

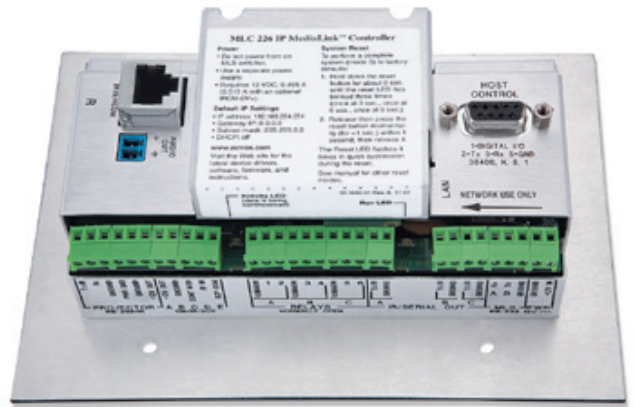


# MLC 226 IP Series

Enhanced MediaLink™ Controllers with IP Link®



MLC 226 IP front view



MLC 226 IP rear view

## COMMON FEATURES

- **Bidirectional RS-232 port for universal display control** — The MLC 226 IP has a dedicated port for communicating with virtually any projector or flat panel display via IR or RS-232. Control drivers can be downloaded or created using the intuitive software. A second RS-232 port is for controlling an optional Extron MediaLink Switcher.
- **Meets or exceeds Section 508 accessibility standards**
- **IP Link® Ethernet monitoring and control** — An IP integration technology developed by Extron that enables the MLC 226 IP to be controlled and proactively monitored over a LAN, WAN, or the Internet.
- **Supports optional IP Intercom station for two-way, half-duplex voice communications over an IP network**
- **Three IR/serial ports for one-way control of external devices**
- **Six configurable relays for control of room functions** — Enables control of lighting, screen settings, and other device functions.
- **Support for optional IRCM - Infrared Control Modules** — For controlling external sources, such as DVD players and VCRs
- **IR learning capability**
- **Discrete ON and OFF display power controls** — Simplify system operations and eliminate the need for an external display remote.
- **RS-232 port for MediaLink Switcher support**
- **Inactivity timer for display shutoff** — Preserves energy, prevents plasma burn-in, or extends projector lamp life.
- **Front panel security lockout** — When the security lockout mode is engaged, the MLC 226 IP's front panel becomes inoperable unless a user-defined PIN number is entered. No functions of the controller or IR remote can be activated.
- **Volume control knob with volume level indication for display or MediaLink Switcher** — Allows for convenient, centralized control without additional remotes. The five LEDs provide clear indication of the current audio setting.
- **Configurable buttons** — Can be set up to trigger a variety of functions such as selecting an input, sending a serial or IR command, or controlling a relay.
- **Macro capability** — Any button can be configured to execute multiple actions through the serial and IR control ports. For instance, the touch of a single button could trigger commands to turn on the display, select the display's RGB input, and select an input on the MediaLink Switcher.
- **Tri-color, backlit buttons can be custom labeled for easy identification** — Buttons illuminate red, green, or amber, depending on function, for ease of use in low-light environments.
- **Pre-printed button labels included**
- **Optional SCP 226 Secondary Control Panel** — Duplicates the MLC 226 IP's front panel buttons and offers a second control point within a room.
- **Integral high performance Web server with 7.25 MB flash memory** — Features a built-in Web server with memory available for storing device drivers, GlobalViewer, and custom user Web pages.

- **Flexible mounting options** — There are a variety of optional mounting kits available for installing the MLC 226 IP virtually anywhere, including walls, lecterns, or tables.
- **Optional IR 402 handheld infrared remote control, part # 70-207-01** — Offers remote control of the MLC 226 IP and connected external sources
- **External universal power supply included, part # 70-055-01** — Provides worldwide power compatibility.

## DESCRIPTION

The Extron **MLC 226 IP** MediaLink Controllers are enhanced control panels for controlling A/V equipment in any small classroom or boardroom. They standardize the interface for all display systems, making them easier to use, set up and maintain. All MLC 226 IP models include IP Link with GlobalViewer™, a free Web-based asset management and remote control software application.

