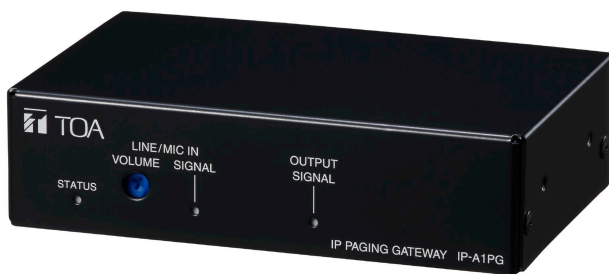# IP-A1PG

IP PAGING GATEWAY

The IP-A1PG is a PoE-powered Gateway Unit that integrates multiple IP Audio devices by converting the SIP voice or ONVIF Backchannel audio into multicast audio streaming. It can also transmit built-in sound source or input audio as multicast audio streaming. Moreover, the event broadcasting triggered by control input or remote API (HTTP) as well as the command set that sends multiple HTTP commands simultaneously are also available.

## Key features

- Convert SIP audio, ONVIF Audio Backchannel, internal audio files or local audio source into Multicast streaming
- System mute function to mute all broadcasts made by every single IP-A1 series devices within the same network
- 1 local audio input (LINE/MIC selectable, phantom power On/Off)
- 4 control inputs and 1 control output
- HTTP commands (receive/send)
- Audio file storage (20 files, total 80MB, WAV/MP3)
- PoE powered

# Specifications

| | |
|---|---|
| Power Source | PoE(IEEE802.3af Class 3) |
| Power Consumption | 2.5 W |
| Audio Transmission Method | Multicast Audio Streaming |
| Audio Codec | PCMU(G.711u), PCMA(G.711a), G.722 |
| Audio Delay Time | Min. 100 ms(*1) |
| SUB#Network I/F | 100BASE-TX, Auto MDI/MDI-X, RJ45 connector |
| Network Protocol | TCP/IP, UDP, HTTP, RTP, RTSP, RTCP, ARP, ICMP, IGMPv3, NTP, SIP(RFC3261) |
| Audio Input | 1 channel, electronically-balanced, 10 kΩ<br>LINE/MIC selectable (Rated input: LINE: 0 dB (*2), MIC: -60 dB (*2)<br>PAD function (-20 dB (*2), Phantom power ON/OFF (12 V DC), volume adjustable<br>removable terminal block (6 pins) |
| Control Input | 4 channels, no-voltage make contact inputs, open voltage: 5 V DC, short-circuit current: 2 mA or less, removable terminal block (6 pins) |
| Monitor Output | 1 channel, electronically-balanced, 600 Ω or less<br>Rated output: 0 dB (*2), RCA pin jack |
| Mute Control In | 1 channel, 24 V DC cut signal, control current 5 mA or less, removable terminal block (2 pins) |
| Control Output | 1 channel, open collector output, withstand voltage: 30 V DC, control current: 10 mA or less, removable terminal block (6 pins) |
| Indicator | STATUS (green/blue/orange/red), LINE/MIC IN (green/red), OUTPUT (green),LINK/ACT (green) |
| Functions_Broadcasting | Audio transmission<br>Transmit internal messages by multicast audio streaming<br>Transmit audio from audio input connected devices by multicast audio streaming<br>Audio conversion<br>Convert SIP voice to multicast audio stream and transmit<br>Convert ONVIF Audio Backchannel audio to multicast audio stream and transmit |
| Functions_Event | Execute event triggered by control input<br>Configurable actions: Internal message broadcast, audio input broadcast, command set transmission, broadcast disable, system mute |
| Functions_Internal Message | Max. 20 messages (Max. recording capacity: 80 MB)<br>Supported fie format:<br>WAV file: 8/16/44.1/48 kHz sampling frequency, 8/16 bit, monaural/stereo<br>MP3 file: 32/44.1/48 kHz sampling frequency, 64 - 320 kbps, CBR/VBR, monaural/stereo<br>Repeat playback: Playcount (1 - 10 times) or Duration (5 - 3600 sec)<br>Interval time: 0 - 60 sec, Delay time: 0 - 30 sec |
| Functions_Command Set | 20 commands can be registered in each of 10 command sets |
| Operating Temperature | 0 °C to +40 °C (32 °F to 104 °F) |
| Clock Accuracy | ±13 seconds per month |
| Operating Humidity | 90 %RH or less (no condensation) |
| Time Adjustment | Manual time setting, Time adjustment by NTP server |
| Finish | Front case: Surface-treated steel plate, black, paint<br>Rear chassis: Surface-treated steel plate |
| Power Outage Protection Period | 24 hours (RTC time retention, at 40 °C (104 °F) |
| Dimensions | 126 (W) x 33 (H) x 80 (D) mm (4.96" x 1.3" x 3.15") (excluding projection) |

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|---|---|
| Weight | 390 g (0.86 lb) |
| Included Accessories | Removable terminal plug (6 pins, preinstalled on the unit) x 2, Removable terminal plug (2 pins, preinstalled on the unit), Rubber feet x 4, Mounting screw (M3 x 6) x 4 |

