

CLA804

FOUR CHANNEL MULTI IMPEDANCE POWER SHARE AMPLIFIER

TECHNICAL DATA SHEET

PRODUCT SUMMARY

The AtlasIED CLA804 is a four-channel, 800W multi-impedance amplifier featuring AtlasIED's Patent-Pending Power Share technology. This innovative feature is an industry first, allowing for controllable power levels to be accurately applied to different zones regardless of the load impedance.

Designed for versatility, the CLA804 amplifier is suitable for both commercial 25V/70.7V/100V distributed systems and sound reinforcement applications requiring amplification for low impedance loads like 2, 4, or 8 ohms. The amplifier's power supply adopts a switch-mode, global auto-sensing design, ensuring a stable output even in fluctuating power conditions. The power supply and output stage are meticulously engineered to deliver exceptional dynamic high output voltage and current simultaneously to virtually any loudspeaker load.

Configuring each channel's Power Share level and speaker load is fast and simplistic with the CLA amplifier. Simply select the desired power level and load type via the switches located on the rear panel.

Other key features of the CLA Series include a unique output stage with a low-resistance, direct-coupled thermal transfer design, effectively maintaining optimal temperature across all loads and output levels. Additionally, the CLA Series amplifiers are energy-efficient, meeting Energy Star standards consuming less than 1W of power in standby mode. The CLA Series amplifiers are so efficient, generating little heat, most of the time they operate in a convection cooled state. If additional cooling is required, the variable speed whisper quiet fans will engage.

Whether your application involves a large distributed constant voltage sound system, a high SPL sound reinforcement system, or both, the AtlasIED CLA Series is the solution for a multi-functional, high-power, and cost-effective amplifier.

KEY FEATURES

- 4 Amplifier Channels
- Load Configurations - Each Channel Configured Individually 2Ω, 4Ω, 8Ω, 25V, 70.7V, & 100V
- Power Share Configurations
 - 4 x 200W
 - 2 x 350W / 50W
 - 2 x 300W / 100W
 - 2 x 250W / 150W
- Energy Efficient 1W Standby GPI
- Convection Cooling, Fan Assist On Demand
- Priority Mute GPI
- Rear Attenuators
- Remote Level Control
- Compact 1RU, Half Rack
- Patent Pending

APPLICATIONS

The AtlasIED CLA804 four-channel amplifier is a high-power, multi-impedance amplifier designed for versatility in both commercial distributed systems and sound reinforcement low impedance applications. The CLA Series incorporates patent-pending Power Share technology, allowing for accurate power levels to be directed to a zone regardless of the load applied. This makes the CLA series ideal for use in restaurants, presentation rooms, classrooms, conference rooms, and retail background/foreground music applications.

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AUDIO SPECIFICATIONS / PERFORMANCE

System	
Model	CLA804
Type	Power Amplifier, 4 Channel
Power Supply Type	Switch Mode - Wide Range 100-132V / 208V-260V
Amp Topology	Class D
Number of Fixed Inputs	4
DSP Internal	No
Network	No
Optional Card Slot	No

Output Power (Note 1) Total Power Available 800W CLA804				
Power Share Configuration	200W / 200W X 2	350W / 50W x 2	300W / 100W x 2	250W / 150W x 2
4Ω, 8Ω, 70.7V	200W / 200W X 2	350W / 50W x 2	300W / 100W x 2	250W / 150W x 2
25V x 4 CH (Note 7)	4 x 150W	150W / 50W x 2	150W / 100W x 2	150W / 150W x 2
2Ω x 4 CH (Note 8)	4 x 100W	175W / 25W x 2	150W / 50W x 2	125W / 75W x 2

Factory Default Settings (As Shipped)	
Amplifier Configuration	4 CH
Level Controls	Rear Panel
Control Ports (Rear Panel)	Standby OFF, Priority Mute OFF
Load Configuration	70V
Power Share Configuration	200W x 200W

