

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) | 7 W with PoE (4-8 Ω) 15 W 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, Noisegate, 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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