**General Description**

Each IP100-EDU Announcement Control System (ACS™) is specifically designed for educational institutions. The IP100-EDU is the heart of AtlasIED’s next generation GLOBALCOM® EDU 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 configured via an intuitive browser-based interface.

Every IP100-EDU 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.

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

**Device Interface / Management Features**

- The IP108-EDU and IP116-EDU support CobraNet® enabled mic stations. The IP108-EDU-D and IP116-EDU-D support Dante™ enabled mic stations.
- Interfaces directly with GDS-4W™ Display Information Systems 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.
- Stores up to 250 hours of pre-recorded .wav message files.
- Stores/manages pre-recorded messages in any language.
- Model IP108-EDU adds eight (8) record and eight (8) playback channels via CobraNet® interface card.
- Model IP116-EDU adds sixteen (16) record and sixteen (16) playback channels via CobraNet® interface card.
- Model IP108-EDU-D adds eight (8) record and eight (8) playback channels via Dante™ interface card.
- Model IP116-EDU-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.
- Low-power processor for high reliability and long life with minimal cooling requirements.
- Storage is SSD (Solid State Drive) for higher performance and reliability.
- Powered using the included IED1112PSD 12V DC power supply module or the optional IED1112PS rack mount redundant power supply unit.
- Fits into one (1) RU of 19” rack space.

**Message Server Features**

- Stores up to 250 hours of pre-recorded .wav message files.
- Stores/manages pre-recorded messages in any language.
- Model IP108-EDU adds eight (8) record and eight (8) playback channels via CobraNet® interface card.
- Model IP116-EDU adds sixteen (16) record and sixteen (16) playback channels via CobraNet® interface card.
- Model IP108-EDU-D adds eight (8) record and eight (8) playback channels via Dante™ interface card.
- Model IP116-EDU-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.
- Powered using the included IED1112PSD 12V DC power supply module or the optional IED1112PS rack mount redundant power supply unit.
- Fits into one (1) RU of 19” rack space.

**4 Models Available**

- IP108-EDU offers 8CH x 8CH CobraNet®, VoIP, and IEDNet+
- IP116-EDU offers 16CH x 16CH CobraNet®, VoIP, and IEDNet+
- IP108-EDU-D offers 8CH x 8CH Dante™, VoIP and IEDNet+
- IP116-EDU-D offers 16CH x 16CH Dante™, VoIP, and IEDNet+
## Pre-Loaded Factory Configured Features

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-Call Auto Registration</td>
<td>IP endpoint devices automatically register in the all-call zone.</td>
<td>During an unexpected emergency alert, all online devices will push the vital notifications automatically.</td>
</tr>
<tr>
<td>Default Bell Schedule</td>
<td>A typical bell schedule is configured and active.</td>
<td>Start with a typical setup and easily modify for quick deployment.</td>
</tr>
<tr>
<td>Quick Schedule</td>
<td>Change a schedule without accessing GCK software by calling a phone extension and choosing the prompt associated with the schedule requested.</td>
<td>Quicker scheduling changes by anyone with permissions access makes early-release and in-service days easier to manage.</td>
</tr>
<tr>
<td>Default Classroom IP Endpoint Group / Profile</td>
<td>Classroom zone group with call request and emergency button are configured.</td>
<td>All IP Endpoints installed in the classrooms will have default communication settings.</td>
</tr>
<tr>
<td>Default Lockdown Alerts</td>
<td>A lockdown emergency event is configured with automated announcements and an all-call zone.</td>
<td>Critical alert automation is immediately available upon system activation.</td>
</tr>
<tr>
<td>Smart Alerts For Emergencies (S.A.F.E.™) Plugin Ready</td>
<td>S.A.F.E.™ provides system administrators with an immediate visual method to centrally monitor a situation when a critical alert happens anywhere in the school campus.</td>
<td>A new method to visually confirm which zones are secured and which ones have not responded during a lockdown. Emergency responders can immediately view which zones within the school require assistance.</td>
</tr>
<tr>
<td>Default School Audio / Visual Message Library</td>
<td>A rich library of professionally recorded audio and visual messages relevant to educational institutions</td>
<td>Quickly choose pre-recorded messages from templates provided.</td>
</tr>
<tr>
<td>Messaging Priority (Announcement Class)</td>
<td>Pre-configured list of priority levels for messages defines which messages have highest priority.</td>
<td>Start with a typical setup and easily modify to meet exact operational practices.</td>
</tr>
<tr>
<td>Default Zone Groups</td>
<td>Pre-configured zone groups for typical school topography including hallways, cafeteria, athletics, classrooms, corridor, outdoors, etc.</td>
<td>Reduces system deployment timeline. All zones are pre-programmed for faster install.</td>
</tr>
<tr>
<td>Default User Rights</td>
<td>Pre-configured user groups with priority levels for admin, principle, teachers, and faculty.</td>
<td>Start with a typical setup and easily modify for quick deployment.</td>
</tr>
</tbody>
</table>
# General Specifications

