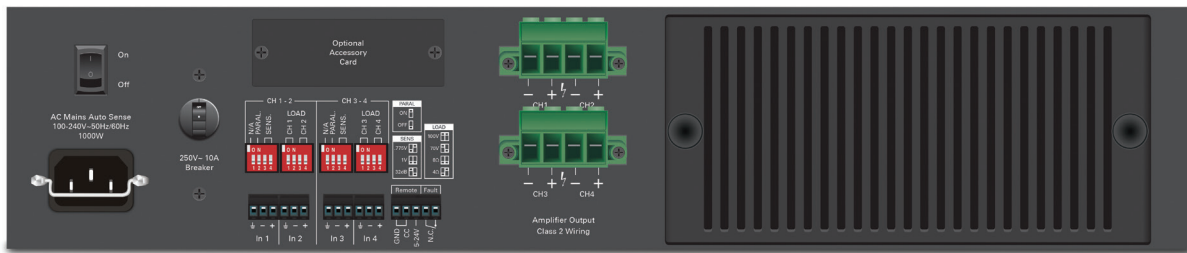


HPA1204

Multi-Impedance High Power Amplifier



Features

- Configurations
 - 4 x 300 Watt 70V
 - 4 x 300 Watt 100V
 - 4 x 300 Watt 8Ω
 - 4 x 300 Watt 4Ω
- Each Channel Load Can Be Independent of the Others
- Balanced Input Euro Block Phoenix Style Connectors
- Remote Turn On
- Accessory Card Slot for Optional Dante™ Digital Network Audio Card
- Fault Reporting
- Detented Attenuators with Security Covers
- Stereo or Parallel Operating Modes
- Selectable Input Sensitivity
- High Efficiency Fan Cooling
- Auto Sensing 100V-240V~ AC Mains Power Supply
- Meets Energy Star Standards for 1W Standby Mode

Applications

The HPA1204 can be used for most audio applications, whether for commercially installed 70V/100V distributed systems, or professional high performance sound reinforcement applications. The HPA series will provide efficient, stable, and reliable power making them 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 HPA1204 has been designed to be used in both commercial 70V/100V distributed systems and professional applications that require amplifiers to handle 8Ω and 4Ω loads.

The HPA Series features Generation II Class D Output topology that provides superior efficiency with the sound quality of a Class AB amplifier. The power supply is a switch mode wide range 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™ four-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, Four-Channel |
| Power Supply Type | Switch Mode - Wide Range- PFC |
| Amp Topology | Class D |
| Number of Fixed Inputs | 4 |
| Accessory Inputs | 4 |
| DSP Internal | No |
| Network | No |
| Optional Card Slot | Yes |
| Output Power (Note 1) | |
| 100V | 4 x 300W |
| 70.7V | 4 x 300W |
| 8Ω | 4 x 300W |
| 4Ω | 4 x 300W |
| 2Ω | N/A |
| 8Ω Bridged | N/A |
| 4Ω Bridged | N/A |
| Factory Default Settings (As Shipped) | |
| Amplifier Configuration | 4 CH |
| Level Controls | Front Panel |
| Control Ports (Rear Panel) | Remote Turn On / Off, Enable On |
| Input Sensitivity | .775 / 0dBu |
| Inputs | |
| Input Quantity | 4 Balanced Inputs, Expandable to 8 via Accessory Card |
| Input Type | Balanced Line |
| Input Connectors Type | 3.5mm Euro Block |
| Input Impedance | 20KΩ (Balanced) 10KΩ (Unbalanced) |
| Input Sensitivity | 775mV / 1.0V / 32dB (Selectable) |
| Maximum Input Level dBu & Vrms | 24dBu, 12V (Accessory Slot Refer to Accessory Card Specifications) |
| Accessory Slot | 4 Input Dante™ Digital Card (HPA-DAC4 Optional) |
| Level Control | |
| Front Panel | Rotary Detented Attenuators with Security Cover |
| Status Indicators | |
| Power | Blue |
| Standby | Amber |
| AC Mains Out of Safe Operating Range | Red |
| Temp | Yellow |
| Ready | Green |
| Signal | Green |
| Output Limit | Yellow |
| Output Protect | Red |
| Bridge | N/A |
| 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 |

