

MLC 104 IP Plus

MEDIALINK® CONTROLLER
WITH IP LINK®

Simplified remote control for A/V systems

- Bi-directional RS-232 port for universal display control
- Integrated IP Link provides:
 - Proactive maintenance
 - Event scheduling
 - Remote technical support
 - Theft alerts
- Three digital I/O ports
- Dedicated IR Port
- Support for optional IRCM - Infrared Control Modules
- IR learning capability
- RS-232 port for MediaLink Switcher support
- Configurable backlit buttons
- Volume control with five level-status LEDs
- Versatile mounting options



Extron® Electronics
INTERFACING, SWITCHING AND CONTROL

Introduction

Extron MediaLink is a family of economical easy-to-install and easy-to-use products that work together to connect, control, and switch A/V presentation equipment in small classrooms and conference rooms. All MediaLink Controllers, MediaLink Switchers, and accessories are designed to simplify installation and operation of presentation systems. The complexity often associated with A/V integration is replaced with standardized and simple one-touch functionality that provides a complete system solution.

Centralized Room Control

Extron's MediaLink Controllers simplify system management and monitoring by centralizing all of the control elements of a complete A/V system.

MediaLink Controllers are compatible with a variety of projectors and displays and eliminate the learning curve often associated with operating complicated control systems. These self-contained controllers consolidate functionality

and control of all connected A/V and room devices into one, easy-to-use system. There are no complicated remotes to lose or worry about, no batteries to wear out, and no confusing menus to memorize. In facilities where brands and types of projectors, DVD players, and VCRs may vary from room to room, controlling the A/V system with a MediaLink Controller is always the same no matter where it is installed, enabling a user to walk in and begin a presentation without uncertainty or delay.

MediaLink System Configuring

Configuring the MediaLink System is simple and intuitive using Extron's free software. There's no need for intricate programming, special codes, scripts, or proprietary languages. MediaLink configuration is as easy as navigating through a graphical user interface and making the appropriate selections to suit the needs of the application.

IP Link® Remote Monitoring and Control

Extron IP Link technology is a key feature of two MediaLink Controller models, the MLC 104 IP Plus and MLC 226 IP. Extron's Free GlobalViewer™ Web-based application, enables you to remotely control and monitor MediaLink Controllers, attached projectors, and other connected A/V devices from any computer on your network. It can be used to simplify and automate resource management and technical support tasks, such as turning displays on and off, reporting lamp hours, and sending theft alerts. Altogether, IP Link and GlobalViewer provide a cost-effective means of centralizing A/V system management and monitoring, thus enabling a higher level of A/V system support that reduces demands on personnel.