Inputs	
Input Quantity	4
Input Type	Balanced Line
Input Connectors Type	3.5mm Euro Block
Input Impedance	20KΩ (Balanced) 10KΩ (Unbalanced)
Input Sensitivity	1V (Fixed)
Maximum Input Level dBu & Vrms	20dBu

Level Control	
Rear Panel	Recessed Rotary Detented Attenuators

Status Indicators Front Panel	
AC Mains / Power Supply Status Indicator, Multi Color	
Power	Blue
Standby	Yellow
AC Mains Out of Safe Operating Range	Red (Flashing)
Temp	Yellow (Flashing)
Protect / Fault	Red

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Channel Status Indicator, Qty 1 Per Channel, Multi Color	
Signal	Green
Output Limit	Yellow (Flashing)
Output Protect	Red
Over Current / Fault	Red (Flashing)
Temp Condition	Yellow

GPI Ports (Rear Panel)	
Number of Ports	7
Type of Connector	Euro Block 3.5mm
Functions	Standby (Energy Save Mode) , Contact Closure Enables Standby
Functions	Priority Mute, Contact Clouser Enables All Channel Mute
Remote Level	Each Channel Has Remote Mute Port

Configuration Settings (Rear Panel)	
Gain (Level)	Rotary pot
Power Share	Rotary Switch

Output Terminals (Speaker)	
Output Connectors Type	Removable Euro Block, 5.08mm Pitch, Locking
Output Connectors Number of Terminals	4
Wire Size	30-12 Gauge (Class 2 Wire)
Current Rating	12A RMS per Terminal

Electrical Specifications (General)	
Total Harmonic Distortion 1 kHz and 1 dB Below Rated Power	≤0.15%
Signal to Noise Ratio 8 Ohm	>93dBA Below Rated Output (A-Weighted),
Frequency Response	20Hz - 20kHz (+0/-1.5dB) 2,4, 8-Ohm, 25V Mode, 50Hz - 20KHz (+0/-1.5dB) 70V & 100V Mode
Input Impedance Balanced (Nominal)	100W Balanced Line to Line
Input Sensitivity	1V
Slew Rate	>18V/μs
Damping Factor (20Hz to 400Hz)	>250
Gain	29dB 4-ohms, 32dB 8-ohms, 37dB 70V, 40dB 100V.
Crosstalk CH1-2 & CH 2-1	>70dB
Max Voltage Per Output 100V Setting	145V
Max Current per Output 4Ω Setting	9.3A 350W Setting
Protection	Soft Start, Input RF, DC, Short Circuit, Current Overload, Clip Limit, AC Mains Under / Over Voltage Shut Off, Peak Current Limit, Over Temp

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AUDIO SPECIFICATIONS / PERFORMANCE

Cooling	
Cooling System	Idle Mode is Convection, Audio Signal Sense (Fan, Variable with Temperature)
Cooling Air Flow Direction	Rear to Front, no filters
Fan Noise Idle 1M	0dBu
Fan Noise Max 1M	42dBu

Environmental	
Operating Temperature	10-104°F (-12-40°C)
Relative Humidity	0-95%, non condensing

AC Power Requirements, All CLA Models	
Operating Voltage Auto Switch, 50/60Hz	100V-132V / 208-264V
Minimum Power-Up Voltage	95V
Maximum Operating Voltage	264V
Mains Connector	IEC C14
Power Cord (Ships With)	IEC C13 Plug / 16AWG 1.8m Cord / NEMA 5-15 Plug

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AUDIO SPECIFICATIONS / PERFORMANCE

