

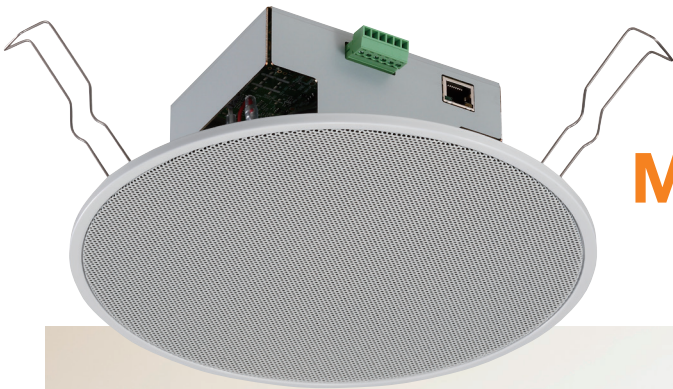


Sophisticated IP Audio Endpoints

IP-A1 Series



**Beyond
Audio
Communications**



More than meets the eye

All of these features are on board...



IP-A1 series is a group of sophisticated IP audio endpoint devices which are designed in different forms. Although it looks like a simple speaker or an I/F box, it is capable of much more features than its appearance and performs as a minimal PA system even with a single device while multiple devices can also be managed as one controlled PA system.

01 What is IP-A1?

IP-A1 series consists of a variety of commercial-grade IP audio endpoints, which can be used as an independent audio system or a fully integrated audio communication system to be configured and operated in conjunction with external systems and platforms such as security video monitoring, access control, digital signage or fire alarm systems.



Common Key Features

Audio File Storage	Standard Protocols	Audio Management	Easy Configuration	Integration Friendly
MP3/WAV 80MB	SIP, Onvif Multicast	Priority & Volume	Browser UI & Software	HTTP API & Contact In/Out

*Onvif is a registered trademark of ONVIF Inc.

Audio communication system design can be much simpler and more flexible with IP-A1 series

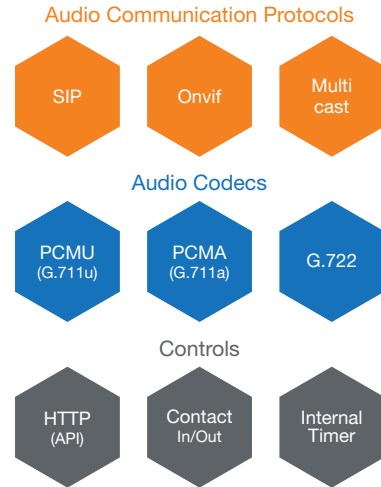
02 Why IP-A1?

Integration-friendly

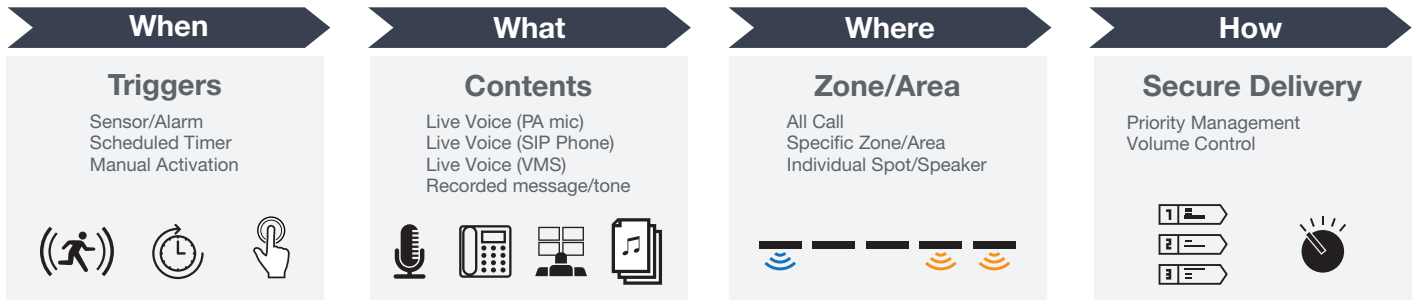
IP-A1 series IP endpoints adopt common industrial standard protocols for its audio communications and controls, which helps to establish fully integrated systems by communicating not only between IP-A1 series devices but also with external devices and platforms such as SIP phone, security VMS (Video Management Software), Access Control or Sensing systems. Adding an endpoint or group of endpoints into a commercial communication system brings it to the next level for being capable of flexible audio communications over the network.



IP-A1 can be the easiest “**piece**” to be added for fulfilling **Audio System** requirements in your integration project designs.



Key Elements of Audio Communications



IP-A1 series is designed to handle these elements flexibly for meeting every single project requirements.

Server-less & Scalable

IP-A1 series does not require a dedicated server for its operation in standalone mode, so that the system budget can be minimized. The simplest PA system can be established by a single endpoint device such as IP Horn Speaker, while a building wide or even community wide audio communication system can also be configured with a large number of endpoints designed in different forms.



Server

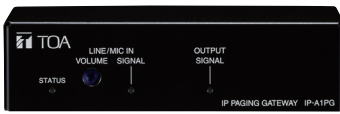


Spot Announcement



Large-scale Broadcast

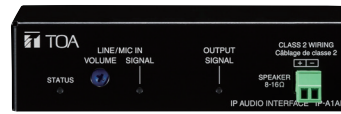
03 Lineup



Transmitter

IP Paging Gateway
IP-A1PG

- > 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



Receiver

IP Audio Interface
IP-A1AF

- > Receive SIP audio, ONVIF Audio Backchannel and Multicast
- > Local broadcast using internal audio files or local audio source
- > 1 audio input (LINE/MIC selectable, phantom power On/Off)
- > 8W (PoE)/15W(PoE+) built-in amplifier, 1 LINE audio output
- > 2 control inputs and 1 control output
- > HTTP commands (receive)
- > Audio file storage (20 files, total 80MB, WAV/MP3)
- > Playback programs (Repeat, Weekly Timer)
- > PoE/PoE+ powered



Receiver

IP Ceiling Speaker
IP-A1PC238

- > 16cm (6") cone-type speaker for in-ceiling installations
- > Receive SIP audio, ONVIF Audio Backchannel and Multicast
- > Local broadcast using internal audio files
- > 8W built-in amplifier
- > 2 control inputs and 1 control output
- > HTTP commands (receive)
- > Audio file storage (20 files, total 80MB, WAV/MP3)
- > Playback programs (Repeat, Weekly Timer)
- > PoE powered



