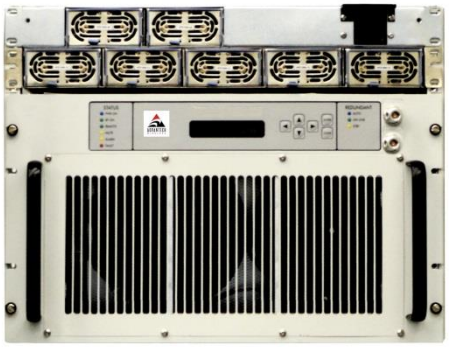
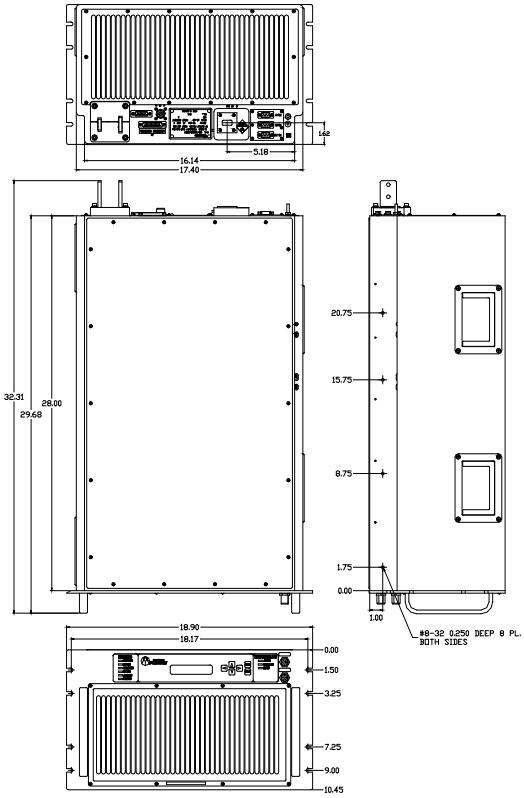
800W Ku-Band
Indoor BUC/SSPB/SSPA
Second Generation GaN Technology

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



SapphireBlu™ Super Compact

- 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

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

- 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
- 3kW by phase combining

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Technical Specifications					
Output Power	**800W**				
P_{SAT}, PA Module	+59.0 dBm nominal				
P_{SAT}, at Flange	+58.0 dBm nominal				
P_{LINEAR}	+55.0 dBm minimum				
	P_{LINEAR} is the power at which the IMD specs are met and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for QPSK/OQPSK/8PSK modulation				
Operating Frequency	KS 14.0 – 14.500 GHz		KX 13.75 –14.5 GHz		
L-Band input (BUC)	KS 950 – 1450 MHz		KX 950 – 1700 MHz		
Gain	SSPA 68 ± 3 dB	SSPB (BUC) 78 ± 3 dB			
Gain adjustment range	20 dB in 1.0 dB steps				
Gain flatness over full band	SSPA 2dB p-p max	SSPB (BUC) 4 dB p-p max (KS); 4dB p-p (KX)			
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	-70 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (10.95 GHz – 12.75 GHz)				
Spurious at P_{LINEAR}	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 signals 5 MHz apart versus total +56 dBm 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 F = Frequency in kHz 500 kHz – 1 MHz -80 dBc				
SSPB (BUC)					
Local Oscillator freq.	KS –13.050 GHz	KX – 12.800 GHz			
Internal Reference frequency (optional)	10 MHz Aging/day ±2 × 10^{-10}	Aging/year ±5 × 10^{-8}	Stability ±2 × 10^{-8} over temp range		
Phase Noise	-53 dBc/Hz at 10 kHz -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)	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 (nominal)	3.5kW at 53 dBm	4.8 kW at P_{LINEAR}	6.0kW at P_{SAT}		
Interfaces	Input (RF or L-Band): N type female Output Sample Port: N type female RS485/ Ethernet: DB9/RJ45	AC line: IEC 320 Inlet RF output: WR75 Cover			
Environmental	Temperature Operating 0°C to +50 °C Storage -55°C to +85 °C Humidity 5% to 95% non condensing Altitude 10,000' AMSL, de-rated by 2 °C/1000> from AMSL				

Ref.: PB-SSPBg-2G-Ku-Rack-800W-18145

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