Power Consumption & Current Draw @ 120V AC Mains, Power Share Settings 200W x 4	CLA804		
	Amps	Watts	BTU / hr (Note 4)
Standby Mode, Meets Energy Star Standards	0.02A	0.4W	1.36 BTU
Low Power Mode - Note: 9	0.1A	10W	34 BTU
Idle Active	0.35A	18W	61 BTU
Average Power 2Ω, All CH Driven, Note 2, 8	0.9A	83W	283 BTU
Average Power 4Ω, All CH Driven, Note 2	1.4A	108W	368 BTU
Average Power 8Ω, All CH Driven, Note 2	1.1A	95W	324 BTU
Average Power 25V, All CH Driven, Note 2,7	1.2A	98W	334 BTU
Average Power 70V, All CH Driven, Note 2	1.2A	96W	327 BTU
Pink Noise Power 2Ω, All CH Driven, Note 3, 8	1.85A	179W	611 BTU
Pink Noise Power 4Ω, All CH Driven, Note 3	3.35A	235W	801 BTU
Pink Noise Power 8Ω, All CH Driven, Note 3	2.47A	208W	734 BTU
Pink Noise Power 25V, All CH Driven, Note 3, 8	3.08A	215W	738 BTU
Pink Noise Power 70V, All CH Driven, Note 3	3.2A	227W	774 BTU
Burst Power 2Ω, All CH Driven, Note 4, 8	1.30A	138W	470 BTU
Burst Power 4Ω, All CH Driven, Note 4	1.67A	162W	552 BTU
Burst Power 8Ω, All CH Driven, Note 4	1.26A	131W	446 BTU
Burst Power 25V, All CH Driven, Note 4, 7	1.62A	160W	545 BTU
Burst Power 70V, All CH Driven, Note 4	1.71A	168W	168 BTU
Music Power 2Ω, All CH Driven, Note 5, 8	4.85A	390W	1330 BTU
Music Power 4Ω, All CH Driven, Note 5	4.97A	425W	1450 BTU
Music Power 25V, All CH Driven, Note 6, 8	4.50A	396W	1351 BTU
Music Power 70V, All CH Driven, Note 5	4.5A	406W	1385 BTU
Sine Wave Power 2, All CH Driven, Note 6, 8	10.1A	835W	2849 BTU
Sine Wave Power 4Ω, All CH Driven, Note 6	12.1A	971W	3313 BTU
Sine Wave Power 8Ω, All CH Driven, Note 6	9.8A	822W	2822 BTU
Sine Power 25V, All CH Driven, Note 6, 7	10.3A	830W	2832 BTU
Sine Wave Power 70V, All CH Driven, Note 6	9.8A	802W	2736 BTU

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TECHNICAL DATA SHEET

AUDIO SPECIFICATIONS / PERFORMANCE

Power Consumption & Current Draw @ 230V AC Mains, Power Share Settings 200W x 4	CLA804		
	Amps	Watts	BTU / hr (Note 4)
Standby Mode	0.03A	0.6W	2 BTU
Low Power Mode - Note: 9	0.1A	9W	30 BTU
Idle Active	0.16A	18W	61 BTU
Average Power 2 Ω , All CH Driven, Note 2, 8	0.48A	62W	211 BTU
Average Power 4 Ω , All CH Driven, Note 2	0.58A	76W	259 BTU
Average Power 8 Ω , All CH Driven, Note 2	0.52A	68W	232 BTU
Average Power 100V, All CH Driven, Note 2	0.62A	79W	269 BTU
Pink Noise Power 2 Ω , All CH Driven, Note 3, 8	0.95A	118W	402 BTU
Pink Noise Power 4 Ω , All CH Driven, Note 3	1.68A	248W	846 BTU
Pink Noise Power 8 Ω , All CH Driven, Note 3	1.35A	197W	672 BTU
Pink Noise Power 100V, All CH Driven, Note 3	1.65A	235W	801 BTU
Burst Power 2 Ω , All CH Driven, Note 4, 8	0.96A	137W	467 BTU
Burst Power 4 Ω , All CH Driven, Note 4	1.59A	182W	621 BTU
Burst Power 8 Ω , All CH Driven, Note 4	1.28A	154W	425 BTU
Burst Power 100V, All CH Driven, Note 4	1.42A	168W	573 BTU
Music Power 2 Ω , All CH Driven, Note 5, 8	2.60A	334W	1139 BTU
Music Power 4 Ω , All CH Driven, Note 5	2.68A	362W	1235 BTU
Music Power 100V, All CH Driven, Note 5	2.54A	336W	1146 BTU
Sine Wave Power 2 Ω , All CH Driven, Note 6, 8	4.76A	711W	2426 BTU
Sine Wave Power 4 Ω , All CH Driven, Note 6	5.53A	855W	2917 BTU
Sine Wave Power 8 Ω , All CH Driven, Note 6	4.98A	728W	2449 BTU
Sine Wave Power 100V, All CH Driven, Note 6	5.12A	778W	2654 BTU

