IP Intercom® System

Classroom intercom system for two-way voice communications, help desk support, and security/status monitoring

➤ Two-way voice communications over an IP network

➤ Integrated microphone, speaker, and call buttons

➤ Flexible paging capabilities

➤ Easy set up and configuration - no programming required

➤ Flexible mounting options

➤ Free IP Intercom HelpDesk™ Software for configuration and remote operation

Extron® Electronics

The Extron IP Intercom System is an easy-to-use two-way intercom designed specifically to meet the needs of the education market. Using a school's existing local area network, the IP Intercom System makes it easy to deploy live help desk support for every classroom. Extron IP Intercom hardware modules and IP Intercom HelpDesk software do not require any upgrades to network protocols and are designed to work with any healthy network.

Why Use an IP Intercom System?

New and emerging presentation technologies empower instructors to help their students comprehend complex concepts and engage them in the learning process. Instructors feel most confident in using these technologies when they have easy access to technical support.

Extron has developed practical solutions to help institutions meet this need. Adding the IP Intercom to an A/V system makes it easy to provide two-way, half-duplex voice communications between classrooms and the central office or instructional technology help desk. This allows instructors to quickly request assistance and describe any problems they may be experiencing.

IP Intercom Hardware Modules

There are two types of Extron IP Intercom hardware modules: The integrated **IPI 100 Series** and the standalone **IPI 200 Series**.

The IPI 100 Series

The one-button and four-button IPI 100 Series IP Intercom Modules require an MLC 226 IP MediaLink Controller for operation. The Extron MLC 226 IP is an enhanced control panel for controlling A/V equipment in any classroom or conference room. With large, backlit power and input buttons and a volume control knob, the MLC 226 IP acts as an extended remote control panel, simplifying control of the A/V system.

For installation flexibility, IPI 100 Series modules can be mounted in an MLC 226 IP AAP or in a separate AAP - Architectural Adapter Plate mounting frame and positioned anywhere in the classroom, up to 100 feet (30 meters) away from the MediaLink Controller.
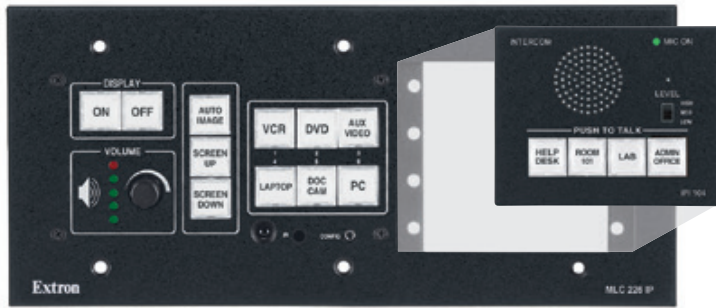
Once installed, the intercom module connects to the MLC 226 IP via the intercom port located on the rear panel of the controller. This port provides power, control, and audio transport between the two products. The IPI 100 Series uses the existing MLC 226 IP network connection, resulting in a substantial cost savings since there is no need to install a second network cable drop. Only one IP address is required for A/V system control and IP Intercom.
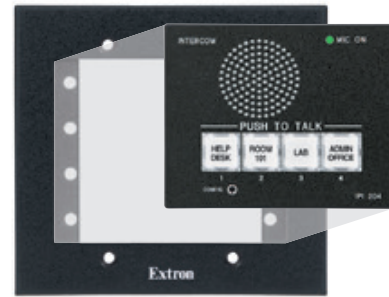
The Stand-alone IPI 200 Series

IPI 200 Series IP Intercom Modules are stand-alone IP-addressable modules that do not require a MediaLink controller for operation. Each one has its own RJ-45 Ethernet connector and is powered independently.

The IPI 200 Series consists of one-button and four-button intercom modules available in models that mount in a two-gang wall box or in any Extron product that accepts a four-space AAP.

