

# IP100 Series

## GLOBALCOM®.IP Announcement Control System



IP116-D Model is Shown

### General Description

The IP100 Series Announcement Control System (aka ACS) is the heart of AtlasIED's next generation GLOBALCOM®.IP enterprise wide communications management system. It manages the flow of announcements and messages between network endpoints such as digital communication stations, zone controllers, network power amplifiers, IP-based loudspeakers and other types of IP endpoints. Additionally it serves as a gateway for external I/O devices, VoIP telephone systems and analog audio to be incorporated into the ecosystem.

Each model is 'plug and play' ready with GCK application software installed and ready to be easily configured via an intuitive browser-based interface.

Every IP100 Series model has the ability to interface with external systems via eight (8) built-in logic inputs and eight (8) built-in relay outputs as well as two (2) balanced line level audio inputs.

All IP100 Series Controllers support VoIP communications with models available supporting Audio over Ethernet (AoE) functionality using Audinate® Dante™ and/or CobraNet® digital audio transport over the same network infrastructure simultaneously. Our VoIP is Wide Area Network (WAN) enabled allowing communication to be routed across an entire enterprise or to another LAN location.

### Announcement Management Features

- Manages dynamic requests for live, delayed and prerecorded messages (simple and assembled), record and playback of ad hoc messages, text-to-speech, mute actions (by zone or zone group) and two-way full duplex intercom connections.
- Allows up to 65,565 message priority levels with NeverMISS™ capability. If enabled, NeverMISS™ records live messages and plays back to busy page zones when they become available.
- Manages thousands of audio and video output zones over local or wide area networks utilizing a variety of industry standard IP based protocols.
- Announcements can be initiated by contact closures, microphone paging stations, open standard IP network commands, and the built-in VoIP telephone interface.
- Includes a built-in comprehensive message scheduling system that allows the creation of schedule profiles that can be applied to specific days of the week or date ranges. Multiple profiles can be applied simultaneously, perfect for campus type installations.
- Built-in interface to VoIP telephone systems via SIP and PBX Trunking as well as support for standard 3rd party FXO gateway devices. Supports industry standard G.711, G.722 and RTP protocols.

### Device Interface / Management Features

- The IP108 and IP116 support CobraNet™ enabled mic stations. The IP108-D and IP116-D support Dante™ enabled mic stations. The IP100 does not support mic stations.
- Interfaces directly with digital displays running IED's VisDID drivers for fully synchronized audio and visual messaging and provides IP based visual message data for use by 3rd party display systems.
- Provides supervision and logging for all associated end-point devices on the network with built-in E-mail / SMS notification capabilities.
- HDMI or VGA output for built-in visual paging interface capability.

### Message Server Features

- Stores up to 250 hours of pre-recorded .wav message files.
- Stores/manages pre-recorded messages in any language.
- Model IP108 adds eight (8) record and eight (8) playback channels via CobraNet® interface card.
- Model IP116 adds sixteen (16) record and sixteen (16) playback channels via CobraNet® interface card.
- Model IP108-D adds eight (8) record and eight (8) playback channels via Dante™ interface card.
- Model IP116-D adds sixteen (16) record and sixteen (16) playback channels via Dante™ interface card.
- Text to Speech messages may be generated in place of prerecorded messages utilizing either the default TTS engine or optional advanced multi-lingual TTS engines.

### Mechanical/Electrical Features

- Low-power processor for high reliability and long life with minimal cooling requirements.
- Storage is SSD (Solid State Drive) for higher performance and reliability than rotating media drives.
- Powered from any 12V DC supply of sufficient current rating, such as the IED1112MPS-MOD singular modular power supply or IED1112PS rack mount redundant power supply unit.
- Fits into one (1) RU of 19" rack space.


### Optional Features

- Integration with IED Enterprise Flight Announcement System and T-CAS Courtesy Announcement functionality.