<table>
<thead>
<tr>
<th></th>
<th>IP108-EDU</th>
<th>IP116-EDU</th>
<th>IP108-EDU-D</th>
<th>IP116-EDU-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>64 Bit Intel® Quad Core™</td>
<td>64 Bit Intel® Quad Core™</td>
<td>64 Bit Intel® Quad Core™</td>
<td>64 Bit Intel® Quad Core™</td>
</tr>
<tr>
<td>Sampling Rate</td>
<td>48kHz</td>
<td>48kHz</td>
<td>48kHz</td>
<td>48kHz</td>
</tr>
<tr>
<td>Analog Converters</td>
<td>24-bit</td>
<td>24-bit</td>
<td>24-bit</td>
<td>24-bit</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20Hz to 20kHz</td>
<td>20Hz to 20kHz</td>
<td>20Hz to 20kHz</td>
<td>20Hz to 20kHz</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>90dB (A Weighted)</td>
<td>90dB (A Weighted)</td>
<td>90dB (A Weighted)</td>
<td>90dB (A Weighted)</td>
</tr>
<tr>
<td>CMRR</td>
<td>85dB (60 to 20kHz)</td>
<td>85dB (60 to 20kHz)</td>
<td>85dB (60 to 20kHz)</td>
<td>85dB (60 to 20kHz)</td>
</tr>
<tr>
<td>Distortion</td>
<td>0.01% (1kHz @+6dBu)</td>
<td>0.01% (1kHz @+6dBu)</td>
<td>0.01% (1kHz @+6dBu)</td>
<td>0.01% (1kHz @+6dBu)</td>
</tr>
</tbody>
</table>

## Front Panel Controls and Indicators

- LCD Display: 2 Line
- Power Indicator: LCD Display

## Rear Panel Connectors

- Analog Inputs: 2 - Balanced Line Level Inputs on 6 Pin Phoenix Plug-in 3.81mm
- Analog Outputs: 1 - 3.5mm Jack
- General Purpose Inputs: 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
- Ethernet Port: 1000BaseT + 100BaseT (CobraNet®) Ethernet

## Balanced Analog Input Specifications

- Type: 2 - Balanced Line Level
- Number of Inputs: 2 - 6 Pin Phoenix Plug-in 3.81mm
- Configuration: Electronically Balanced
- Polarity: Fixed
- Connection: PHX Style, 6 Position, 3.81mm Spacing
- Input Impedance: 18K
- Maximum Input Level: (+14dBu)
- Phantom Power: N/A

## Unbalanced Analog Input Specifications

- Type: Unbalanced
- Number of Inputs: 1 - 3.5mm Mini Input Jack
- Configuration: Unbalanced
- Polarity: Fixed
- Connection: 1 - 3.5mm Mini Input Jack
- Input Impedance: 47K
- Maximum Input Level: -6dBu
- Phantom Power: N/A
- Ethernet: RJ-45
- Supported Network Speed: 100Mbps / 1000Mbps
<table>
<thead>
<tr>
<th>Supported Network Audio Protocols</th>
<th>IP108-EDU</th>
<th>IP116-EDU</th>
<th>IP108-EDU-D</th>
<th>IP116-EDU-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CobraNet® Channel Capability</td>
<td>8 Input x 8 Output</td>
<td>16 Input x 16 Output</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Dante™ Channel Capability</td>
<td>N/A</td>
<td>N/A</td>
<td>8 Input x 8 Output</td>
<td>16 Input x 16 Output</td>
</tr>
<tr>
<td>Layer 3 WebRTC Channel Capability</td>
<td>RTP / RTCP Wide Area Network</td>
<td>RTP / RTCP Wide Area Network</td>
<td>RTP / RTCP Wide Area Network</td>
<td>RTP / RTCP Wide Area Network</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions and Weight</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rack Space</td>
<td>1 RU, 19&quot;</td>
<td>1 RU, 19&quot;</td>
<td>1 RU, 19&quot;</td>
<td>1 RU, 19&quot;</td>
</tr>
<tr>
<td>Dimensions</td>
<td>17.25&quot; x 1.75&quot; x 7.75&quot; (438mm x 44mm x 197mm)</td>
<td>17.25&quot; x 1.75&quot; x 7.75&quot; (438mm x 44mm x 197mm)</td>
<td>17.25&quot; x 1.75&quot; x 7.75&quot; (438mm x 44mm x 197mm)</td>
<td>17.25&quot; x 1.75&quot; x 7.75&quot; (438mm x 44mm x 197mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>6.5 lbs / 3.0 kg</td>
<td>6.5 lbs / 3.0 kg</td>
<td>6.5 lbs / 3.0 kg</td>
<td>6.5 lbs / 3.0 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Requirements</th>
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</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>12VDC</td>
<td>12VDC</td>
<td>12VDC</td>
<td>12VDC</td>
</tr>
<tr>
<td>Mains Connector</td>
<td>Two Pin Euroblock Connector</td>
<td>Two Pin Euroblock Connector</td>
<td>Two Pin Euroblock Connector</td>
<td>Two Pin Euroblock Connector</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Consumption</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>24 W, 82 BTU/hr, 20.6 kcal/hr Max</td>
<td>24 W, 82 BTU/hr, 20.6 kcal/hr Max</td>
<td>24 W, 82 BTU/hr, 20.6 kcal/hr Max</td>
<td>24 W, 82 BTU/hr, 20.6 kcal/hr Max</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling and Heat Loss</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Dissipation</td>
<td>82 BTU / Hr</td>
<td>82 BTU / Hr</td>
<td>82 BTU / Hr</td>
<td>82 BTU / Hr</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Micro Fan</td>
<td>Micro Fan</td>
<td>Micro Fan</td>
<td>Micro Fan</td>
</tr>
<tr>
<td>Ventilation Direction</td>
<td>Side to Back</td>
<td>Side to Back</td>
<td>Side to Back</td>
<td>Side to Back</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Included When Shipped</th>
<th></th>
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</table>