IPI 104 AAP mounted in an MLC 226 IP AAP MediaLink Controller

IPI 204 AAP mounted in an AAP 102 Mounting Frame

Easy Set-up and Configuration

The free IP Intercom HelpDesk software makes it easy to set up, manage, and monitor an IP Intercom system. This software lets you quickly configure system options and does not require any programming knowledge.

Paging Capability

The software also includes a convenient paging capability, allowing the help desk operator to page a single room or a group of rooms simultaneously. A line level audio output is provided for mixing into a local sound system in each room.
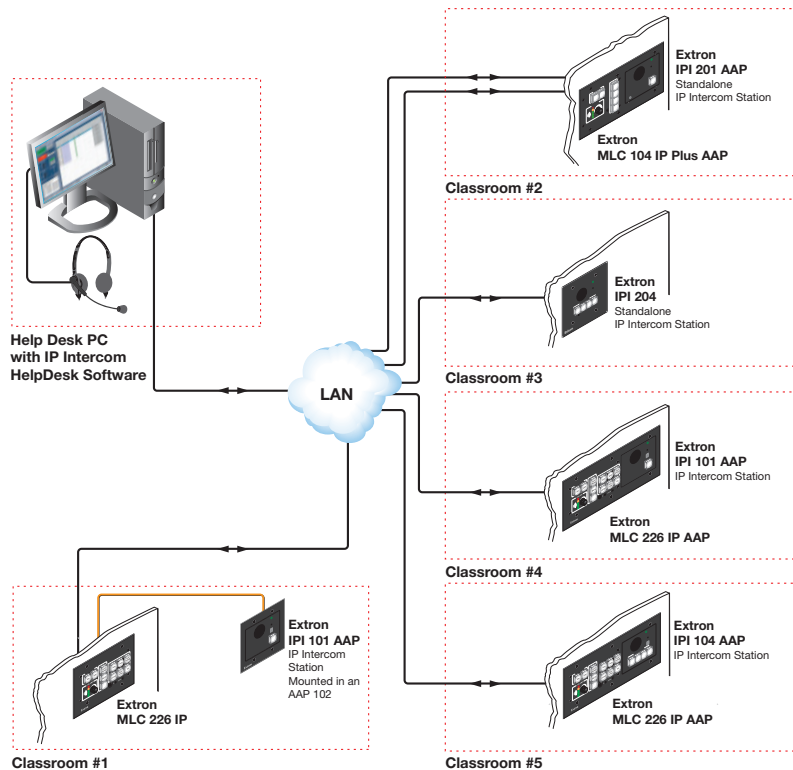
Activity Call Logging

Using the intuitive IP Intercom HelpDesk software, intercom calls and pages can be logged, and date/time-stamped on the help desk computer. Activity logs can be accessed and archived for record keeping and tracking purposes.

Security

The IP Intercom System enhances security operations by allowing audio monitoring for each room. Help desk operators or other authorized personnel can use the IP Intercom's audio monitoring capability to listen to the activity in the room, especially after hours, helping them determine if security personnel should be dispatched to investigate. Audio monitoring can be disabled, if necessary, to comply with local regulations and policies.

The Extron IP Intercom System is ideal for campus-wide A/V systems that require internal communications, help desk support, and security/status monitoring.

Help Desk PC with IP Intercom HelpDesk Software

LAN

Extron IPI 201 AAP Standalone IP Intercom Station
Extron MLC 104 IP Plus AAP
Classroom #2

Extron IPI 204 Standalone IP Intercom Station
Classroom #3

Extron IPI 101 AAP IP Intercom Station
Extron MLC 226 IP AAP
Classroom #4

Extron IPI 101 AAP IP Intercom Station Mounted in an AAP 102
Extron MLC 226 IP
Classroom #1

Extron IPI 104 AAP IP Intercom Station
Extron MLC 226 IP AAP
Classroom #5

There are two series of Extron IP Intercom hardware modules: The IPI 100 Series IP Intercom Modules require an IP Intercom-enabled MLC 226 IP MediaLink Controller for operation. The IPI 200 Series consists of standalone IP Intercom Modules that are IP-addressable and do not require an MLC 226 IP controller. Both series provide two-way, half-duplex voice communication over an IP network, are fully interoperable, and can be installed on the same network. The maximum number of IP Intercom Modules that can be deployed in one system depends solely on the total available bandwidth of the network.