### 5 Models Available

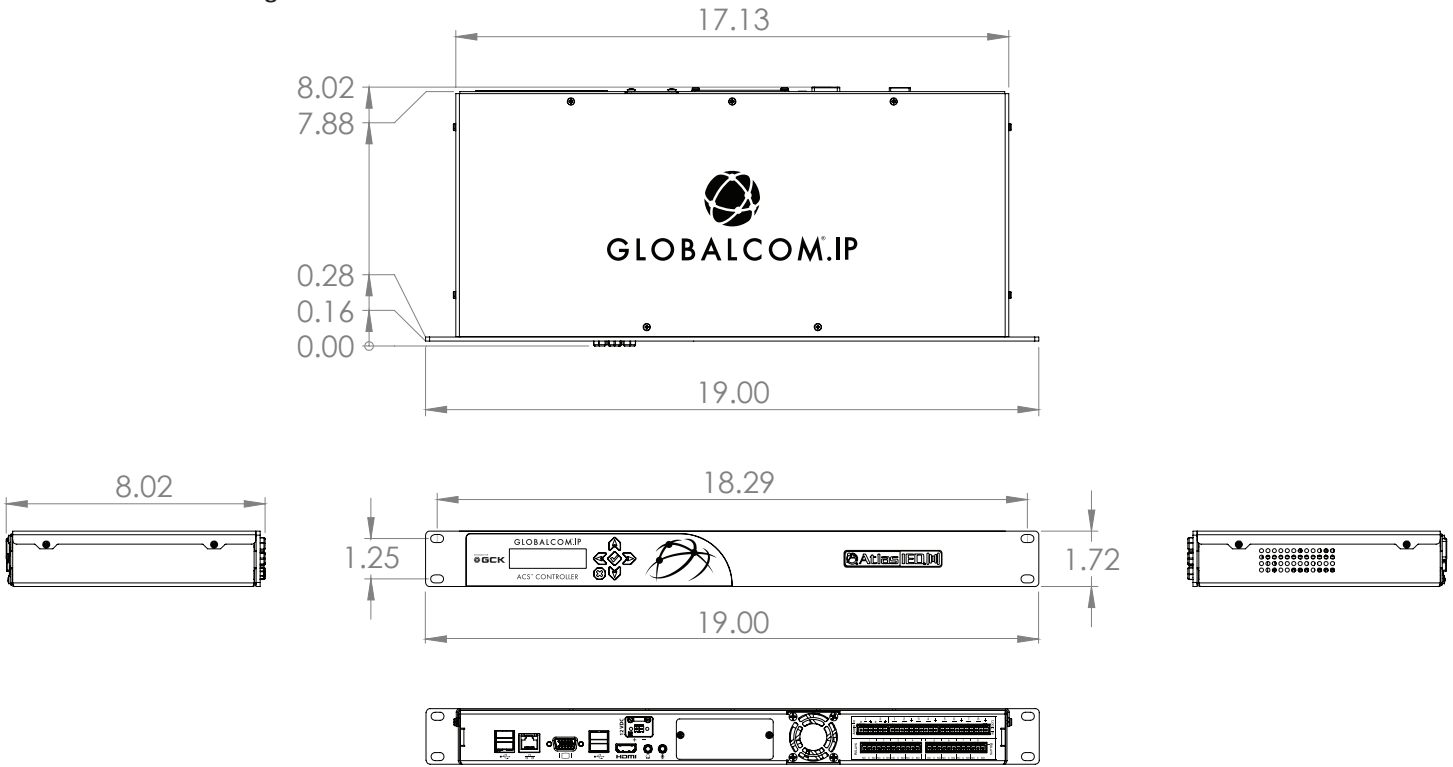
- IP100 offers VoIP and IEDNet+
- IP108 offers 8CH x 8CH CobraNet®, VoIP, and IEDNet+
- IP116 offers 16CH x 16CH CobraNet®, VoIP, and IEDNet+
- IP108-D offers 8CH x 8CH Dante™, VoIP, and IEDNet+
- IP116-D offers 16CH x 16CH Dante™, VoIP, and IEDNet+