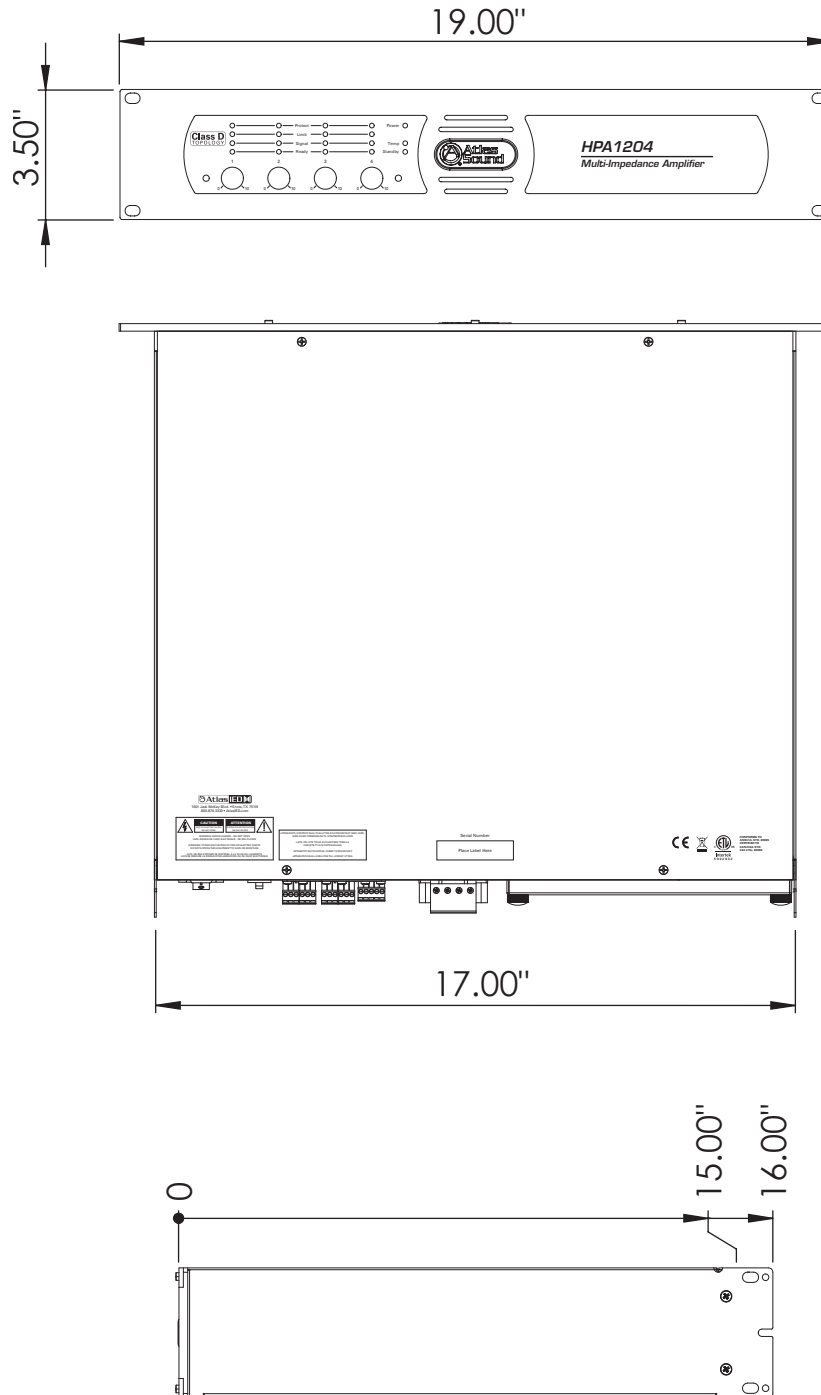
| Configuration Settings (Rear Panel) | | | |
|--|--|---------|-------------------|
| Input Sensitivity | .775V, 1V, 32dB per CH | | |
| Parallel Inputs | Yes (Y Input) | | |
| Bridge | N/A | | |
| Output Terminals (Speaker) | | | |
| Output Connectors Type | Removable Euro Block, 7.62mm Pitch, Locking | | |
| Output Connectors Number of Terminals | Qty 2, 4 Position | | |
| Wire Size | 6-18 Gauge (Class 2 Wire) | | |
| Current Rating | 57A per Terminal | | |
| Electrical Specifications (General) | | | |
| Total Harmonic Distortion 1 kHz and 1 dB Below Rated Power | ≤0.15% | | |
| Signal to Noise Ratio | >70dB Below Rated Output (A-Weighted) | | |
| Frequency Response | 20Hz - 20kHz (+0/-1.5dB) | | |
| Input Impedance Balanced (Nominal) | 100Ω Balanced Line to Line | | |
| Input Sensitivity | 0.775V / 1.0V / 32dB (Selectable) | | |
| Slew Rate | >10V / μs | | |
| Damping Factor (20Hz to 400Hz) | >200 | | |
| Gain | 40dB (8Ω Factory Ship or 32dB Assignable) | | |
| Crosstalk CH1-2 & CH 2-1 | >70dB | | |
| Max Voltage Per Output 8Ω | 49V | | |
| Max Current per Output 4Ω | 8.9A | | |
| 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 | 100V - 240V | | |
| Minimum Power-Up Voltage | 95V | | |
| Maximum Operating Voltage | 264V | | |
| Mains Connector | C14 IEC Receptacle / Locking | | |
| Power Cord (Ships With) | IEC C13 Plug / 14AWG 1.8m Cord / NEMA 5-15 Plug | | |
| Power Consumption & Current Draw @ 120V AC Mains | Amps | Watts | BTU / hr (Note 4) |
| Standby Mode | 0.272A | .35W | 2.39 BTU |
| Idle Active | 0.855A | 79.3W | 148.4 BTU |
| Average Power 4Ω, All CH Driven | 2.1A | 250W | 511.8 BTU |
| Average Power 70.7V, All CH Driven | 2.1A | 250W | 511.8 BTU |
| Max Power 4Ω, All CH Driven | 13.13A | 1575.6W | 1279.5 BTU |
| Max Power 70V, All CH Driven | 13.63A | 1635.6W | 1486 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 | 21.4 lbs. (9.7kg) | | |
| Weight - Shipping | 28.4 lbs. (12.9kg) | | |