IPI 100 Series IP Intercom Modules for use with MLC 226 IP

IPI 101 AAP

One-Button IP Intercom Module for Use With MLC 226 IP MediaLInk Controller

- For use with an IP Intercom-enabled MLC 226 IP MediaLink Controller
- Uses the same network drop as the MLC 226 IP; only one IP address required for A/V system control and IP Intercom
- One backlit, configurable Push To Talk button for communicating with one location
- Integrated speaker and microphone
- Three-position switch to adjust speaker levels
- LED indicator shows when someone is monitoring the room
- Mounts in a four-space AAP - Architectural Adapter Plate opening

IPI 104 AAP

Four-Button IP Intercom Module for Use With MLC 226 IP MediaLInk Controller

- For use with an IP Intercom-enabled MLC 226 IP MediaLink Controller
- Uses the same network drop as the MLC 226 IP; only one IP address required for A/V system control and IP Intercom
- Four backlit, configurable Push To Talk buttons for communicating with four different locations
- Integrated speaker and microphone
- Three-position switch to adjust speaker levels
- LED indicator shows when someone is monitoring the room
- Mounts in a four-space AAP - Architectural Adapter Plate opening

IPI 200 Series IP Stand-Alone Intercom Modules

IPI 201

One-Button Stand-Alone IP Intercom Module

- Stand-alone IP addressable module
- One backlit, configurable Push To Talk button for communicating with one location
- Integrated speaker and microphone
- Line level audio output and contact relay port
- LED indicator shows when someone is monitoring the room
- Mounts in a two-gang wall plate

IPI 201 AAP

One-Button Stand-Alone IP Intercom Module - AAP Version

- Stand-alone IP addressable module
- One backlit, configurable Push To Talk button for communicating with one location
- Integrated speaker and microphone
- Line level audio output and contact relay port
- LED indicator shows when someone is monitoring the room
- Mounts in a four-space AAP - Architectural Adapter Plate opening

IPI 204

Four-Button Stand-Alone IP Intercom Module

- Stand-alone IP addressable module
- Four backlit, configurable Push To Talk buttons for communicating with four different locations
- Integrated speaker and microphone
- Line level audio output and contact relay port
- LED indicator shows when someone is monitoring the room
- Mounts in a two-gang wall plate