	IP100	IP108	IP116	IP108-D	IP116-D
<b>General Specifications</b>					
Processor	64 Bit Intel® Quad Core™	64 Bit Intel® Quad Core™	64 Bit Intel® Quad Core™	64 Bit Intel® Quad Core™	64 Bit Intel® Quad Core™
Sampling Rate	48kHz	48kHz	48kHz	48kHz	48kHz
Analog Converters	24-bit	24-bit	24-bit	24-bit	24-bit
Frequency Response	20Hz to 20kHz	20Hz to 20kHz	20Hz to 20kHz	20Hz to 20kHz	20Hz to 20kHz
Dynamic Range	90dB (A Weighted)	90dB (A Weighted)	90dB (A Weighted)	90dB (A Weighted)	90dB (A Weighted)
CMMR	85dB (60 to 20kHz)	85dB (60 to 20kHz)	85dB (60 to 20kHz)	85dB (60 to 20kHz)	85dB (60 to 20kHz)
Distortion	0.01 % (1kHz @+6dBu)	0.01 % (1kHz @+6dBu)	0.01 % (1kHz @+6dBu)	0.01 % (1kHz @+6dBu)	0.01 % (1kHz @+6dBu)
<b>Front Panel Controls and Indicators</b>					
LCD Display	2 Line	2 Line	2 Line	2 Line	2 Line
Power Indicator	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display
<b>Rear Panel Connectors</b>					
Analog Inputs	2 - Balanced Line Level Inputs on 6 Pin Phoenix Plug-in 3.81mm	2 - Balanced Line Level Inputs on 6 Pin Phoenix Plug-in 3.81mm	2 - Balanced Line Level Inputs on 6 Pin Phoenix Plug-in 3.81mm	2 - Balanced Line Level Inputs on 6 Pin Phoenix Plug-in 3.81mm	2 - Balanced Line Level Inputs on 6 Pin Phoenix Plug-in 3.81mm
Analog Outputs	1 - 3.5mm Jack	1 - 3.5mm Jack	1 - 3.5mm Jack	1 - 3.5mm Jack	1 - 3.5mm Jack
General Purpose Inputs	8 Dry Contact Closure Inputs on 12 Pin Phoenix Plug-in 3.81mm	8 Dry Contact Closure Inputs on 12 Pin Phoenix Plug-in 3.81mm	8 Dry Contact Closure Inputs on 12 Pin Phoenix Plug-in 3.81mm	8 Dry Contact Closure Inputs on 12 Pin Phoenix Plug-in 3.81mm	8 Dry Contact Closure Inputs on 12 Pin Phoenix Plug-in 3.81mm
General Purpose Outputs	8 Form C Relays, NC and NO option available 10 Pin Phoenix Plug-in 3.81mm	8 Form C Relays, NC and NO option available 10 Pin Phoenix Plug-in 3.81mm	8 Form C Relays, NC and NO option available 10 Pin Phoenix Plug-in 3.81mm	8 Form C Relays, NC and NO option available 10 Pin Phoenix Plug-in 3.81mm	8 Form C Relays, NC and NO option available 10 Pin Phoenix Plug-in 3.81mm
Ethernet Port	1000BaseT Ethernet	1000BaseT + 100BaseT (CobraNet®) Ethernet	1000BaseT + 100BaseT (CobraNet®) Ethernet	1000BaseT + 1000BaseT (Dante™) Ethernet	1000BaseT + 1000BaseT (Dante™) Ethernet
<b>Balanced Analog Input Specifications</b>					
Type	2 - Balanced Line Level	2 - Balanced Line Level	2 - Balanced Line Level	2 - Balanced Line Level	2 - Balanced Line Level
Number of Inputs	2 - 6 Pin Phoenix Plug-in 3.81mm	2 - 6 Pin Phoenix Plug-in 3.81mm	2 - 6 Pin Phoenix Plug-in 3.81mm	2 - 6 Pin Phoenix Plug-in 3.81mm	2 - 6 Pin Phoenix Plug-in 3.81mm
Configuration	Electronically Balanced	Electronically Balanced	Electronically Balanced	Electronically Balanced	Electronically Balanced
Polarity	Fixed	Fixed	Fixed	Fixed	Fixed
Connection	PHX Style, 6 Position, 3.81mm Spacing	PHX Style, 6 Position, 3.81mm Spacing	PHX Style, 6 Position, 3.81mm Spacing	PHX Style, 6 Position, 3.81mm Spacing	PHX Style, 6 Position, 3.81mm Spacing
Input Impedance	18K	18K	18K	18K	18K
Maximum Input Level	(+)14dBu	(+)14dBu	(+)14dBu	(+)14dBu	(+)14dBu
Phantom Power	N/A	N/A	N/A	N/A	N/A
<b>Unbalanced Analog Input Specifications</b>					
Type	Unbalanced	Unbalanced	Unbalanced	Unbalanced	Unbalanced
Number of Inputs	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack
Configuration	Unbalanced	Unbalanced	Unbalanced	Unbalanced	Unbalanced
Polarity	Fixed	Fixed	Fixed	Fixed	Fixed
Connection	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack	1 - 3.5mm Mini Input Jack
Input Impedance	47K	47K	47K	47K	47K
Maximum Input Level	-6dBu	-6dBu	-6dBu	-6dBu	-6dBu
Phantom Power	N/A	N/A	N/A	N/A	N/A
Ethernet	RJ-45	RJ-45	RJ-45	RJ-45	RJ-45
Supported Network Speed	100Mbps / 1000Mbps	100Mbps / 1000Mbps	100Mbps / 1000Mbps	100Mbps / 1000Mbps	100Mbps / 1000Mbps

