

# I128SYSM+

PoE+ Indoor 1' x 2' Suspended Ceiling Mount IP Loudspeaker with Microphone



## Features

### Network Features

- Dynamic or Static IP Address
- IEEE802.3 10/100Base-T Ethernet
- IEEE 802.1q Tagging
- IEEE 802.11AT Compliant

### VoIP Standard Audio

- G.711 u-law/a-law (64 kbit/s)
- G.729 Wideband Audio (64 kbit/s)

### Auto Provisioning

- DHCP Option 66, 150, or TFTP Server
- DHCP Option 72 for HTTP Server

### Auto Registration

- SLP for InformaCast
- DHCP Option 72 for SA-Announce or GCK

### Static Configuration

- HTTP GUI for Static Configuration
- Cisco SRST

### Audio Features

- Integrated Amplifier
  - 15-Watt Total Power
  - Primary Speaker Output 8Ω
- Aux Audio Line-In Unbalanced (2.8Vpp 10K)
- Aux Audio Line-Out Unbalanced (2.8Vpp 10K)

### Additional Features

- 2 General Purpose Inputs
- 1 General Purpose Output (2A @ 30 VDC)
- Phone/Night Loud Ringer
- External Power Supply Option
- Highly Efficient Horn Loudspeaker Provides Greater Output and Coverage
- Integrated Microphone Allows for Half-Duplex or Full-Duplex Paging Based on Software Platform

## General Description

AtlasIED I128SYSM+ is a 1' X 2' suspended ceiling mount IP loudspeaker with integrated microphone. It leverages VoIP communication to extend tele-presence with enhanced audio for environments where network-wide communication is desired and high-output loudspeakers are required to overcome high ambient noise and/or large spaces.

## Applications

AtlasIED I128SYSM+ registers as a communication endpoint directly within InformaCast, GCK, and SA-Announce advanced notification applications, supporting audio broadcast to enhance physical security while improving day-to-day communications through advanced alerting, bell schedules, pre-recorded & scheduled announcements, while leveraging the WAN or LAN network architecture.

When used within a Cisco environment, the I128SYSM+ loudspeakers can join Cisco's Unified Survivable Remote Site Telephony (SRST) as a supported device. Cisco's SRST provides remote location call-processing redundancy when access to the centralized Cisco Unified Communications Manager is interrupted because of a WAN outage. The ability of LAN communication between any combination of phones and loudspeakers is particularly critical during an emergency (which may be the actual cause of the WAN outage).

Where 3rd party notification applications are not required, the I128SYSM+ suspended ceiling mount loudspeaker with integrated microphone can register as SIP devices directly to a SIP server or VoIP Communications Manager for critical alerts and public address applications.

System	
Type	PoE+ Indoor 1' x 2' Suspended Ceiling Mount IP Loudspeaker with Microphone
Operation Mode	Self Powered
Indicators	Network Status (On Back)
Operating Range (-10db)	70Hz - 15.5kHz
Frequency Response (+/- 5dB)	86Hz - 15.5kHz
Vertical Coverage	105° 800Hz - 4kHz
Horizontal Coverage	105° 800Hz - 4kHz
Directivity Factor (Q)	4.7 @ 2 kHz
Max SPL at 1 m (passive)	95 dB SPL Continuous / 98 dB SPL Peak
Recommended Signal Processing	Built-In Processing
General Purpose Interface	Two Trigger Inputs / One Relay Output (2A @ 30 VDC)
Transducers	
Transducer Qty and Size	8"
Voice Coil Size	1"
Cone Material	Curvilinear, Treated Industrial Paper
Driver Protection	Built-In Limiter
Amplification	
Type	Single-Channel Class D Topology
AC Power Input	PoE or PoE+ and External 24VDC
Power Rating (RMS)	15 Watts Max (802.3AT)
THD	<.02%
Cooling	Passive/Convection
Microphone	
Sensitivity	Minus 35 (±4dB) / (0db = 1V/pa, 1kHz)
Impedance	Less than 2.2kΩ
Directivity	Omnidirectional
Frequency Range	20Hz – 20kHz
Standard Operation Voltage	2V
Max. Operation Voltage	10V
Current Consumption Max.	0.5 mA
Sensitivity Reduction Within	Minus 3dB @ 1.5V
S/N Ratio	More than 62dB
Audio Inputs and Outputs	
Input: Analog Audio Type(s)	One Unbalanced Analog
Input: Analog Connectivity	Secured Screw Terminal Block
Input: Network Audio Type(s)	G.711 U-Law/A-Law and G.722 Capable
Input: Network Connectivity	RJ-45 Female
Output: Analog Audio Type(s)	One Unbalance Line Level
Output: Analog Connectivity	Secured Screw Terminal Block
Output: Digital Audio Type(s)	N/A
Output: Digital Connectivity	N/A
Output: Loudspeaker Level	8Ω, 9W (802.3AF), 15W (802.3AT)
Output: Loudspeaker Connectivity	Two x Secured Screw Terminal Block
Software	
SA-Announce Compatible Versions	9.0.18+
InformaCast Compatible Version	8.0+
GCK Compatible Version	3.0+
Network	
Ethernet	IEEE802.3 10/100Base-T
POE	IEEE802.3AF/AT Compliant
VLAN	IEEE802.1q Tagging

