

AMN-P15-SIP Amplifier module 15W, SIP



- ▶ Full IP for power (PoE), communication (SIP) and control
- ▶ Low impedance loudspeaker connection and amplifier line out
- ▶ Class D amplifier and Digital Signal Processing (DSP)
- ▶ Remotely configurable via Web-GUI

The AMP-P15-SIP is an IP SIP based amplified module intended to drive passive loudspeakers directly or through an external amplifier. The IP amplifier module is a compact unit and can be mounted on a surface or on a DIN rail via the additional adapter (included).

Functions

- Power over Ethernet (PoE) allowing easy and cost effective single cable operation.
- SIP support for connection to external SIP system.
- Low impedance connection for passive loudspeakers.
- Line-out for connection to an external amplifier.
- Supporting Bosch Alarm Task Script Language (ATSL) for direct camera integration.
- Internal storage for pre-recorded messages.
- Third party integration by easy to use HTTPS REST API.
- GPIO for generic third party integration.
- Audio line-in for supporting live speech from other devices.
- Discoverable via ONVIF.
- Digital Signal Processing (DSO) on board.

Architects' and engineers' specifications

- For integration with VoIP systems it shall support SIP with the following audio codes G.711 (u-law and a-law), G.722 and Opus.
- The IP amplifier module shall support PoE IEEE 802.3af Class 3 and PoE+ IEEE 802.3at Class 4.
- The built-in amplifier shall be a class D delivering up to 8 watt with PoE and up to 15 watt with PoE+.

- The IP amplifier module shall have a line-level audio input and output.
- The IP amplifier module shall have one GPI and one GPO for generic interfacing to other devices.
- It shall offer a web-GUI interface for configuration and uploading messages.
- It shall have built-in Digital Signal Processor (DSP) for adjusting volume level, equalization.
- User shall be able to create their own recorded messages and store them in the module. It shall support the following formats: WAV, MP3, Ogg Vorbis and OPUS. The storage capacity for recorded messages should be 300 MB.
- Pre-recorded message can be virtually triggered based on alarm condition or via contact input.

Regulatory information

Regulatory areas	
Safety	CAN/CSA 62368-1 ANSI/UL 62368-1
Immunity	EN 50130-4 EN 55035 EN 50121-4
Emissions	EN 55032 FCC Part 15 Class B
Environment	EN/IEC 63000 EN 50130-5

Region	Regulatory compliance/quality marks
Australia	RCM
China	RoHS
Europe	CE
Great Britain	UKCA
USA	FCC

Parts included

Quantity	Component
1	Amplifier module
1	DIN adapter plate with 2 screws
1	Quick installation guide
1	Safety information
1	China RoHS information

Technical specifications

Electrical

Power transfer		
Power over Ethernet	PoE IEEE 802.3af Class 3 PoE+ IEEE 802.3at Class 4	
Power consumption	PoE	<5 W in Idle <7 W at 1/8 th of rated power <13 W at rated power
	PoE+	<6 W in Idle <9 W at 1/8 th of rated power <26 W at rated power

Network	
Ethernet	100BASE-TX, 1000BASE-T
Protocols	IPv4, SIP, NTP, TCP, UDP, HTTP, HTTPS, ONVIF (Discovery)
SIP audio codecs	G.711 (u-law and a-law), G.722, Opus
Ports	1x RJ45

Amplifier	
Type	Class D amplifier

Amplifier	
Rated power (W)	8 Watt with PoE (4-8 Ω) 15 Watt with PoE+ (4-8 Ω)
Maximum output level	10.95 V
THD+N (3 dB below max., @1 kHz)	<0.03%
Signal to Noise Ratio (A-weighted)	>95 dB

Analog audio input/output

Type	1 line-level input, 1 line-level output; unbalanced
Connector	3-pin screw terminals
Accepted Wire gauge	AWG 28—AWG 14
Maximum level line input	1 V
Maximum level line output	1 V
Line input impedance	>10 kΩ
Line output impedance	<100 Ω

Digital signal processing (DSP)

Sample rate	48 kHz
Signal latency	<45 ms
Processing	User PEQ (3 bands), Speaker PEQ (6 bands), Compressor, Autogain, Noise gate, Dynamic EQ, RMS-limiter, Peak limiter, Level, Mute, Delay

GPIO

Type	Terminal block with screw terminals
Connector	3-pin screw terminals
Wire gauge	AWG 28—AWG 14
Ports and operating modes	1x supervised GPI, 1x GPO
Digital inputs	Open: >2 V Off: 1.25 V—2 V On: 0.75 V—1.25 V Short: < 0.75 V Maximum: 48 V

GPIO	
Digital outputs	On: Output switched to GND, max. 48 V/500 mA Off: Open collector (> 10 MΩ to GND)
Stored messages	
Uploadable	Via web-GUI
Capacity	300 MB
Supported file formats	WAV, channels: mono, stereo; sampling rates: 44.1 kHz, 48 kHz MP3, channels: mono, stereo; sampling rates: 44.1 kHz, 48 kHz Ogg Vorbis, channels: mono, stereo; sampling rates: 44.1 kHz, 48 kHz Opus, channels: mono, stereo; sampling rates: 44.1 kHz, 48 kHz

Mechanical

Enclosure	
Material	Acrylonitrile Butadiene Styrene (ABS)
Dimension (HxWxD) (mm)	92 mm x 146 mm x 40 mm
Dimension (HxWxD) (in)	3.62 in x 5.75 in x 1.57 in
Weight (g)	215 g
Weight (lb)	0.474 lb
Ingress Protection (IP)	IP30
Color	Black

DIN rail adapter	
Material	Aluminum

Environmental

Climatic conditions	
Operating temperature (°C)	-40 °C—55 °C
Operating temperature (°F)	-40 °F—131 °F

Climatic conditions	
Storage temperature (°C)	-40 °C—70 °C
Storage temperature (°F)	-40 °F—158 °F
Operating relative humidity, non-condensing (%)	5%—95%

Ordering information

AMN-P15-SIP Amplifier module 15W, SIP

IP Amplifier module 15 W, Integrated class D amplifier, DSP

Order number **AMN-P15-SIP | F.01U.389.866**

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