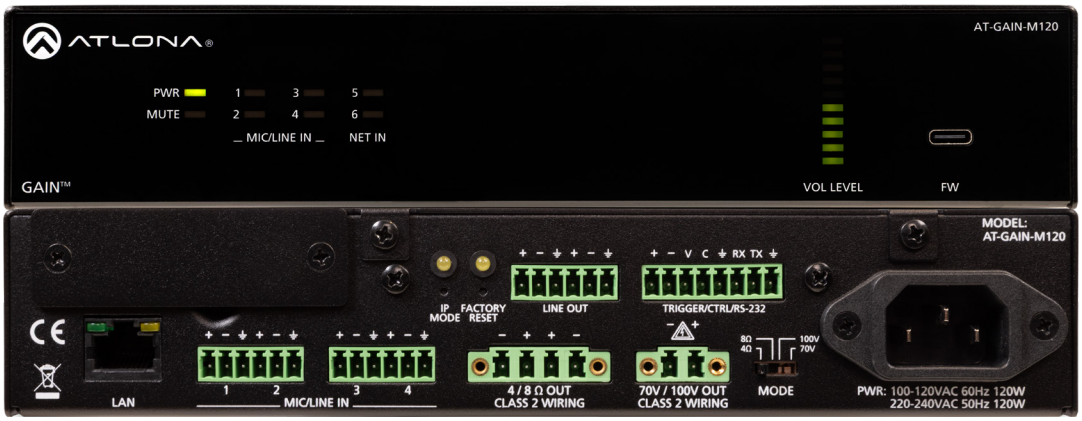
Stereo / Mono Mixer Amplifier
120 Watts



Introduction

The Atlona **AT-GAIN-M120** is a mixer amplifier designed for low or high impedance education and commercial applications. A mode selector switch allows the GAIN-M120 to deliver two channels of 60 watts each into 4 or 8 ohms, or a single channel of 120 watts at 70 or 100 volts.

Advanced Configuration Features
The GAIN-M120 is a highly flexible audio amplification platform that can be tailored to the specific requirements of any application:

- Configurable inputs – Four analog inputs may be configured for mono or stereo as well as mic (with support for Phantom power) or line levels.
- Signal processing – Supports gain and ducking adjustments for each input as well as delay, high/low pass filters, equalization, and attenuation for each output.
- Multiple output mixes – Discreet mixes and gain control are available for the amplifier and line outputs.
- Ducking – Lowers the level of program audio sources when a signal, such as a teacher microphone, is present on the selected input.
- Standby Mode – Reduces power consumption and energy costs when the amplifier is not in use.
- Mute – Audio from the amplifier can be muted via contact closure, IP, or RS-232.

Control
The amplifier includes IP, contact closure, and a RS-232 interfaces for control operations from Velocity™ or third-party control systems. It also supports remote volume control via the optional AT-GAIN-VOL wall plate for more simplified control.

Mounting
The GAIN-M120 is housed in a rack-mountable 1RU, half-rack-width enclosure and ships with a short rack ear, long rack ear, and mounting plate for installing two of the amplifiers side-by-side in a single 1RU rack space.

Networked Audio Interfaces

- AT-GAIN-NET is an optional audio bridge card that accepts two channels of Dante®, AES67, or Atlona OmniStream™ encoder audio over its network interface. Additionally, the amplifier has the ability to make routes to/from available Dante® Devices via API commands.

Applications

- **Classrooms**
  Distribute lesson audio to low impedance speakers in the room, lower program audio when teacher speaks in a microphone, and mute audio for PA announcements.
- **Meeting Rooms**
  The GAIN-M120 can receive audio from an AV switcher or DSP, and then feed the audio to a high impedance distributed speaker network in the room.

Key Features

- Four analog inputs may be configured for mono or stereo as well as mic (with Phantom power support) or line levels.
- On-board mixer supports gain and ducking adjustments for each input as well as delay, high/low pass filters, equalization and attenuation for each output.
- Supports separate mixes for the amplifier and line outputs including independent gain control.
- Selectable low or high impedance operation.
  - » 2 x 60 watts @ 4 or 8 ohms.
  - » 1 x 120 watts @ 70 or 100 volts.
- Ducking lowers the level of program audio sources when signal is detected on the selected input.
- Balanced line level output allows the mixed signal to be passed to an assistive listening system or separate amplifier.
- Standby mode for reducing power consumption and energy costs when not in use.
- Contact closure to engage mute or standby mode from an external system.
- LAN and RS-232 interfaces for configuration as well as control from Velocity or third-party automation systems.
- Status LEDs for power, mute, and input and output levels.
- Rack-mountable 1RU half-rack-width enclosure.
- Integrated power supply—no external converter required.
- Optional AT-GAIN-VOL volume control wallplate.
- Optional AT-GAIN-NET network audio interface.
- Includes captive screw connectors, power cord, short rack ear, long rack ear, and dual mounting plate.

