



AZP604
AZP1204
AZP1208
AZP2408

ATMOSPHERE SMART AMPLIFIER

AZP604-D
AZP1204-D
AZP1208-D
AZP2408-D

ATMOSPHERE SMART AMPLIFIER WITH DANTE



TECHNICAL DATA SHEET

PRODUCT SUMMARY

The Atmosphere AZP Series is a family of intelligent multi-channel amplifiers designed for modern commercial audio systems that demand high-performance amplification, advanced DSP capability, and flexible system integration. Available in 4-channel and 8-channel configurations with 150W and 300W average per-channel models, the AZP Series combines powerful processing and flexible amplification into a compact 1RU platform optimized for hospitality, corporate, education, and large-scale distributed audio applications. Select models include integrated Dante® audio networking for seamless audio transport within modern networked AV systems.

Built around a powerful onboard DSP architecture, the AZP Series provides extensive audio processing capabilities including matrix mixing, crossovers, EQ, compressors, priority processing, and advanced loudspeaker protection with peak and RMS limiting. Integrated AtlasIED speaker tunings simplify system optimization while delivering consistent performance across a wide range of applications. An onboard Message Player and Scheduler further expand system functionality for automated announcements, timed events, and critical messaging applications. Dante-enabled models support low-latency networked audio distribution with integrated Dante audio transport and routing capabilities.

AZP amplifiers utilize advanced Power Share technology that allows amplifier power to be software configurable in 5 W increments across groups of four output channels, enabling efficient power allocation without the limitations of traditional fixed-output amplifier designs. With high-power output capability available to individual channels and a robust 15-second CAF power rating, the AZP Series delivers exceptional real-world performance and sustained output capability for demanding commercial audio environments.

In addition to high-performance amplification, the AZP Series includes integrated sound masking functionality with onboard signal generation, scheduling, equalization, and long-term ramping capabilities. Dedicated Cat5 sound masking outputs allow direct connection to AtlasIED SHS series sound masking speakers, simplifying installation while reducing infrastructure costs.

Programming and system configuration are managed through an intuitive onboard web-based interface designed for fast deployment and flexible customization. The modern responsive GUI provides access to amplifier configuration, DSP tuning, Dante routing, monitoring, and system management from nearly any device without requiring dedicated software installation. Dual network ports support configurable deployment options for control and Dante audio networking while simplifying system connectivity. The AZP Series also supports PoE-powered monitoring of the control platform during AC power loss, enabling continued network visibility and status reporting. Integration with Atmosphere Cloud provides secure remote monitoring, management, and system access from anywhere.

KEY FEATURES

- Network controlled with web interface
- Dante networked audio inputs and outputs (-D models only)
- Advanced DSP with Speaker Tunings
- High-performance amplification with long term power rating
- User-defined power sharing configurable in 5 W increments
- Direct drive 70/100V and 4/8 Ω , 2 Ω stable
- Dual/Redundant network ports with PoE front end
- Atmosphere Cloud compatible for remote monitoring and control
- Sound Masking support with RJ45 outputs.
- Power save modes include channel Standby and module Deep Sleep
- Protection systems include short, DC, HF and thermal
- Power saving amplifier Standby and Deep Sleep modes
- System Self-test
- Third Party Control API

APPLICATIONS

- Restaurants / Bars
- Houses of Worship
- Offices and Corporate Centers
- Industrial
- Education Performance Spaces
- Stadiums & Arenas





TECHNICAL DATA SHEET

AUDIO SPECIFICATIONS / PERFORMANCE

System	AZP604/AZP604-D	AZP1204/AZP1204-D	AZP1208/AZP1208-D	AZP2408/AZP2408-D
Type	4-Channel, 600 W Smart Amplifier	4-Channel, 1200 W Smart Amplifier	8-Channel, 1200 W Smart Amplifier	8-Channel, 2400 W Smart Amplifier