The MLC 226 IP MediaLink Controller offers several enhanced control capabilities including six input selection buttons, two bidirectional serial ports for display and switcher control, three unidirectional serial/IR control ports, six relays, and support for optional IRCM - Infrared Control Modules to control VCRs, DVDs, and other IR controllable equipment.

The flexible MLC 226 IP acts as an extended remote control panel. It is not a switcher; instead, as a controller, it tells the display when to switch between its various inputs. Presenters with little or no training can walk into any multimedia classroom and operate the A/V system. The MLC 226 IP includes universal display control for a display's power, input switching, and volume control. The MLC 226 IP features backlit buttons that can be custom-labeled for easy identification. Because the buttons illuminate, they are helpful for presenters in low-light environments. The input selection and room/function buttons on the MLC 226 IP can be utilized for source selection and relays, as well as sending various RS-232 or IR commands.

### Room Control

In addition to display and source control, the MLC 226 IP also offers the ability to control many other devices in the room. Room lighting, screens, projector lifts, window shades and other equipment can be controlled using the controller's six relays.

### IP Link® Ethernet Control

The MLC 226 IP is equipped with Extron's IP Link, a network integration technology specifically engineered to meet the needs of professional A/V environments — from small K-12 classrooms to university and business applications. When used with the GlobalViewer Web application, IP Link facilitates key asset management functions including:

- **Proactive maintenance** — GlobalViewer can store and display information about connected devices like serial numbers, owner identification, maintenance history, and installed firmware versions. This centralized data can be collected and used to reduce maintenance costs and guide future purchasing decisions. For instance, a projector can be polled routinely to track lamp usage and total life time. When lamp usage reaches a predetermined number of hours, the MLC 226 IP can send a report via e-mail.

Continued →

## MLC 226 IP Series

### DESCRIPTION (CONTINUED)

- **Event scheduling** — GlobalViewer uses the real-time clock and calendar in IP Link-enabled devices to maximum value. User-defined tasks are easy to configure and schedule with the GlobalViewer and don't require high-level programming skills. For instance, an administrator may want to turn off all projectors every Friday at close of business. The administrator can schedule the system to turn off all projectors at a specified time, and raise all projection screens that were left down.
- **Remote technical support** — Technicians can troubleshoot systems remotely because GlobalViewer provides the real-time status of connected devices. Information such as connection status, power state, and current input selection is displayed in a central location. For many connected devices, technicians can toggle power on or off, switch sources, control volume, and more without leaving their office. Many common problems can be resolved without a trip to where the equipment is located.
- **Theft alerts** — IP Link-enabled products are always on and routinely poll their attached devices for status information. If any serially controlled device such as a projector or plasma display is physically disconnected from the network, the MLC 226 IP monitoring its status will know immediately. In such an event, it can send an e-mail message notifying security personnel of the possible theft. For fast action, e-mails can be sent to multiple addresses including cell phones and wireless PDAs.

### Data Logger

Data Logger is a free Microsoft® Excel-based spreadsheet application that allows administrators to automatically gather up-to-date lamp hour and usage statistics for multiple rooms of A/V equipment. It provides a simple, convenient way to retrieve A/V system usage statistics into a single document for data analysis, collecting critical system information such as frequency of usage for each front panel input and current lamp hours of connected projectors.