Receiver

IP Horn Speaker
IP-A1SC15

- > 124dB (PoE+ powered) with IP66 rating for outdoor installations
- > Receive SIP audio, ONVIF Audio Backchannel and Multicast
- > Local broadcast using internal audio files
- > 8W (PoE)/15W(PoE+) built-in amplifier
- > 2 control inputs and 1 control output
- > HTTP commands (receive)
- > Audio file storage (20 files, total 80MB, WAV/MP3)
- > Playback programs (Repeat, Weekly Timer)
- > PoE/PoE+ powered



Receiver

IP Ceiling Mount Speaker
IP-A1PC580R

- > 20cm (8") dual cone-type speaker with metal construction
- > Receive SIP audio, ONVIF Audio Backchannel and Multicast
- > Local broadcast using internal audio files
- > 1 audio input (LINE/MIC selectable, phantom power On/Off)
- > 8W built-in amplifier, 1 LINE audio output
- > 2 control inputs and 1 control output
- > HTTP commands (receive)
- > Audio file storage (20 files, total 80MB, WAV/MP3)
- > Playback programs (Repeat, Weekly Timer)
- > PoE powered



Receiver

IP Square Speaker
IP-A1PC580S

- > 20cm (8") dual cone-type speaker with metal construction
- > Receive SIP audio, ONVIF Audio Backchannel and Multicast
- > Local broadcast using internal audio files
- > 1 audio input (LINE/MIC selectable, phantom power On/Off)
- > 8W built-in amplifier, 1 LINE audio output
- > 2 control inputs and 1 control output
- > HTTP commands (receive)
- > Audio file storage (20 files, total 80MB, WAV/MP3)
- > Playback programs (Repeat, Weekly Timer)
- > PoE powered

04 Key Broadcast Functions

Internal Audio File

PG AF PC238 SC15 PC580R/S

- Up to 20 audio files (Total 80MB)
- MP3, WAV
- Volume level, Number of times to repeat and Interval can be specified.



Audio File Formats

WAV: 8/16/44.1/48 kHz sampling frequency, 8/16bit, mono/stereo
 MP3: 32/44.1/48 kHz sampling frequency, 64-320 kbps, CBR/VBR, mono/stereo

VMS (Onvif Audio Backchannel) Broadcast

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- Broadcasts can be made using Onvif Audio Backchannel protocol from VMS (Video Management System) software.



Compatible Audio Codecs

PCMU (G.711u)

2-way Communication

AF PC580R/S

- Audio back stream can be made for audio monitoring and/or conversation applications.



Audio Input

Audio Input: LINE/MIC (LINE: 0dB, MIC: -60dB), PAD, Phantom Power On/Off

SIP Broadcast

AF PC238 SC15 PC580R/S

- Broadcasts can be made using SIP protocol via SIP server.



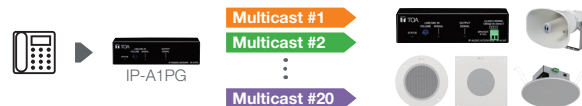
Compatible Audio Codecs

G.722, PCMU (G.711u), PCMA (G.711a)

Multicast Streaming

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- Up to 20 multicast addresses and ports can be managed and streamed by one IP-A1PG.
- Each receiving device is capable of 20 multicast ports.



Compatible Audio Codecs

G.722, PCMU (G.711u), PCMA (G.711a) – Auto codec recognition

Priority Management

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- Broadcast priorities can be changed between broadcast types and patterns on each device.



Default Priorities (High to Low)

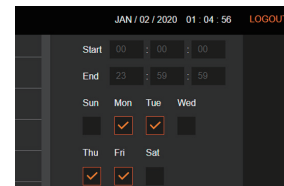
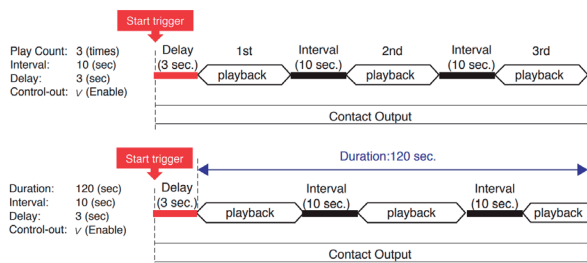
IP-A1PG: SIP, VMS, Pattern 1-20, LINE/MIC IN
 Receivers: SIP, VMS, Multicast 1-10, Pattern 1-20, Multicast 11-20, Local*

*Available only on IP-A1AF

Broadcast Patterns

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- Up to 20 Broadcast Patterns can be registered by using internal audio files.
- Play mode can be selected from the following;



Weekly Timer

- Specify Start and End time to repeat.
- Select applicable days.

*This functions is available only on IP-A1AF, IP-A1PC238, IP-A1PC580R and IP-A1PC580S.

