4 × 120W Power Amplifier with DSP

AP412

AP412 is a 4-channel DSP-equipped amplifier that delivers 120W per channel and receives balanced / unbalanced mic / line-level signals to drive 4 / 8-ohm low impedance or 70 / 100V line loudspeaker systems. It also supports Lo-Z / Hi-Z in Bridge mode to deliver higher power.

Configurable via intuitive WebGUI / ATEN Audio Wizard, the built-in DSP allows Speaker EQ, 5-band EQ, compressor, delay, limiter, and up to 20 presets for precise tuning and extensive audio system protection. The ground-lift switch helps eliminate unwanted hum noises from power circuit. Immersive sound experience is delivered without compromise on power efficiency with the Class D design. Customizable Auto Standby mode enables AP412 to automatically switch to "sleep" when the signal level falls lower than -40 / -50 dBu for 10 / 15 / 25 minutes.

With the system protection circuit, the amplifier is prevented from damages led by shorted outputs, over / under-voltage, high-frequency overload, and overtemperature. Plus, AP412 will be muted when the heat sink temperature exceeds the limit. The fanless design avoids fan noise and prevents dust from building up inside the chassis.

AP412 becomes compatible with Dante audio when working with AP901 expansion card or receives two more channels of mic / line signals with AP902 expansion card. It can be integrated with ATEN VK Control System via RS-232 / Ethernet for comprehensive control from a distance. The 1U casing is available for rack mounting. AP412 assures reliable amplification with professional audio quality and higher power delivery for larger commercial spaces.

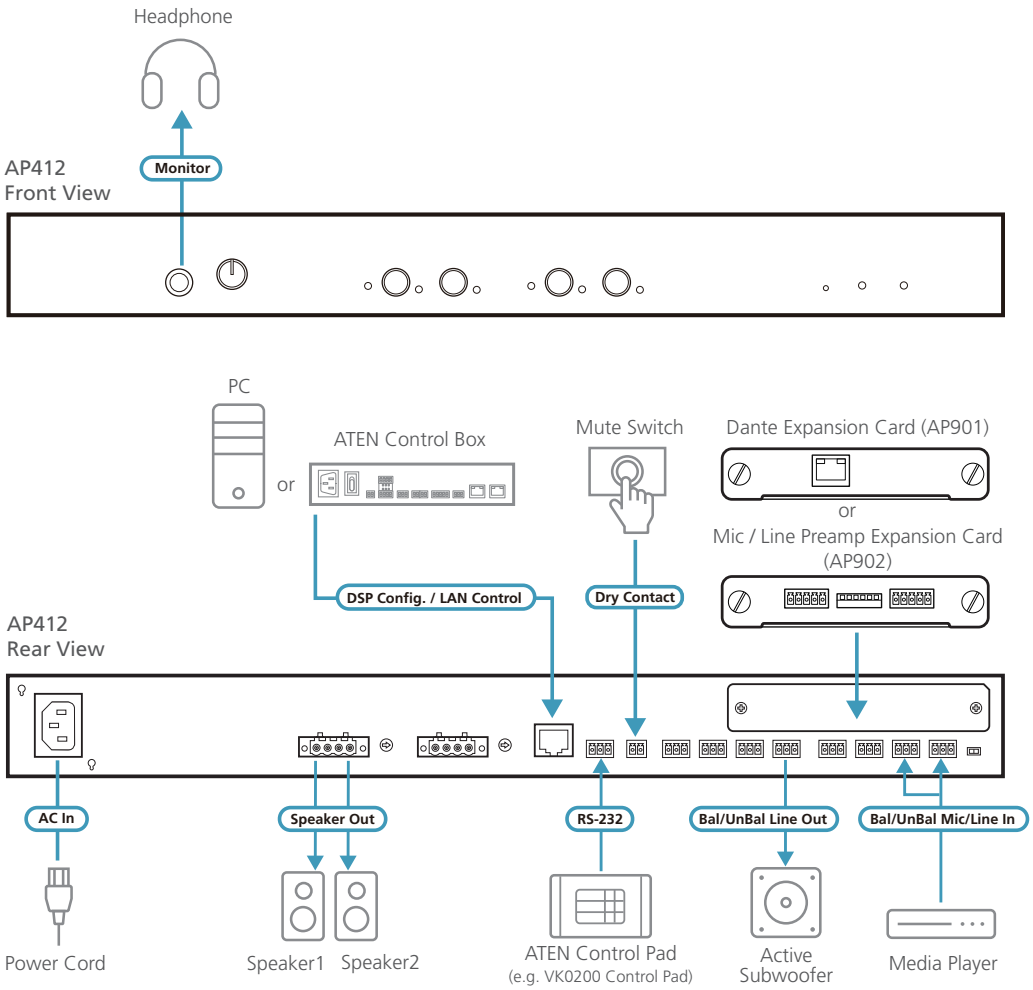
Fanless | Built-In DSP | Self-Protection Circuit | Overheat Protection | Energy Saving | VK Control System Compatible | Lo-Z Bridge