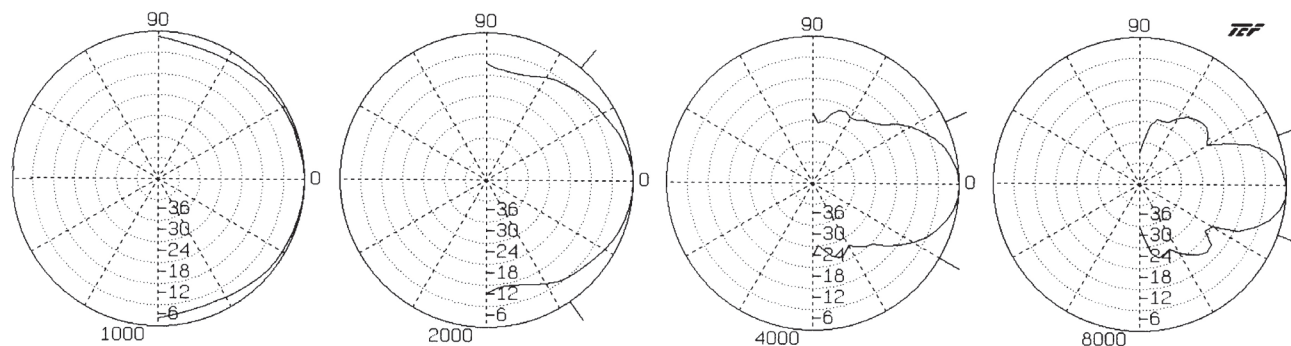
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Protocols	
IP Addressing	DHCP/Static
Auto-Provisioning	HTTP/TFTP
Auto-Registration	HTTP/Service Location Protocol/IEDNet
Time	NTP
Telephony	SIP
Enclosure	
Color	White
Grille Material	Powder Coated Steel with 22-gauge Perforated Steel
Baffle Material	18-gauge Corrosion-Resistant Zinc Plated Steel
Mounting/Rigging Provisions	Lay-In Into A Reflected Ceiling Grid
Safety Agency Ratings	ETL Listed to Comply with UL-60950-1, and CAN/CSA-C22.2 No. 60950-1
Ingress Protection	IP-XX (Not Rated)
Logo	Blue and Removable
Product Dimensions (HxWxD)	11.94" (303mm) x 25.67" (652mm) x 5.06" (128.5mm)
Shipping Dimensions (HxWxD)	12.5" (318mm) x 25.25" (641mm) x 5.5" (140mm)
Net Weight - lbs	10 lbs (4.54kg)
Shipping Weight - lbs	12.8 lbs (5.81kg)
Warranty Coverage	
Warranty Period	1 Year

