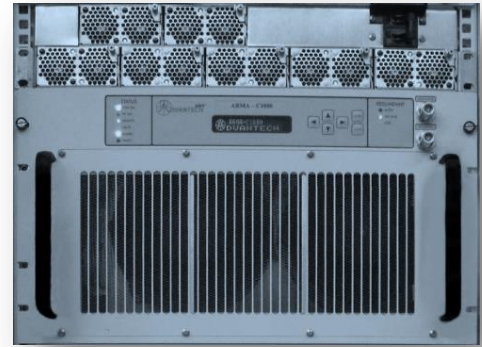


SSPA ARMAg-K 5200-SapphireBlu™ Series  
SSPB (BUC) ARMUg-K 5200-SapphireBlu™ Series



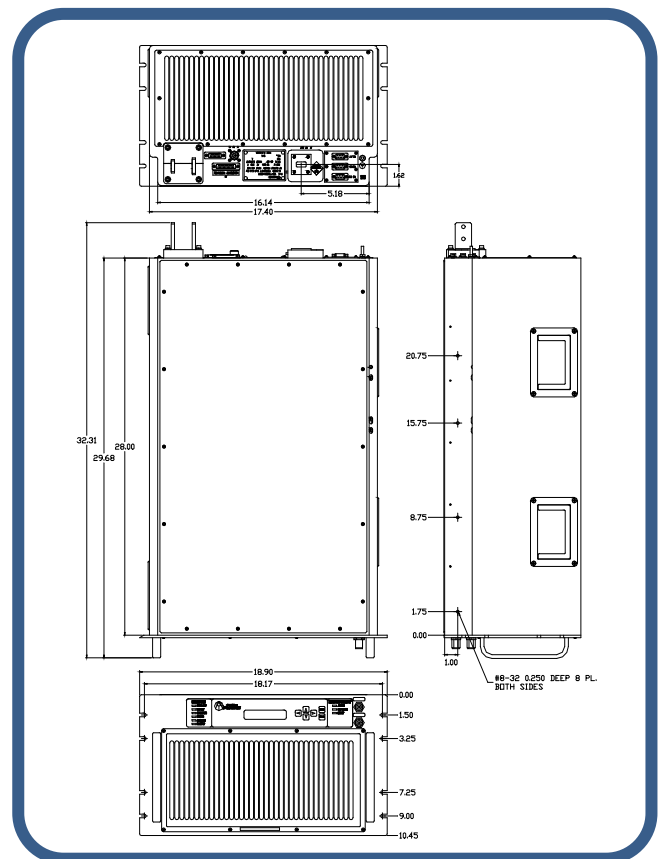
## NEXT GENERATION GaN TECHNOLOGY

- High power density in a compact, indoor package
- UltraLinear™, designed for Multi Carrier Operations
- High Performance GaN Technology SSPA Indoor design concept
- High Reliability, High Linearity, Low Energy Consumption

### THE ULTIMATE SOLUTION FOR DIRECT TO HOME TV

- Exceeds all barriers between Klystrons, TWTs and SSPAs
- Save Millions of dollars in Energy Cost, Satellite Bandwidth, CAPEX
- Can cover multiple transponders, full DVB-S2 enabled
- Indoor Package, MIL-STD-188-164A Compliant
- Redundant Ready, Power Expandable to 2-5 KW by phase combining

- ⇒ We can now saturate all transponders of an entire satellite and obtain maximum bandwidth/power efficiency! (using modular RF concept)
- ⇒ 3 years warranty, due to increased GaN Technology reliability
- ⇒ Backed by over 25 years of Indoor SSPA design and manufacturing



# 1,250W Ku-Band Rackmount SapphireBlu™ / UltraLinear™ SSPA/ SSPB Second Generation GaN Technology



SMARTER SOLUTIONS.  
GLOBAL REACH.

## 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	1250W		
PSAT, PA Module	+60.7 dBm nominal		
P <sub>SAT</sub> , at Flange	+58.5 dBm nominal		
P1dB	+58.0 dBm minimum		
PLINEAR	+57.0 dBm minimum		
Gain	PLINEAR is the maximum combined transmit power of two equal amplitude continuous wave (CW) carriers 5MHz apart, when the third order intermodulation product power is -25dB relative to each carrier and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for QPSK/OQPSK/8PSK modulation.		
	SSPA	68 ± 3 dB	
	SSPB (BUC)	78 ± 3 dB	
Gain adjustment range	20 dB in 1.0 dB steps		
Gain flatness over 500 MHz	SSPA: 2 dB 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	-75 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (10.95 GHz – 12.75 GHz)		
Spurious at P <sub>LINEAR</sub>	SSPA: -65 dBc max SSPB (BUC): -60 dBc max		
Harmonics	-50 dBc @ P <sub>LINEAR</sub>		
AM/PM conversion	<1.0 <sup>o</sup> /dB P <sub>LINEAR</sub>		
Third order intermod (two tones)	-25 dBc two signals 5 MHz apart at total +57 dBm Plinear, versus each carrier		
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	±2 × 10 <sup>-10</sup>
		Aging/year	±5 × 10 <sup>-8</sup>
		Stability	±2 × 10 <sup>-8</sup> over temp range
Phase Noise	-53 dBc/Hz at 10Hz	-83 dBc/Hz at 10 kHz	
	-63 dBc/Hz at 100Hz	-93 dBc/Hz at 100 kHz	
	-73 dBc/Hz at 1000Hz		
External Reference Frequency phase noise (max)	10 MHz	-155 dBc/Hz at 10 kHz	
	-120 dBc/Hz at 10Hz	-160 dBc/Hz at 100 kHz	
	-135 dBc/Hz at 100Hz		
	-150 dBc/Hz at 1000Hz		
Weight & Dimensions			
Dimensions	19" Rackmount 6 RU + 2 RU Power supply 28" deep		
Weight	198 lbs (90 kg)		
AC input voltage	190 – 265 VAC (47-63 Hz)		
Power consumption	3.8KW at 46 dBm	5KW at 56 dBm	6.5KW at P <sub>SAT</sub>
Interfaces	Input (RF or L-Band) - N type female	AC line - IEC 320 Inlet	
	Output Sample Port - N type female	RF output - WR75 Cover	
	RS485/Ethernet DB9 / RJ45		
Environmental	Temperature	Operating 0°C to +50 °C Storage -55°C to +85 °C	
	Humidity	5% to 95% non condensing	
	Altitude	10,000' AMSL, derated by 2 °C/1000' from AMSL	

Specifications are subject to change without notice

### NORTH AMERICA USA

Tel: +1 703 659 9796  
Fax: +1 703 635 2212  
info.usa@advantechwireless.com

### CANADA

Tel: +1 514 420 0045  
Fax: +1 514 420 0073  
info.canada@advantechwireless.com

### EUROPE UNITED KINGDOM

Tel: +44 1480 357 600  
Fax: +44 1480 357 601  
info.uk@advantechwireless.com

### RUSSIA & CIS

Tel: +7 495 971 59 18  
info.russia@advantechwireless.com

### INDIA

Tel: +91 33 2415 5922  
info.india@advantechwireless.com

### SOUTH AMERICA

Tel: +1 514 420 0045  
Fax: +1 514 420 0073  
info.latam@advantechwireless.com

### BRAZIL

Tel: +55 11 3054 5701  
Fax: +55 11 3054 5701  
info.brazil@advantechwireless.com

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Ref.: PB-SAPPH-2G-Ku-Rack-1250-16168

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