IPI 204 AAP

Four-Button Stand-Alone IP Intercom Module - AAP Version

- Stand-alone IP addressable module
- Four backlit, configurable Push To Talk buttons for communicating with four different locations
- Integrated speaker and microphone
- Line level audio output and contact relay port
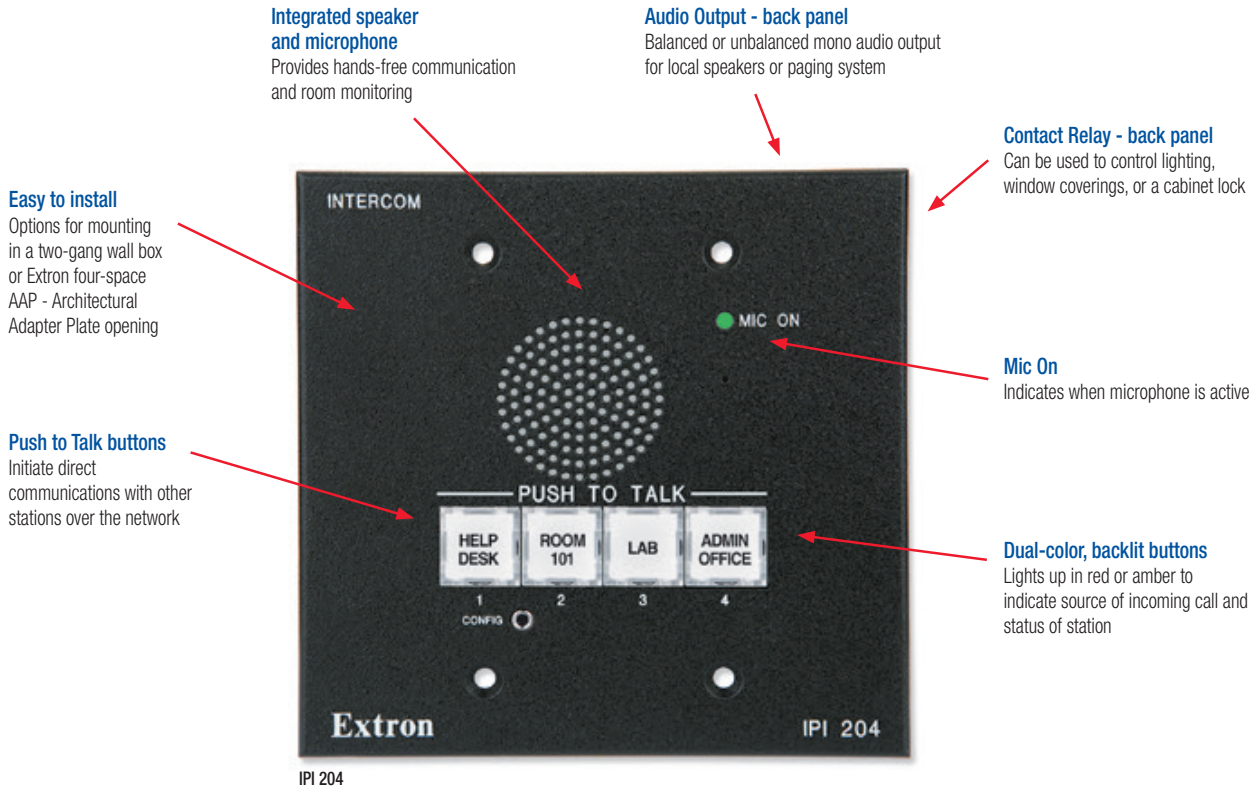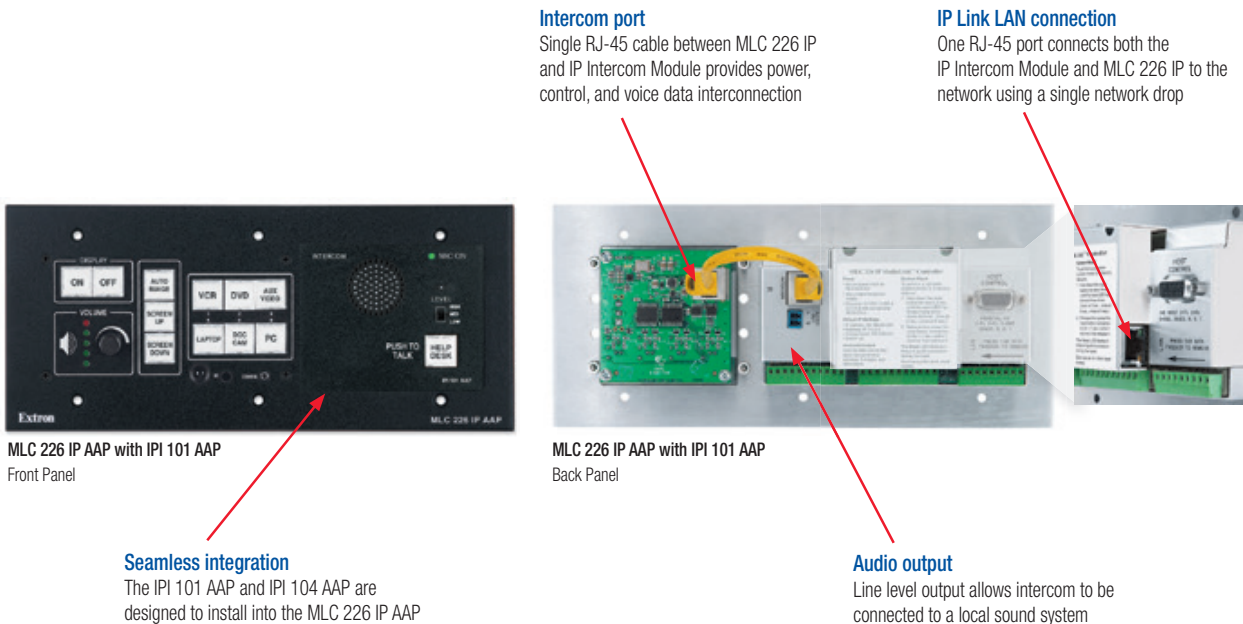- LED indicator shows when someone is monitoring the room
- Mounts in a four-space AAP - Architectural Adapter Plate opening

