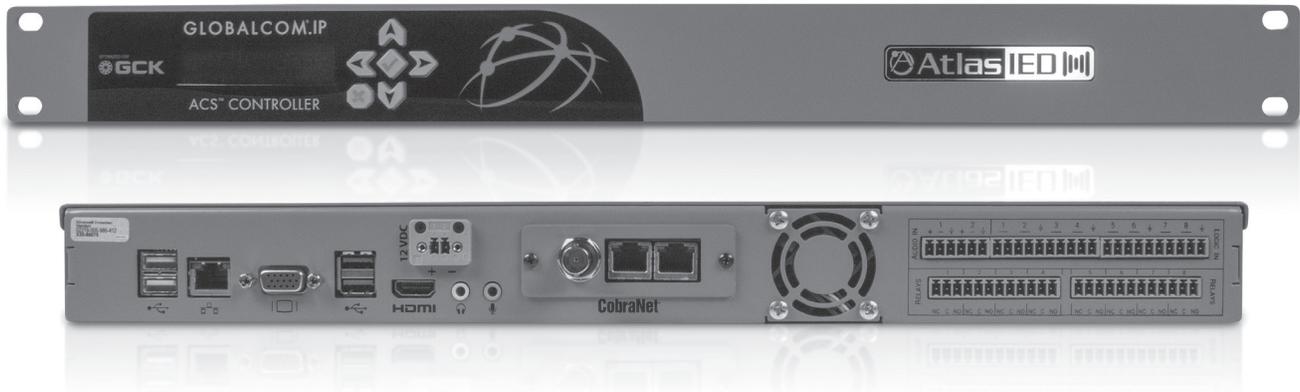




**IP100 / IP108 / IP116
IP108-D / IP116-D
Announcement Control System**



IP100 / IP108 / IP116

Owner's Manual

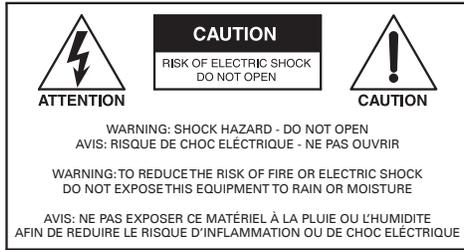
Table of Contents

Important Safety Instructions	3
Introduction	5
Key Features.....	5
Applications	5
Front Panel Description	6
Rear Panel Description	6
Installation	8
Connect Keyboard, Mouse, and Monitor	8
Connect Network Cables	9
Connect Logic and Relay I/O.....	10
Connect Auxiliary Audio Inputs	11
Connect Power Plug.....	12
Complete Unit Configuration	12
Specifications	13
Warranty	16

IP100 / IP108 / IP116

Owner's Manual

Important Safety Instructions



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other device that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device.
11. Only use attachments / accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When a cart is used, use caution when moving the cart / device combination to avoid injury from tip-over.



13. Unplug this device during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
16. **WARNING:** To reduce the risk of fire or electric shock, this device should not be exposed to dripping, splashing, rain, or moisture, and objects filled with liquids, such as a vase, should not be placed on this device.
17. To completely disconnect this equipment from the mains, disconnect the power supply cord plug from the receptacle.
18. The mains plug of the power supply cord shall remain readily operable.
19.  Protective earthing terminal. The apparatus should be connected to a mains socket with a protective earthing connection.