Specifications

Inputs	
Mic / Line	4 analog inputs, configurable individually as microphone or line level Microphone Input Level: –50 dBV (typical) Consumer Line Level: –10 dBV Professional Line Level: +4 dBV
Dante	2 channels using AT-GAIN-NET (optional module)
Impedance	> 20 kΩ
Signal Detection Threshold	≤ 1 Vrms (–60 dBV) at 1 kHz
Phantom Power	+48 VDC, 10 mA (available when input is set to mic level)

Outputs	
Type	Class D
Modes	Stereo (4/8 Ω) or Mono 70V/100V
Impedance	< 10 kΩ
Line-Level	Stereo, unpowered

Amplifier Performance	
Power	2 × 60 W @ 4/8 Ω; 1 x 120 W @ 70V or 100V (mono)
Frequency Response	Low Impedance: 20 Hz – 20 kHz (±1 dB) High Impedance: 200 Hz – 12 kHz (±1 dB), 80 Hz – 20 kHz (±3 dB)
THD+N	0.1% @ 1 kHz, 3 dB below full output, 8 Ω 0.3% from 100 Hz to 16 kHz, 3 dB below full output, 4/8 Ω
SNR	> 85 dB
CMRR	> 75 dB @ 60 Hz, 1 kHz, 10 kHz

Signal Processing	
High-Pass Filter	Butterworth, selectable slopes: 6/12/18/24/30 dB/oct
Low-Pass Filter	Butterworth, selectable slopes: 6/12/18/24/30 dB/oct
5-Band Parametric EQ	Center Frequency: 20 Hz – 20 kHz Q Factor: 1 – 15 Gain: –36 dB to +12 dB
Delay	0 – 30 ms (adjustable in 0.1 ms steps)

Ethernet	
Port	1 x RJ45
Standards and Protocols	HTTP, HTTPS, mDNS
Speeds	10/100/1000 Mbps
Addressing	DHCP, Static

RS-232	
Port	1 x 8-pin captive screw, TX, RX, GND
Use	Device control and configuration
Baud Rates	9600, 19200, 38400, 57600, 115200
Data Flow	Bidirectional

Buttons and Indicators	
Buttons:	
IP MODE, RESET	2 x momentary, tact-type, recessed
MODE	1 x 4-position slide switch
Indicators:	
PWR, MUTE	2 x LED, green
MIC / LINE IN (1 - 4)	4 x LED, green
NET IN (5 - 6)	2 x LED, green
IP MODE, RESET	2 x LED, green
VOL LEVEL	1 x 10-segment LED level meter (green, yellow, red)

Connectors	
MIC/LINE IN	2 x 6-pin captive screw
4/8 Ω OUT	1 x 4-pin, 5.08 mm lock-down screw connector
70V / 100V OUT	1 x 2-pin, 5.08 mm lock-down screw connector
LINE OUT	1 x 6-pin captive screw
TRIGGER/CTRL/RS-232	1 x 8-pin captive screw
LAN	1 x RJ45
FW	1 x USB type C, female
PWR	1 x IEC

Environmental	Fahrenheit	Celsius
Operating Temperature	+32 to +122	0 to +50
Storage Temperature	-4 to +140	-20 to +60
Operating Humidity (RH)	20% to 90%, non-condensing	

Power	
Low Power Mode	0.5 W
Network Standby Mode	2 W
Auto-Standby Timer	Configurable from 1 to 1440 minutes
BTU/h	12.3 (idle) 67.9 (maximum power)
Supply	100 - 240 V AC, 50/60 Hz

Dimensions (H x W x D)	Inches	Millimeters
Unit	1.75 x 8.875 x 13	44 x 225 x 330

Weight	Pounds	Kilograms
Device	6.94	3.15

Certification	
Device	CE, RoHS, FCC

Compliance	
NDAA-889	Yes
TAA	No

Warranty	
3 years	View the full warranty information here: https://atlona.com/warranty

Accessories

SKU	Description
AT-GAIN-VOL	Volume Control Wallplate
AT-GAIN-NET	AES67 / Dante Network Audio Interface

Copyright, Trademark, and Registration