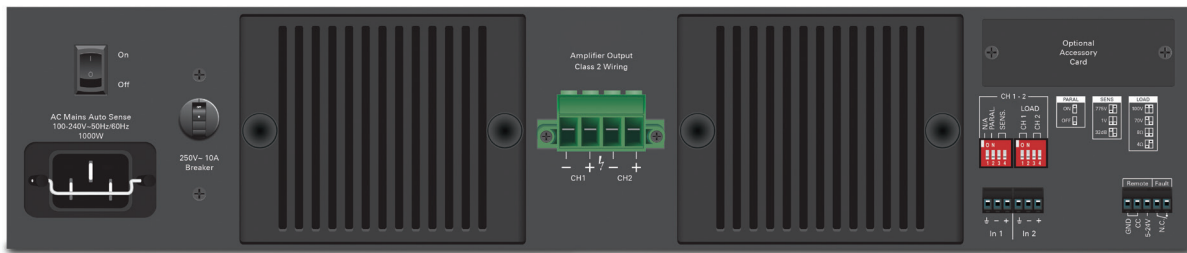


# HPA 1302

## Multi-Impedance High Power Amplifier



### Features

- Configurations
  - 2 x 650 Watt 70V
  - 2 x 650 Watt 100V
  - 2 x 650 Watt 8Ω
  - 2 x 650 Watt 4Ω
- Balanced Input Euro Block Phoenix Style Connectors
- Remote Turn On
- Accessory Card Slot for Optional Dante™ Digital Network Audio Card
- Fault Reporting
- Soft Clip Limiter Protection
- Stepped Attenuators with Security Covers
- Stereo or Parallel Operating Modes
- Selectable Input Sensitivity
- High Efficiency Fan Cooling
- Wide Range Global Power Supply with Power Factor Correction
- Meets Energy Star Standards for 1W Standby Mode

### Applications

The HPA1302 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 HPA1302 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™ two-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, Two-Channel
Power Supply Type	Switch Mode -Wide Range- PFC
Amp Topology	Class D
Number of Fixed Inputs	2
Accessory Inputs	2
DSP Internal	No
Network	No
Optional Card Slot	Yes
Output Power (Note 1)	
100V x 2 CH	2 x 650W
70.7V X 2 CH	2 x 650W
8Ω x 2 CH	2 x 650W
4Ω x 2 CH	2 x 650W
2Ω x 2 CH	N/A
8Ω Bridged	N/A
4Ω Bridged	N/A
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	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	2 Input Dante™ Digital Card (HPA-DAC2 Optional)
Level Control	
Front Panel	Rotary Stepped 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		
Bridge	N/A		
Output Terminals (Speaker)			
Output Connectors Type	Removable Euro Block, 7.62mm Pitch, Locking		
Output Connectors Number of Terminals	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	71V		
Max Current per Output 4Ω	12.9A		
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	C15 IEC Receptacle / Locking		
Power Cord (Ships With)	IEC 16-Gauge 1.5M Cord w/ NEMA 5-15 Male Plug		
Power Consumption & Current Draw @ 120V AC Mains	Amps	Watts	BTU / hr (Note 4)
Standby Mode	0.194A	0.7W	2.39 BTU
Idle Active	0.568A	50W	170.6 BTU
Average Power 4Ω, All CH Driven	1.5A	185W	342.9 BTU
Average Power 70.7V, All CH Driven	1.5A	182W	329 BTU
Max Power 4Ω, All CH Driven	15A	1839W	2009 BTU
Max Power 70V, All CH Driven	14.4A	1750W	1706 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 10.3" D (483mm x 89mm x 261mm)		
Dimensions - Shipping	22" W x 6.69" H x 16.5" D (560mm x 170mm x 420mm)		
Weight - Unit	15.4 lbs. (7kg)		
Weight - Shipping	18.5 lbs. (8.4kg)		