Introduction

Versatile Mounting Options

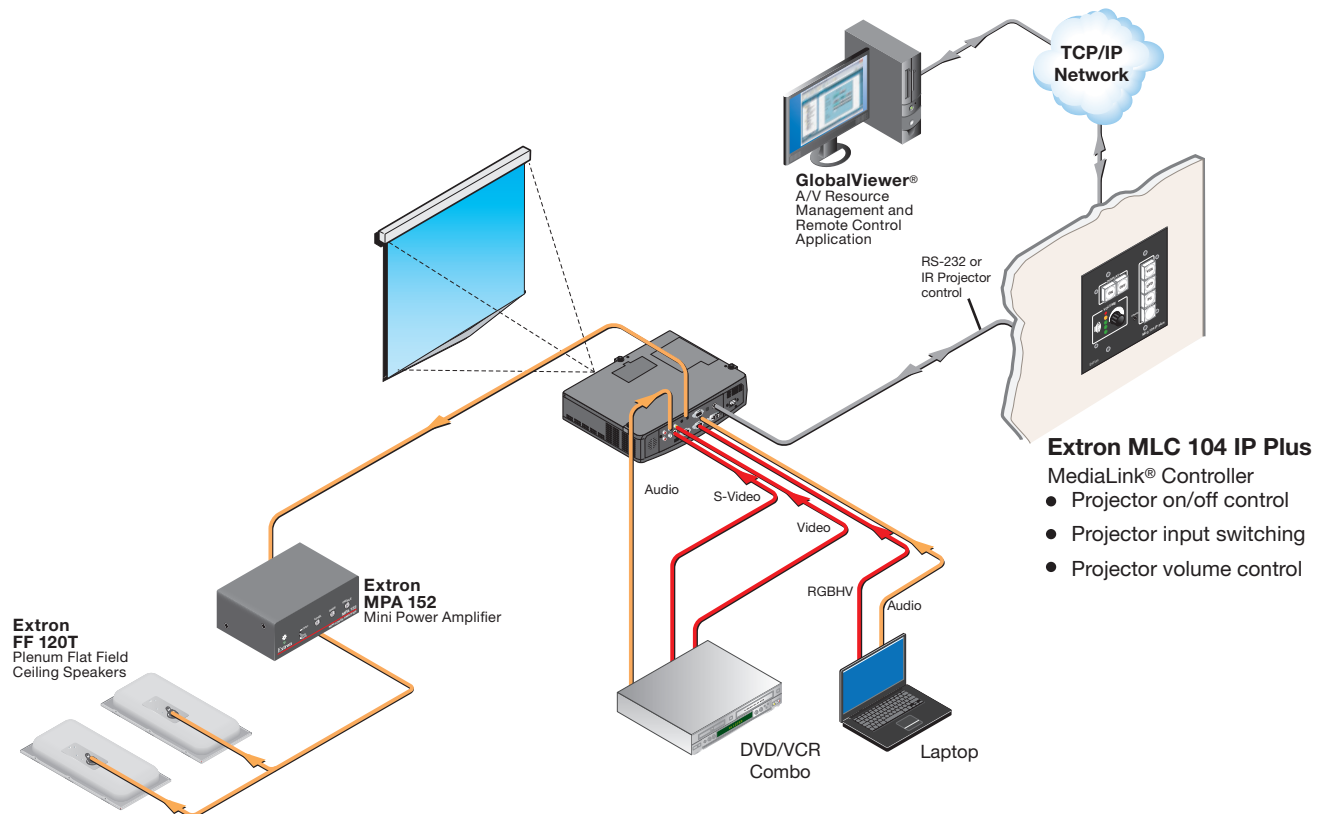
MediaLink Controllers and MediaLink Switchers are housed in secure, tamper-resistant enclosures. They maintain the same control layout regardless of where they are mounted: lecterns, desks, walls, A/V equipment racks, or wall boxes. Mounting kits are available to accommodate various installation requirements. These kits provide supplemental functionality and control with additional buttons, knobs, and openings for Architectural Adapter Plates that enable the addition of signal pass-through connections or device control modules.

Multiple Switching Options

Extron offers over a dozen MediaLink Switchers, ranging in size from two to six inputs. Each MediaLink Switcher allows for system expansion where more inputs are required than what a display can handle. Some MediaLink Switchers also feature integrated mono or stereo audio amplifiers with microphone input, as well as an output for assisted listening systems. MediaLink Switchers are specifically designed to be used in conjunction with MediaLink Controllers to facilitate low-cost integration and expansion; they may also be used as stand-alone switchers.

MediaLink Accessories

There are several MediaLink accessories available to complete the MediaLink family. Secondary Control Panels duplicate the MediaLink Controller's front panel and offer a second access point within a room to control switching, volume, and the display. Other accessories include IRCM AAPs for VCR and DVD control, IR remotes, faceplates, mud rings, and junction boxes.



Enhanced Classroom Application with MediaLink Controller

MLC 104 IP Plus

The MLC 104 IP Plus MediaLink Controller with built-in IP Link Ethernet Control is an easy-to-use control panel for any small classroom or meeting room. It is designed to control a wide range of smaller A/V systems and enables Web-based remote diagnostics, asset management, and support. The MLC 104 IP Plus standardizes the control interface for all systems, making them simple to use. Standardization also makes setup and maintenance easier to support.