05 Applications

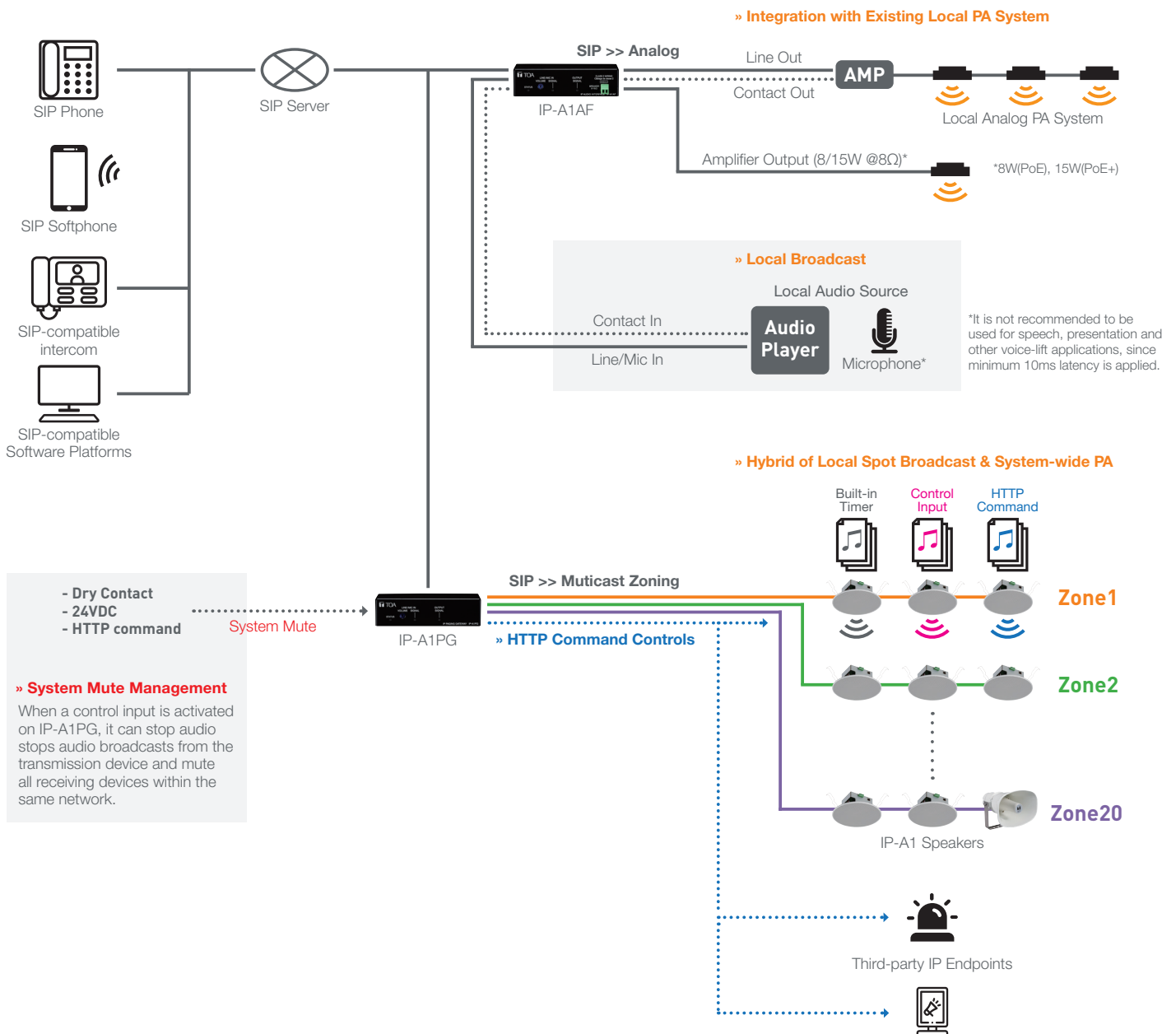
Minimal Standalone Operation



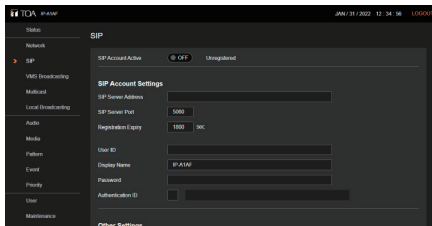
Internal Audio Files (20 files, MP3/WAV, 80MB)

Scheduled Timer / Repeat

Sophisticated PA System Integrations

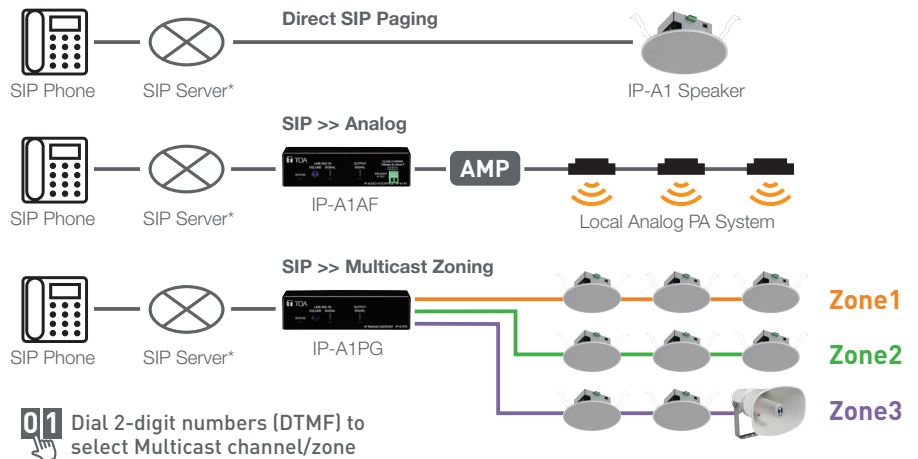


SIP Phone System Integrations



IP-A1 Browser Interface
(SIP Account Setting Menu)

» As simple as adding a “Phone”



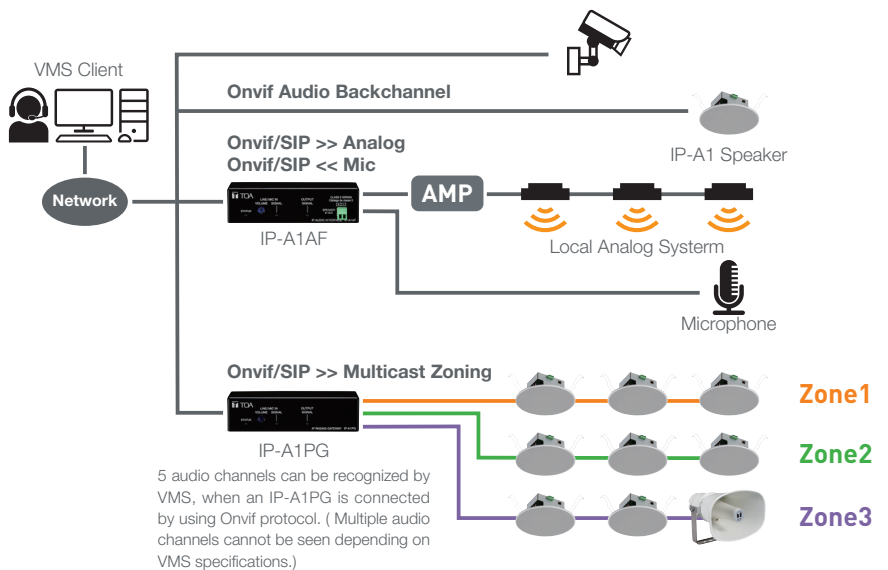
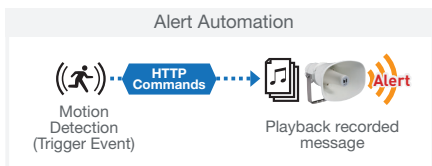
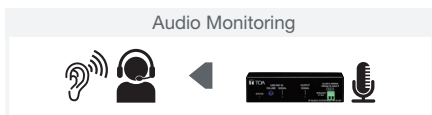
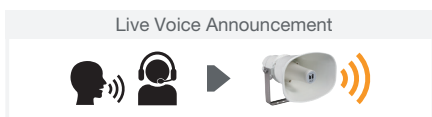
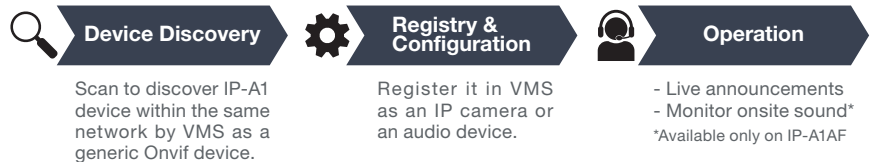
01 Dial 2-digit numbers (DTMF) to select Multicast channel/zone

*Peer-to-peer (P2P) network communication is also supported to establish the system without a SIP server.

