

HPA4202

2-Channel High Power Multi-Impedance Amplifier



HPA4202 Front



HPA4202 Back

Features

- 70.7V/100V and 2Ω, 4Ω, and 8Ω Output
 - 100V 2 x 2100W
 - 70.7V 2 x 2100W
 - 8Ω 2 x 1200W
 - 4Ω 2 x 2100W
 - 2Ω 2 x 2500W
 - 8Ω BRIDGED 1 x 3800W
 - 4Ω BRIDGED 1 x 4800W
- Balanced Inputs Euro Block Phoenix Style Connector
- Remote Turn On
- Fault Reporting
- Accessory Card Slot for Optional Dante™ Digital Network Audio Card
- Soft Clip Limiter Protection
- Stepped Attenuators with Security Covers
- Stereo, Bridge, or Parallel Operating Modes
- Selectable Input Sensitivity
- High Efficiency Fan Cooling
- Auto Sensing 120V/220V AC Mains Power Supply
- Meets Energy Star Standards for 1W Standby Mode

Applications

The HPA4202 can be used for most audio applications whether it is for commercial installed 70V/100V distributed systems or professional high performance sound reinforcement applications. The HPA series will provide efficient, stable, reliable power making it the perfect choice for Night Clubs, House of Worship Systems, Portable Sound Systems, Convention Centers, Sports Venues, Hotels and Retail Centers.

General Description

The AtlasIED High Power Amplifier “HPA” Series model HPA4202 has been designed to be versatile for use in both commercial 70V/100V distributed systems and professional applications that require amplifiers to handle 4 and 2 ohm loads.

The HPA Series features generation II Class I Output topology that provides efficiency similar to a Class D amplifier with the sound quality of a Class AB amplifier. The power supply is a switch mode global auto sensing generation 3 design that maintains a stable output during fluctuating power conditions. The power supply and output stage collectively are designed to deliver exceptional dynamic high output voltage and current to virtually any loudspeaker load.

The HPA Series features front panel stepped level controls with a security cover, remote turn on, balanced line inputs with sensitivity settings, fault reporting and an accessory card slot for an optional Dante™ 2-channel digital audio interface. Cooling is not an issue because of the unique output stage low resistance direct couple thermal transfer design. HPA also is energy efficient and meets Energy Star 1W standby mode standards.

Whether the application is a large distributed constant voltage sound system or a high SPL sound reinforcement system, the AtlasIED HPA Series is the answer for high power/cost effective reliable amplification requirements.