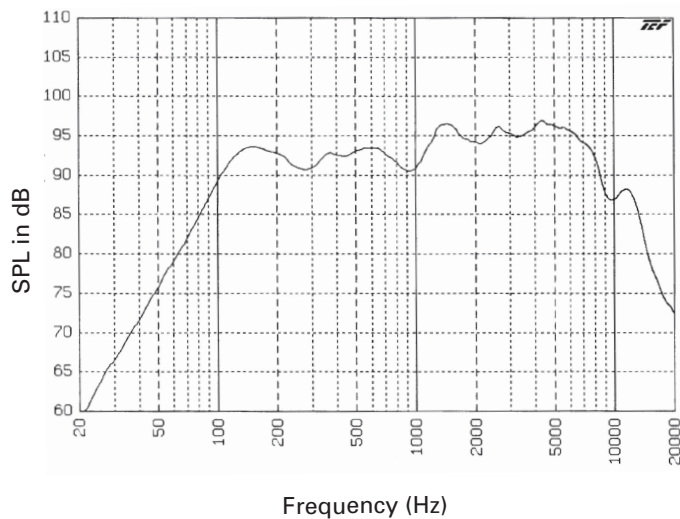
**NOTES:**

1. Sensitivity: Half space pink noise measurement at 6 ft (1.8 m) at 20% power; extrapolated to 1 meter and an input of 2.83 volts RMS.
2. Watts: All wattage figures are calculated using the rated nominal impedance.
3. Frequency response and sensitivity are half-space measurements.

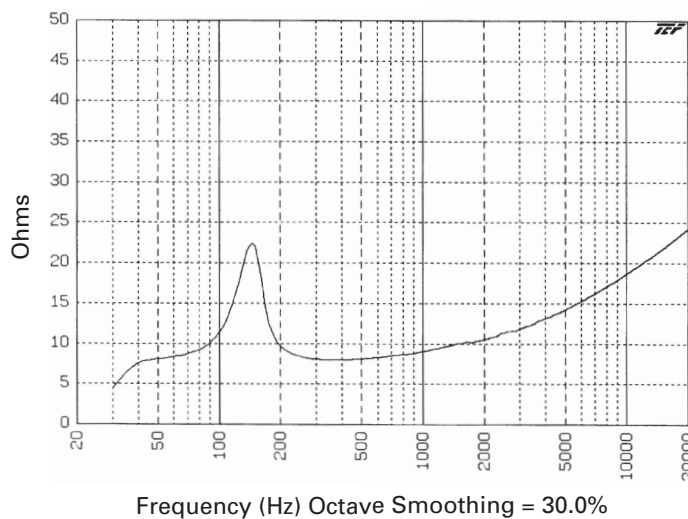
### Polars (Normalized to Zero on Axis) (-6dB)



