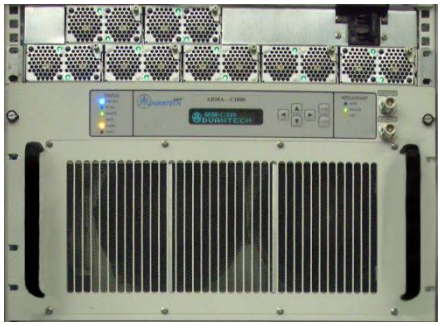
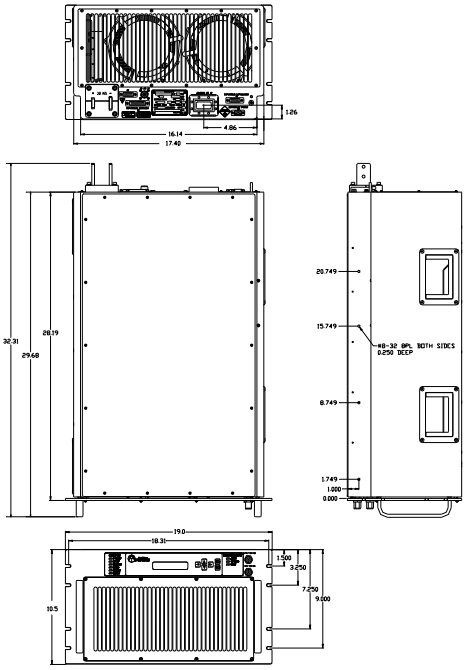
Advantech Wireless

C-Band Rack-mount SSPA

1250W
ARMA-C 1250





Features

- Remote Monitor & Control
- High gain and linearity
- Output power 1250W
- Gain adjustment
- Output sample monitor port
- Temperature gain compensation
- Automatic over-temperature shutdown
- Automatic high reflected power shutdown
- Infinite VSWR protection
- Power factor correction
- CE Marking

Overview

The ARMA-C1250® is a rack-mount solid-state power amplifier (SSPAs), operating in C-Band frequency range. The amplifier is an integrated unit, complete with power supply and cooling system. Intended for indoor operation, the amplifiers are of compact size and occupy three rack-mounting spaces (8 RU – 14”) of a standard 19-inch rack. Built-in microprocessor controller provides capability for serial port interfaces (RS485) for remote monitoring and control.

Advantech’s SSPAs set the industry standard for linearity and operating efficiency. Built-in design features and assembly methods incorporated with efficient combining techniques result in the trouble-free operation of the amplifier.

APPLICATION

The featured SSPAs are designed for C-Band satellite up-link applications. They are designed for 19-inch rack mounting in a protected environment. The ARMA-C series are available in output power from 20W to 1250W. For higher power Advantech provides phase-combined systems.

Other SSPAs are available for operation at other satellite frequency bands. With all the features of the ARMA-C, Advantech also offers a built-in converter.

Options

- Integrated Block Up Converter
- RF input sample port
- Redundant system

Accessories

- Redundancy Kit
- Shelf slides
- Remote M&C panel (Ethernet port optional)

Redundancy

With the addition of the appropriate waveguide and switch kit, theARMA-C1250®amplifiers can be easily converted for the operation in 1:1 redundant configuration without the use of any external controller. Full remote Monitor and Control of the redundant system is accessible via the serial port (RS-485).

C-Band Rack-mount SSPA ARMA-C-1250

TECHNICAL SPECIFICATIONS		1250W	
Electrical Characteristics			
Availability in this series CS		√	
Output power (Psat) Output power (P1dB)		+61 dBm +60 dBm	
Power gain @ maximum gain setting		70 dB min	
Operating frequency range Max input power without damage Gain slope Gain flatness over 600MHz Gain variation over temperature Gain variation over 24 hours Gain adjustment range Input return loss Output return loss Noise power density Spurious at rated power Harmonics at rated power AM/PM conversion at rated power Third order IMD (2 tones 5 MHz apart) Group delay		5.850 – 6.425 GHz +10 dBm 0.6 dB max over 40 MHz ±1.0 dB ±1.5 dB over full operating temperature range ±0.25 dB max @ constant temperature & drive level 20 dB min. (0.1 dB resolution) 18 dB 19 dB -70 dBm/Hz max in TX band -150 dBm/Hz max in 3.4 –4.2 GHz RX band -65 dBc, max -60 dBc, max 2.5°/dB max. at P1dB, 1°/dB max. at 3 dB back-off -25 dBc max. at 3 dB total back-off from rated P1dB Linear: 0.02 nsec/MHz max. Parabolic: 0.003 nsec/MHz^2 max. Ripple: 1.0 nsec p-p max.	
Residual AM (F* - frequency in kHz)		0-10 kHz 10 kHz - 500 kHz 500 kHz - 1 MHz	-45 dBc -20 (1.25+log F*) dBc -80 dBc
Power Requirements			
AC input voltage		220 VAC	
Power consumption (nominal)		6000W	
Mechanical Characteristics			
Panel height Weight		8 RU of 19" rack (6 RU amplifier + 2 RU power supply unit) 90 kg (198 lbs)	
Interfaces:	RF input N-Type (F) RF output CPR-137 contact (for CL series – CPR187)	Redundancy D-sub 15S RS-485 D-sub 9S Discrete port D-sub 25S	AC Line IEC 309 inlet Output sample port N-Type (F)
Environmental Conditions			
Operating temperature: Humidity Altitude		0°C to +50°C 5%-95%, non-condensing 10,000' AMSL, de-rated 2°C/1,000' from AMSL	

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Specifications are subject to change without notice