### Easy System Configuration using Global Configurator Software

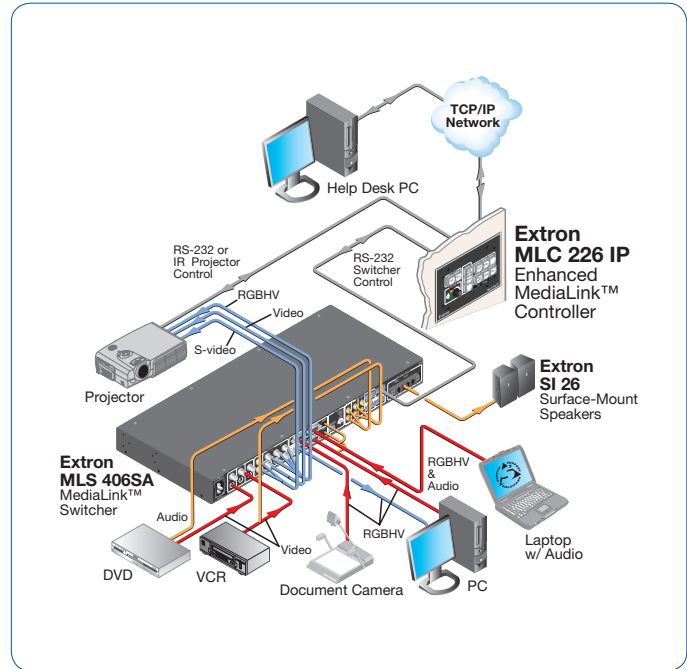
The MLC 226 IP is designed to be configured with Extron's Global Configurator. With Global Configurator, the MLC 226 IP can be configured with a wide selection of commonly used display control drivers. These RS-232 or IR drivers are essential for the MLC 226 IP to effectively communicate with a display device. They enable the MLC 226 IP to control basic display functions such as power, input selection, and volume adjustment. Users can create their own drivers or go to the Extron Web site to download RS-232 or IR drivers compatible with the latest and most popular display devices. Global Configurator also adds support for GlobalViewer, a free Web-based asset management and remote control software application specifically designed to work with products that include IP Link technology.

The MLC 226 IP is designed to work with almost every Extron switcher, including the MediaLink Switchers, which are specifically designed to complement MediaLink Controllers.

Switchers are available to accommodate a variety of video, RGBHV, and audio signals while providing unique features that expand A/V system capabilities. The MLC 226 IP can also work as a stand-alone device to control a display without the aid of a switcher.

### Mounting Options

The MLC 226 IP Controllers are offered in various sizes to accommodate numerous architecturally compatible possibilities. The MLC 226 IP is available without a faceplate. It also ships with a three-gang wall plate. The MLC 226 IP AAP ships with a five-gang faceplate and includes an opening to accommodate four single space AAP - Architectural Adapter Plates. The MLC 226 IP L utilizes a low profile lectern mounting kit that mounts in a rack or wall using an Extron UCM RAAP or UCM 10X8P Universal Controller Mounting Kit; mounts on a desk using an Extron SMB 203 L Lectern Series Mount Box.



## MLC 226 IP

Enhanced MediaLink™ Controller with IP Link®

### UNIQUE FEATURES

- Three-gang faceplate
- MR 300 Mud Ring included



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP	Black .....	60-600-02
MLC 226 IP	White .....	60-600-03
MLC 226 IP	RAL9010 White .....	60-600-05

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MLC 226 IP Series

# MLC 226 IP DV+

Enhanced MediaLink Controller with IP Link® and Integrated DVD and VCR IR Control

**UNIQUE FEATURES**

- Five-gang faceplate
- Dual-function DVD and VCR IR control
- Includes black and white, high-impact plastic mounting faceplates
- Black and white MR 500 Mud Rings included



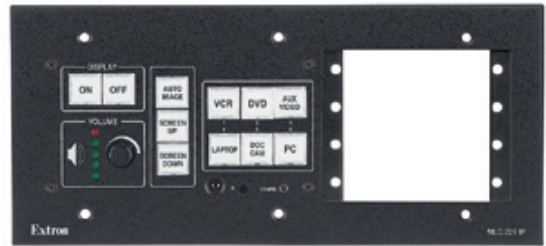
MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP DV+	Black & White	60-600-82

# MLC 226 IP AAP

Enhanced MediaLink™ Controller with IP Link® and AAP Opening

**UNIQUE FEATURES**

- Five-gang faceplate
- Opening for up to four single space AAP - Architectural Adapter Plates; AAPs sold separately
- MR 500 Mud Ring included



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP AAP	Black	60-600-12
MLC 226 IP AAP	White	60-600-13
MLC 226 IP AAP	RAL9010 White	60-600-15

# MLC 226 IP L

Enhanced MediaLink™ Controller with IP Link® and Lectern Faceplate

**UNIQUE FEATURES**

- Low profile, 3.2" (8.1 cm) tall faceplate fits into a compact space on a lectern or desk
- Mounts in a rack or wall using an Extron UCM RAAP or UCM 10X8P Universal Controller Mounting Kit; mounts on a desk using an Extron SMB 203 L Lectern Series Mount Box



