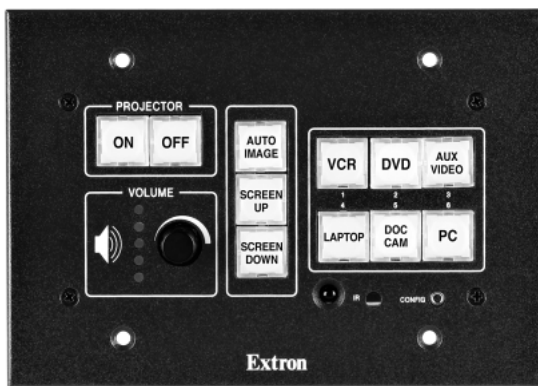


# MLC 226 IP

MEDIALINK™ CONTROLLERS WITH IP LINK™

- Universal projector control
- Integrated IP Link™ provides
  - Proactive maintenance
  - Event scheduling
  - Remote technical support
  - Theft alerts
- Six Room control relays
- Configurable Backlit buttons
- Inactivity timer for display shut-off
- Front panel security lockout
- Volume control with five level-status LEDs
- Versatile mounting options



The Extron MLC 226 IP Series of MediaLink Controllers are full-featured user interfaces for centralized room control. The cornerstone of the MediaLink System, the MLC 226 IP is an intuitive and flexible remote control panel engineered to streamline operations and simplify control for A/V systems.



## Extron® Electronics

[www.extron.com](http://www.extron.com)

# DESCRIPTION

---

The Extron **MLC 226 IP** MediaLink Controllers are easy-to-use, full-featured control panels for any small classroom or boardroom. They standardize the control interface for all systems, making projection systems simple to use. Standardization also makes setup and maintenance easier to support.

The flexible MLC 226 IP acts as an extended remote control panel. It is not a switcher; instead, as a controller, it tells the projector 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 projector control for a projector's power, input switching, and volume control. For one-button functionality, 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.

Especially vital for high traffic areas, the MLC 226 IP is housed in a secure, three-gang enclosure. It has the same look and functionality regardless of where it is mounted: a lectern, desk, wall, rack, or wall box.

## FEATURES

---

- **Universal projector control** – The MLC 226 IP has a dedicated port for communicating with virtually any projector or plasma via IR or RS-232. Control drivers can be downloaded or created using the intuitive software.
- **Projector power control** – Discreet ON and OFF backlit buttons simplify system operations and eliminate the need for external projector remote.
- **Room control** – The MLC 226 IP is equipped with six internal relays to control lighting, screen settings, and other device functions. The relays may be controlled through the front panel, SCP 226 control panel, IR 402 remote or RS-232.
- **Bi-directional RS-232 port for universal projector control** – The MLC 104 has a dedicated port for communicating with virtually any projector or plasma via IR or RS-232. Control drivers can be downloaded or created using the intuitive software.
- **RS-232 port for MediaLink switcher support** – For controlling an optional Extron MediaLink switcher, such as the MLS 406SA.
- **Three IR/Serial ports** – For one-way RS-232 control of external devices.
- **VCR and DVD player control** – The MLC 226 IP is capable of performing IR learning which enables it to control various source devices when using optional IR control modules (IRCMs) such as the IRCM-DV+.
- **Backlit buttons** – Programmable backlit buttons on the front panel of the MLC 226 IP can be custom-labeled for easy identification. Because the buttons illuminate, they are helpful for presenters in low-light environments.
- **Inactivity timer for display shut-off** – Adjustable timer control provides automatic shutdown to preserve energy, prevent plasma burn-in, or extend projector lamp life.
- **Front panel security lockout** – When the security lock-out mode is engaged, the MLC 104's front panel becomes inoperable unless a user-defined PIN number is entered. No controller functions can be activated.
- **Volume control** – Volume control provides adjustment of projector or MediaLink switcher audio levels, allowing for convenient, centralized control without additional remotes. The five LEDs provide clear indication of the current audio setting.
- **Secondary Control Panel** – The optional SCP 226 duplicates the MLC 226 IP's front panel functions and offers a second access point within a room.
- **IR Remote control** – The optional IR 402 offers remote control of the MLC 226 IP and connected source equipment, such as VCR's and DVD players.
- **AAP openings** – The MLC 226 IP AAP fits into a five-gang wall plate and includes four single space Architectural Adapter Plate (AAP) openings. Blank AAPs are not included. The openings allow for integration with many Extron AAPs, including signal pass-through connections
- **Color choices** – The MLC 226 IP controllers are available in black, white, or RAL9010 white for architectural integration.
- **Mounting options** – Flexibility in installation allows for numerous architecturally compatible possibilities.