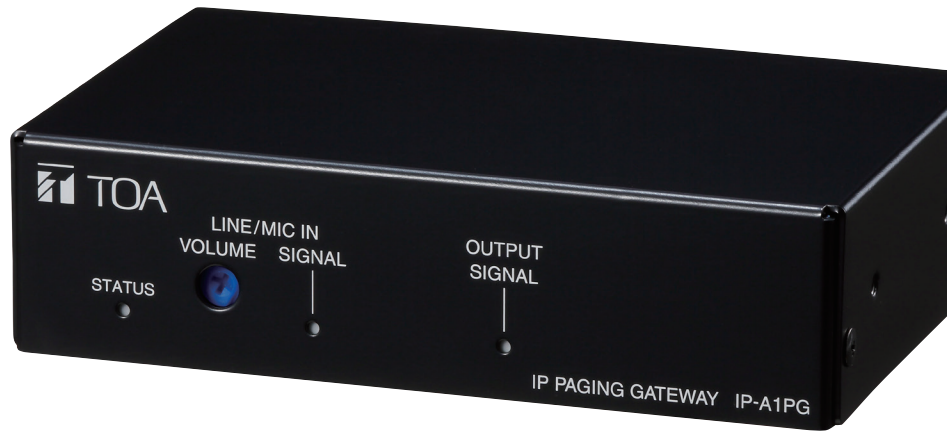
Security VMS Integrations



» As simple as adding a “Camera”



06 Features

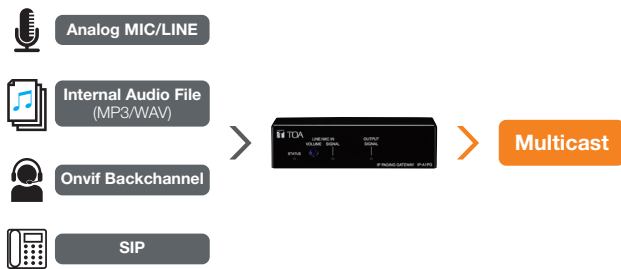


IP-A1PG the Intelligence of IP-A1 Series

IP-A1PG is designed to manage a variety of functions to make IP-A1 series a powerful communication system, while being integrated with external systems and platforms for receiving and sending signals to each other.

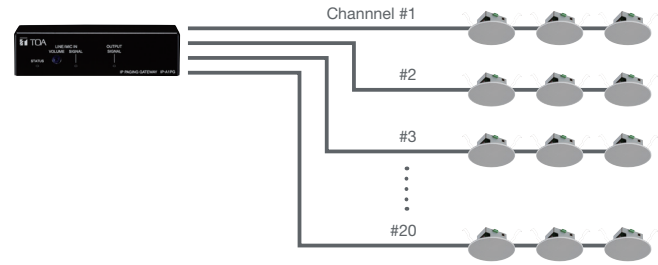
Audio Protocol Conversion

A variety of audio sources sent via different protocols can be converted into multicast format.



Multicast Zoning

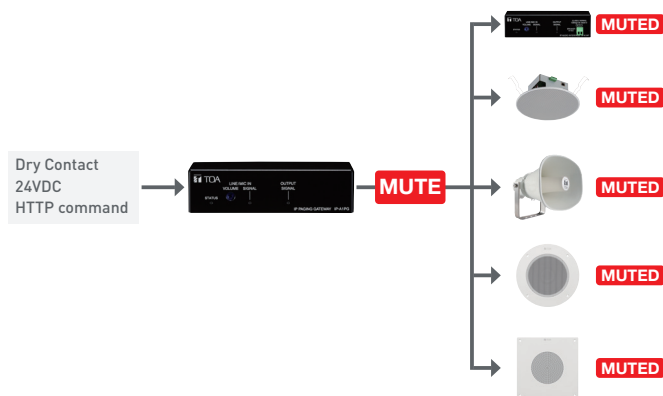
Up to 20 multicast addresses and ports can be managed by one IP-A1PG for zoning broadcast applications.



Multicast Transfer Channel Settings		
Group Name	Multicast Address	Port
1 Multicast 1	239 . 239 . 14 . 1	48000
2 Multicast 2	239 . 239 . 14 . 2	48002
3 Multicast 3	239 . 239 . 14 . 3	48004

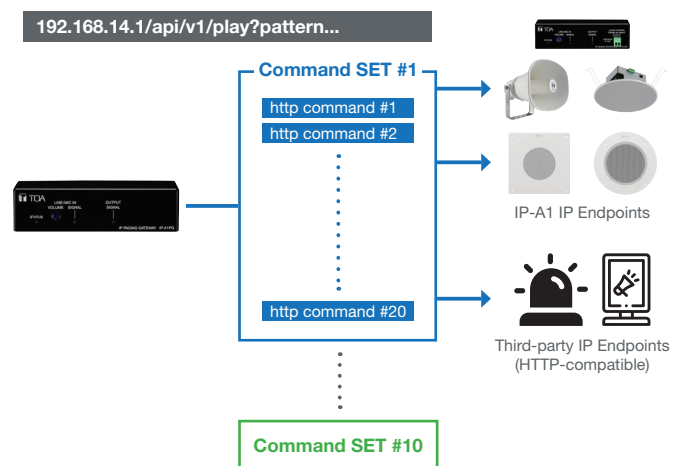
System Mute

All broadcasts made by IP-A1 series endpoints within the same network can be muted at once by triggering the control input.

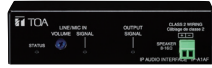


HTTP Command Distribution

General HTTP commands can be registered and sent out as a set to any HTTP command-compatible devices.



IP-A1AF



IP-A1PC238



IP-A1SC15



IP-A1PC580R



IP-A1PC580S



Power source	PoE+ / PoE	PoE	PoE+ / PoE	PoE	PoE
Audio Protocols 	✓	✓	✓	✓	✓
Audio Protocols 	✓	✓	✓	✓	✓
Two-way Communication (MIC Input)	✓	-	-	✓	✓
Audio Output	✓	-	-	✓	✓
Audio Storage 	✓	✓	✓	✓	✓
Weekly Timer Triggering Broadcast Patterns	✓	✓	✓	✓	✓
Controls 	✓	✓	✓	✓	✓
Environmental Ratings	- (-30 to +55°C / -22 to 131°F)	- (0 to +50°C / 32 to 122°F)	IP66 (-30 to +55°C / -22 to 131°F)	- (0 to +50°C / 32 to 122°F)	- (0 to +50°C / 32 to 122°F)
Plenum-rated (UL2043)	-	-	-	✓ when installed with the optional backcan HY-BC580U	-

» Priority Management

Broadcast priority can be flexibly configured on each endpoint device independently.