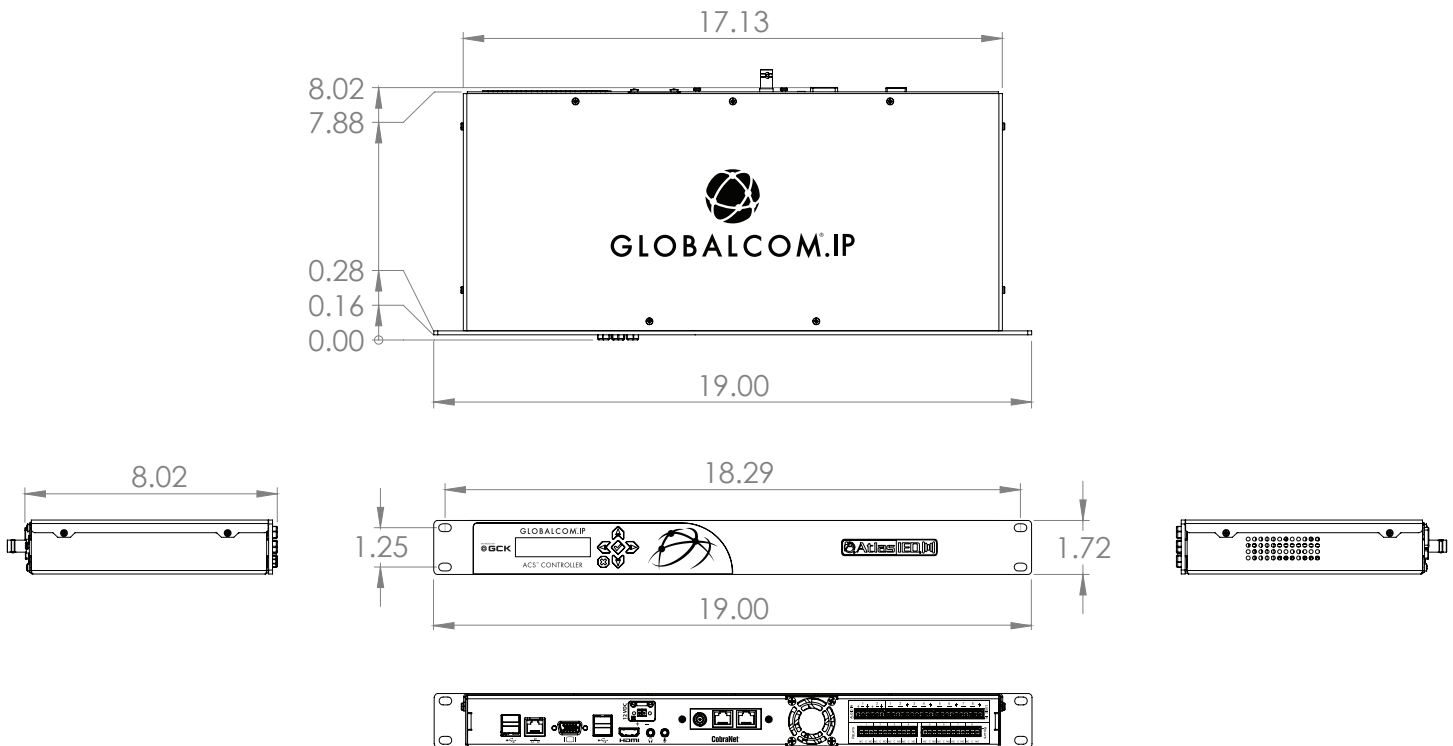
	IP100	IP108	IP116	IP108-D	IP116-D
<b>Supported Network Audio Protocols</b>					
CobraNet® Channel Capability	N/A	8x8 CobraNet®	16x16 CobraNet®	N/A	N/A
Dante™ Channel Capability	N/A	N/A	N/A	8x8 Dante™	16x16 Dante™
VoIP Codecs - Channel Capability	VoIP - G.711, G.722	VoIP - G.711, G.722	VoIP - G.711, G.722	VoIP - G.711, G.722	VoIP - G.711, G.722
Layer 3 WebRTC Channel Capability	RTP / RTCP Wide Area Network	RTP / RTCP Wide Area Network	RTP / RTCP Wide Area Network	RTP / RTCP Wide Area Network	RTP / RTCP Wide Area Network
<b>Dimensions and Weight</b>					
Rack Space	1 RU, 19"	1 RU, 19"	1 RU, 19"	1 RU, 19"	1 RU, 19"
Dimensions	17.25" x 1.75" x 7.75" (438mm x 44mm x 197mm)	17.25" x 1.75" x 7.75" (438mm x 44mm x 197mm)	17.25" x 1.75" x 7.75" (438mm x 44mm x 197mm)	17.25" x 1.75" x 7.75" (438mm x 44mm x 197mm)	17.25" x 1.75" x 7.75" (438mm x 44mm x 197mm)
Weight	6.5 lbs / 3.0 kg	6.5 lbs / 3.0 kg	6.5 lbs / 3.0 kg	6.5 lbs / 3.0 kg	6.5 lbs / 3.0 kg
<b>Power Requirements</b>					
Operating Voltage	12VDC	12VDC	12VDC	12VDC	12VDC
Power Connector	Two Pin Euroblock Connector	Two Pin Euroblock Connector	Two Pin Euroblock Connector	Two Pin Euroblock Connector	Two Pin Euroblock Connector
<b>Power Consumption</b>					
Power Consumption	36 W Max	36 W Max	36 W Max	36 W Max	36 W Max
<b>Cooling and Heat Loss</b>					
Thermal Dissipation	123 BTU / Hr	123 BTU / Hr	123 BTU / Hr	123 BTU / Hr	123 BTU / Hr
Cooling System	Micro Fan	Micro Fan	Micro Fan	Micro Fan	Micro Fan
Ventilation Direction	Side to Back	Side to Back	Side to Back	Side to Back	Side to Back
<b>Included When Shipped</b>					
Packaging Contents	IP100 Controller, Connectors, Quick Start Guide	IP108 Controller, Connectors, Quick Start Guide	IP116 Controller, Connectors, Quick Start Guide	IP108-D Controller, Connectors, Quick Start Guide	IP116-D Controller, Connectors, Quick Start Guide
<b>Agency Approvals</b>					
Safety 	Conforms to UL Std. 60950-1 UL Std. 62368-1  Certified to CSA Std. 60950-1 CSA Std. 62368-1	Conforms to UL Std. 60950-1 UL Std. 62368-1  Certified to CSA Std. 60950-1 CSA Std. 62368-1	Conforms to UL Std. 60950-1 UL Std. 62368-1  Certified to CSA Std. 60950-1 CSA Std. 62368-1	Conforms to UL Std. 60950-1 UL Std. 62368-1  Certified to CSA Std. 60950-1 CSA Std. 62368-1	Conforms to UL Std. 60950-1 UL Std. 62368-1  Certified to CSA Std. 60950-1 CSA Std. 62368-1

