and deep space communications, these amplifiers provide exceptional performance where reliability is mission critical.

Comprehensive monitor and control capabilities are provided via both serial and Ethernet interfaces, giving operators full visibility and control in real time. For higher power requirements, the system can be seamlessly expanded through external phase combining, forming Advantech's innovative Summit III system.

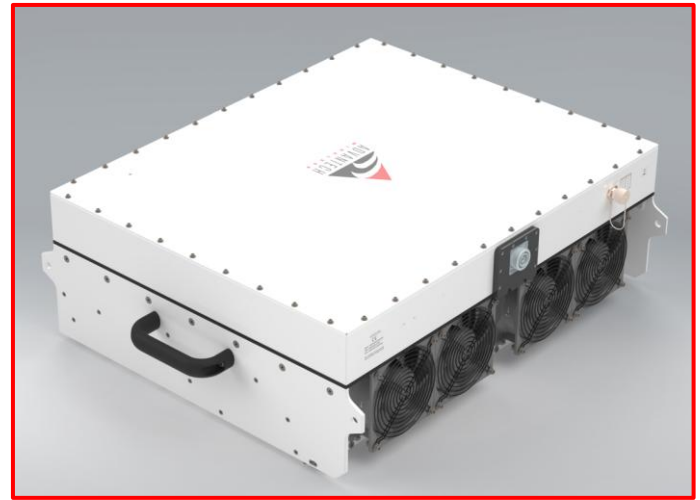
**Genesis-HP Series** amplifiers deliver the performance, reliability, and flexibility that today's most demanding satellite communication users expect.

### Features

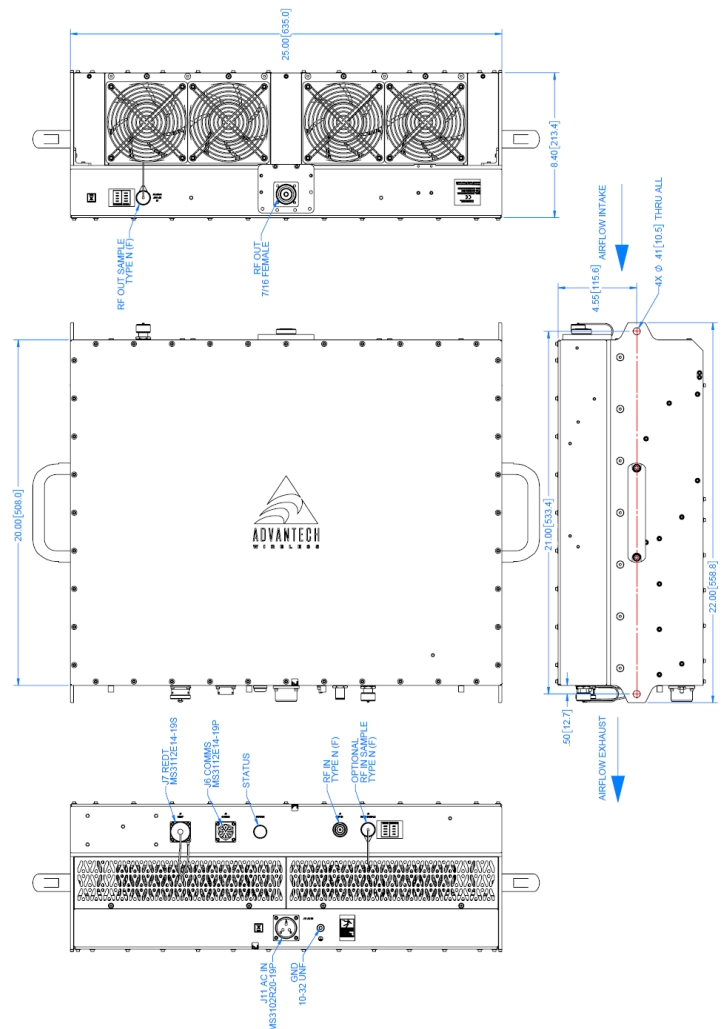
- Redundant-ready with no external controller
- Full-featured embedded web server
- Secure SNMPv3 interface (10/100 Ethernet)
- Serial Protocol over RS232/RS485/UDP
- Discrete Alarm Interface
- Status LED indicator
- Forward and Reflected power monitoring
- Calibrated Output RF sample port
- Field replaceable fan assembly
- Weatherproof construction
- 20dB gain adjustment (minimum)

### Options

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



700W L/S-Band SSPA (GENESISHPA1-700LS)



# 700W L/S-band GaN SSPA

## General Specifications

### SSPA

|  |  |
|--|--|
| Operating Frequency  | Standard: 1.750 – 2.120 GHz                    |
| Saturated Output Power   | 700W   |
| Output Power $P_{SAT}$   | +58.5dBm nominal *                             |
| Output Power $P_{LINEAR}$  | +55.5dBm minimum                               |
| $P_{LINEAR}$ 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)  | 70 dB minimum                                  |
| Gain adjustment range  | 20 dB in 0.1 dB steps                          |
| Gain flatness over full band   | 3 dB p-p max                                   |
| Gain slope over 10 MHz   | ± 0.3 dB max                                   |
| Gain variation over temperature  | ± 1.5 dB max                                   |
| Input Impedance and VSWR   | 50 $\Omega$ 1.5:1                              |
| Output VSWR  | 1.3:1  |
| Spurious at $P_{LINEAR}$   | -60 dBc max                                    |
| Harmonics  | -60 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 10 MHz band     |

## Mechanical, Environmental, Power

|                   |   |            |                                       |
|-------------------|---|------------|---------------------------------------|
| Dimensions        | L x W x H: 20" x 25" x 8.4" (508 x 635 x 213.36 mm)   |            |                                       |
| Weight            | 98 lbs. (44.5 kg)   |            |                                       |
| AC input voltage  | 190 – 265 VAC (47-63 Hz)<br>0.95 Power Factor @ 220VAC  |            |                                       |
| Power consumption | 2375 W  |            |                                       |
| Interfaces        | Input (RF or L-Band): N type female   | AC line:   | MS3102 type (See outline for details) |
|                   | Output Sample Port: N type female   | RF output: | DIN 7/16                              |
|                   | Interface Port: MS3112 type (See outline for details)   |            |                                       |
| Environmental     | IP65 compliance<br>Temperature: Operating: -40°C to +55 °C<br>Storage: -55°C to +85 °C<br>Humidity: 100% condensing<br>Altitude: 10,000' AMSL, de-rated by 2 °C/1000' from AMSL |            |                                       |

\*  $P_{SAT}$  will be limited to +57.0 dBm

Note: specifications subject to change without notice.