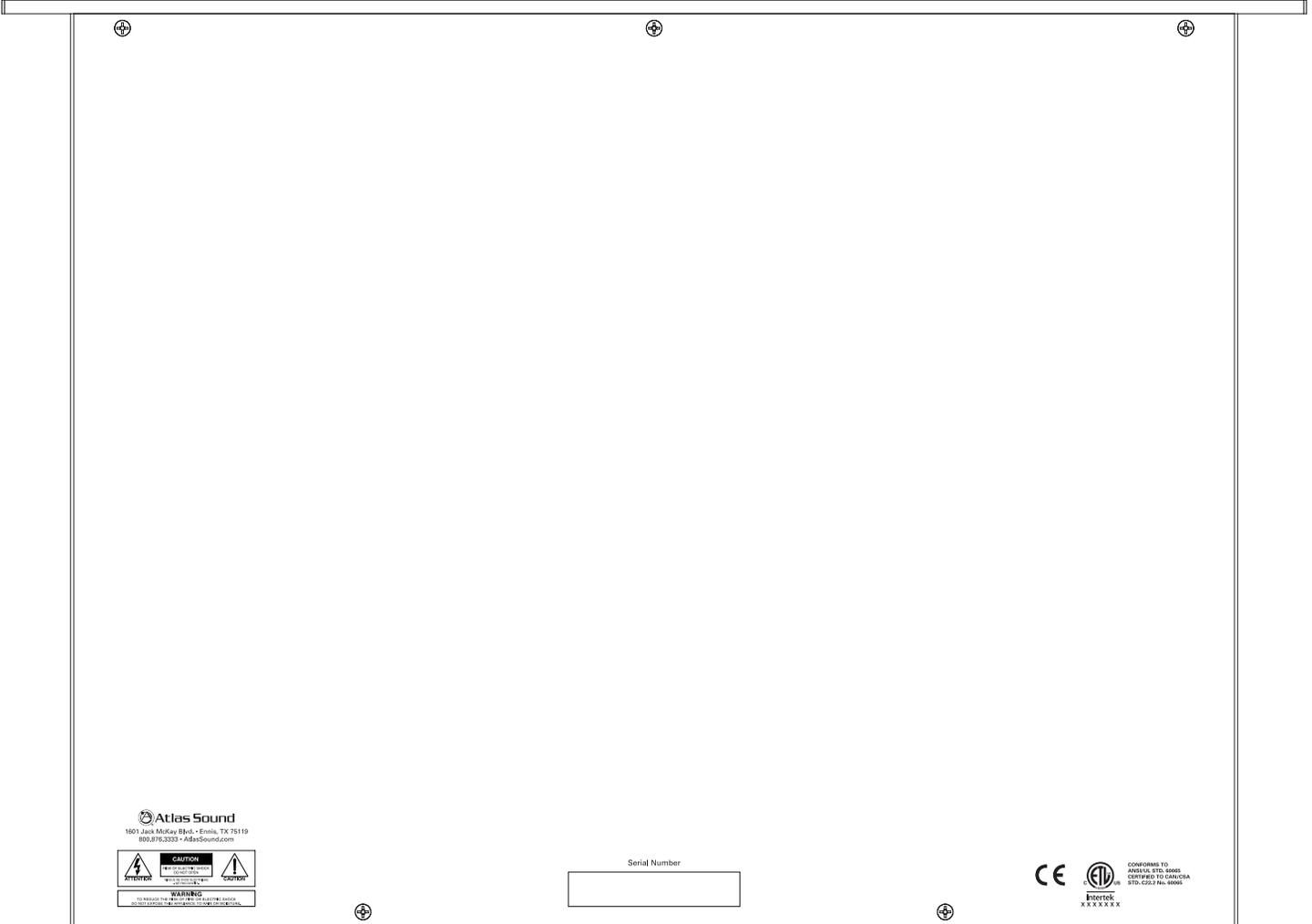
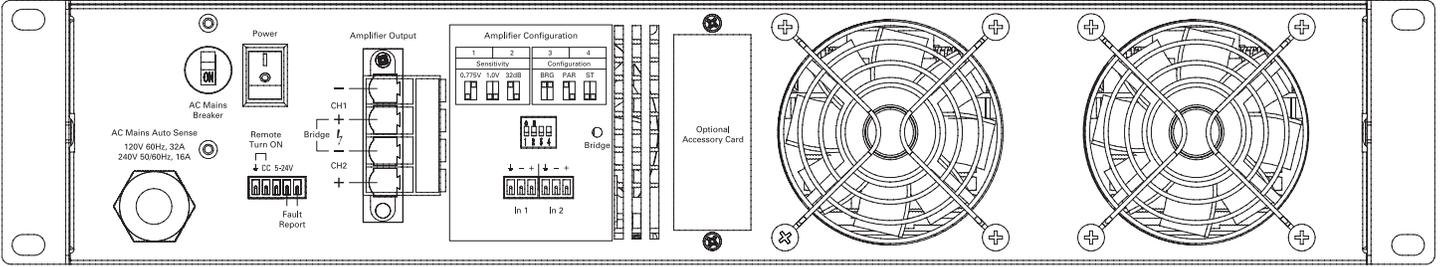
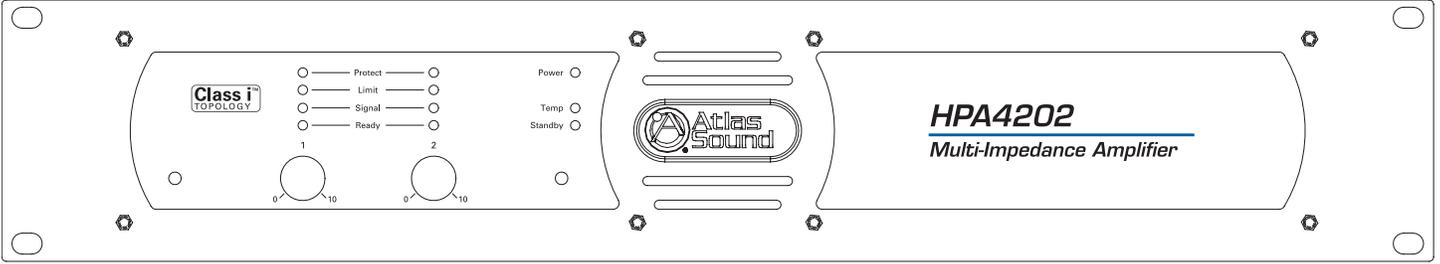
System	
Type	Power Amplifier, 2 Channel
Power Supply Type	Auto Switch Mode 120V / 220V
Amp Topology	Class I
Number of Fixed Inputs	2
Accessory Inputs	2
Optional Card Slot	Yes
Output Power	
100V x 2 CH	2 x 2100W
70.7V X 2 CH	2 x 2100W
8Ω x 2 CH	2 x 1200W
4Ω x 2 CH	2 x 2100W
2Ω x 2 CH	2 x 2500W
8Ω Bridged	1 x 3800W
4Ω Bridged	1 x 4800W
Factory Default Settings (As Shipped)	
Amplifier Configuration	2 CH
Level Controls	Front Panel
Control Ports (Rear Panel)	Remote Turn On/Off , Enable On
Input Sensitivity	.775 / 0dBu
Inputs	
Input Quantity	2-Balanced Inputs, Expandable to 4 via Accessory Card
Input Type (Line Balanced or Unbalanced)	Balanced
Input Impedance	20KΩ (Balanced) 10KΩ (Unbalanced)
Input Sensitivity	775mV/1.0V/32dB (Selectable)
Input Connectors Type	3.5mm Euro Block
Accessory Slot	2 Input Dante™ Digital Card (HPA-DAC2)
Level Control	
Front Panel Manual	Stepped Attenuators with Security Cover
Status Indicators	
Power	Blue Indicator
Standby	Amber
AC Mains Out Of Safe Operating Range	Red
Temp	Yellow
Ready	Green
Signal	Green
Output Limit	Yellow
Output Protect	Red
Bridge	Yellow (Rear Panel)
GPIO Ports (Rear Panel)	
Number of Ports	Qty 5
Type of Connector	Euro Block 3.5mm
Functions	Remote Turn ON via Contact Closure
Functions	Remote Turn ON via DC Voltage 5-24V
Functions	Fault Report
Output Terminals (Speaker)	
Output Connectors Type	Removable Euro Block, 10.16mm pitch, Locking
Output Connectors Number of Terminals	4 Position
Wire Size	6-18 Gauge (Class 3 Wire)
Current Rating	57A per Terminal