Front View



Rear View





Features

- A 4-channel DSP-equipped amplifier that delivers 120W per channel
- Supports balanced / unbalanced mic / line-level inputs and drives 4 / 8-ohm low impedance or 70 / 100V line (in Bridge mode) loudspeaker systems
- +48V phantom power supply
- Built-in WebGUI-configurable Sigma®DSP allows speaker EQ, 5-band EQ, compressor, delay, limiter, and up to 20 presets for precise tuning and system protection
- Class D design assures high power efficiency
- PFC (Power Factor Correction) Power Supply – Fly-back power supply design with PFC ensures efficient operation while reducing energy consumption
- Integrated protection circuit – Protects the system from damages caused by Amp short circuit, Amp output over/ under voltage, high-frequency overload, and overtemperature
- Customizable Auto Standby mode – Amplifier automatically switches to “sleep” when the signal level falls lower than -40 / -50 dBu for 10 / 15 / 25 minutes
- Solo function – Allows users to isolate and monitor a particular input / output
- Expansion slot for add-on expansion card – Install AP901 2-CH Dante Expansion Card to make the sound system compatible with Dante network or AP902 2-CH Mic/Line Pre-AMP Expansion Card to receive two more channels of mic / line input signals
- Fanless – Avoids fan noise and prevents dust from building up
- Supports VK Control System via RS-232 and Ethernet connection
- 1U rack mountable enclosure
- Firmware upgradable

Specifications

	AP412
System Specification	
Amplifier Type	Class D
Rated Power	120W per Channel @4Ω or 8Ω 240W per Channel @8Ω Bridge or 70/100V Hi-Z Bridge
Sensitivity	Balanced: +4dBu Unbalanced: -10dBV (0dBu=0.775Vrms, 0dBV=1Vrms)
Distortion	THD+N: <0.1%, 1kHz, 3dB before clipping
Frequency Response	50~20kHz, +/-2.5dB @4Ω, 1W, MIC / Line Input to SPK Output
Microphone Inputs	
Gain Range	0~+36dB
Impedance	3kΩ
Phantom power	+48V
Line Inputs	
Gain Range	Bal: -6~+4dB UnBal: -6~+10dB
Impedance	Bal: 5kΩ UnBal: 2.5kΩ
Maximum Input Level	+19dBu / Nominal: +4dBu
Line Outputs	
Impedance	200Ω
Maximum output Level	+10dBu / Nominal: +4dBu
Audio Outputs	
Impedance	Lo-Z: 4/8Ω Lo-Z Bridge: 8Ω Hi-Z: 70V (20Ω), 100V (40Ω)
Headphone Outputs	
Frequency Response	50~20kHz, -3dB @10mW
Maximum output Level	>30mW @32Ω
Audio Effects	Built-In DSP (COMP, EQ, Delay, Priority, Limiter)
Protection	Output Shortcut AMP Output over/under voltage High Frequency Overload Thermal Protect
Communication	
RS-232	Connector: 3-pin, 3.5mm, Terminal Block Baud rate and protocol: Baud Rate: 19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No
Compliance	
Certification	FCC, CE, UKCA, IEC62368-1:2018
Power	
Maximum Input Power Rating	100-240V~, 50/60Hz, 4A with PFC
Power Consumption	AC110V:81W; AC220V:76.7W
Note	1/8 Max. Power Output
Environmental	
Operating Temperature	0 – 50 °C
Humidity	0 – 80% RH, Non-Condensing
Storage Temperature	-20 – 60 °C
Physical Properties	
Weight	5.21 kg
Housing	Metal
Dimensions (L x W x H)	43.24 x 33.97 x 4.40 cm

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