IP100 / IP108 / IP116

Owner's Manual



WARNING - When The Device Is In Use

- WARNING: For the terminals marked with symbol of ⚡ may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.
- WARNING: The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
- WARNING: The mains plug is used as disconnect device, the disconnect device shall remain readily operable.
- To prevent electric shock, do not remove the product cover as there are high voltage components inside. Refer all servicing to AtlasIED.
- Should any of the following irregularities occur during use, immediately switch off the power, disconnect the power cord from the AC outlet and contact AtlasIED. Do not to attempt to continue operation with the product as this may cause fire or electric shock:
 - Smoke or strange smell coming from the unit.
 - If the product falls or the case is damaged.
 - If water or any metallic objects falls into the product.
 - If the power supply cord is damaged in any way.
 - If the unit is malfunctioning.
- Do not insert or drop metallic objects or flammable materials into the ventilation holes of the product's cover, as this may result in electric shock or fire.
- Do not place any containers with liquid or metallic objects on the top of the product. If any liquid spills into the unit, fire or electric shock may result.
- Never operate this product or touch the power supply cord during an electrical storm, electric shock may result.
- Never exceed the power rating on the product when connecting equipment. Fire and/or property damage may result.
- Operate the product only with the voltage specified on the unit. Fire and/or electric shock may result if a higher voltage is used.
- Do not modify, kink, or cut the power cord. Do not place the power cord in close proximity to heaters and do not place heavy objects on the power cord, including the product itself, doing so may result in fire or electrical shock.
- Ensure that the safety ground terminal is connected to a proper ground. Never connect the ground to a gas pipe as a catastrophic disaster may result.
- Be sure the installation of the product is stable, avoid slanted surfaces as the product may fall and cause injury or property damage.



CAUTION - When Installing The Product

- Plugging in or unplugging the power cord with wet hands may result in electric shock.
- Never move the unit with the power cord plugged into the wall, as damage to the power cord may result.
- When unplugging the cord from the wall, grasp the plug, NOT the cord.
- Never install this product in humid or dusty locations, nor in direct sunlight, near sources of heat, or in areas where sooty smoke or steam are present. Fire and electric shock may result.
- Keep all sides of the unit at least 3 1/2" away from objects that may obstruct air flow to prevent the unit's internal temperature rise.



CAUTION - When The Product Is In Use

- Never place heavy objects on the product, causing it to fall and/or break, resulting in personal injury and property damage. In addition, the product itself may fall and cause injury and property damage.
- Contact AtlasIED for instructions on cleaning the inside of the unit. Large accumulations of dust inside the unit may result in heat buildup and fire.
- Ensure that the power supply plug is securely plugged into the wall outlet. Never allow dust to accumulate on the power plug or inside the wall outlet.
- When cleaning the unit or the unit is not to be operated for an extended period, unplug the power cord from the wall.

IP100 / IP108 / IP116

Owner's Manual

Introduction

Congratulations and thank you for purchasing the AtlasIED IP100 announcement control system. The IP100 family of products is an integrated control system containing a micro-controller with integrated storage media, data network interface, auxiliary analog audio inputs, logic input ports and relay outputs. The system functions performed by the unit are determined by the software configuration provided with the unit. The IP108 and IP116 models include a CobraNet® digital audio network interface. In addition, other models may be available that are denoted by suffixes such as IP100-x or IP100-xx. The models available in the IP100 family are as follows:

IP100 The base level model that handles only IEDnet+ audio devices such as IP Speakers.

IP108 The same base as the IP100, with the addition of an 8-channel CobraNet® digital audio network interface.

IP116 The same base as the IP100, with the addition of a 16-channel CobraNet® digital audio network interface.

IP108-D The same base as the IP100, with the addition of an 8-channel Dante® digital audio network interface.

IP116-D The same base as the IP100, with the addition of a 16-channel Dante® digital audio network interface.

Other related part numbers are actually "sales kits" that include special features such as education-related pre-configuration in the -EDU versions and included technical support in -CS versions. However, the underlying hardware in each of these cases is one of the above listed options.

Key Features

- Manages dynamic requests for live, delayed and prerecorded messages (simple and assembled).
- Manages record and playback of ad hoc messages.
- Manages text-to-speech messages.
- Manages 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.
- Manages thousands of audio and video output zones over local or wide area networks utilizing a variety of industry standard IP based protocols.
- LDAP (Lightweight Directory Access Protocol) and Active Directory Supported.
- Initiate announcements via contact closure, 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.
- 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.
- Stores up to 250 hours of pre-recorded .wav message files.
- Stores / manages pre-recorded messages in any language.
- Text to Speech messages may be generated in place of prerecorded messages utilizing the default TTS engine or optional multi-lingual TTS engines.