High	Priority
1	SIP
2	VMS Broadcasting
3	Multicast 1
⋮	
12	Multicast 10
13	Pattern 1(None)
⋮	
32	Pattern 20(None)
Low	

» Individual Volume Adjustment

Individual (Master and each Input) volume level can be flexibly adjusted to uniform the output level or set specific broadcasts at higher level intentionally.

Speaker Volume	
Speaker Mute	<input type="checkbox"/>
Master Volume	31-30 dB
Offset Volume	0.0 dB
Input Volume	
SIP	0.0 dB
VMS Broadcasting	0.0 dB
Multicast 1	0.0 dB
Multicast 2	0.0 dB

» Weekly Timer

Weekly Timer function is available to play broadcast patterns by specifying "Start" time, "End" time and effective Day of Week.

JAN / 02 / 2020 01 : 04 : 56 LOGOUT	
Start	00 : 00 : 00
End	23 : 59 : 59
Sun	<input type="checkbox"/>
Mon	<input checked="" type="checkbox"/>
Tue	<input checked="" type="checkbox"/>
Wed	<input type="checkbox"/>
Thu	<input checked="" type="checkbox"/>
Fri	<input checked="" type="checkbox"/>
Sat	<input type="checkbox"/>

07 What can be achieved by HTTP commands?



Remote API
HTTP



Play and Stop Internal Audio Files

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- Internal audio files can be played back and stopped.



Number of times to repeat / Interval time / Volume Level and others

Initiating a SIP Call

AF PC238 SC15 PC580R/S

- A SIP call can be initiated and cancelled from an IP-A1 device to a pre-registered SIP phone.



Volume Setting

PG AF PC238 SC15 PC580R/S

- Master volume, Master offset volume and Internal audio source volume can be adjusted and configured.



"Command Set" Distribution

PG

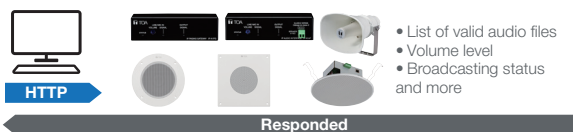
- Up to 10 pre-registered HTTP Command Set can be distributed from IP-A1PG. And each Command Set consists of up to 20 commands.



Get Device Status and Setting Values

PG AF PC238 SC15 PC580R/S

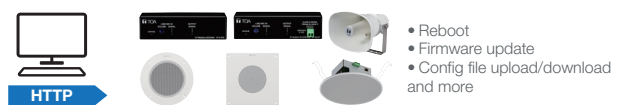
- Device status and setting values can be obtained.



Device Maintenance

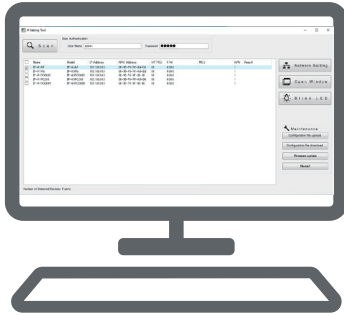
PG AF PC238 SC15 PC580R/S

- Key device maintenance operations can be performed.



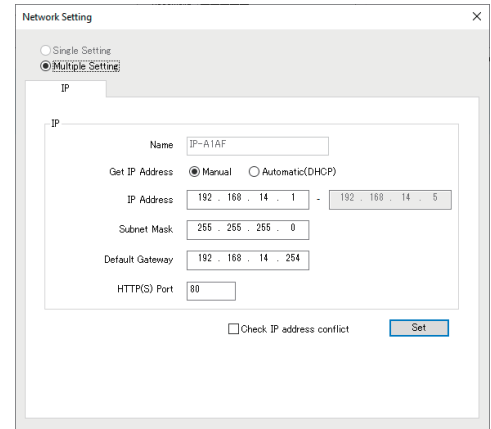
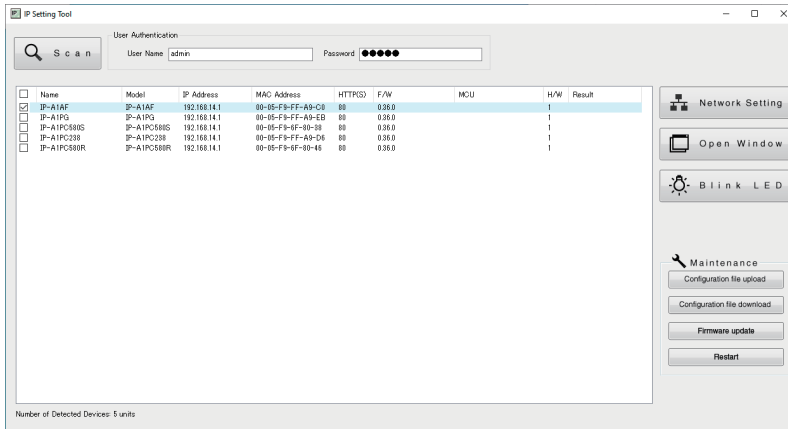
Please contact us to get the full command list.

08 IP Setting Tool Software



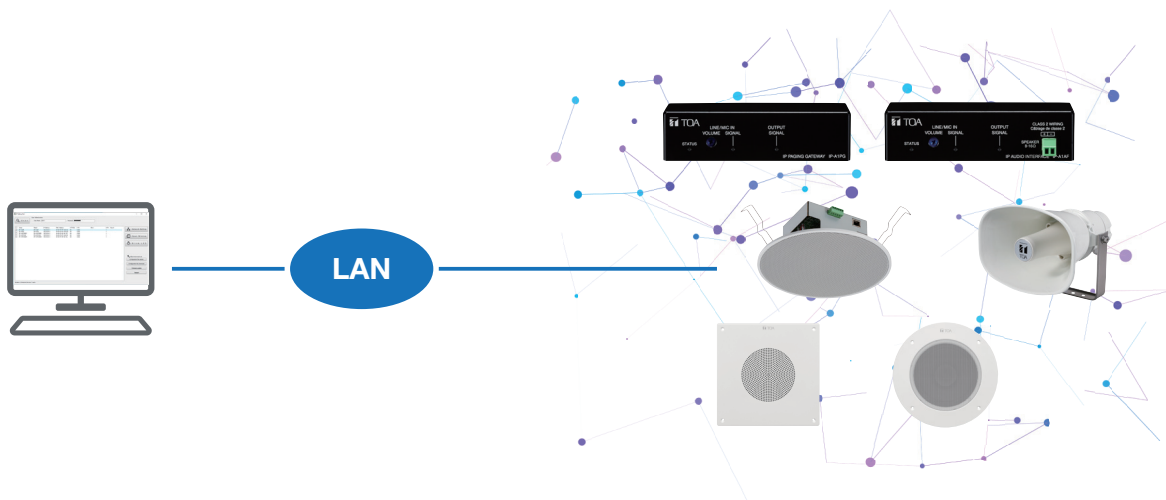
(Free to download)

- All IP-A1 series endpoint devices within the same network can be discovered and displayed as a list.
- Configuration file can be downloaded/uploaded.
- Firmware can be updated.
- Basic network settings can be configured on single device or multiple devices.