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### Dimensional Drawing for IP100



### Dimensional Drawing for IP108 & IP116



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## Architect and Engineer Specifications

The Announcement Control System (ACS) shall be AtlasIED GLOBALCOM® .IP Model IP100 Series.

The ACS shall manage announcements and messages using dynamically routed data on a standard Ethernet Network. It shall include an integral multi-channel message server providing simultaneous record and playback capability for up to 16 play and 16 record channels (model dependent) in multiple languages.

The ACS shall manage AtlasIED GLOBALCOM® Series peripherals including Digital Communications Stations, Network Power Amplifier Systems, Input/Output Devices, Zone Controllers and IP End Points. The ACS shall include internal support for (8) logic inputs, (8) relay outputs, and (2) balanced audio inputs.

The ACS shall manage dynamic requests for live and delayed announcements, pre-recorded and assembled messages, actions, defined events, and two-way full duplex intercom connections. An integrated visual paging server shall deliver visual messaging to supported visual displays that shall be synchronized to the audio regardless of message length. Announcements and messages shall be initiated by contact closures, microphone paging stations, IED DIRECTOR® software, open standard IP network commands, VoIP, or Wi-Fi Smartphones.

The ACS shall include an integral interface for VoIP telephones via SIP and PBX trucking as well as standard 3rd party FXO gateways. The interface shall support standards G.711, G.722 and RTP protocols. Operating modes shall provide for both direct dial zone paging access and well as voice prompted actions for announcements and messages.

The ACS shall support CobraNet® and Dante™ Audio-over-Ethernet protocols with VoIP, RTP, and RTCP. The ACS shall supervise all associated end-point devices, report system abnormalities, and log faults to be reported via SMNP, E-mail, and SMS via E-mail notifications.

The ACS shall be designed for high reliability with no moving parts including an Intel® 64-bit Quad Core™ low power processor, solid state hard drive, and available hot swap redundant power supply. The ACS shall fit into 1 RU of 19" rack space and weigh 3.0 kg. The ACS shall comply to UL & CSA Standard 60950.

The ACS shall include GLOBALCOM® .IP system configuration and management software. The ACS shall include internally hosted web page for configuration and monitoring the System Management Console.