(*1) When using in Local Input Broadcasting Mode, assume Audio Delay Time.
(*2) 0 dB = 1 VThese specifications only apply to the firmware version 2.1.0.
ONVIF is a registered trademark of ONVIF Inc.
Windows and Microsoft Edge are registered trademarks of Microsoft Corporation in the United States and other countries.
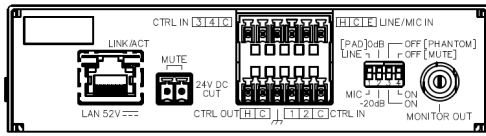Google Chrome is the trademark of Google LLC in the United States and other countries.
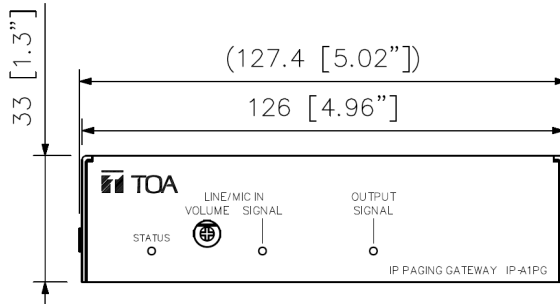Other company names and products are also trademarks of individual companies.

# PC requirements

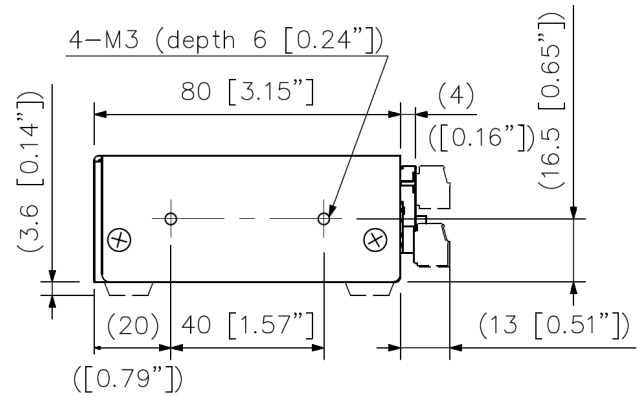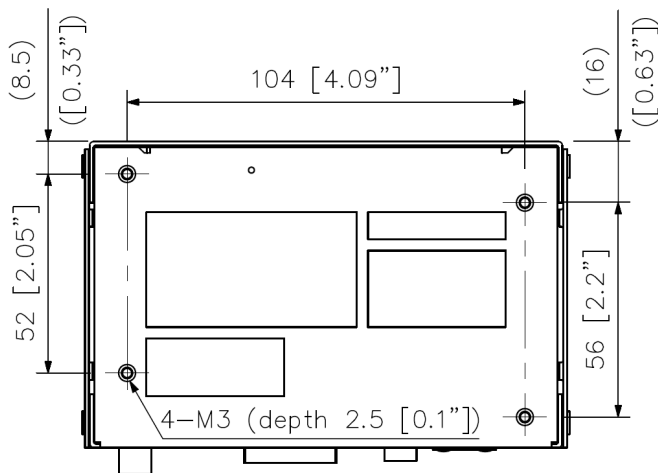| | |
|---|---|
| PC Requirements_Display | Recommended resolution: 1920 x 1080 |
| OS | Windows 10 Pro (64 bit edition) Windows 10 Home (64 bit editon) Windows 11 Pro Windows 11 Home |
| Web Browser | Google Chrome Microsoft Edge |

# Dimensions

Rear View

Front View

Side View
(with accessories)

Top View

UNIT:mm

Note: Numerical values in parentheses are for reference only.

## A&E specifications

The IP paging gateway unit shall be able to convert multiple IP audio protocols such as SIP, ONVIF Backchannel audio as well as built in analog audio input signals into multicast streaming for delivering audio to multiple IP speakers and/or other IP endpoints for the purpose of site wide simultaneous paging applications.The IP paging gateway shall have an electronically balanced 10k Ω audio input with LINE/MIC selection with switchable ON/OFF 12 V DC phantom power and a 600 Ω electronically balanced monitoring output. The audio input shall have an independent volume control on the front panel that can be adjusted only by using a screwdriver.Twenty multi-cast ports shall be available for group paging and shall have the facility of storing up to twenty audio files with the code of WAV or MP3 format internally. The device shall have the flexibility of broadcasting these files from a calendar schedule at predetermined times or repeated when necessary triggered from a control input, or from remote API (HTTP). The IP paging gateway shall be capable of muting other TOA IP-A1 series devices such as IP-A1AF, IP-A1PC238, IP-A1PC580R or IP-A1PC580S within the same network.Remote settings shall be achieved by connection to a Windows® based personal computer and by using the PC's browser, operational settings, functions and system status can be established.The IP paging gateway unit shall have four control inputs and one control output with an additional 24 V DC mute contact.The IP paging gateway shall offer priority status among the various broadcast modes that will override and interrupt a lower priority broadcast.Power source shall be supplied from a PoE switching hub.

The IP paging gateway shall be housed in black treated steel plate and its dimension shall be 126 (W) x 33 (H) x 80 (D) mm (4.96" x 1.3" x 3.15") weighing 390 g (0.86 lbs).

Manufacturer: TOA Corporation

Model: IP-A1PG