The flexible MLC 104 IP Plus 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 equipped with the MLC 104 IP Plus and operate the A/V system. The MLC 104 IP Plus includes universal display control for a display's power, input switching, and volume control. For one-button functionality, the MLC 104 IP Plus 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 MLC 104 IP Plus is also capable of learning IR commands for centralized control of external source devices, such as DVD players and VCRs, when used with an optional IRCM - Infrared Control Module.

Especially vital for high traffic areas, the MLC 104 IP Plus is housed in a secure two-gang enclosure. It has the same look and functionality regardless of where it is mounted: a lectern, desk, wall, rack, or wall box.

IP Link® Ethernet Control

The MLC 104 IP Plus 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 large universities and businesses. The MLC 104 IP Plus is fully supported by our Free GlobalViewer® Web-based A/V resource management application and GlobalViewer® Enterprise server-based A/V resource management software.

Universal Projector Control

Each MLC 104 IP Plus is equipped with a dedicated port for communicating with virtually any projector or display via IR or bidirectional RS-232. Hundreds of device drivers are available for download at no charge from our Web site at www.extron.com.

Room Control

External devices such as lighting, screens, projector lifts, or other products can be controlled via three digital I/O ports and the dedicated IR port on the MLC 104 IP Plus. Each digital I/O port is configurable as a digital input or digital output and can interface with a variety of devices, such as sensors, switches, LEDs, and relays. The dedicated IR port is ideal for control of display devices and source equipment, such as VCRs and DVD players.

Macro Capability

The backlit source selection and room control buttons of the MediaLink Controllers can be configured to execute multiple actions through serial RS-232 and IR control ports. For instance,

the touch of a single button can trigger commands to turn on a projector, select the projector's computer video input, and select a source input on a MediaLink Switcher.

Configurable, Backlit Buttons

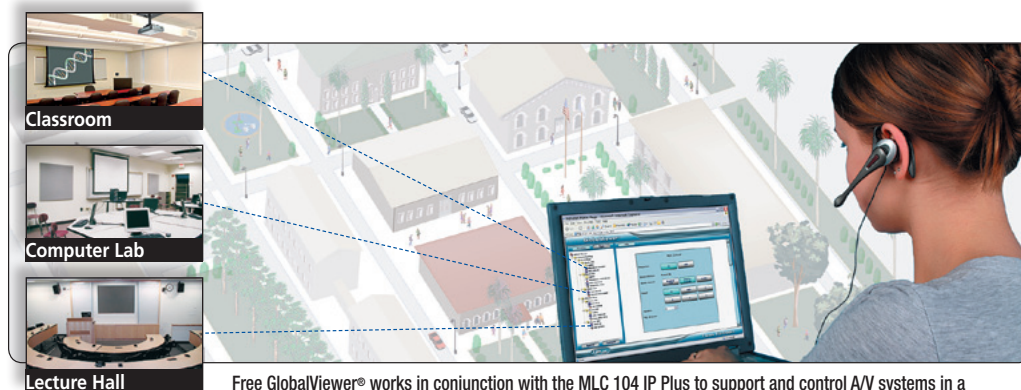
With the MLC 104 IP Plus, presenters with little or no training can walk into any multimedia classroom and operate the A/V system. The backlit buttons on all MediaLink Controllers are configurable to control input switching, power, and volume. Because the buttons illuminate, they are simple to see and operate in low-light environments.

Control Modules

A wide selection of Extron Control Modules is available for customized remote control of external devices such as VCRs, DVD players, and audio tape decks, as well as screens, lighting, and basic audio adjustments. Integrating DVD and VCR Control Modules into a MediaLink system eliminates the clutter and confusion that comes with multiple handheld remote controls.