IPI 204
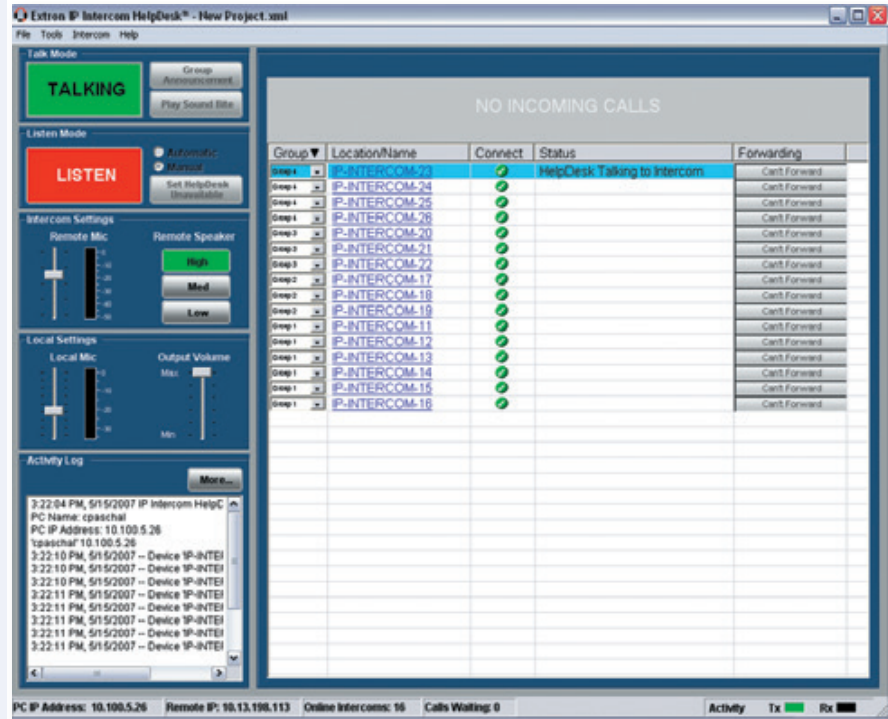### Four Button Stand-alone IP Intercom Module

Integrated speaker and microphone
Provides hands-free communication and room monitoring

Audio Output - back panel
Balanced or unbalanced mono audio output for local speakers or paging system

Contact Relay - back panel
Can be used to control lighting, window coverings, or a cabinet lock

Easy to install
Options for mounting in a two-gang wall box or Extron four-space AAP - Architectural Adapter Plate opening

Mic On
Indicates when microphone is active

Push to Talk buttons
Initiate direct communications with other stations over the network

Dual-color, backlit buttons
Lights up in red or amber to indicate source of incoming call and status of station

IPI 204

IPI 101 AAP
One-Button IP Intercom Module – Shown in MLC 226 IP AAP

Intercom port
Single RJ-45 cable between MLC 226 IP and IP Intercom Module provides power, control, and voice data interconnection

IP Link LAN connection
One RJ-45 port connects both the IP Intercom Module and MLC 226 IP to the network using a single network drop