Amplifier Output Specifications	AZP604/AZP604-D	AZP1204/AZP1204-D	AZP1208/AZP1208-D	AZP2408/AZP2408-D
Number of Amplifier Channels	4	4	8	8
Total AZP Amplifier Power (W_{RMS})	615	1215	1230	2430
Total Amplifier Module Power (W_{RMS})	1x615	1x1215	2x615	2x1215
Maximum Continuous Power (W_{RMS}) ¹				
Average Power per Channel (4/8 Ω , 70/100 V)	150 W	300 W	150 W	300 W
Max. Power per Channel (4/8 Ω 70/100 V)	600 W ⁽²⁾	1200 W	600 W ⁽²⁾	1200 W
SHS RJ45 Outputs ³	100 W	100 W	100 W	100 W
Maximum Output Voltage	100 V_{RMS} / 145 V_P	100 V_{RMS} / 145 V_P	100 V_{RMS} / 145 V_P	100 V_{RMS} / 145 V_P
Maximum Output Current	10 A_{RMS} / 14.5 A_P	17 A_{RMS} / 24 A_P	10 A_{RMS} / 14.5 A_P	17 A_{RMS} / 24 A_P
Power Share Technology ⁵	Channel independent, software assignable, increments of 5 W across four channel module banks (1-4, 5-8)			
Loads Impedance	Stable with resistive, capacitive or inductive loads > 1.5 ohms			
Protection	Short, Thermal, HF, and DC			
Channel Standby	Individual channels can be placed into Standby mode; automatic wakeup within 0.75 s			
Module Deep Sleep	Amplifier module (4 ch) can be placed into Deep Sleep mode, saving further power; automatic wakeup within 3 s			
Power-On Delay	3.5 s with PoE / 22 s AC only			

Audio Specifications & Performance	AZP604/AZP604-D	AZP1204/AZP1204-D	AZP1208/AZP1208-D	AZP2408/AZP2408-D
Analog Inputs	4	4	8	8
Dante Inputs	4 (Dante model only)	4 (Dante model only)	8 (Dante model only)	8 (Dante model only)
Dante Output	4 (Dante model only)	4 (Dante model only)	8 (Dante model only)	8 (Dante model only)
THD+N	Less than 0.02% (1 W to 100 W), 0.20% (100 W to 1200 W)			
Frequency Response (8 ohms)	+/-0.5 dB 20 Hz to 20 kHz			
Signal-to-Noise Ratio	106 dB	110 dB	106 dB	110 dB
Crosstalk	-80 dB (1 kHz)			
Latency	3.7 ms			
DC Offset	<10 mV			
Input Sensitivity	Selectable options: -10 dBV, 1.4 V, +4 dBu, +20 dBu, and Custom			
Maximum Input Level (Analog)	+20 dBu (7.75 V_{RMS})			

Signal Processing	
DSP Type	48 kHz SHARC DSP processor with proprietary algorithms
Input Gate	Configurable noise gate with threshold, attack, hold, and release controls
Input Compressor	Configurable compressor with threshold, ratio, attack, release, and makeup gain controls
Input Equalizer	4-band Parametric EQ, Low Shelf, High Shelf, Notch, HPF
Input Priority/Backup Router	Default and Priority channel routing
Input Matrix Mixer	Customizable matrix mixer, 1 per output, fully routable
Output Speaker Tunings	Includes AtlasIED and Atlas+Fyne Loudspeaker Tunings
Output HPF	20/80 Hz HPF

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AUDIO SPECIFICATIONS / PERFORMANCE

Output Delay	≤100 ms
Output Priority/Backup Router	Default and Priority channel routing
Output Crossover	HPF/LPF with Butterworth 6/12/18/24 dB/oct and Linkwitz-Riley 12/24 dB/oct
Output EQ	8-band Parametric EQ, Tilter Filter, Tone Control, Low Shelf, High Shelf
Output Limiters	User adjustable Peak and RMS output limiters
Signal Generator	Built in signal generator (sine, pink noise, white noise)

Interface & Features	
User Interface	Web GUI interface, compatible with mobile, fully accessible via Atmosphere Cloud
Cloud	Compatible with Atmosphere Cloud for remote monitoring and control
Message Player	Up to 100 messages with delay/repeat, triggered via GPI, Scheduler, or Third Party. Accepts up to 100 WAV, MP3, and/or FLAC files. >1 GB total storage.
Scenes	Customizable output presets including gain, mute, and matrix mixer settings
Scheduler	Event Scheduler recalls Scenes or Messages, includes recurrence options.
Self-Test	Tests AC line, power supply, fans, relays, and loudspeaker impedance.
User Accounts	Up to 32 Installer (admin), Manager, Associate, and Planner accounts provide tailored access per user.
Third Party API	Includes third party API for integration into external control and monitoring systems