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP L	Black	60-600-32
MLC 226 IP L	White	60-600-33
MLC 226 IP L	RAL9010 White	60-600-35

# MLC 226 IP Controller Only

Enhanced MediaLink™ Controller with IP Link® - No Faceplate

**UNIQUE FEATURES**

- No faceplate for custom installations
- For use with any of the MLM 226 IP Series mounting options



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP Controller Only	Controller Only - No Faceplate	60-600-00

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## MLC 226 IP Series

### MLC 226 IP Series Accessories

INCLUDED ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
EPS 1210 B	Extron Desktop Power Supply - 12VDC, 2A	page 694	70-055-01
NETXC M-M	Male to Male RJ-45 Network Crossover Cable, 6' (1.8 m)	page 418	26-591-01
OPTIONAL ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
UC50' (50' / 15 m)	Universal Projector Control Cable 50' (15.2 m)	page 419	26-518-01
IR Emitter and Shield Kit	IR Emitter Kits	page 416	70-283-01
MLC PW/RS-232/VC-35'	One Power, Switcher Communications and MPA Volume Control Cable - Plenum, 35' (10.6 m)	page 419	26-626-35
IRCM-DV+	Dual-Function DVD and VCR IR Control Module - Quad Space AAP	page 393	70-220-02
IPI 101 AAP	One-Button IP Intercom® Station for Use With MLC 226 IP	page 424	70-501-02
IPI 104 AAP	Four-Button IP Intercom Station	page 424	70-502-02
MLS 406SA	Six Input MediaLink™ Switcher with Stereo Audio Amplifier	page 439	60-560-03
MLS 506SA	Six Input MediaLink™ Switcher with Stereo Audio Amplifier	page 442	60-386-04
CM-9BLB	Nine-Button Control Module - Quad Space AAP	page 394	70-494-02
SCP 226	Secondary Control Panels for MLC 226 IP and System 5 IP	page 400	60-671-02
IR 402	Handheld IR Remote Control for System 5 IP and MLC 226 IP	page 271	70-207-01
MLA-VC10	Volume Control Module	page 418	60-502-01
MLM 226 L	Replacement Lectern Mounting Kit for the MLC 226 IP L and SCP 226 L	page 406	70-342-02
UCM RAAP	Universal Controller Mounting Rack Kit	page 410	70-344-02
SMB 103	Three-Gang Surface Mounting Box	page 824	60-641-02
MLM-WB+	Lockable Metal Wall Box with Flip-Down 4U Rack Space	page 409	60-458-02

### SPECIFICATIONS

#### CONTROL / REMOTE – MLC CONTROLLER HOST PORTS

Serial control port	2 RS-232: 1 rear panel 9-pin female D connector (shared with digital input), 1 front panel 2.5 mm mini stereo jack
Baud rate and protocol	38400, 8 data bits, 1 stop bit, no parity
Ethernet control port	1 RJ-45 female
Ethernet data rate for network communication	10/100Base-T, half/full duplex with autodetect
Ethernet protocol	ARP, DHCP, ICMP (ping), TCP/IP, Telnet, HTTP, SMTP
Ethernet default settings	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
Web server	Up to 200 simultaneous sessions 7.25 MB nonvolatile user memory
Secondary Control Panel (SCP)	(1) 3.5 mm 5-pole direct insertion captive screw connector (shared with control module and IR Link port)
IR remote control	IR 402 (optional) Front panel: 30° maximum, 40 degrees off axis Rear panel: 38 kHz, hardwired, modulated
Program control	Extron's configuration program for Windows® Extron's Simple Instruction Set (SIS™) Microsoft® Internet Explorer, Telnet

#### CONTROL – RELAY

Number / Type	6 momentary or latching (configurable via software)
Connectors	(3) 3.5 mm captive screw connectors, 3 pole
Connector configuration	Groups A, B, C; each with 1 common and 2 normally open relays (default)
Contact rating	24 V, 1 A