MLC 226 IP AAP with IPI 101 AAP
Front Panel

MLC 226 IP AAP with IPI 101 AAP
Back Panel

Seamless integration
The IPI 101 AAP and IPI 104 AAP are designed to install into the MLC 226 IP AAP

Audio output
Line level output allows intercom to be connected to a local sound system

With IP Intercom HelpDesk software you can:

- Set up, access, and manage audio for IP Intercom modules
- Communicate with a single room to provide technical support
- Identify IP Intercoms by location and IP address
- Create calling groups for broadcast messages
- Page a single room or group of rooms simultaneously
- Store and transmit pre-recorded voice announcements to one or more rooms
- Monitor audio in room for security
- Control access to the help desk with administrator and user passwords
- View detailed information from multiple intercom stations at the same time

IP Intercom HelpDesk Software

The IP Intercom System HelpDesk software allows any PC on the network equipped with a microphone and speaker or headset to become the help desk station. This simplifies the integration of campus-wide classroom communication and A/V support. The software is supplied for free with the purchase of any IP Intercom module.

Operator Console Window

From the operator console window of the software, the help desk operator can immediately see incoming calls and critical intercom station status in order to prioritize help desk support.

The user interface features easy-to-navigate menus and large on-screen buttons for the "Talk" and "Listen" intercom functions. A list of active intercoms in the center of the screen shows stations that are requesting support. Operators are able to select which room to help and view a list of rooms waiting for help.

Call Flexibility

Console operators use the on-screen IP Intercom station list to initiate a call to an individual station. IP Intercom HelpDesk software also allows console operators to create calling groups to broadcast messages to multiple destinations.

Simple to Set Up and Operate

The intuitive user interface makes it easy to set passwords, configure push-to-talk buttons, create call groups, and create and store pre-recorded messages.

There are three methods for setting up and initializing the intercom system. You can import an existing Global Configurator configuration project file, initialize each IP Intercom module manually, or use the automatic detection feature. In automatic mode, the software looks for all of the IP Intercom modules on the network.

Extron GlobalViewer Web Application

When using the IP Intercom to assist an instructor, the help desk operator can also access Extron's free GlobalViewer® Web-based remote asset management application directly from the on-screen hyperlink in the HelpDesk software. This is particularly useful for classrooms using the IPI 100 Series/MLC 226 IP combination. Without disrupting the communication, the help desk operator can use GlobalViewer to quickly check the status of any A/V devices connected to the MLC 226 IP.

GlobalViewer enables remote troubleshooting and aids the help desk operator in better understanding what's happening with the classroom A/V system. The end result is even more effective internal communication and a much higher level of technical support, while saving valuable time, money , and resources.

Unless otherwise noted all specifications provided are for either an IPI 100 Series IP Intercom Module and MLC 226 IP combined or an IPI 200 Series Standalone IP Intercom Module

AUDIO

Speaker	1.4" (35.6 mm), 1-way, indoor
Frequency response	
Line level output	20 Hz to 3.3 kHz, ±1 dB
Speaker output	300 Hz to 3.3 kHz, -10 dB
Nominal sensitivity/IPI speaker output level	80 dB SPL, 300 mW, 3' (1 m)
Processing	
Audio format	PCM, µ-law companded
Sampling rate	8 kHz
Sample size	16 bit, µ-law companded to 8 bit
Audio latency	<100 ms

AUDIO INPUT

Number/signal type	1 mono, via integrated electret microphone
Microphone gain	-30 dB to 0 dB, adjustable in 2 dB steps

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

AUDIO OUTPUT

Number/signal type	2 mono: 1 via audio output port, 1 via IPI speaker
Line level output	
IPI 100 Series	-10 dBV (316 mVrms), unbalanced (via 3.5 mm captive screw connector, 2 pole)
IPI 200 Series	-10 dBV (316 mVrms), balanced/unbalanced (via 3.5 mm captive screw connector, 3 pole)
Amplified speaker output	300 mW, continuous, 1% THD

