



SSPA            AWMA-C        TT series  
SSPB (BUC)    SSPBM-C        TT series

**Features**

- Full range of output power of 700W to 1000W in a compact single package
- UltraLinear™: extra high linearity up to saturation
- Perfect for Multi Carrier, Multi Transponder Uplinking
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Detachable power supply module
- Weatherproof construction
- CE marking

**Options**

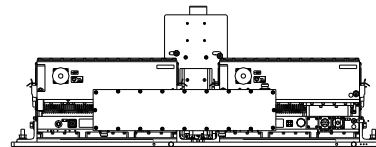
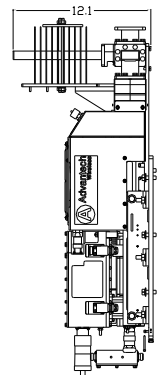
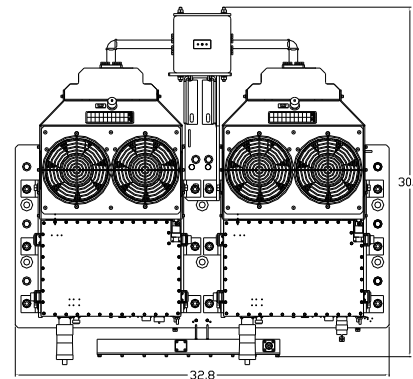
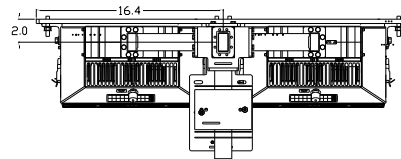
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port with SNMP V3.0, Webinterface, Telnet, CLI

**Accessories**

- Mounting kits
- External Harmonics Reject Filter (-65dBc)
- Receive Reject Filter
- Remote M&C panel with optional Ethernet (SNMP, Telnet, Webinterface, CLI)
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames
- High power terminations and circulators
- Dehydrators, pressure windows

**Overview**

The new Super Compact TT-Series C-Band SSPA/BUCs provide highest linear power density in the industry. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience for Multichannel, Multitransponder transmission for HDTV and DTH.



# 700W/850W/1KW C-Band Hubmount SapphireBlu™ / UltraLinear™ / SuperWideband™ GaN Technology SSPA with redundant 1:1 BUC

## General Specifications

Output Power	700W		850W		1000W	
$P_{SAT}$ (typ.)	+58.0 dBm (nominal)		+58.5 dBm (nominal)		+59.0 dBm (nominal)	
$P_{LINEAR}$	+54.5 dBm		+55.0 dBm		+55.5 dBm	
Operating Frequency	5.850 – 7.025 GHz					
L-Band input to external 1:1 BUC	950 – 2125 MHz					
Gain	SSPA 67 dB min		with external BUC 80 dB min			
Gain adjustment range	20 dB in 0.1 dB steps					
Gain flatness over full band	SSPA 2dB p-p max		SSPB (BUC) 4 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	-70 dBm/Hz in Transmit Band, -135 dBm/Hz in Receive Band (3.4GHz – 4.2 GHz)					
Spurious at $P_{LINEAR 1}$	SSPA: -65 dBc max		with external BUC: -55 dBc max			
Harmonics	-35 dBc at $P_{LINEAR}$					
AM/PM conversion	1°/dB at $P_{LINEAR}$					
Third order intermod (two tones)	-25 dBc two signal 5 MHz apart at $P_{LINEAR}$ relative to total power					
Spectral Regrowth	-30 dBc at $P_{LINEAR}$ (for QPSK at 1.5 x symbol rate and OQPSK at 1.0 x symbol rate)					
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			
External BUC included in the system						
Local Oscillator freq.	4.9 GHz					
Internal Reference frequency (optional)	10 MHz		Aging/day	±2 <sup>-10</sup>		
			Aging/year	±5 <sup>-8</sup>		
			Stability	±2 <sup>-8</sup> over temp range		
Phase Noise	-63 dBc/Hz at 100 Hz		Integrated SSB Phase Noise < 1.5 deg. rms @ $P_{LINEAR}$			
	-73 dBc/Hz at 1 kHz					
	-88 dBc/Hz at 10 kHz					
	-108 dBc/Hz at 100 kHz					
External Reference Frequency phase noise (max)	10 MHz					
	-120 dBc/Hz at 10Hz		-155 dBc/Hz at 10 kHz			
	-135 dBc/Hz at 100Hz		-160 dBc/Hz at 100 kHz			
	-150 dBc/Hz at 1000Hz					
Weight & Dimensions						
Dimensions (L x W x H)	32.8" x 30.6" x 12.1" (83.3 cm x 77.7 cm x 30.7 cm)					
Weight	165 lbs. (75 kg)					
AC input voltage	220V AC ± 20% (47 – 63 Hz)		Power Factor 0.95 min.			
Power consumption (nominal)	1300W at $P_{LINEAR}$		1450W at $P_{LINEAR}$		1550W at $P_{LINEAR}$	
	1750W at $P_{SAT}$		1900W at $P_{SAT}$		2000W at $P_{SAT}$	
Interfaces	Input (RF or L-Band)		N type female	AC line	MS3102 type	
	Output Sample Port		N type female	RF output	CPR137	
	RS485/RS232/Ethernet		MS3112 type			
Environmental	Temperature		Operating -30°C to +55°C			
			Storage -55°C to +85°C			
	Humidity		100% condensing			
Altitude		10,000ft AMSL, de-rated by 2 °C/1000ft from AMSL				

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