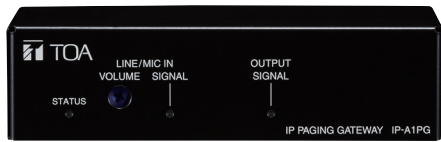


PC Requirements

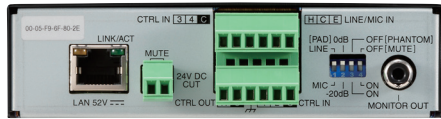
OS	Windows 10 Pro (64bit) / 10 Home (64bit) / 11 Pro / 11 Home
Display	Resolution: 1366 x 768 or more



IP-A1PG IP Paging Gateway



IP-A1PG front



IP-A1PG rear

- 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

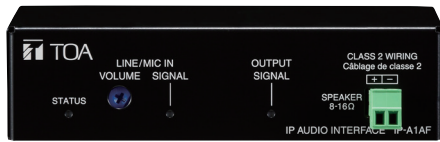
Specifications

	IP-A1PG
Power Source	PoE(IEEE802.3af Class 3)
Power Consumption	2.5 W
Audio Transmission Method	Multicast Audio Streaming
Audio Codec	PCM(U.G.711u), PCMA(G.711a), G.722
Audio Delay Time	Min. 100 ms(*1)
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 LINE/MIC selectable (Rated input: LINE: 0 dB (*2), MIC: -60 dB (*2)) PAD function (-20 dB (*2)), Phantom power ON/OFF (12 V DC), volume adjustable removable terminal block (6 pins)
Monitor Output	1 channel, electronically-balanced, 600 Ω or less Rated output: 0 dB (*2), RCA pin jack
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)
Mute Control Input	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)
Broadcasting	Audio transmission Transmit internal messages by multicast audio streaming Transmit audio from audio input connected devices by multicast audio streaming Audio conversion Convert SIP voice to multicast audio stream and transmit Convert ONVIF Audio Backchannel audio to multicast audio stream and transmit
Event	Execute event triggered by control input Configurable actions: Internal message broadcast, audio input broadcast, command set transmission, broadcast disable, system mute
Internal Message	Max. 20 messages (Max. recording capacity: 80 MB) Supported file format: WAV file: 8/16/44.1/48 kHz sampling frequency, 8/16 bit, monoaural/stereo MP3 file: 32/44.1/48 kHz sampling frequency, 64 - 320 kbps, CBR/VBR, monoaural/stereo Repeat playback: Playcount (1 - 10 times) or Duration (5 - 3600 sec) Interval time: 0 - 60 sec, Delay time: 0 - 30 sec
Command Set	20 commands can be registered in each of 10 command sets
Clock Accuracy	±13 seconds per month
Time Adjustment	Manual time setting, Time adjustment by NTP server
Power Outage Protection Period	24 hours (RTC time retention, at 40 °C (104 °F))
Operating Temperature	0 °C to +40 °C (32 °F to 104 °F)
Operating Humidity	90 %RH or less (no condensation)
Finish	Front case: Surface-treated steel plate, black, paint Rear chassis: Surface-treated steel plate
Dimensions	126 (W) x 33 (H) x 80 (D) mm (4.96" x 1.3" x 3.15") (excluding projection)
Weight	390 g (0.86 lb)
Accessory	Removable terminal plug (6 pins, preinstalled on the unit) ...2, Removable terminal plug (2 pins, preinstalled on the unit), Rubber feet ...4, Mounting screw (M3 x 6) ...4

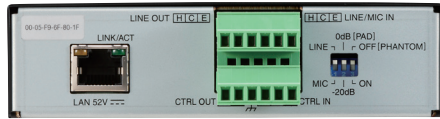
(*1) When using Monitor output, assume an audio delay time.

(*2) 0 dB = 1 V

IP-A1AF IP Audio Interface



IP-A1AF front



IP-A1AF rear

- Receive SIP audio, ONVIF Audio Backchannel and Multicast
- Local broadcast using internal audio files or local audio source
- 1 audio input (LINE/MIC selectable, phantom power On/Off)
- 8W (PoE)/15W(PoE+) built-in amplifier, 1 LINE audio output
- 2 control inputs and 1 control output
- HTTP commands (receive)
- Audio file storage (20 files, total 80MB, WAV/MP3)
- Playback programs (Repeat, Weekly Timer)
- PoE/PoE+ powered

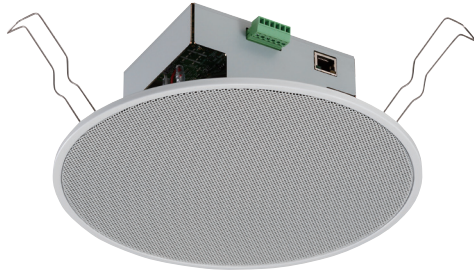
Specifications

	IP-A1AF
Power Source	PoE+ (IEEE802.3at Class 4), PoE (IEEE802.3af Class 3)
Power Consumption	22 W (at PoE+ powered, rated output) 12.95 W (at PoE powered, rated output) 5 W (IEC62368-1)
Amplifier Rated Output	15 W (at PoE+, powered, 8 Ω) 8 W (at PoE, powered, 8 Ω) Applicable impedance: 8 - 16 Ω
Frequency Response	50 Hz - 20 kHz
Audio Codec	PCMU (G.711u), PCMA (G.711a), G.722
Audio Delay Time	Min. 100 ms (*1)
Broadcasting Mode	SIP Broadcasting/SIP calling Mode: PCMU/PCMA/G.722, P2P/SIP Server Connection Multicast Broadcasting Mode: PCMU/PCMA/G.722 Auto codec recognition, 20 ports VMS Broadcasting Mode: ONVIF Audio Backchannel, PCMU Internal Message Broadcasting Mode Local Broadcasting Mode: Output from LINE/MIC IN to SPEAKER OUT Note: Each broadcast mode can be assigned an order of priority using the Priority Setting function.
Internal Messages	Max. 20 messages (Max. recording capacity: 80 MB) Supported file formats WAV file: 8/16/44.1/48 kHz sampling frequency, 8/16 bit, monoaural/stereo MP3 file: 32/44.1/48 kHz sampling frequency, 64 - 320 kbps, CBR/VBR, monoaural/stereo Repeat playback: Playcount (1 - 10 times), Duration (5 - 3600 sec) or Timer (from Start time to End time) Interval time: 0 - 60 sec, Delay time: 0 - 30 sec Trigger: Control Input or Remote API (HTTP)
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 LINE/MIC selectable (Rated input: LINE: 0 dB (*2), MIC: -60 dB (*2)) PAD function (-20 dB (*2)), Phantom power ON/OFF (12 V DC), volume adjustable removable terminal block (6 pins)
Audio Output	1 channel, electronically-balanced, 600 Ω or less Rated input: 0 dB (*2), removable terminal block (6 pins)
Control Input	2 channels, no-voltage make contact inputs, open voltage: 5 V DC, short-circuit current: 2 mA or less, removable terminal block (6 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)
Clock Accuracy	±13 seconds per month
Time Adjustment	Manual time setting, Time adjustment by NTP server
Power Outage Protection Period	24 hours (RTC time retention, at 40 °C (104 °F))
Operating Temperature	-30 °C to +55 °C (-22 °F to 131 °F)
Operating Humidity	90 %RH or less (no condensation)
Finish	Front case: Surface-treated steel plate, black, paint Rear chassis: Surface-treated steel plate
Dimensions	126 (W) x 33 (H) x 80 (D) mm (4.96" x 1.3" x 3.15") (excluding projection)
Weight	390 g (0.86 lb)
Accessory	Removable terminal plug (6 pins, preinstalled on the unit) ...2, Removable terminal plug (2 pins, preinstalled on the unit) ...1, Rubber feet ...4, Mounting screw (M3 x 6) ...4