Versatile Mounting Options

Several mounting options are available for the MLC 104 IP Plus. Additional mounting kits are available for local input expansion, or to accommodate installations in lecterns, external wall boxes, equipment racks, or desks.



Free GlobalViewer® works in conjunction with the MLC 104 IP Plus to support and control A/V systems in a single building or across an entire campus.

Overview

Faceplate options

Black, white, and RAL9010 White models are standard options. Brushed aluminum finish mounting kits are also available.

Display ON/OFF

Discrete, backlit buttons simplify system operations and eliminate the need for an external display remote

Volume control

Five level status LEDs provide visual representation of the display's or switcher's volume setting

Variety of Mounting Options Available

Can be mounted virtually anywhere, including a lectern, A/V equipment rack, or on a wall

Front Panel Security Lockout

Four digit "PIN" prevents unauthorized system use

Source Selection

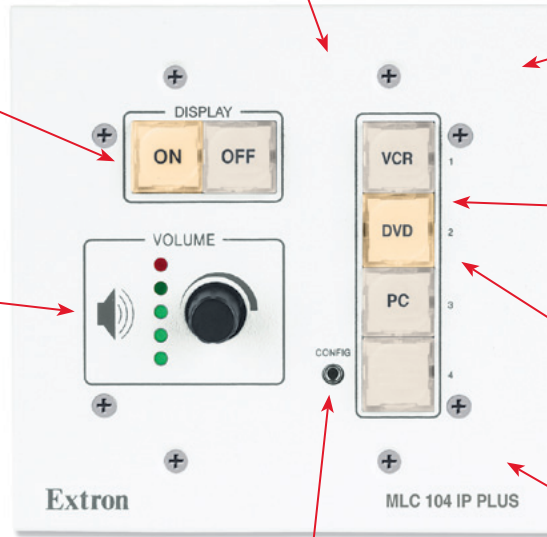
Used to select the input on a projector or switcher. Can also be configured to perform other functions, such as projector auto image

Backlit Buttons

Illuminated buttons are easy to custom-label for identification and are helpful for presenters in low-light environments

Inactivity Timer for Display Shut-Off

Adjustable timer controls automatic shutdown to conserve energy, prevent plasma burn-in, or extend projector lamp life



MLC 104 IP Plus Front Panel

Configuration Port

Allows for configuration of the MLC 104 IP Plus via the front panel

IP Link®

Enables remote monitoring, control, and asset management

Display Control

Allows for bidirectional serial RS-232 display control

Optional IR Control Modules

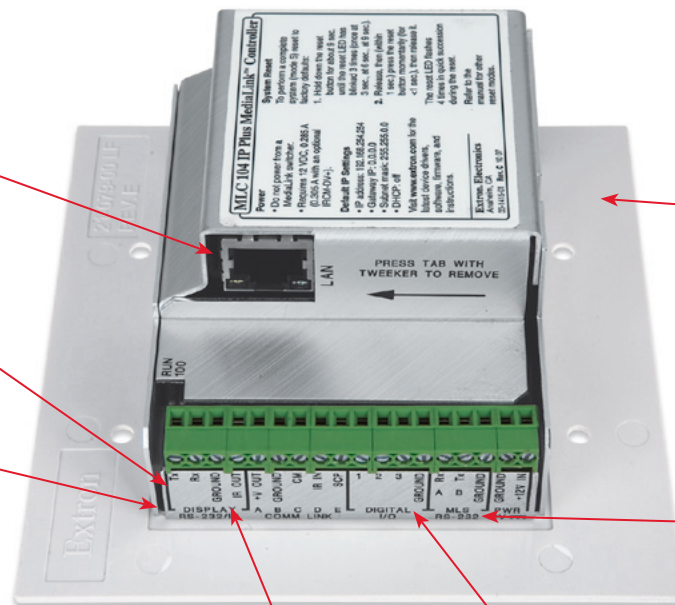
Optional Control Modules enable operation and customized control of source devices such as VCRs or DVD players