### System Configuration

Extron creates and administers a wide selection of commonly used projector control drivers. These RS-232 drivers are essential for the MLC 226 IP to effectively communicate with a display device. They enable the MLC 226 IP to control basic projector functions such as power, input selection, and volume adjustment.

The MLC 226 IP is designed to work with almost every Extron switcher, including the MediaLink Switchers (MLS) and VersaTools™ MediaLink Switchers, which are specifically designed to complement MediaLink controllers. Each product of the MLS line switches video, computer-video, and/or audio and provides unique features such as volume and tone control. The MLC 226 IP can also work as a stand-alone device to control a projector without the aid of a switcher.



### IP Link™ Ethernet Control

The MLC 226 IP is equipped with Extron's IP Link, an IP integration technology specifically engineered to meet the needs of professional A/V environments — from small K-12 classrooms to universities and businesses. IP Link Global Viewer, a free Web-based asset management and remote control software application, is specifically designed to work with products that include IP Link technology. It facilitates key asset management functions including:

- **Proactive maintenance** – The Global Viewer 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.
- **Event scheduling** – The Global Viewer 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 Global Viewer Configurator (GVC) 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 the Global Viewer 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 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.

## 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 TRS jack
Baud rate and protocol .....	38400, 8 data bits, 1 stop bit, no parity
Serial control pin configurations.....	9-pin female D connector: 2 = TX, 3 = RX, 5 = GND, TRS jack: tip = TX, ring = RX, sleeve = GND
Ethernet control port .....	1 RJ-45 female
Ethernet data rate .....	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
Extron remote key pad control.....	(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)
Program control.....	Extron's configuration program for Windows® Extron's Simple Instruction Set (SIS™) Microsoft® Internet Explorer, Netscape® Navigator®, Telnet

## CONTROL — RELAY

Number/type.....	6 momentary or latching (configurable via software)
Connectors .....	(1) 3.5 mm captive screw connectors, 9 pole
Connector configuration .....	Groups A, B, C; each with 1 common and 2 normally open relays (default)
Contact rating .....	12V, 1A

## CONTROL — PROJECTOR/DISPLAY

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, 57600, 38400, 19200, 9600 (default), 4800, 2400, or 1200 baud (configurable); 8 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 .....	115200, 57600, 38400, 19200, 9600 (default), 4800, 2400, or 1200 baud (configurable); 8 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, 57600, 38400, 19200, 9600 (default), 4800, 2400, or 1200 baud (configurable); 8 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.....	1 digital
Connector .....	1 rear panel 9-pin female D connector (shared with the MLC controller host port)
Pin configuration .....	9-pin female D connector: 1 = digital input, 5 = GND
Input voltage range .....	0-24 VDC, clamped at +30 VDC
Input impedance .....	28k ohms
Programmable pull-up .....	2k ohms to +5 VDC
Threshold low to high .....	Programmable range: 100 mV to 24 VDC, default = 2 VDC
Threshold high to low .....	Programmable range: 100 mV to 24 VDC, default = 1 VDC

## GENERAL

Power.....	Supplied by an optional MediaLink™ switcher or the included external power supply
External power supply .....	100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, 1 A, regulated
Power input requirements .....	12 VDC, 0.5 A
Rack mount .....	Yes, with optional rack mounting kits, and also wall- and furniture-mountable with optional mounting kits
Enclosure type .....	Metal
Enclosure dimensions	
MLC 226 faceplate.....	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 faceplate .....	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)
Device .....	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) (fits some 3 gang boxes)
Product weight .....	1.9 lbs (0.9 kg)
Shipping weight.....	6 lbs (3 kg)
Listings.....	UL, CUL
Compliances .....	CE, FCC Class A, VCCI, AS/NZS, ICES