IP100 / IP108 / IP116

Owner's Manual

Front Panel



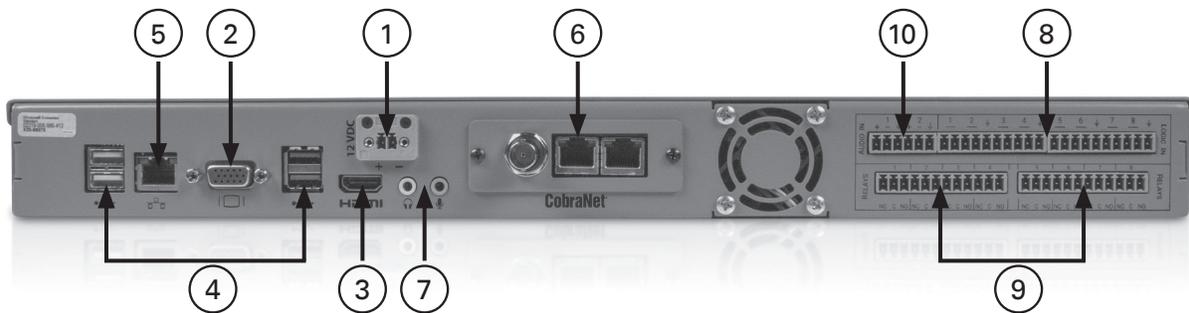
1. 2-Line LCD

This display will illuminate when the unit is powered on, and may be used to view and change certain properties of the announcement controller.

2. Navigation Buttons

These buttons are used to navigate through the options on the LCD display.

Rear Panel



1. Power

This connector is used to connect the unit to either the included single IED1112PSD power supply module or the IED1112PS rack-mount power supply. This 12VDC jack accepts a 2-pin Phoenix plug with 3.81mm spacing.

2. VGA Monitor Out

This analog video output is used to attach a monitor to the unit. It supports resolutions up to a maximum of 2048 x 1536 (QXGA) at 75Hz refresh rate.

3. HDMI Monitor Out

This digital video output (HDMI) is used to attach an external monitor that supports digital video. It supports a maximum resolution of 1600 x 1200 (UXGA)

4. USB Ports (4)

Use these four USB 2.0 compliant ports to connect a keyboard and mouse to the unit. The remaining ports can be used to attach an external storage device for system backup or file transfers.

IP100 / IP108 / IP116

Owner's Manual

Rear Panel

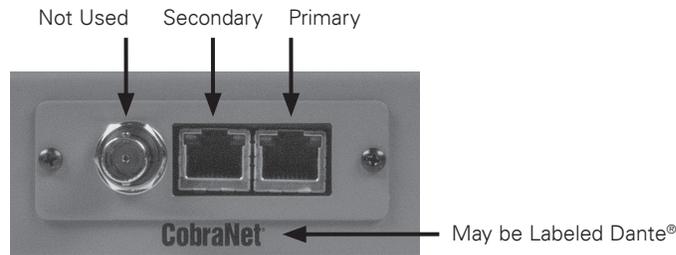
5. Network Connection

This 10/100/1000 Mb/s Ethernet LAN port is used to connect the unit to the network using a standard RJ45 connector. This port transmits and receives control data only. The digital audio from the device is transmitted using the audio network port. Two LEDs are provided to indicate status as shown in the table below.

LED	State	Condition
Link (Left)	Off	LAN link not established
	Green (Solid)	LAN link established
	Green (Blinking)	LAN activity occurring
Speed (Right)	Off	10 MB/s data rate
	Green	100 MB/s data rate
	Yellow	1000 MB/s data rate

6. Audio Network (IP108 / IP116 or IP108-D / IP116-D Only)

These 100 Mb/s (CobraNet®) or 100/1000 Mb/s (Dante®) Ethernet LAN ports are used to connect either the CobraNet® or Dante® digital audio channels of the device to the network using a standard RJ-45 connector. The Primary and Secondary ports can be used to in applications where there is a redundant network. Do not connect both ports into the same LAN / VLAN. The BNC connector on the CobraNet® version is not used.



Two LEDs on each connector are provided to indicate the status as shown in the table below.

Condition	Left LED	Right LED
Conductor	Orange (Blinking)	Green (Blinking)
Performer	Orange (Solid)	Green (Blinking)
Fault	Orange (Blinking)	Orange (Blinking)

7. 1/8" Mini Phone Connectors (2)

These connectors are used only for local recording and monitoring if connected to suitable microphone and speakers (e.g., self-powered desktop speakers).