<table>
<thead>
<tr>
<th>Agency Approvals</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Conforms to UL Std. 60950</td>
<td>Conforms to UL Std. 60950</td>
<td>Conforms to UL Std. 60950</td>
<td>Conforms to UL Std. 60950</td>
</tr>
<tr>
<td>Intertek</td>
<td>Certified to CAN/CSA Std. 60960</td>
<td>Certified to CAN/CSA Std. 60960</td>
<td>Certified to CAN/CSA Std. 60960</td>
<td>Certified to CAN/CSA Std. 60960</td>
</tr>
</tbody>
</table>
System Example - Education Facility

**Administration**
- Video Display
- Admin Computer with GCK™ and SAFE™ Applications
- 4PLAYER1
- IPCSD-TOUCH.G

**Hallways**
- IP-DDS
- SD72W
- IP-ZCM

**Classroom**
- IP-SDMF
- Atlas Learn System with IR Wireless

**Mobile Control**
- Laptop
- Tablet
- Smart Phone

**Music**
- Music Source
- 4PLAYER1
- IPCSD-TOUCH.G

**Network**
- GCK Software Application
- IP108-EDU GLOBALCOM.IP System Controller
- PoE Network Switch
- Access Point
- Fire Alarm System
- Security System
- Communicate with VoIP Phone System

**Cafeteria**
- Video Display
- 4PLAYER1
- SD72W

**Athletics**
- Local Music Source
- Wireless Handheld Mic System
- DPA404
- FS12T68
- FS12T68

**Performing Arts**
- Local Music Source
- Wireless Handheld Mic System
- DPA404
- ALA1ST
- ALA1ST

**System Example**
- Administration
- Hallways
- Classroom
- Mobile Control
- Music
- Network
- Cafeteria
- Athletics
- Performing Arts

**System Controllers**
- GCK Software Application
- IP108-EDU GLOBALCOM.IP System Controller
- PoE Network Switch
- Access Point
- Fire Alarm System
- Security System
- Communicate with VoIP Phone System

**Upcoming Events**
- 5.29.17: Science Under the Stars, 7:30PM - College Green
- 6.2.17: TED Talk - Creative Business Concepts, 5:30PM - Activities Center
- 7.1.17: Phantom of the Opera, 7:30PM - Auditorium

**Music Source**
- Local Music Source
- Wireless Handheld Mic System
- DPA404
- FS12T68
- FS12T68

**Access Point**
- GCK™ and SAFE™ Applications
- Admin Computer

**Video Display**
- Video Display
- 4PLAYER1
- IPCSD-TOUCH.G

**Local Weather**
- Thu: 47°
- Fri: 63°
- Sat: 55°
Dimensional Drawings

Model IP108-EDU Shown. All Models Share Same Physical Characteristics
The Announcement Control System (ACS) shall be AtlasIED GLOBALCOM®.EDU IP1XX-EDU(-D)

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®.EDU series peripherals including Digital Communications Stations, Network Power Amplifiers, 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, DIRECTOR® software, open standard IP network commands, VoIP, or Wi-Fi enabled 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® or 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 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®.EDU system configuration and management software. The ACS shall include internally hosted web page for configuration and monitoring called the System Management Console.