



**Advantech
Wireless**



SapphireBlu™ Class Solid State GaN Technology

6,600W C-Band Rackmount UltraLinear™ Modular SSPA/ SSPB

SSPA ARMAg-C 7000-SapphireBlu™ series
SSPB (BUC) ARMUg-C 7000-SapphireBlu™ series



THE ULTIMATE SOLUTION FOR WIDE BANDWIDTH, ULTRA HIGH POWER SATELLITE TELEPORT UPLINKS

The maximum power/ bandwidth combination that you will ever need

Save Millions of dollars in Energy Cost, Satellite Bandwidth, CAPEX

Can cover multiple transponders, full DVB-S2 enabled

Indoor Modular Package, for maximum link availability

Optional Built in redundant L-band Interface

Built in Redundancy, field replaceable RF modules



- High power density GaN Technology SSPA concept, in a compact, indoor modular package with Built in Redundancy
- 6.6 KW single thread or 3.3 KW 1:1 Redundant
- UltraLinear™, designed for Multi Carrier Operations
- Built in Arc Detection Circuitry



- ⇒ The Highest Linear Power Available! Exceeds all barriers between Klystrons, TWTs and SSPAs
- ⇒ We can now saturate all transponders of an entire satellite and obtain maximum bandwidth/power efficiency!
- ⇒ 3 years warranty, due to increased GaN Technology reliability
- ⇒ Backed by over 25 years of Outdoor SSPA design and manufacturing.

Please call or visit our site for more information >>>

www.AdvantechWireless.com

Specifications		CS / CX	
Operating Frequency		5.85 – 6.425 GHz / 5.85-6.725 GHz	
L-Band input (BUC)		950 – 1525 MHz / 950 – 1825 MHz	
Output Power		6600W	
PSAT, PA Module		+68.12 dBm nominal	
P _{SAT} , at Flange		+68.0 dBm nominal	
P _{LINEAR}		+64.0 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 QPSK/OQPSK/8PSK modulation	
Gain	SSPA SSPB (BUC)	75 dB typical 78 dB typical	
Gain adjustment range		20 dB in 0.1 dB steps	
Gain flatness over full band		SSPA 3dB p-p max SSPB (BUC) 4 dB p-p max (CS); 4dB p-p over 500 MHz (CX)	
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		-55 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 power (64.0 dBm Plinear)	
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.		4.9 GHz	12.8 GHz
Internal Reference frequency (optional)	10 MHz	Aging/day	±2 ⁻¹⁰
		Aging/year	±5 ⁻⁸
		Stability	±2 ⁻⁸ over temp range
Phase Noise		-53 dBc/Hz at 10Hz	
		-63 dBc/Hz at 100Hz	
		-73 dBc/Hz at 1000Hz	
External Reference Frequency phase noise (max)	10 MHz		
		-120 dBc/Hz at 10Hz	
		-135 dBc/Hz at 100Hz	
		-150 dBc/Hz at 1000Hz	
Weight & Dimensions			
Dimensions		L x W x H 62 x 62 x 90 inches (157.5 x 157.5 x 229 cm) 2 x 19" cabinets	
Weight		990 lbs (450 kg)	
AC input voltage		190 – 265 VAC (47-63 Hz) 3 phase	
Cooling		Water cooled (Optional Forced Air Cooled)	
Power consumption		47,000 W at P _{LINEAR} 50,000 W at P _{SAT}	
Interfaces		Input (RF or L-Band) - N type female AC line - 3 x Phase PDU	
		Output Sample Port - N type female RF output - CPR137	
		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	

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

An ISO 9001: 2008 Company



Ref.: PB-SAPPH-C-6600-14119

www.advantechwireless.com
Specifications are subject to change without notice