8. Logic Inputs

Eight (8) logic inputs provide a simple method to interface the IP100 to other systems such as fire alarm panels, building management systems, security systems, etc.. The function of each input is programmed in the system software.

9. Relay Outputs

Eight (8) dry contact relay outputs are provided to send signals from the IP100 to other systems such as fire alarm panels, building management systems, security systems, etc. Each relay is programmed in the system software. Relays can be programmed to act as zones and trip each time an announcement or message is active for that zone. Relays can also be used to provide a closure when there is a fault condition present in the system.

10. Auxiliary Audio Inputs

These connectors are used to bring in up to two channels of line level analog audio which may be used for such things as background music (BGM) or audio to accompany a logic closure.

IP100 / IP108 / IP116

Owner's Manual

Installation

Unpack the unit from its shipping carton and identify any accompanying components that may have been included. The unit comes with built-in rack ears for easy mounting into a 19" rack.

Two types of external 12VDC power supplies are available. The IED1112PSD is an in-line power supply module that provides power to the unit for situations that do not require power supply redundancy. The IED1112PS is a rack-mount power supply unit with optional redundant power supply modules to provide uninterrupted power to the unit should a supply fail.

If the unit will be used with the IED1112PS, locate the adaptor cable that will be used to connect the two units. If the installation will use the IED1112PSD in-line power supply, then locate this unit and prepare it for installation as shown later in this manual.

The IP100 requires one rack unit (1 RU) of available space and a recommended mounting depth of 12" to allow adequate clearance for cabling. Select a location in the 19" rack for the unit based on proximity to the rack mounted 12V power supply system, and (if desired) keyboard and monitor or a KVM (keyboard / video / mouse) switch unit. Mount the unit using suitable screws for the rack being used, two per rack mount ear. Please refer to any safety and installation instructions that came with the rack prior to assembly.

Connect Keyboard, Mouse, and Monitor

The unit can be operated as a black box with only network connection, but if desired may be connected to keyboard, mouse and monitor either directly or via a KVM switch shared with other devices in the rack. Connect the keyboard and mouse to two of the available USB ports on the back of the unit. Connect the monitor to either the VGA output (15-pin D shell connector) or the HDMI output on the back as appropriate for the type of monitor being used. **Note:** A monitor (VGA or HDMI) or video switcher must be connected when the unit is powered up or rebooted, or else the display driver will not be initialized and connecting a monitor to the unit later will not show any video.