Easy to Configure

Simple, one-time setup with easy-to-use, configuration software

Switcher Control

Provides control of an optional MediaLink Switcher via bidirectional serial RS-232



MLC 104 IP Plus Back Panel

Dedicated IR Port

For controlling a source device, such as a DVD player or VCR

Digital I/O Ports

Control of room devices such as lighting, screen settings, and drapes

MLC 104 IP Plus MediaLink Controllers



MLC 104 IP Plus
MediaLink Controller with IP Link

UNIQUE FEATURES

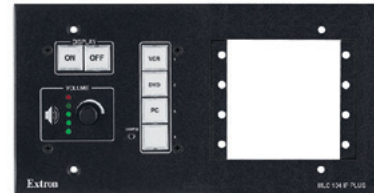
- Two-gang faceplate



MLC 104 IP Plus DV+
MediaLink Controller with IP Link and Integrated DVD and VCR IR Control

UNIQUE FEATURES

- Four-gang faceplate
- Dual-function DVD and VCR IR control



MLC 104 IP Plus AAP
MediaLink Controller with IP Link and AAP Opening

UNIQUE FEATURES

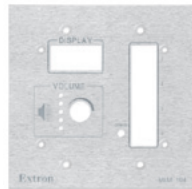
- Four-gang faceplate
- Opening for up to four single space AAP - Architectural Adapter Plates - AAPs sold separately



MLC 104 IP Plus L
MLC - 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 Universal Controller Mounting Kit



MLM 104 2GWP
Two-Gang Wall Mounting Kit for the MLC 104 IP Plus

UNIQUE FEATURES

- Replacement faceplates to match room décor
- Available in Black & White, or Brushed Aluminum

SECONDARY CONTROL PANELS FOR THE MLC 104 IP PLUS

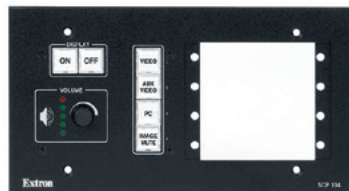
Optional Secondary Control Panels provide a second access point within a room to control switching, projector, and audio volume by duplicating the front panel buttons of the MLC 104 IP Plus MediaLink Controllers. Secondary Control Panel models are available in black, white, or RAL9010 white.



SCP 104
Secondary Control Panels for MLC 104 IP Plus

UNIQUE FEATURES

- Two-gang faceplate



SCP 104 AAP
Secondary Control Panel with AAP Opening for MLC 104 IP Plus

UNIQUE FEATURES

- Four-gang faceplate
- Opening for up to four single space AAP - Architectural Adapter Plates — AAPs sold separately



SCP 104 L
Secondary Control Panel with Lectern Faceplate for MLC 104 IP Plus

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 Universal Controller Mounting Kit

Graphical User Interface

Logo Graphics

Insert your full color school or department logo here

Display Power On/Off

Control your display power, plus up to two additional functions

Custom Color Scheme

Pick from a selection of colors to coordinate with school colors

Room Name

The classroom description is automatically displayed from GlobalViewer configuration setup

Source Selection Buttons

Buttons can be custom-labeled with user defined text



Audio Control

Simple push button control of audio volume and mute functions

Online Help

Displays online reference screens that show how to use the presentation system and controller functions

One of the free templates that can be downloaded from the Extron Web site

Graphical User Interface Option

Technology enhanced classrooms provide an instructor with new tools to teach and interact within the presentation environment. Many instructors prefer the flexibility of not only controlling the environment via an in-room controller mounted on a wall or lectern, but also from a control page on a computer monitor or wireless device. Now, you can economically deliver a graphically rich control environment in each and every room, along with the powerful management capability of a network-enabled MediaLink Controller.