#### CONTROL – PROJECTOR / PLASMA

Projector control port	(1) 3.5 mm direct insertion captive screw connector, 3 pole
Programmable for RS-232 control	(±5 V) or TTL level (0 to 5 V) infrared control up to 1 MHz
Baud rate and protocol (RS-232)	115200 to 300 (9600 default) baud (configurable); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity

#### CONTROL – SWITCHER

Switcher control port	(1) 3.5 mm direct insertion captive screw connector, 3 pole, for RS-232 control (±5 V)
Baud rate and protocol	9600 baud; 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity

#### CONTROL – PERIPHERAL EQUIPMENT

IR / Serial control ports	(3) 3.5 mm direct insertion captive screw connectors, 2 pole Programmable: RS-232 (±5 V) control, or TTL level (0 to 5 V) infrared control up to 1 MHz
Baud rate and protocol	115200 to 300 (9600 default) baud (configurable); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity
IR learning frequencies	30 kHz to 62 kHz
IR learning distance	2" (5.1 cm) to 12" (30.5 cm) from the front panel

#### DIGITAL INPUT CONTROL

Number / Type	2 digital
Connector	1 rear panel 9-pin female D connector (shared with the MLC controller host port) (1) 3.5 mm direct insertion captive screw connector (shared with power sense port)

Input voltage range	0-12 VDC
Input impedance	28k ohms
Programmable pullup	2k ohms to +3.3 VDC
Threshold low to high	>1.2 VDC
Threshold high to low	<1.1 VDC

#### IP INTERCOM

Connection type (IPI-MLC)	RJ-45 jack for CAT 5, CAT 5e, or CAT 6 cable
Audio	Frequency response: 20 Hz to 3.3 kHz, ±1 dB Audio processing: PCM, μ-law companded Audio format: PCM, μ-law companded Sampling rate: 8 kHz Sample size: 16 bit, μ-law companded to 8 bit Audio latency: Software: 30 ms through 160 ms Network: <150 ms, typical
Audio output	Number / Type: 1 mono (for use with an optional IP Intercom) Line level output: -10 dBV (316 mVrms), unbalanced (via 3.5 mm captive screw connector, 2 pole)
Communication	Transport bandwidth for IPI control and audio, half duplex: 80 kbps (0.08% of 100Base-T) Ethernet protocol: TCP/IP (control), UDP (audio)

#### GENERAL

External power supply	100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, 1 A, regulated
Power input requirements	MLC 226 IP DV+ : 12 VDC, 0.515 A (includes MLC 226 IP and IRCM-DV+) All other models: 12 VDC, 0.495 A (0.515 A with 1 IRCM-DV+ connected) NOTE: An MLC 226 Series controller must be powered by its own power supply. It cannot be powered by an MLS switcher.
Rack mount	MLC 226 IP DV+ : No, but wall- and furniture-mountable All other models: Yes, with optional rack mounting kits, and also wall- and furniture-mountable with optional mounting kits
Enclosure type	MLC 226 IP DV+ : High-impact plastic All other models: Metal
Enclosure dimensions	Faceplate MLC 226 : 4.5" H x 6.4" W x 0.1" D (11.4 cm H x 16.3 cm W x 0.3 cm D) (3 gang) MLC 226 AAP, MLC 226 IP DV+ : 4.5" H x 10.1" W x 0.1" D (11.4 cm H x 25.7 cm W x 0.3 cm D) (5 gang) MLC 226 L : 3.2" H x 6.5" W x 0.1" D (8.1 cm H x 16.5 cm W x 0.3 cm D)
Device	MLC 226 IP DV+ : 2.75" H x 5.3" W x 2.0" D (7.0 cm H x 13.5 cm W x 5.9 cm D) and 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 knob and buttons. Fits some 5 gang boxes. Allow at least 2.1" (5.3 cm) depth in the wall/furniture.) All other models: 2.75" H x 5.3" W x 2.0" D (7.0 cm H x 13.5 cm W x 5.9 cm D) (Depth excludes knob and buttons. Fits some 3 gang boxes)
Product weight	MLC 226 IP DV+ : 2.1 lbs (1.0 kg) All other models: 1.9 lbs (0.9 kg)
Shipping weight	6 lbs (3 kg)