Sound Masking	
Sound Masking Generators	Independent Pink/White noise generators per output channel
Sound Masking Filters	20-band Graphic EQ with Perfect Fit, Tilter Filter, LPF, and HPF
Sound Masking Scheduler	Weekly schedule with on/off hours and 30-day, long-term commissioning ramp-up
Sound Masking Output Connectors ³	RJ45 outputs available for SHS-3T2 sound masking loudspeakers over Cat5 in addition to Euroblock

Connectivity	
Networking	Two Gigabit Ethernet Ports with selectable modes (Separate, Switch, Redundant)
PoE	Front-end DSP, Dante, and Logic processing can be powered by PoE Class 3 using Port A
GPIO	6 General Purpose inputs (recall Scenes/Messages), 1 High Priority input, 2 GPO with selectable modes (Heartbeat, Fault, AC Loss Detect)

Front Panel	
Display	OLED display for showing status of IP address, amp status, device name, firmware version, and more; configurable via web UI
Channel Indicators	Individual channel indicators for showing signal (green), channel standby (blue), clip (yellow), and fault (red)
Standby/Menu Button	Dedicated push-button for cycling through OLED menu options or placing amplifier into standby mode (defeatable)

Rear Panel Connections	AZP604/AZP604-D	AZP1204/AZP1204-D	AZP1208/AZP1208-D	AZP2408/AZP2408-D
Amplifier Output Connection Type	7.62 mm Euroblock, 2 pin	7.62 mm Euroblock, 2 pin	7.62 mm Euroblock, 2 pin	7.62 mm Euroblock, 2 pin
Analog Input Connector Type	3.5 mm Euroblock, 3 pin	3.5 mm Euroblock, 3 pin	3.5 mm Euroblock, 3 pin	3.5 mm Euroblock, 3 pin
IEC Inlet	15 A IEC (C13)	15 A IEC (C13)	15 A IEC (C13)	15 A IEC (C13)
Network Ports	2 RJ45 Gigabit	2 RJ45 Gigabit	2 RJ45 Gigabit	2 RJ45 Gigabit
SH5 Cat5 Amplifier Output	2 RJ45 outputs for 4 channels	2 RJ45 outputs for 4 channels	4 RJ45 outputs for 8 channels	4 RJ45 outputs for 8 channels

Environmental & Cooling	AZP604/AZP604-D	AZP1204/AZP1204-D	AZP1208/AZP1208-D	AZP2408/AZP2408-D
AC Mains	Universal 100–240 VAC +/-10%, 50/60 Hz, with Power Factor Correction			
Cooling System	Variable speed forced air, front to back airflow, side and rear panel venting			
# Fans	2	2	4	4

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AUDIO SPECIFICATIONS / PERFORMANCE

Idle Fan SPL	<38 dBA @ 1 m
Max Fan SPL ⁴	<50 dBA @ 1 m
Operating Temperature	0°–40°C

Dimensions & Weight	AZP604/AZP604-D	AZP1204/AZP1204-D	AZP1208/AZP1208-D	AZP2408/AZP2408-D
Unit Dimensions with Rack Ears (W × D × H)	19.0 × 15.1 × 1.7 in (482 × 384 × 43 mm)	19.0 × 15.1 × 1.7 in (482 × 384 × 43 mm)	19.0 × 15.1 × 1.7 in (482 × 384 × 43 mm)	19.0 × 15.1 × 1.7 in (482 × 384 × 43 mm)
Shipping Dimensions (W × D × H)	23.3 × 19.6 × 4.6 in (591 × 499 × 118 mm)	23.3 × 19.6 × 4.6 in (591 × 499 × 118 mm)	23.3 × 19.6 × 4.6 in (591 × 499 × 118 mm)	23.3 × 19.6 × 4.6 in (591 × 499 × 118 mm)
Rack Space Height	1 RU, 19 in	1 RU, 19 in	1 RU, 19 in	1 RU, 19 in
Unit Weight with Rack Ears	13.54 lbs (6.14 kg)	13.94 lbs (6.32 kg)	15.8 lbs (7.17 kg)	16.64 lbs (7.55 kg)
Shipping Weight	19.3 lbs (8.75 kg)	19.7 lbs (8.94 kg)	21.8 lbs (9.89 kg)	22.5 lbs (10.21 kg)

Notes:

1. Measured using CAF method: 1 kHz for 15 seconds at rated THD
2. AZP604 and AZP1208 maximum power limited to 400 W at 4 ohms
3. SHS outputs are 1 A current limited for RJ45 and Cat5 cable ratings.
4. All channels driven at 1/8th continuous maximum program power
5. AZP amplifiers use advanced Power Share technology to let users allocate available amplifier power across each 4-channel amplifier module. Power is software-configurable in precise 5 W increments, allowing each channel to be assigned only the maximum power needed for the connected loudspeaker load. Unlike load-dependent power sharing designs, AZP power allocation is user-defined, providing predictable system design and flexible power distribution. On 8-channel models, power is shared within each 4-channel module. Power cannot be shared across modules.

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TECHNICAL DATA SHEET

PRODUCT IMAGES - 4 CHANNEL MODEL SHOWN



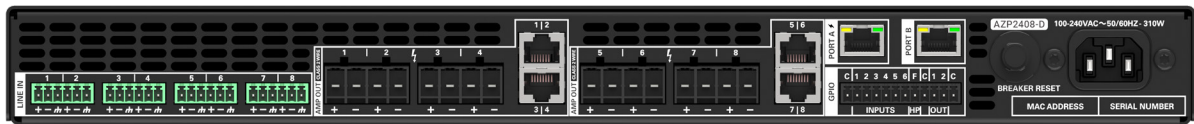
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TECHNICAL DATA SHEET

PRODUCT IMAGES - 8 CHANNEL MODEL SHOWN





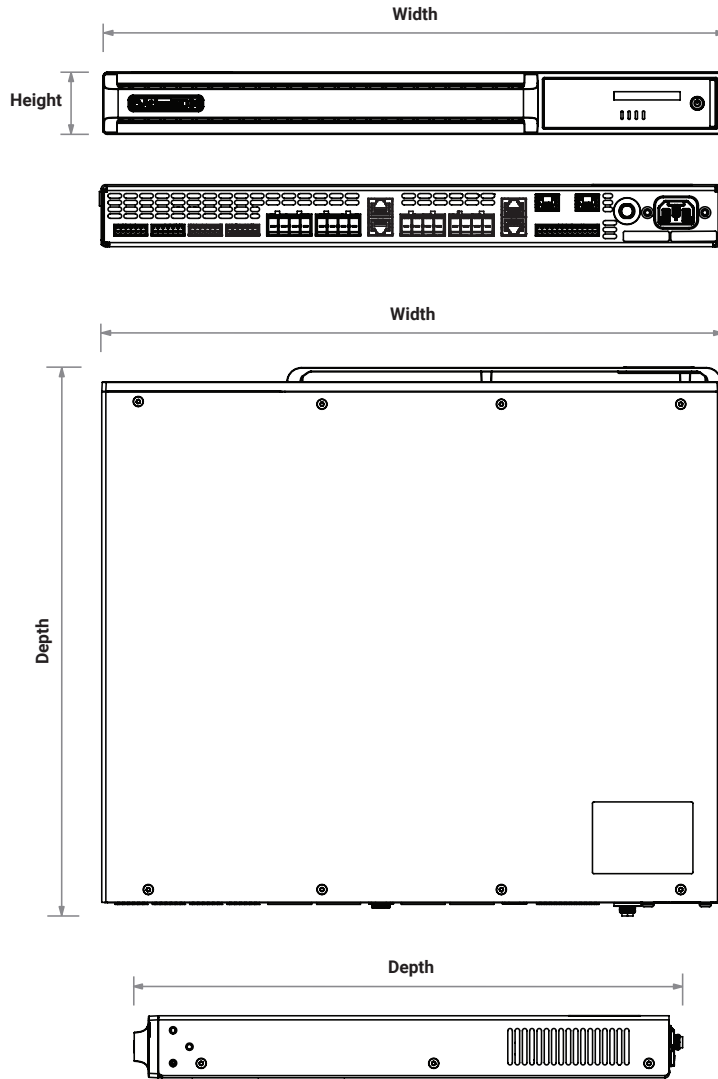
TECHNICAL DATA SHEET

DIMENSIONAL DRAWINGS

Note: All AZP models share the same dimensions. Shown is the AZP1208.

Product Dimensions

Width	17.05" (433.1 mm)
Height	1.70" (43.2 mm)
Depth	15.06" (382.4 mm)
Rack-Mount Depth	14.30" (364.0 mm)



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