Electrical Specifications (General)			
Total Harmonic Distortion 1 kHz and 1 dB Below Rated Power	0.05%		
Signal to Noise Ratio	>85dB Below Rated Output (A-Weighted)		
Frequency Response	20Hz - 20kHz (+0/-1.5dB)		
Input Sensitivity	0.775V / 1.0V / 32dB (Selectable)		
Slew Rate	>10V/ μ s		
Damping Factor (20Hz to 400Hz)	>800		
Gain	40dB (8 Ω Factory Ship or 32dB Assignable)		
Crosstalk CH1-2 & CH 2-1	>70dB		
Max Voltage Per Output 8 Ω	103V		
Max Current per Output 4 Ω	26A		
Protection	Soft Start, Input RF, DC, Short Circuit, Current Overload, Clip Limit, AC Mains Under / Over Voltage Shut Off, Peak Current Limit, Over Temp		
AC Power Requirements			
Operating Voltage Auto Switch, 50/60Hz	88V-135V & 180V-264V		
Minimum Power-Up Voltage	88V		
Maximum Operating Voltage	264V		
Mains Connector	Included - Removable 30A 125V NEMA L5-30 Male Plug or User Select		
Power Cord (Ships With)	Fixed, 10-Gauge 3M Cord, 1.5M		
Power Consumption & Current Draw @ 120V AC Mains			
Standby Mode	212mA	.6W	2.05 BTU
Idle Active	1.05A	96W	328 BTU
Average Power 4 Ohm, All CH Driven	7.46A	407W	1389 BTU
Average Power 70.7V, All CH Driven	10.87A	500W	1707 BTU
Max Power 4 Ohm, All CH Driven	25.66A	1288W	4396 BTU
Max Power 70V, All CH Driven	25.66A	1288W	4396 BTU
Cooling			
Cooling System	Fan (Variable With Temperature)		
Air Inlet Filter	Yes, Rear, Washable		
Cooling Air Flow Direction	Rear to Front		
Dimensions and Weight			
Rack Mount Requirements	2 RU, 19"		
Dimensions - Unit	19"W x 3.5"H x 15"D (483mm x 89mm x 381mm)		
Dimensions - Shipping	23"W x 6.5"H x 22"D (584mm x 165mm x 558mm)		
Weight - Unit	29.2 lbs. (13.2kg)		
Weight - Shipping	35.2 lbs (15.9kg)		
Agency Approvals			
North America Agency	ETL		
Testing Standard North America	60065		
FCC Class A (Conducted & Radiated Emissions)	Part 15 of the FCC Rules		
CE	Yes (Includes RoHS & WEEE)		
Optional Accessories			
HPA-DAC2 - Dante™ Digital Audio Interface	2 Channel Receive (Only)- Field Installable		