Notes:

1. Power Level - Test is defined as follows: 1kHz 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 available upon request. All power tests are done at 120V.
2. Average power draw is defined as pink noise input signal applied to achieve 1/4 of the 4 Ω or 70.7V power rating.
3. Max pink noise power current draw is defined as pink noise applied as the signal source to the amplifier to achieve 100% of the 4 Ω or 70.7V power rating. Using pink noise for testing amplifiers is a strenuous test that provides a consistent signal across the entire audio spectrum. Pink noise also provides a 6db Crest factor signal that injects a balance of RMS and peak signals providing realistic amp draw data for audio application.
4. Max burst power draw is defined as follows: 1 kHz sine wave signal burst of 20 cycles (40mS) at 100% of the 4 Ω or 70.7V power rating., followed by 480 cycles of a 1 kHz sine wave at 10% of the max power repeated. Note: The amp draw /watt data is the peak power consumed and not steady state amp draw. This complies the UL 62368-1 standard and testing for maximum peak amp draw for a 120v 15A AC mains.
5. Music power draw is defined as dynamic input signal applied to achieve the maximum rated power into a 4 Ω or 70.7V load. This test also represents realistic current draw data for audio applications. The current draw data is the maximum peak amp / watt and not steady state amp draw. This complies the UL 62368-1 standard and testing for maximum peak amp draw for a 120V 15A AC mains. Note When specifying this amp for power consumption, we recommend using the Max Music Power Amps / Watt rating data.
6. Sine wave power draw is defined as 1 KHz input signal applied to achieve the maximum power output before clip into a 4 Ω or 70.7V load. This data should be used as a reference of the maximum the current the amplifier can draw. The amount of time used to test was subject to exceeding the units circuit breaker provides this data thermal trip point. Note: The HPA2408 is designed and to be specified for paging and music program application. Steady state sine wave signals over 3 seconds should not be applied and may drip a 15A 120V AC Mains breaker.
7. 25V System use 4 Ω Load Selection Settings, CLA402 & CLA804 Power Share 200W Setting Equal 150W, CLA202 & CLA404 Power Share Setting 100W Equal 100W
8. 2 Ω loads use 4 Ω Load Selection Settings, CLA402 & CLA804 Power Share 200W Setting Equal 100W, CLA202 & CLA404 Power Share 100W Setting Equal 50W
9. Low Power Mode: The Front panel AC Mains indicator will blink Blue slowly. Fans are off and the power rails are lowered reducing power consumption. Signal flow is not interrupted or delayed.

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AUDIO SPECIFICATIONS / PERFORMANCE

Package Contents	
CLA Model	CLA804
Power Cord IEC C13 Plug / 16AWG 1.8m Cord / NEMA 5-15 Plug	Qty 1
Input Connector, 3 Position, 3.5MM Pitch	Qty 4
GIP Connector, 3 Postion, 3.5MM Pitch	Qty 1
Remote Level Connector, 6 Position, 3.5MM Pitch	Qty 1
Speaker Connector, 2 Position, 5.08 MM Pitch	Qty 4
Rack Kit for Single & Dual mounting	Qty 1
Install Sheet with QR Code	Qty 1

Dimensions and Weight	
Rack Mount Requirements	1 RU, 8.5"
Dimensions - Unit, All CLA Models	8.75" W x 1.75" H x 13.5" D (222mm x 44mm x 343mm)
Dimensions - Shipping, All CLA Models	17.25" W x 4.5" H x 11.75" D (438mm x 114mm x 298mm)
Weight - Unit CLA804	8 lbs. (3.64kg)
Weight - Shipping, CLA804	11.2 lbs. (5.06kg)