(*1) When using in Local Input Broadcasting Mode, assume Audio Delay Time.

(*2) 0 dB = 1 V

IP-A1PC238 IP Ceiling Speaker



- 16cm (6") cone-type speaker for in-ceiling installations
- Receive SIP audio, ONVIF Audio Backchannel and Multicast
- Local broadcast using internal audio files
- 8W built-in amplifier
- 2 control inputs and 1 control output
- HTTP commands (receive)
- Audio file storage (20 files, total 80MB, WAV/MP3)
- Playback programs (Repeat, Weekly Timer)
- PoE powered

Specifications

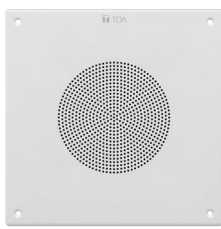
	IP-A1PC238
Power Source	PoE (IEEE802.3af Class 3)
Power Consumption	12.95 W (rated output) 5 W (IEC62368-1)
Amplifier Rated Output	8 W
Sensitivity	94 dB (1 W, 1 m) (500 Hz - 5 kHz, pink noise)
Maximum Sound Pressure Level	103 dB (8 W, 1 m)
Frequency Response	60 Hz - 20 kHz (peak - 20 dB)
Speaker Component	16 cm (6") cone-type
Audio Codec	PCMU (G.711u), PCMA (G.711a), G.722
Broadcasting Mode	SIP Broadcasting Mode: PCMU/PCMA/G.722, P2P/SIP Server Connection Multicast Broadcasting Mode: PCMU/PCMA/G.722 Auto codec recognition, 20 ports VMS Broadcasting Mode: ONVIF Audio Backchannel, PCMU Internal Message Broadcasting Mode Note: Each broadcast mode can be assigned an order of priority using the Priority Setting function.
Internal Messages	Max. 20 messages (Max. recording capacity: 80 MB) Supported file formats WAV file: 8/16/44.1/48 kHz sampling frequency, 8/16 bit, monoaural/stereo MP3 file: 32/44.1/48 kHz sampling frequency, 64 - 320 kbps, CBR/VBR, monoaural/stereo Repeat playback: Playcount (1-10 times), Duration (5-3600 sec) or Timer (from Start time to End time) Interval time: 0 - 60 sec, Delay time: 0 - 30 sec Trigger: Control Input or Remote API (HTTP)
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)
Control Input	2 channels, no-voltage make contact inputs, open voltage: 5 V DC, short-circuit current: 2 mA or less, removable terminal block (6 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 (orange), LINK/ACT (green)
Clock Accuracy	±13 seconds per month
Time Adjustment	Manual time setting, Time adjustment by NTP server
Power Outage Protection Period	24 hours (RTC time retention, at 40 °C (104 °F))
Dimensions for Fixing Hole	Mounting hole: $\phi 200 \pm 2$ mm (7.87" ± 0.08 ") Ceiling thickness: 5 - 25 mm (0.2" - 0.98")
Speaker Mounting Method	Spring clamp
Operating Temperature	0 °C to +50 °C (32 °F to 122 °F)
Operating Humidity	90 %RH or less (no condensation)
Finish	Frame: Steel plate, white (RAL 9016 equivalent), paint Grill: Steel net, white (RAL 9016 equivalent), paint
Dimensions	$\Phi 230 \times 89$ (D) mm (9.06" x 3.5")
Weight	880 g (1.94 lb)
Accessory	Pattern paper ...1, Removable terminal plug (6 pins, preinstalled on the unit) ...1

NOTE: Please do not install the product near heat insulation material, or cover the product with heat insulation or acoustic absorbing materials to prevent fire risk. Please do not install the product in damp or wet locations or areas with high humidity (condensing) as it may cause damage to the product.

IP-A1PC580R IP Ceiling Mount Speaker
IP-A1PC580S IP Square Speaker



IP-A1PC580R



IP-A1PC580S

- 20cm (8") dual cone-type speaker with metal construction
- Receive SIP audio, ONVIF Audio Backchannel and Multicast
- Local broadcast using internal audio files
- 1 audio input (LINE/MIC selectable, phantom power On/Off)
- 8W built-in amplifier, 1 LINE audio output
- 2 control inputs and 1 control output
- HTTP commands (receive)
- Audio file storage (20 files, total 80MB, WAV/MP3)
- Playback programs (Repeat, Weekly Timer)
- PoE powered