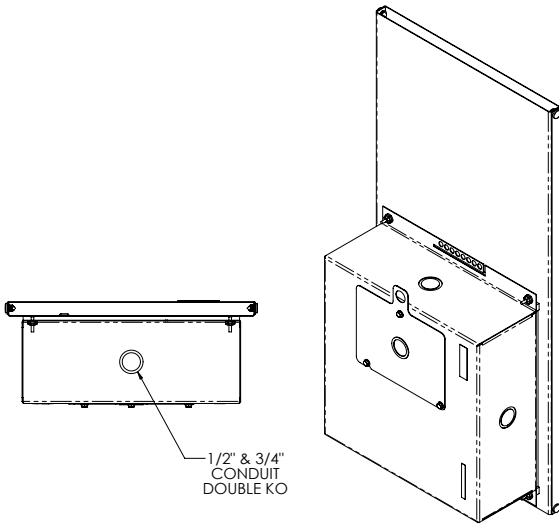
### Frequency Response



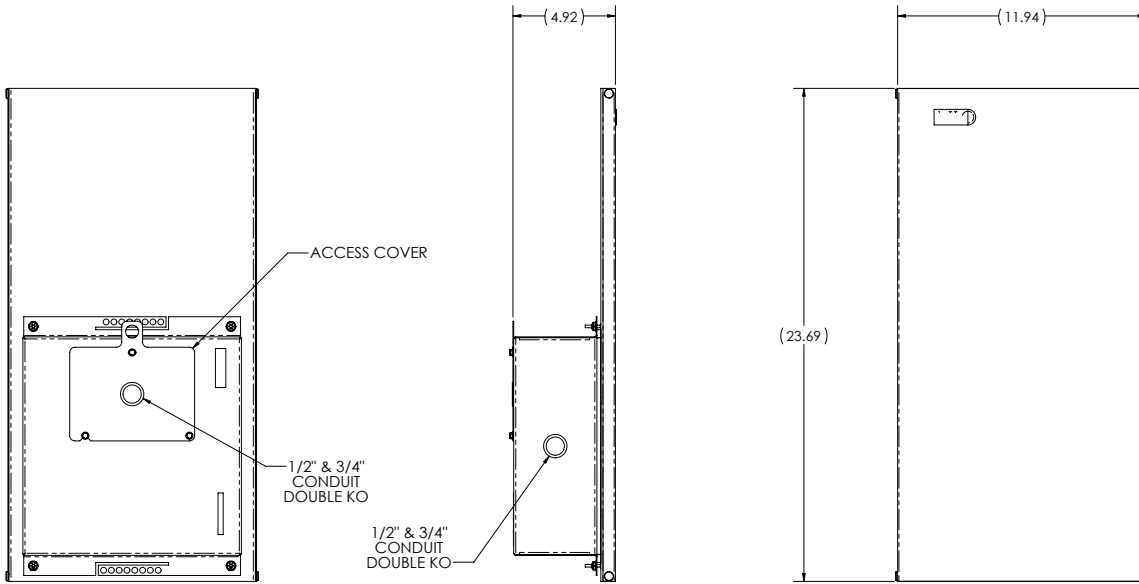
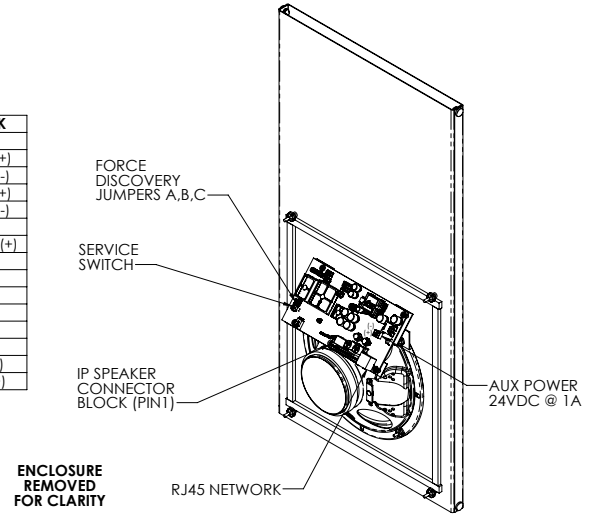
### Impedance



Dimensional Drawings



IP SPEAKER CONNECTOR BLOCK	
PIN	FUNCTION
1	REMOTE BUTTON / GPI 2 (+)
2	REMOTE BUTTON / GPI 2 (-)
3	REMOTE BUTTON / GPI 1 (+)
4	REMOTE BUTTON / GPI 1 (-)
5	RELAY (-)
6	RELAY - NORMALLY OPEN (+)
7	LINE-IN (-)
8	LINE-IN (+)
9	LINE-OUT (-)
10	LINE-OUT (+)
11	PRIMARY SPEAKER (-)
12	PRIMARY SPEAKER (+)
13	SECONDARY SPEAKER (-)
14	SECONDARY SPEAKER (+)



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## Architect and Engineer Specifications

The unit shall be AtlasIED model I128SYSM+. The loudspeaker system shall include factory assembled loudspeaker, integrated talkback microphone, IP addressable PCB amplifier/ control, metal baffle and loudspeaker back box. The loudspeaker shall be an 8" driver with a 10oz (260g) ceramic magnet and seamless cone. The impedance shall be 8 ohm and a voice coil diameter of 1" (25mm). The loudspeaker dispersion shall be 105° (800Hz - 4kHz) and frequency response of 86Hz – 15.5kHz (±5dB). The max peak output at 1W/1m shall be 98dB SPL. The loudspeaker shall have a mounting design so the entire assembly lays into the reflected ceiling tile grid and replaces a portion of the ceiling tile.

The amplifier/control board shall be capable of producing 15-watts RMS when using an IEEE 802.3at compatible PoE+ switch or 24VDC local power supply and 9-watts RMS when used with an IEEE 802.3af compliant PoE switch. Interconnect shall be via female RJ-45 connector mounted to the PCB.

All control functionality shall be determined via software. The metal loudspeaker baffle overall dimensions shall be 11.94" (303mm) x 23.6" (601mm) x 5" (128.5mm). Finish shall be neutral white electrostatic powder coat.