Agency Approvals	
North America Agency	TUV
Testing Standard North America	62368-1
FCC Class A (Conducted & Radiated Emissions)	Part 15 B of the FCC Rules
CE	Yes (Includes RoHS & WEEE)

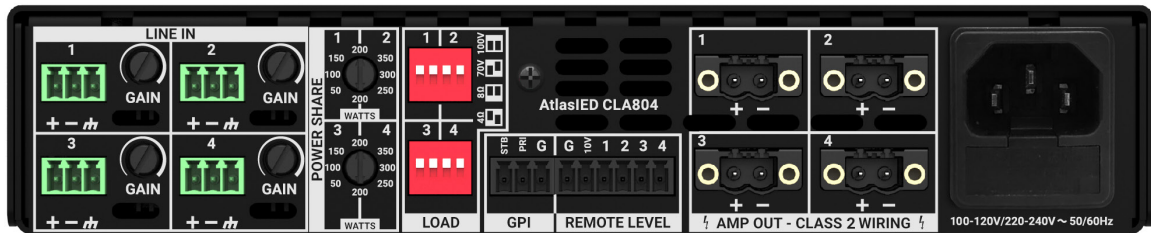
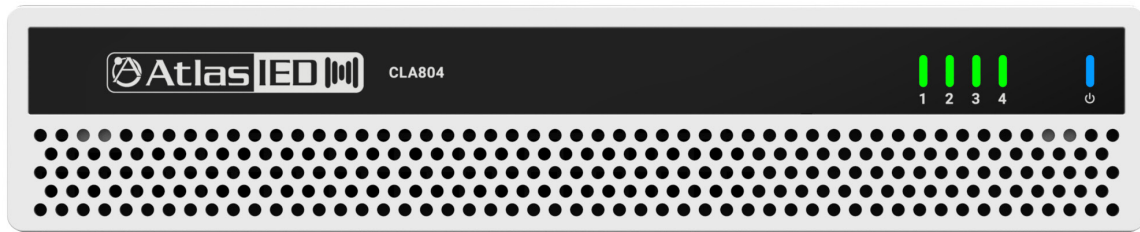
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TECHNICAL DATA SHEET

PRODUCT IMAGES



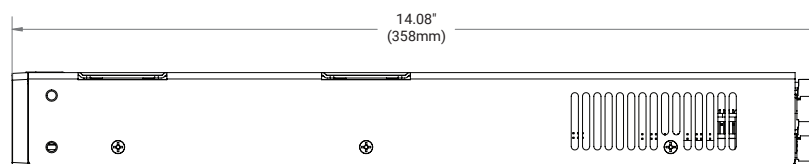
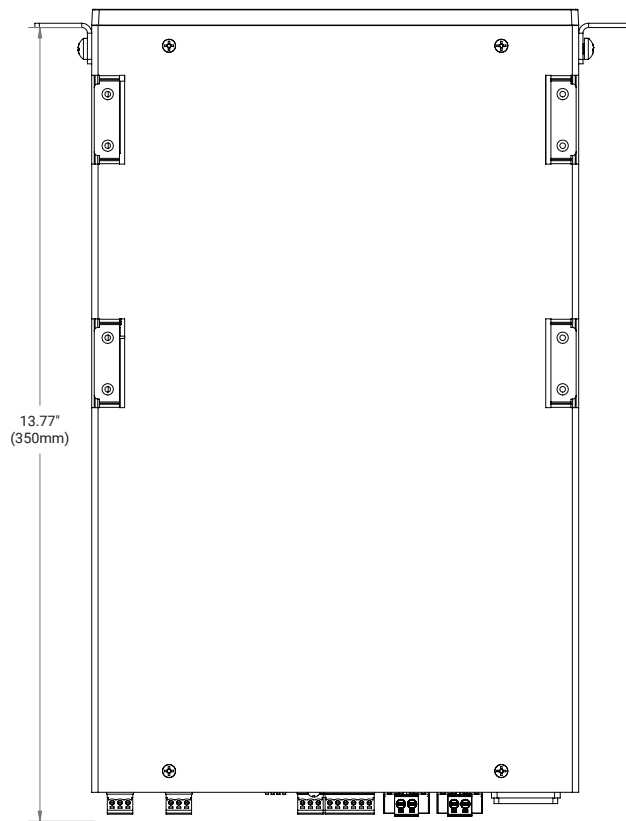
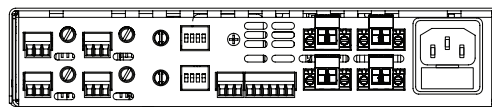
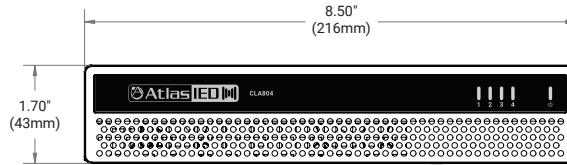
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TECHNICAL DATA SHEET