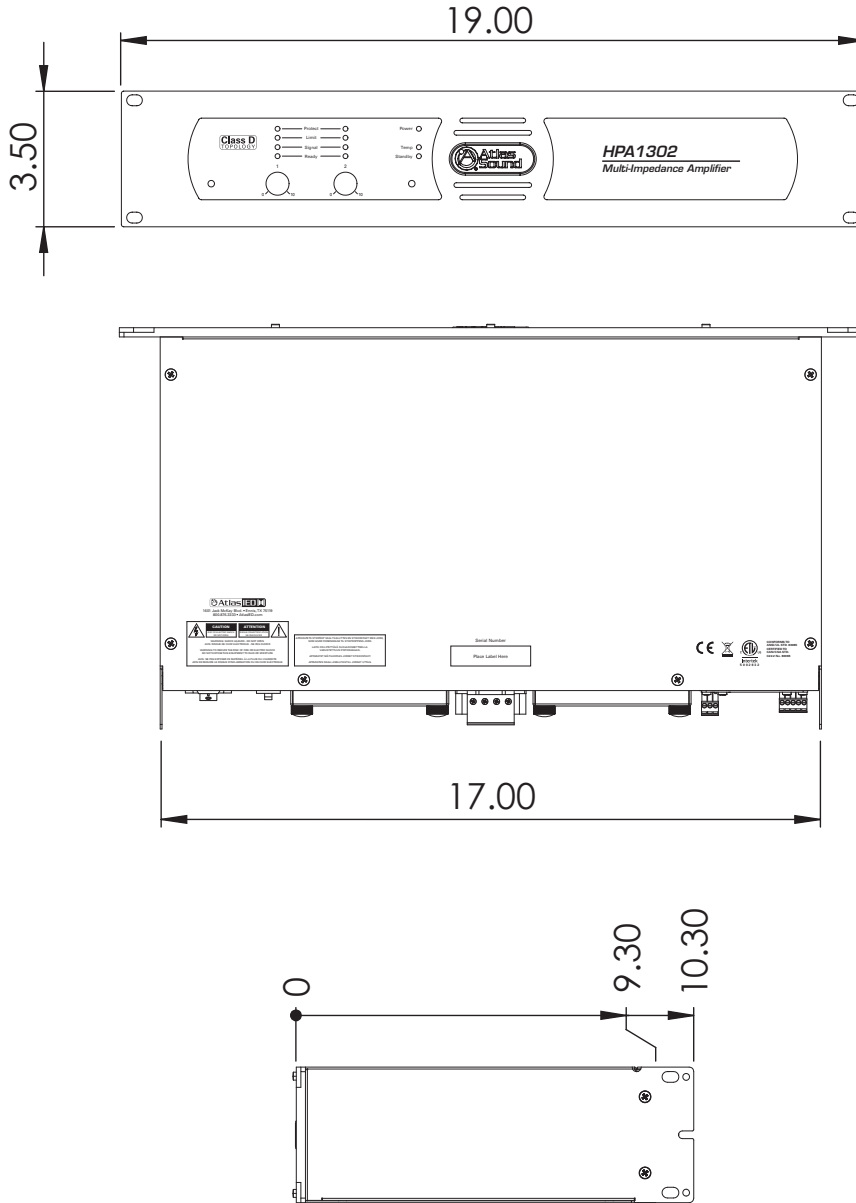
Agency Approvals	
North America Agency	ETL
Testing Standard North America	60065
FCC Class A (Conducted & Radiated Emissions)	Part 15 of the FCC Rules
CE	Yes (Includes RoHS & WEEE)
Optional Accessories	
HPA-DAC2 - Dante™ Digital Audio Interface	Two-Channel Receive (Only) - Field Installable

**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. 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 maxium 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

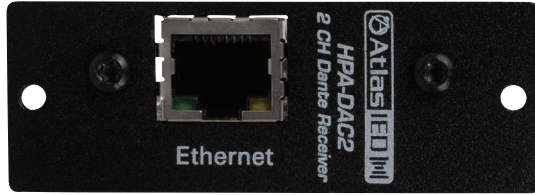
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## Dimensional Drawings



## Optional Accessories

HPA-DAC2 - Dante™ Two-Channel Receiver Card



## Architect and Engineer Specifications

The power amplifier shall be a two-channel multi-impedance amplifier capable of driving 100V, 70.7V, 8Ω, and 4Ω 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 C15 IEC Locking Receptacle and ship with a IEC 16-gauge 1.5M cord with a fixed NEMA 5-15 Male Plug. The HPA1302 shall meet Energy Star 1W Standby Mode Standards. Power ratings shall equal or exceed 650W x 2 @ 100V, 70.7V, 8Ω and 4Ω 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 8 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 two-channel Dante™ Digital Audio Receiver Input Card. Dimensions shall be 2 RU, 3.5" x 19" x 9.3" (89mm x 483mm x 236mm) and the amplifier shall weigh 15.4 lbs. (7kg).

The amplifier shall be AtlasIED HPA1302.