**NOTE:** All nominal levels are at ±10%

Model	Part Numbers
MLC 226 IP (Controller Only) .....	60-600-00
MLC 226 IP (black) .....	60-600-02
MLC 226 IP (white) .....	60-600-03
MLC 226 IP (RAL9010 white).....	60-600-05
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 AAP (black).....	60-600-12
MLC 226 IP AAP (white) .....	60-600-13
MLC 226 IP AAP (RAL9010 white).....	60-600-15

### Included Accessories

#### MLC 226 IP / MLC 226 IP AAP

12V/1Amp power supply .....	70-055-01
3-gang/5-gang mud ring .....	70-086-X2/X4
Button label text .....	33-954-01
Button label icon .....	33-955-01
6' RJ-45 crossover cable .....	26-591-01

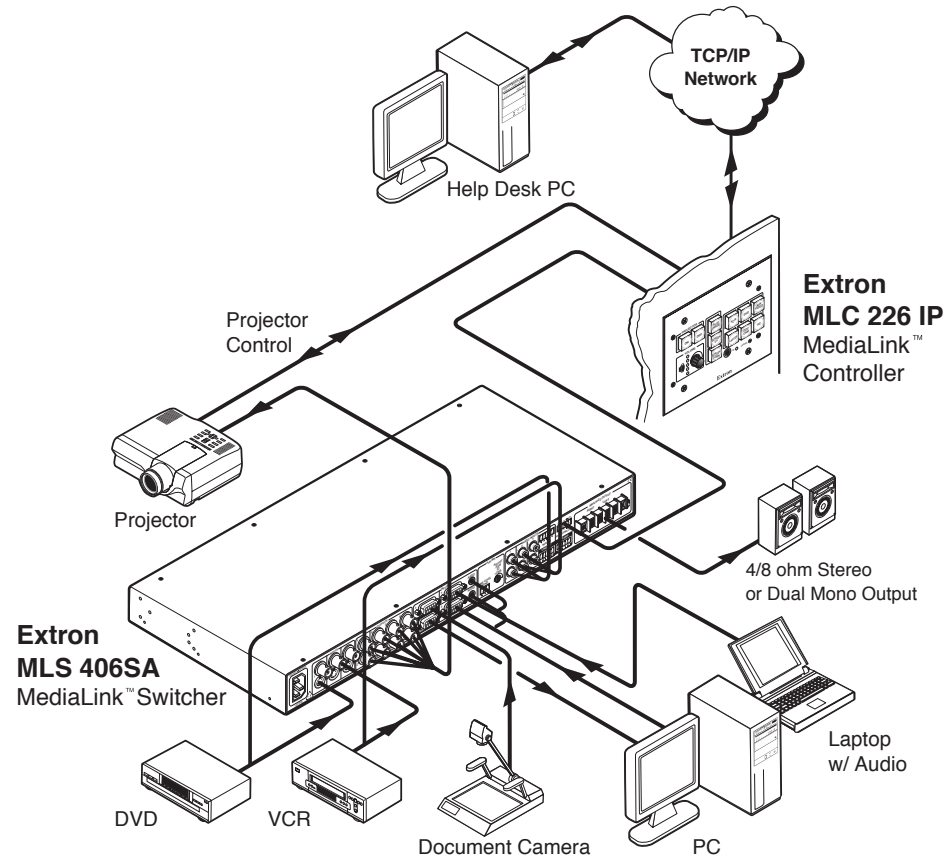
#### MLC 226 IP L

12V/1Amp power supply .....	70-055-01
Button label text .....	33-954-01
Button label icon .....	33-955-01
6' RJ-45 crossover cable .....	26-591-01

