



SSPA      AWMA-K    4200-G series  
SSPB (BUC)    SSPBM-K    4200-G series



### Features

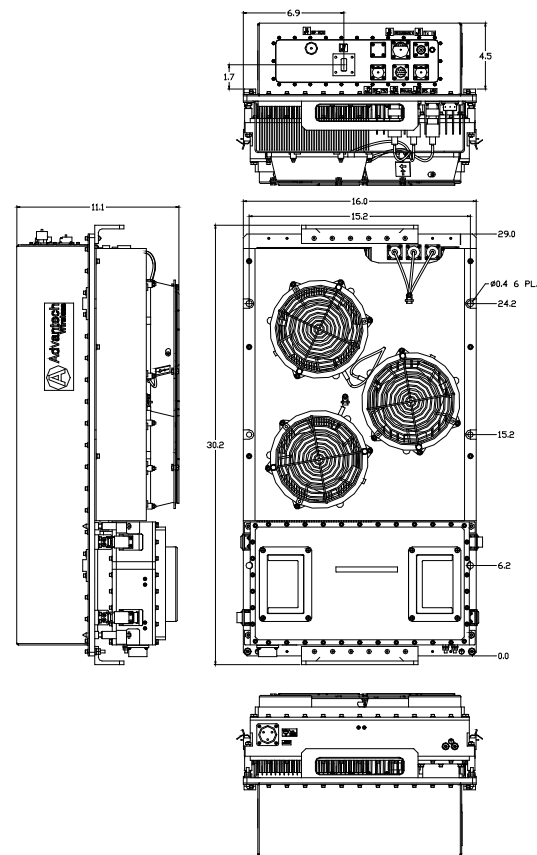
- Full range of output power of 300W or 400W in a single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward precision powering metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Weatherproof construction
- CE marking

### 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
- Remote M&C panel with optional SNMP
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames



### 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 Wireless features, these new series of BUCs provide the ultimate in performance and convenience.

# 300 - 400W Ku-Band Hubmount SapphireBlu™ SSPA/ SSPB

## General Specifications

Operating Frequency	Ku-Band: 14.0 – 14.5 GHz Extended Ku-Band: 13.75 – 14.5 GHz	
L-Band input (BUC)	Ku-band IF: 950 – 1450 MHz Extended Ku-Band IF: 950 – 1700 MHz	
Output Power	<b>300W</b>	<b>400W</b>
$P_{SAT}$ , typ	+55.0 dBm	+56.0 dBm
$P_{LINEAR}$	+51.0 dBm	+52.0 dBm
	PLINEAR 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 for a single QPSK/OQPSK/8PSK signal	
Gain	SSPA SSPB (BUC)	68 ± 3 dB 73 ± 3 dB
Gain adjustment range	20 dB in 0.1 dB steps	
Gain flatness over full band	SSPA 2dB p-p max	SSPB (BUC) 4 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	1.25 : 1	
Noise power density	-80 dBm/Hz in Transmit Band, -150 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 @ $P_{LINEAR}$	
AM/PM conversion	<1.0°/dB $P_{LINEAR}$	
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 500 kHz – 1 MHz -80 dBc	F = Frequency in kHz
SSPB (BUC)		
Local Oscillator freq.	13.05 GHz	12.8 GHz
Internal Reference frequency (optional)	10 MHz	Aging/day ±2 <sup>-10</sup> Aging/year ±5 <sup>-8</sup> Stability ±2 <sup>-8</sup> over temp range
Phase Noise	-53 dBc/Hz at 10Hz -63 dBc/Hz at 100Hz -73 dBc/Hz at 1000Hz	-83 dBc/Hz at 10 kHz -93 dBc/Hz at 100 kHz
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -135 dBc/Hz at 100Hz -150 dBc/Hz at 1000Hz	-155 dBc/Hz at 10 kHz -160 dBc/Hz at 100 kHz
Weight & Dimensions		
Dimensions	L x W x H 36.2" x 15.8" x 11.1" (920 x 401 x 282 mm)	
Weight	119 lbs (54 kg)	
AC input voltage	190 – 265 VAC (47-63 Hz)	
Power consumption	2200W at $P_{LINEAR}$ 2900W at $P_{SAT}$	2400W at $P_{LINEAR}$ 3200W at $P_{SAT}$
Interfaces	Input (RF or L-Band) - N type female Output Sample Port - N type female RS485/Ethernet	AC line - MS3102 type RF output - WR75 Cover MS3112 type
Environmental	Temperature	Operating -30°C to +55 °C    Option 1 -40°C to +55 °C Option 2 -50°C to +50 °C Storage -55°C to +85 °C
	Humidity	100% condensing
	Altitude	10,000' AMSL, derated by 2 °C/1000' from AMSL

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