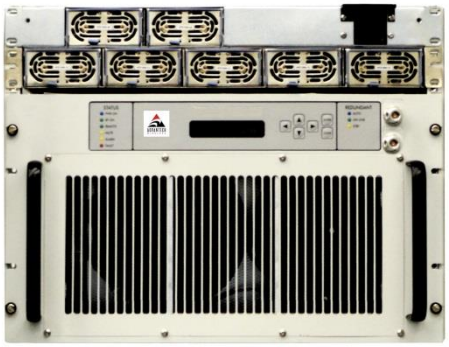
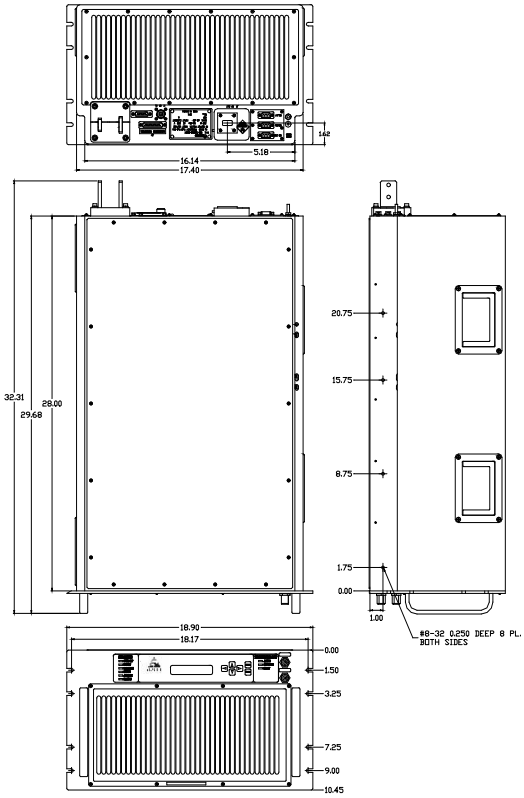
800W Ku-Band
Indoor BUC/SSPB/SSPA
Second Generation GaN Technology

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_{1dB}	57.0 dBm
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 -73 dBc/Hz at 1000Hz -93 dBc/Hz at 100 kHz -63 dBc/Hz at 100Hz -83 dBc/Hz at 10 KHz
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -150 dBc/Hz at 1000Hz -160 dBc/Hz at 100 kHz -135 dBc/Hz at 100Hz -155 dBc/Hz at 10 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 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, de-rated by 2 °C/1000> from AMSL

Ref.: PB-SSPBg-2G-Ku-Rack-800W-001-18352

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