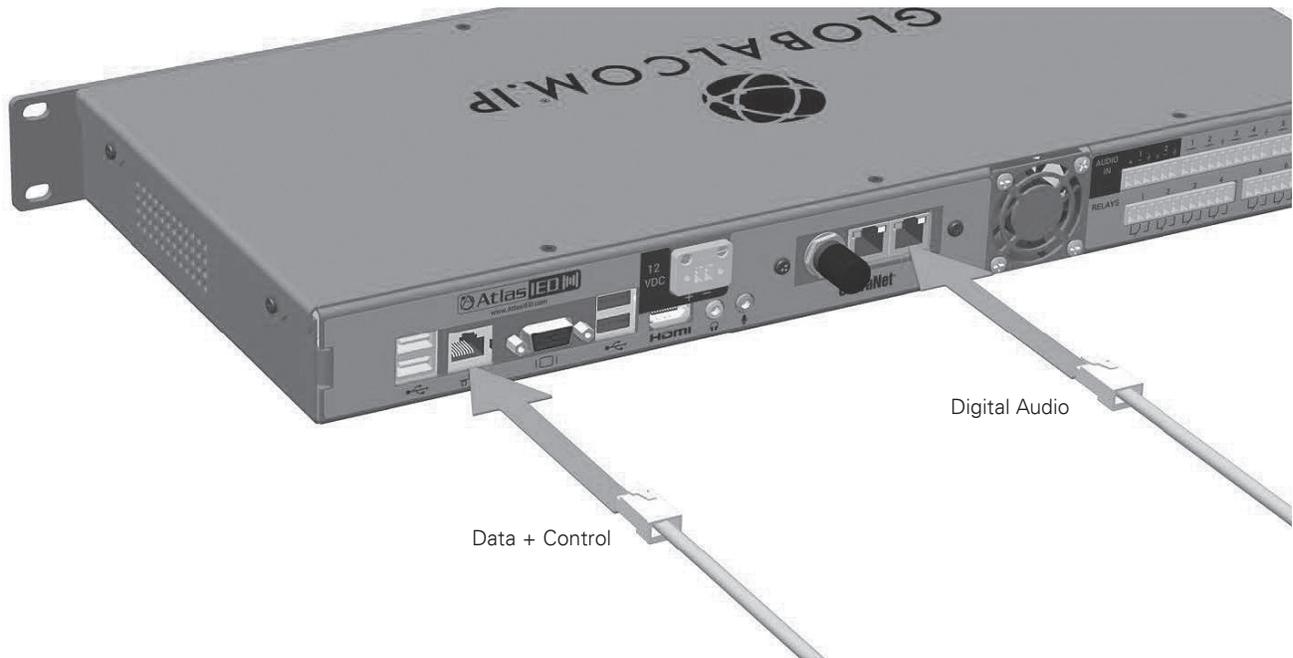


IP100 / IP108 / IP116

Owner's Manual

Connect Network Cables

The IP100 unit has one Ethernet port and the IP108 / IP116 units have three Ethernet ports located on the rear of the unit. At a minimum the control port and if provided, one of the two digital audio ports must be connected for proper operation. One is used for control and data while the other is dedicated strictly for digital audio. Connect the data and primary CobraNet® ports to available Ethernet switch ports using a suitable Cat-5e or Cat-6 jumper cable. The switch ports should be configured for auto-negotiation 10 / 100 or 10 / 100 / 1000.