NOTES:

1. Power level measurement is define as follows: 1Hz Sine wave signal burst of 20 cycles (20mS) at 1% THD+N, followed by 480 cycles of a 1kHz sine wave at 10% of the max power. Other power measurements are available upon requests.
2. Average Power is defined as Pink Noise input signal applied to achieve 1/4 of the 4 Ohm or 70.7V power rating.
3. Max Power is defined as 1 KHz input signal applied to achieve the maximum power output before clipping into a 4 Ohm or 70.7V load.

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Architect and Engineer Specifications

The power amplifier shall be a 2-channel second generation Class I multi-impedance amplifier capable of driving 70.7V, 8 Ω , 4 Ω , 2 Ω , 8 Ω bridged, and 4 Ω bridged load conditions. The amplifier shall have multiple internal circuits to protect itself and connected speakers from Input RF, output DC, output short circuits, current overload, clipping, AC mains under or over voltage, peak current limit, and thermal overload. A variable speed fan shall provide rear to front airflow for dynamic cooling. The universal auto-switch 50/60Hz power supply operating range shall be 88V-135V & 180V-264V. The AC Mains inlet shall be Fixed, 10-Gauge 3M Cord, 1.5M with Removable 30A 125V NEMA L5-30 Male Plug or User Select. The HPA4202 shall meet Energy Star 1W Standby Mode Standards. Power ratings shall equal or exceed 2100W x 2 @ 70.7V or 1200W x 2 @ 8 Ohms. Each balanced Line input channel shall have a selectable input sensitivity of 0.775V, 1.0V, or 32dB, and frequency response shall be 20Hz–20kHz (+0/-1.5dB) with a Signal to Noise Ratio of >85dB below rated output (A-Weighted). Front panel indicators shall include ready, signal present, limiter, and protection LEDs. Front panel level controls shall be stepped attenuators with security covers included. Input terminations shall be removable 3.5mm Phoenix style connectors and loudspeaker outputs shall be a removable 4-position Phoenix style connector capable of accepting up to 6 AWG wire. A switch on the rear panel shall provide selection of stereo, parallel or bridge modes of operation. Rear panel 5 position Phoenix style GPIO ports shall provide Remote Turn On and Fault Reporting for each channel. The amplifier shall have one (1) rear mounted Accessory Card slot. This slot shall be for an HPA-DAC2, a 2-channel Dante™ Digital Audio Input Card. Dimensions shall be 2 RU, 3.5" x 19" x 15" (89mm x483mm x 381mm) and the amplifier shall weigh 29lbs (15Kg).

The amplifier shall be AtlasIED HPA4202.