| 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-DAC4 - Dante™ Digital Audio Interface | Four-Channel Receive (Only)- Field Installable |

NOTES:

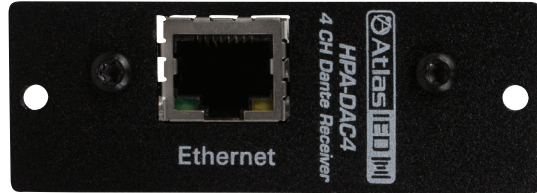
1. Power level measurement is defined as follows: 1Hz Sine wave signal burst of 20 cycles (20ms) at 1% THD+N, followed by 480 cycles of a 1kHz sine wave at 10% of the max power. Other power measurements are available upon requests.
2. Power measurement with Ethernet connected. Without Ethernet connected deduct .2W
3. Average Power is defined as Pink Noise input signal applied to achieve 1/4 of the 4 Ohm or 70.7V power rating.
4. 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.
5. BTU is calculated by the AC Mains Power consumed minus the total power output measured at the specified load and condition, multiplied by 3.412.
Example: 785 Watts from the AC Source - 600 Watts Total Output power = $185 \times 3.412 = 631$ BTU

Dimensional Drawings



Optional Accessories

HPA-DAC4 - Dante™ Four-Channel Receiver Card



Architect and Engineer Specifications

The power amplifier shall be a four-channel multi-impedance amplifier capable of driving 100V, 70.7V, 8 Ω , and 4 Ω 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 PFC switch mode 50/60Hz power supply operating range shall be 95V-264V. The AC Mains inlet shall be C14 IEC Locking Receptacle and ship with a IEC 14-gauge 1.8m cord with a fixed NEMA 5-15 male plug. The HPA1204 shall meet Energy Star 1W Standby Mode Standards. Power ratings shall equal or exceed 300W x 2 @ 100V, 70.7V, 8 Ω and 4 Ω loads. 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 or parallel 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-DAC4, a four-channel Dante™ Digital Audio Receiver Input Card. Dimensions shall be 2 RU, 3.5" x 19" x 15" (89mm x 483mm x 381mm) and the amplifier shall weigh 21.4 lbs. (9.7kg).

The amplifier shall be AtlasIED HPA1204.