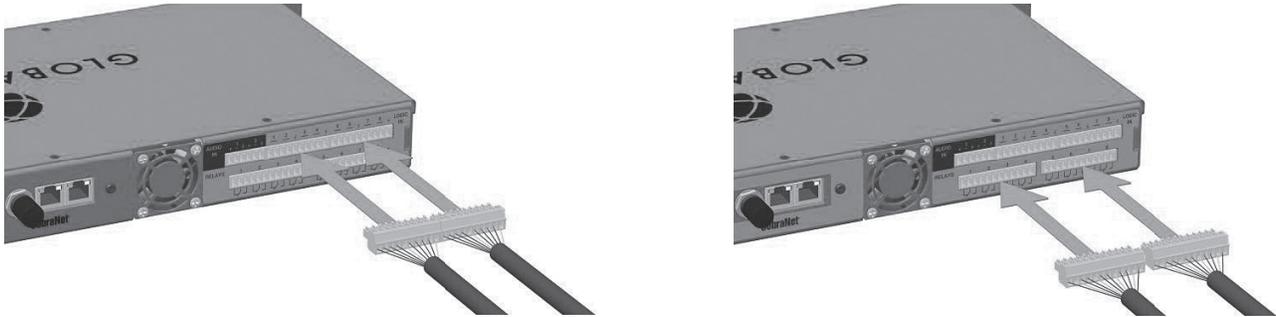


IP100 / IP108 / IP116

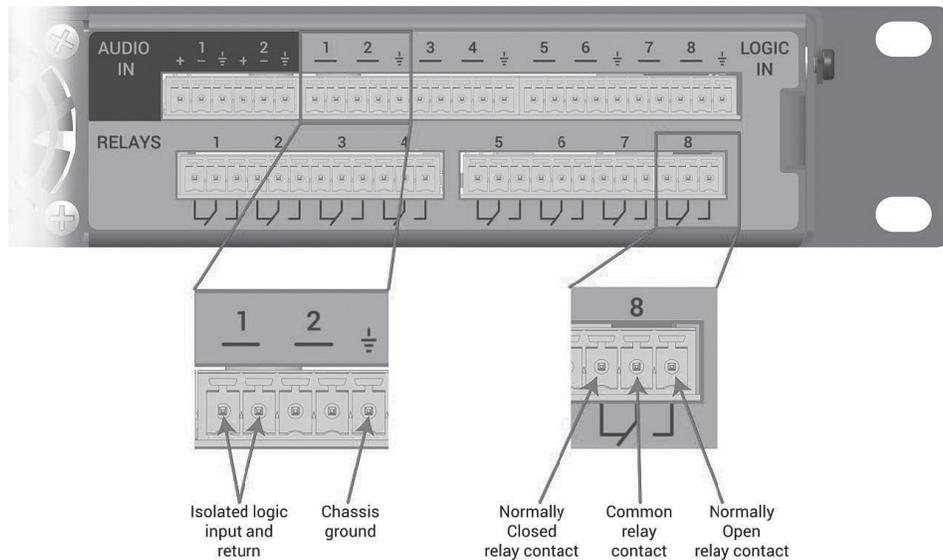
Owner's Manual

Connect Logic and Relay I/O

The IP100 provides eight (8) logic sensor inputs that can be used to trigger announcements, indicate a fault with external equipment or mute the system, for example. Also there are eight (8) dry contact outputs which can provide control to external systems or indicate a system status, for example. As required for the application, attach logic input lines and relay output lines to the terminal blocks provided, as shown in the images below.



Each logic input is isolated and terminations are made by connecting the signal to the + terminal while using the - terminal for the return path to the signaling device. Pins 5 and 10 on each connector provide a reference to chassis ground. Refer to the image below for details on the logic and relay terminals.

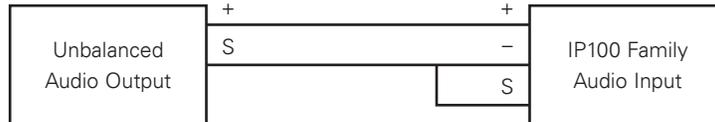


IP100 / IP108 / IP116

Owner's Manual

Connect Auxiliary Audio Inputs

There are two analog audio inputs available on the rear of the IP100, which may be connected for background music or audio to use in a page action, such as from a logic input closure. One makes connections to these inputs as shown below. **Note:** These inputs are balanced. If connecting unbalanced audio to these inputs, it may be done as shown below.



IP100 / IP108 / IP116

Owner's Manual

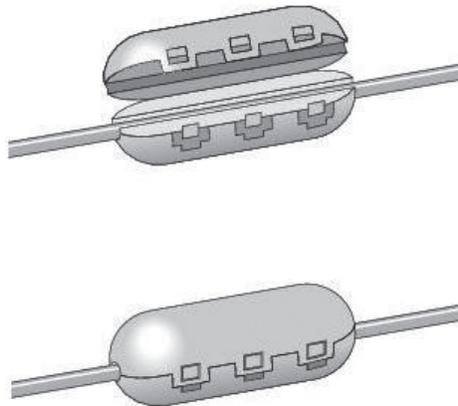
Connect Power Plug

Connect the cable from the IED1112PSD in-line 12V power supply or the IED1112PS rack mount 12V power supply system to the power connection on the back of the unit. If main power is present, the unit will immediately boot up. The fan will run and the LCD display on the front panel will illuminate.



For 230VAC Mains applications, the ferrite filter included with the unit must be installed near the connector in the vicinity marked here.

When the unit's power supply is connected to a 230VAC mains line, to avoid excessive EMI from the unit, the ferrite filter should be installed on the power inlet within a few inches of the connector. This ferrite can be installed in 120VACS mains applications as well, if desired, with no harmful effects. The ferrite filter simply clamps over the wire as shown in the figure below. (The reason the ferrite is not pre-installed is that there is more than one power supply option that can be ordered and used.)



Complete Unit Configuration

Once the unit is booted up, complete the system configuration using the supplied configuration software. This is accomplished using either a keyboard, mouse and monitor connected directly to the unit or via remote connection through the network. Refer to the appropriate user guides for the specific model configuration to complete the unit setup.