Extron's graphical user interfaces, or GUIs, are functional, intuitive, and easy to use. The integrated IP Link Web server in the MLC 104 IP Plus controller makes adding a high-quality, customized user interface easy and enables control from any networked PC or laptop using either a mouse or touch-monitor in the room. Your AV/IT facility support team will still

be able to provide remote interactive support for all users from within the free GlobalViewer® management environment.

Extron offers two ways to create a custom GUI for your installation. You can create your own using our free templates or let Extron software developers do the work for you with our economical GUI Customization Service.

Download Free Templates and Do It Yourself

Our free user interface software development kit includes modifiable templates that can be downloaded from the Extron Web site at www.extron.com/gui. The kit includes Adobe Photoshop template files and code samples that you can use to create and deploy your own custom GUI. A detailed "getting started" guide is also included with instructions on modifying the template files and code, how basic communication is handled by the system, and loading and testing the base templates.

GUI Customization Service: Extron Does The Work For You

Ordering a custom GUI for your organization is as easy as contacting an Extron Customer Support Representative and describing what you need. For a small fee, Extron will take care of all the details.

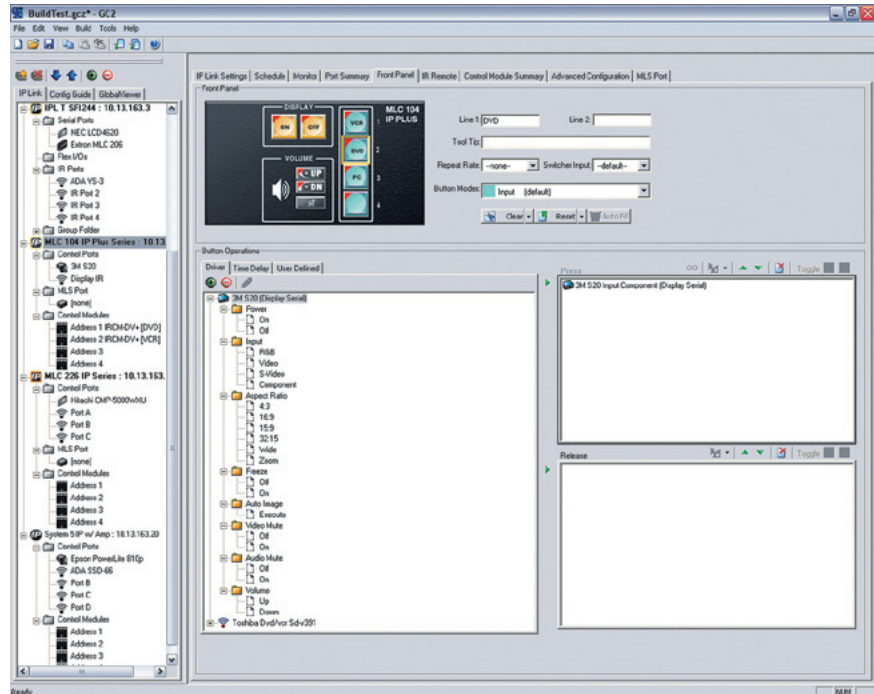
Our software development team will create a mockup of your customized GUI. When you are completely satisfied with the design mockup, Extron software programmers will develop your custom GUI according to your exact specifications. The files will be fully tested using the same model of MLC 104 IP Plus controller used in your A/V system. When the testing is done, an Extron Application Engineer will send you your GUI files and work with you to install the GUI on your system.

Free Global Configurator Software

MEDIALINK® PRODUCTS ARE SIMPLE AND EASY TO CONFIGURE... NO PROGRAMMING KNOWLEDGE IS REQUIRED

Extron's free Global Configurator puts all of the most commonly used system monitoring and control options at your fingertips. One of the costliest aspects of building an A/V asset management system, in terms of human resources and time, is programming. A/V system programming can be a complex task that requires the skills of an experienced programmer.