Specifications

	IP-A1PC580R	IP-A1PC580S
Power Source	PoE (IEEE802.3af Class 3)	
Power Consumption	12.95 W (rated output) 5 W (IEC62368-1)	
Amplifier Rated Output	8 W	
Sensitivity	97 dB (1 W, 1 m)	
Maximum Sound Pressure Level	106 dB (8 W, 1 m)	
Frequency Response	50 Hz - 16.5 kHz	
Speaker Component	20 cm (8") Dual cone-type	
Audio Codec	PCMU (G.711u), PCMA (G.711a), G.722	
Broadcasting Mode	SIP Broadcasting/SIP calling Mode: PCMU/PCMA/G.722, P2P/SIP Server Connection Multicast Broadcasting Mode: PCMU/PCMA/G.722 Auto codec recognition, 20 ports VMS Broadcasting Mode: ONVIF Audio Backchannel, PCMU Internal Message Broadcasting Mode Note: Each broadcast mode can be assigned an order of priority using the Priority Setting function.	
Internal Messages	Max. 20 messages (Max. recording capacity: 80 MB) Supported file format: WAV file: 8/16/44.1/48 kHz sampling frequency, 8/16 bit, monoaural/stereo MP3 file: 32/44.1/48 kHz sampling frequency, 64 - 320 kbps, CBR/VBR, monoaural/stereo Repeat playback: Playcount (1 - 10 times), Duration (5 - 3600 sec) or Timer (from Start time to End time) Interval time: 0 - 60 sec, Delay time: 0 - 30 sec Trigger: Control Input or Remote API (HTTP)	
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 LINE/MIC selectable (Rated input: LINE: 0 dB (*1), MIC: -60 dB(*1)) PAD function(-20 dB(*1)), Phantom power ON/OFF(12 V DC), volume adjustable removable terminal block(6 pins)	
Audio Output	1 channel, electronically-balanced, 600 Ω or less Rated output: 0 dB(*1), removable terminal block (6 pins)	
Control Input	2 channels, no-voltage make contact inputs, open voltage: 5 V DC, short-circuit current: 2 mA or less, removable terminal block (6 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)	
Clock Accuracy	±13 seconds per month	
Time Adjustment	Manual time setting, Time adjustment by NTP server	
Power Outage Protection Period	24 hours (RTC time retention, at 40 °C (104 °F))	
Dimensions for Fixing Hole	Mounting hole: Φ228.6 mm (9")	
Speaker Mounting Method	Screw in type	
Operating Temperature	0 °C to +50 °C (32 °F to 122 °F)	
Operating Humidity	90 %RH or less (no condensation)	
Finish	Frame: Steel plate, white (RAL 9016 equivalent), paint Grill: Steel net, white (RAL 9016 equivalent), paint	
Dimensions	Φ324 x 111 (D) mm (12.76" x 4.37")	318 (W) x 318 (H) x 108 (D) mm (12.52" x 12.52" x 4.25")
Weight	1.8 kg (3.97 lb.)	2 kg (4.41 lb.)
Accessory	Pattern paper...1, Removable terminal plug (6 pins, preinstalled on the unit) ...2, Mounting screw (5 x 38) ...4	
Option	Back Can (for UL 2043 certified installation): HY-BC580U	

(*1) 0 dB = 1V

NOTE: Please do not install the product near heat insulation material, or cover the product with heat insulation or acoustic absorbing materials to prevent fire risk. Please do not install the product in damp or wet locations or areas with high humidity (condensing) as it may cause damage to the product.

IP-A1SC15 IP Horn Speaker



- 124dB (PoE+ powered) with IP66 rating for outdoor installations
- Receive SIP audio, ONVIF Audio Backchannel and Multicast
- Local broadcast using internal audio files
- 8W (PoE)/15W(PoE+) built-in amplifier
- 2 control inputs and 1 control output
- HTTP commands (receive)
- Audio file storage (20 files, total 80MB, WAV/MP3)
- Playback programs (Repeat, Weekly Timer)
- PoE/PoE+ powered

Specifications

	IP-A1SC15
Power Source	PoE+ (IEEE802.3at Class 4), PoE (IEEE802.3af Class 3)
Power Consumption	22 W (at PoE+ powered, rated output), 12.95 W (at PoE powered, rated output), 5 W (IEC62368-1)
Amplifier Rated Output	15 W (at PoE+ powered), 8 W (at PoE powered)
Sensitivity	112 dB (1 W, 1 m) (500 Hz - 2.5 kHz, peak level)
Maximum Sound Pressure Level	124 dB (at PoE+ powered, 15 W, 1 m) (500 Hz - 2.5 kHz, peak level) 121 dB (at PoE powered, 8 W, 1 m) (500 Hz - 2.5 kHz, peak level)
Frequency Response	280 Hz - 12.5 kHz
Audio Codec	PCMU (G.711u), PCMA (G.711a), G.722
Broadcasting Mode	SIP Broadcasting Mode: PCMU/PCMA/G.722 Multicast Broadcasting Mode: PCMU/PCMA/G.722, Auto codec recognition, Max. 20 ports VMS Broadcasting Mode: ONVIF Audio Backchannel, PCMU Internal Message Broadcasting Mode Note: Each broadcast mode can be assigned an order of priority using the Priority Setting function.
Internal Messages	Max. 20 messages (Max. recording capacity: 80 MB) Supported file formats WAV file: 8/16/44.1/48 kHz sampling frequency, 8/16 bit, monoaural/stereo MP3 file: 32/44.1/48 kHz sampling frequency, 64 - 320 kbps, CBR/VBR, monoaural/stereo Repeat playback: Playcount(1-10 times), Duration (5-3600 sec) or Timer (from Start time to End time) Interval time: 0 - 60 sec, Delay time: 0 - 30 sec Trigger: Control Input or Remote API (HTTP)
Network I/F	100BASE-TX, MDI/MDI-X, RJ-45
Network Protocol	TCP/IP, UDP, HTTP, RTP, RTSP, ARP, ICMP, IGMPv3, NTP, SIP (RFC3261)
Control Input	2 channels, no-voltage make contact inputs, open voltage: 5 V DC, short-circuit current: 2 mA or less, removable terminal block (3 pins)
Control Output	1 channel, open collector output, withstand voltage: 30 V DC, control current: 10 mA or less, removable terminal block (3 pins)
Indicator	LAN LINK/ACT (green), STATUS (orange)
Clock Accuracy	±13 seconds per month
Time Adjustment	Manual time setting, Time adjustment by NTP server
Power Outage Protection Period	24 hours (RTC time retention, at 40 °C (104 °F))
Dust/Water Protection	IP66
Operating Temperature	-30 °C to +55 °C (-22 °F to +131 °F)
Operating Humidity	90 %RH or less (no condensation)
Finish	Horn flare and body: Aluminum, off-white (RAL 9010 equivalent), paint Reflector horn: ABS resin, off-white (RAL 9010 equivalent) Rear cover: PC resin, off-white (RAL 9010 equivalent), paint Bracket, screws and bolts: Stainless steel
Dimensions	222 (W) x 211 (H) x 276 (D) mm (8.74" x 8.31" x 10.87")
Weight	1.4 kg (3.09 lb)
Accessory	Rear cover...1, Removable terminal plug (3 pins)...2
Option	Speaker mount bracket: SP-131, SP-201, SP-301 Pole band: YS-60B

Note: Take special care to avoid mounting this speaker directly to structures (such as ski lift towers) that generate large amounts of vibration. Also, do not use this speaker in environments where it may be exposed to oil or other chemicals, as mounting parts could rapidly deteriorate, possibly resulting in personal injury or other accidents due to the speaker falling.
These specifications only apply to the firmware version 2.1.0.