

HPA4202

2-Channel High Power Multi-Impedance Amplifier



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 Contact - NC Under Safe Operating Conditions, NO When Fault is Detected, No AC Mains Power, Thermal, Shorted Output, Over Current |

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| 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) | | |

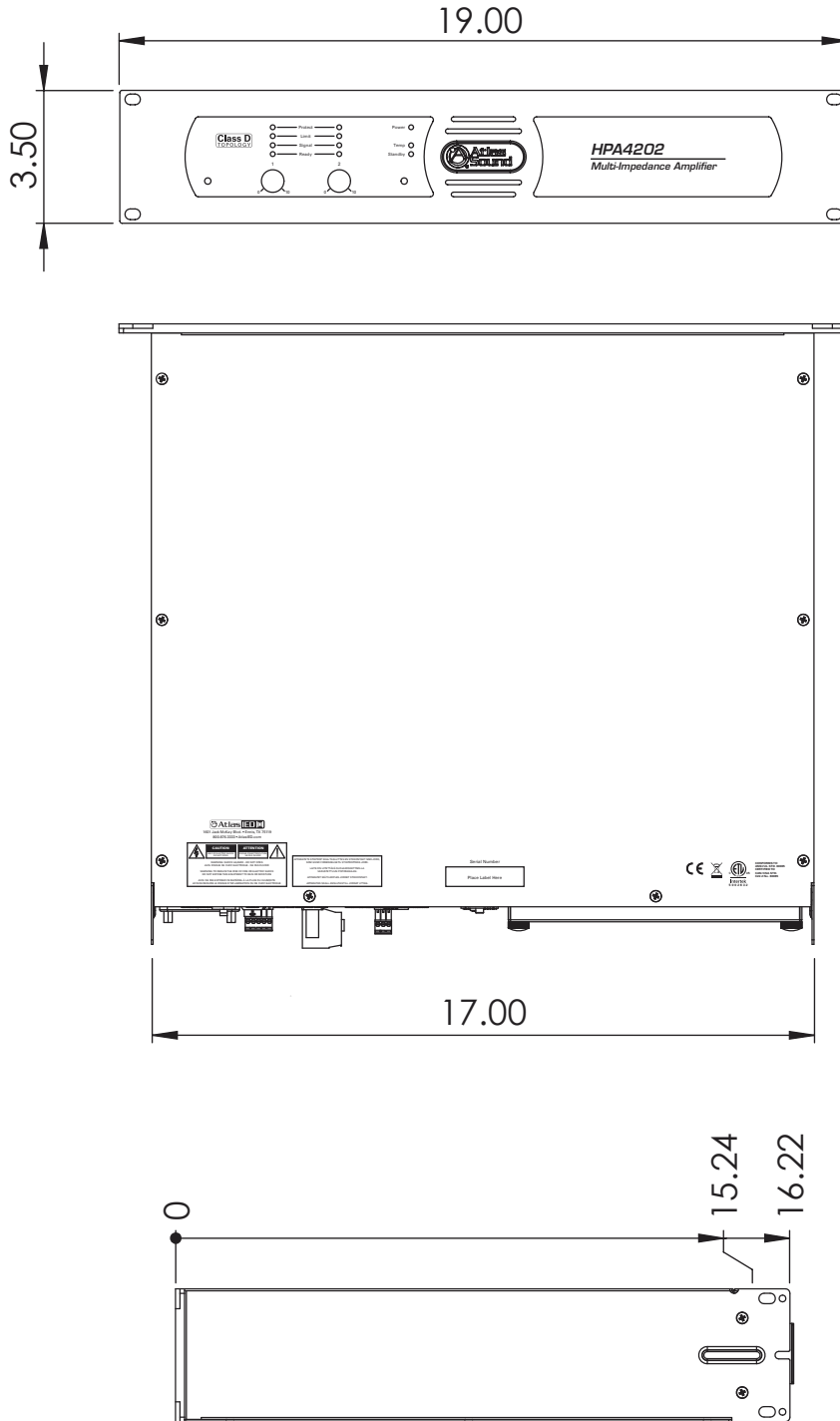
Optional Accessories

| | |
|---|--|
| 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.

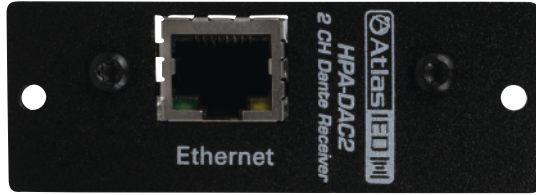
Dimensional Drawings



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Optional Accessories

HPA-DAC2 - Dante™ Two-Channel Receiver Card



Architect and Engineer Specifications

The power amplifier shall be a 2-channel second generation Class I multi-impedance amplifier capable of driving 70.7V, 8Ω, 4Ω, 2Ω, 8Ω bridged, and 4Ω 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 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.