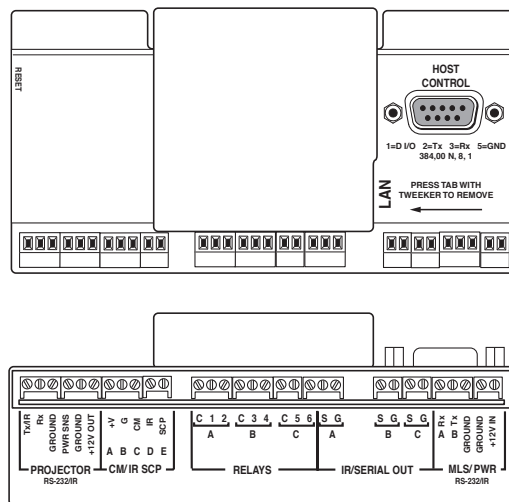
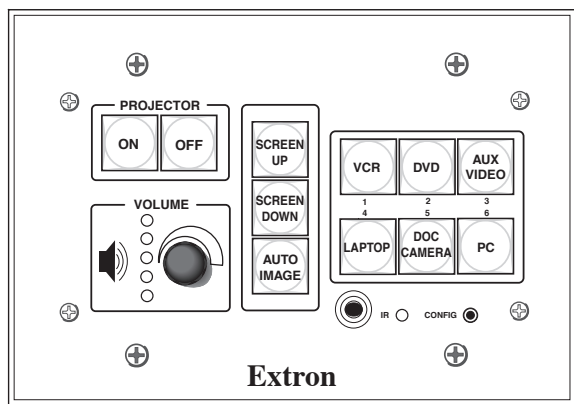
### Optional Accessories

SCP 226 .....	60-671-XX
UC 50' .....	26-518-01
IR Emitter .....	70-283-01
IR Link .....	60-401-0X
9pin-2.5 RS-232 cable .....	70-335-01
IRCM-VCR .....	70-148-0X
IRCM-DVD .....	70-149-0X
IRCM-DVD+ .....	70-179-0X
IRCM-DV+ .....	70-220-0X
IRCM-TAPE.....	70-180-0X
RCM-SC .....	70-183-0X
RCM-SCLT .....	70-184-0X
ACM-Level .....	70-182-0X
ACM-Tone .....	70-181-0X
MLA-VC10 .....	60-502-01
Three-gang mudring .....	70-086-0X
Five-gang mudring.....	70-086-0X
Display Power Sensor .....	60-271-01
IR Broadcaster .....	60-272-02
P/S 100 power supply .....	60-357-01
Three-gang back box .....	980083
Five-gang back box .....	980131
EWB-3-gang .....	60-454-0X
EWB-5-gang .....	60-456-0X
EWB-10X8 .....	60-457-0X
SMB-3-gang.....	60-641-02
SMB-5-gang.....	60-643-02
IR 402 .....	70-207-01
UCM 10X8.....	70-341-02/03
UCM RAAP.....	70-344-02/03
MLM 226 L .....	70-342-02/03
MLM 226 LAAP .....	70-343-02/03/05
MLM 226 EC (RAL9010 white).....	70-342-10
MLM 226 AAP EC (RAL9010 white) .....	70-356-10
MLS 100 A .....	60-497-01
MLS 102 VGA .....	60-497-04
MLS 103 V .....	60-497-02
MLS 103 SV .....	60-497-03
MLS 304MA/SA .....	60-550-01/02
MLS 406/MA/SA .....	60-560-01/02/03
MLS 506/70/MA/SA.....	60-386-02/03/04

# APPLICATION DIAGRAM



# PANEL DRAWINGS



**Extron Electronics, USA**  
 1230 South Lewis Street  
 Anaheim, CA 92805  
 800.633.9876 714.491.1500  
 FAX 714.491.1517

**Extron Electronics, Europe**  
 Beeldschermweg 6C  
 3821 AH Amersfoort, The Netherlands  
 +800.3987.6673 +31.33.453.4040  
 FAX +31.33.453.4050

**Extron Electronics, Asia**  
 135 Joo Seng Rd. #04-01  
 PM Industrial Bldg., Singapore 368363  
 +800.7339.8766 +65.6383.4400  
 FAX +65.6383.4664

**Extron Electronics, Japan**  
 Daisan DMJ Bldg. 6F, 3-9-1 Kudan Minami  
 Chiyoda-ku, Tokyo 102-0074  
 Japan  
 +81.3.3511.7655 FAX +81.3.3511.7656