IP100 / IP108 / IP116

Owner's Manual

Electrical, Analog	
Supply Voltage	12V DC
Rated Input Current	3 Amps Max (36W)
Relay Contact Rating	1A @ 30VDC Max
Connectors	
Power	2-pin Phoenix, 3.81mm Spacing with Locking Screws
USB 2.0	4 Rear
Ethernet (1 or 3)	Control (10 / 100 / 1000 Mbps), CobraNet® Digital Audio (100 Mbps), Dante® Digital Audio (100 / 1000 Mbps)
Video (2)	VGA / HDMI
Auxiliary Audio Input (2)	6-pin Phoenix, 3.81mm Spacing
Opto-Isolated Logic Inputs (Typical of 2)	10-pin Phoenix, 3.81mm Spacing
Relay Outputs (Typical of 2)	12-pin Phoenix, 3.81mm Spacing
Environmental	
Operating Temperature Range	(+32 °F+104 °F) 0 °C+40 °C
Storage Temperature Range	(-4 °F+158 °F) -20 °C+70 °C
Dimensions and Weight	
Rack Mount Requirements	1 RU, 19"
Dimensions (Without Rack Ears) - Unit	17"W x 1.75"H x 12.25"D (432mm x 44mm x 311mm)
Weight - Unit	10.85 lbs. (4.92kg)
Agency Approvals	
North America Agency	UL
Testing Standard North America	Conforms to UL 60950-1 (Ed.2) Conforms to UL 62368-1 (Ed.2) Certified to CSA C22.2 No. 60950-1-07 (Ed.2) Certified to CSA C22.2 No. 62368-1:2014 (Ed.2) IEC 60950-1: 2005 IEC 62368-1: 2014 CB Certificate
FCC / IC	CFR, Title 47, Chapter I, Part 15 Subpart B ICES-003, Issue 6
EMC / CE	(only on IP108-D and IP116-D) CISPR 32:2015 CISPR 24:2010 EN55032:2015 EN55024:2010 IEC 61000-3-2:2014 IEC 61000-3-3:2013

FCC Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Limited Warranty

All products manufactured by AtlasIED are warranted to the original dealer / installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of three years on all AtlasIED products, including SOUNDOLIER brand, and ATLAS SOUND brand products except as follows: one year on electronics and control systems; one year on replacement parts; and one year on Musician Series stands and related accessories. Additionally, fuses and lamps carry no warranty. AtlasIED will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workman like manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to AtlasIED do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any nonwarranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ATLASIED SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

AtlasIED does not assume, or does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Service

Should your IP100 Series require service, please contact the AtlasIED warranty department through the online warranty claim process.

Online Warranty Claim Processes

1. Warranty submissions are accepted at: https://www.atlasied.com/warranty_statement where the type of return Warranty or Stock return can be selected.
2. Once selected, you will be prompted to enter your login credentials. If you do not have a login, register on the site. If already logged-in, navigate to this page by selecting "Support" and then "Warranty & Returns" from the top menu.
3. In order to file a Warranty Claim, you will need:
 - A. A copy of the invoice / receipt of the purchased item
 - B. Date of Purchase
 - C. The product name or SKU
 - D. The serial number for the item (if no serial number exists, enter N/A)
 - E. A brief description of the fault for the claim
4. Once all required fields are completed, select the "Submit Button." You will receive 2 emails:
 1. One with a confirmation of the submission
 2. One with a case# for your reference should you need to contact us.

Please allow 2-3 business days for a response with a Return Authorization (RA) number and further instructions.

AtlasIED Tech Support can be reached at 1-800-876-3333 or [atlasied.com/support](https://www.atlasied.com/support).

Visit our website at www.AtlasIED.com to see other AtlasIED products.

A copy of the DoP can be found at [www.AtlasIED.com/SM42TEN-\(B or WH\)](https://www.AtlasIED.com/SM42TEN-(B%20or%20WH))

©2022 Atlas Sound L.P. The Atlas "Circle A", Soundolier, and Atlas Sound are trademarks of Atlas Sound L.P. IED is a registered trademark of Innovative Electronic Designs LLC. All Rights Reserved. All other trademarks are the property of their respective owners. All specs are subject to change without notice. DOC 1240B Ver 1.3 ATS005583 RevB 7/22



1601 JACK MCKAY BLVD.
ENNIS, TEXAS 75119 U.S.A.

TELEPHONE: (800) 876-3333
SUPPORT@ATLASIED.COM

AtlasIED.com