ETHERNET CONTROL INTERFACE

Ethernet control/communications port	1 RJ-45 female connector
Ethernet data rate/transport bandwidth	80 kbps
Communications type	Half duplex
Ethernet protocol	TCP/IP (control), UDP (port 3121, audio), Telnet
Program control	Extron's control/configuration program for Windows®
	Extron's Simple Instruction Set (SIS™)
	Microsoft® Internet Explorer ver. 6 or higher, Telnet
Default settings (IPI 200 Series only)	Link speed and duplex level: autodetected
	IP address = 192.168.254.254
	Subnet mask = 255.255.0.0
	Default gateway = 0.0.0.0
	DHCP = off

CONTROL — RELAY (IPI 200 SERIES ONLY)

Number/type	1 momentary or latching (configurable)
Connector	(1) 3.5 mm captive screw connector, 2 pole, C (common) and NO (normally open) for configurable relay output
Contact rating	24 V, 1 A

GENERAL

Power (IPI 100 Series)	Supplied by an MLC 226 IP
External power supply (IPI 200 Series)	100 VAC to 240 VAC, 50/60 Hz, external to 12 VDC, 2 A, regulated
Power input requirements	
IPI 100 Series	+12 VDC, <100 mA
IPI 200 Series	+12 VDC, 0.25 A
Distance between MLC 226 IP and an IPI 100 Series unit	100' (30.5 m), maximum
Mounting	
IPI 100 Series	Rack mount with optional faceplate. Furniture- and wall-mountable with optional faceplate or in an MLC 226 IP AAP faceplate
IPI 200 Series	Rack mount with optional faceplate and rack mounting kit. Furniture- and wall-mountable with optional faceplate and mounting kits.
Enclosure type	Metal faceplate
Enclosure dimensions - faceplate	
IPI 201, IPI 204	4.5" H x 4.6" W x 0.1" D (11.4 cm H x 11.7 cm W x 0.3 cm D) (fits some 2 gang boxes)
IPI 100 Series, IPI 201 AAP, IPI 204 AAP	2.8" H x 3.5" W x 0.1" D (7.1 cm H x 8.9 cm W x 0.3 cm D) (four space AAP plate)
Device	
IPI 100 Series	2.7" H x 2.6" W x 0.9" D (6.9 cm H x 6.6 cm W x 2.3 cm D) (Depth excludes buttons and switch. Allow at least 2.1" (5.3 cm) depth in the wall/furniture.)
IPI 200 Series	2.7" H x 2.6" W x 2.0" D (6.9 cm H x 6.6 cm W x 4.9 cm D) (Depth excludes buttons. Allow at least 2.25" (5.5 cm) depth in the wall/furniture.)
Product weight	
IPI 100 Series	0.2 lbs (0.1 kg)
IPI 200 Series	0.5 lbs (0.2 kg)
Shipping weight	
IPI 100 Series	1 lbs (1 kg)
IPI 200 Series	3 lbs (1 kg)
Regulatory compliance	
Safety	CE, CUL, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE: All nominal levels are at ±10%.

Model	Version Description	Part number
Intercom modules that require MLC 226 IP		
IPI 101 AAP	One-button AAP- Black	70-501-02
IPI 101 AAP	One-button AAP- White	70-501-03
IPI 104 AAP	Four-button AAP - Black	70-502-02
IPI 104 AAP	Four-button AAP - White	70-502-03
Stand-alone intercom modules		
IPI 201	One Button Two-gang - Black	60-809-02
IPI 201	One Button Two-gang - White	60-809-03
IPI 201 AAP	One Button AAP - Black	60-809-12
IPI 201 AAP	One Button AAP - White	60-809-13
IPI 204	Four Button Two-gang - Black	60-810-02
IPI 204	Four Button Two-gang - White	60-810-03
IPI 204 AAP	Four Button AAP - Black	60-810-12
IPI 204 AAP	Four Button AAP - White	60-810-13

Specifications are subject to change without notice.