DIMENSIONAL DRAWINGS



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FOUR CHANNEL MULTI IMPEDANCE POWER SHARE AMPLIFIER



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ARCHITECT AND ENGINEER SPECS

The AtlasIED CLA804 amplifier shall be ready to use out of the box, configured as four-by 200W per channel in 70.7V mode, with no configuration or network connectivity required. The CLA804 shall be configurable for both commercial 25V/70.7V/100V distributed systems and professional applications requiring amplification for low impedance loads like 2, 4, or 8 ohms. Configuration of the CLA shall be done via rear panel switches. The CLA804 amplifier shall provide 800W of total power with the ability to accurately power steer the amount of power needed per output channel regardless of the speaker load impedance.

The performance specifications shall match or exceed the following: Load Configurations - Each Channel load selection shall be Configured Individually 2Ω, 4Ω, 8Ω, 25V, 70.7V, & 100V. Each pair of channels Power Share Configurations shall be: 4 x 200W, 2 X 350W / 50W, 2 x 300W / 100W, 2 x 250W / 150W; Input Sensitivity 775mV Balanced, 0dBu; Input Impedance Balanced 20K Ohms; Max Input Level, +24dBu, THD 1% at rated output, Frequency Response -3dB 20Hz @ 20kHz Lo Z; Signal to Noise Ratio -100dB Below Rated Output A Weighted; Crosstalk >70dB @1kHz.

Protection circuits =Thermal, Short, Signal Limiter; Standby mode .4W,1.36BTU; Max Power All CH driven 70.7V (default mode) = 802W, 2736BTU.

The CLA power amplifier shall feature an AC Mains status RGB LED indicator for the following operating modes: Active Mode, Low Power Mode, Standby Mode, and AC power line warning status for low and high AC Line conditions. Additionally, the front panel shall have individual channel indicators that consist of three-color status RGB LED indicators for Signal/Limit/Protect/Mute.

The amplifier shall include convection cooling with whisper fan assist for extreme conditions. If the unit is not being used or in low power mode, the fan shall remain off until the unit is in heavy use. The amplifier's airflow direction shall be from front to rear and requires no air filters.

The amplifier shall feature a three-pin rear-mounted GPI Control Ports for activating Standby mode and Priority mute mode, to be activated by external contact closure relay. Additionally, each amplifier channel shall have a separate Remote Level control port. The Remote Level Control Ports shall provide +10V and GND connections, as well as a return voltage port for each channel. The Remote Level return voltage shall come from a 10kΩ Linear Taper pot or remote-control system with a variable 0-10V output.

The CLA804 amplifier shall be ready to use out of the box, configured as a four-channel, 70.7V mode, requiring no configuration or network connectivity.

Additionally, the CLA Series shall come with a rack mount kit for mounting one or two AtlasIED half-rack devices.

The CLA804 shall be a 1RU half-rack device with the following dimensions: 8.75 inches (222mm) wide, 1.75 inches (44mm) high, and 13.5 inches (343mm) deep. It shall weigh 7.7 lbs. (5.06kg). The amplifier shall be an AtlasIED CLA804.

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