



Cascade-X Line

X-Band GaN SSPA BUC

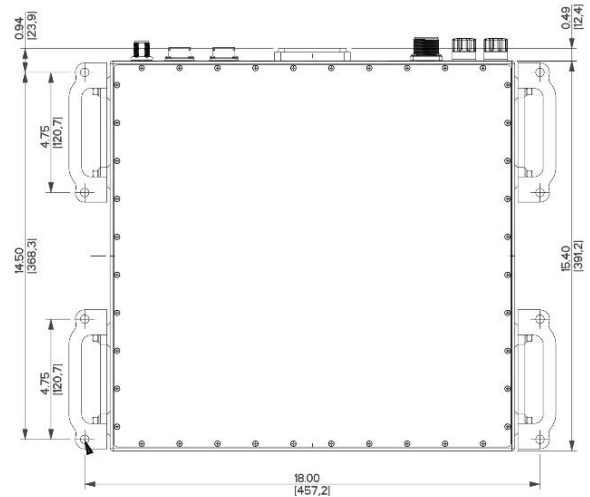
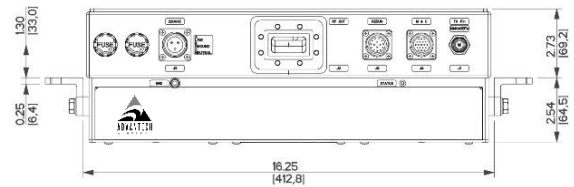
Overview

An ideal solution for both mobile and fixed Communication terminals. The Cascade-X Line SSPAs / BUCs are designed for high efficiency resulting in an optimal compact form factor with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System Redundancy.

- X-Band: 300W / 400W / 500W

Features

- Compact size
- Available in AC
- Up to 500W of RF Output Power
- Up to 250W of Linear Power
- Built-in monitoring of critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- IP55 rated housing and fan (weather proof construction)
- M&C Interfaces included: RS485, RS232, Ethernet and dry-contacts
- WEB interface and SNMP monitoring
- Redundant Ready
- 1:1 and 1:2 built into the BUC eliminating external controller
- Other frequency ranges available
- Optional 10MHz reference
- Optional output sample port
- Optional Remote control unit





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Technical Specifications

X-Band					
Electrical Characteristics	300W	400W	500W		
RF Output at P Sat	55 dBm	56 dBm	57 dBm		
RF Output at P Lin	52 dBm	53 dBm	54 dBm		
Output Frequency Range	7.9 – 8.4 GHz				
Input Frequency Range	950 – 1450 MHz				
Local Oscillator Frequency	6.95 GHz				
Gain Stability Over Temperature	± 1.5 dB nominal				
Gain Variation at fixed temperature	± 0.5 dB over max over 40 MHz; ± 2.0 dB over full band				
Linear Gain	70 dB min.				
User Adjustable Gain	20 dB in 0.5 dB steps				
Spectral Re-growth					
	-30dBc @PLinear				
Third order IMD (2 equal tones 5MHz apart)	-25 dBc, with 2 equal carriers (5MHz spacing) at 3dB total power back off from rated power (P Sat -3dB)				
10MHz Reference	0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)				
	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz	@ 1 MHz
Ref Phase Noise Requirement		-140 dBc/Hz max	-150 dBc/Hz max	-155 dBc/Hz max	
Local Oscillator Phase Noise	-63 dBc/Hz max	-73 dBc/Hz max	-83 dBc/Hz max	-93 dBc/Hz max	-103 dBc/Hz max
Output Spurious	-60dBc max @PLinear				
Harmonics	-60dBc max @PLinear				
AM/PM	< 2deg/dB at PLin				
VSWR	Input (1:50:1) Output (1:30:1)				
Power consumption					
X-Band	300W	400W	500W		
Power consumption (at rated power) AC version	2100W	2300W	2500W		
Power requirement	220 VAC				
Interface					
Output Interface	Waveguide, CPR 112G (Grooved)				
Input Interface	N-Type Female, 50 Ohms				
Connectors	AC Connector: MS3102R16-10P	M&C: MS3112E14-19P	Redundancy: MS3112E14-15P (Optional)		
Mechanical					
Dimensions (L x W x H)	16.0 x 16.9 x 5.2 / 41.0 x 43.0 x 13.2				
Weight	45 / 20.4				
Environmental					
	Temperature Range (ambient)	Humidity		Altitude	
	-40°C to + 55°C (operating) -40°C to + 75°C (storage)	0 to 100% (condensing)		10,000 ft ASL	

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