Extron's configuration approach offers tremendous benefits over traditional system programming methods, particularly for those who have medium-to-large installations to connect, monitor, and maintain. Configuring the MLC 104 IP Plus is as simple as selecting choices from intuitive, drop-down menus instead of writing, compiling, and debugging complicated computer source code. Should system changes need to be made in the future, such as a new VCR or DVD player, an experienced programmer is not required.

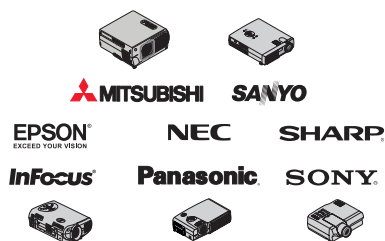


Nearly Anyone Can Configure A System

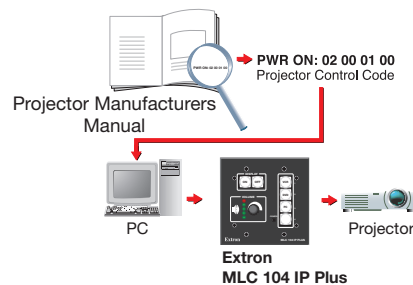
Non-programmers can use our free Global Configurator software to build a complete A/V asset management and monitoring system, freeing up programmers for other projects.

System Changes Take Less Time

Configuration means that initial system setup time is reduced and there's no need to delay making changes because you are waiting for a hard-to-find programming resource.



Extron offers hundreds of drivers from many major projector and display manufacturers



Extron-provided software allows for customized projector control



Extron MLC 104 IP Plus DV+



IR Learning for VCR and DVD control

Free Projector Drivers

Extron creates and administers a wide selection of commonly used projector control drivers. These IR and serial RS-232 drivers allow MediaLink Controllers to communicate with a display device. They enable control of basic projector functions such as power, input selection, and volume adjustment. Go to the Extron Web site at www.extron.com to download drivers for the latest and most popular projectors.

Custom Serial RS-232 Control

In environments where customizable projector control is needed, integrators can easily enter in their own RS-232 commands. RS-232 commands can be assigned to any button using the provided configuration software. The MediaLink Controllers will work with virtually any projector.

IR Learning

Serial RS-232 is the preferred method of control; however, many ultra portable projectors can only support IR control. Various MediaLink Controller models can learn IR commands from virtually any IR controllable device. IR learning can also be used in conjunction with optional IRCM Control Modules that control source devices such as VCRs, DVD players, and audio tape decks.

Free GlobalViewer® Software

Free GlobalViewer®, a Web-based asset management software application for the MLC 104 IP Plus MediaLink Controller, is a powerful, flexible way to manage, monitor, and control these and other Extron IP Link products and the devices connected to them over a standard TCP/IP network. Together, GlobalViewer and MediaLink Controllers with IP Link are ideal for use by schools and universities, corporate offices, government facilities, and even multi-building presentation environments.

The MLC 104 IP Plus is equipped with Extron's IP Link, an IP integration technology specifically engineered to meet the needs of A/V presentation environments. Free GlobalViewer is designed to work with MediaLink and other Extron products that include IP Link technology. It facilitates key asset management functions and is scalable from small to large scale systems. Free GlobalViewer requires no per-seat charges or license fees.

Control Screen
Remotely control basic functions such as power, volume, and input selection

Monitor Screen
Remotely monitor power and projector lamp hours

Schedule Screen
Conveniently schedule projector shutdown or e-mail alerts for lamp replacement, filter cleaning, and other maintenance

Sort Options
View devices by location or device type

Location Tree View
Organize devices on eight user-configurable levels, e.g., Building/Floor/Room

Web-Based
Runs in a standard Microsoft® Internet Explorer Web browser

Custom Button Text
Button label text can be changed to suit system requirements

KEY FEATURES

Available for free from www.extron.com

Extron Global Configurator can be downloaded from the Extron Web site free of charge. There are no per seat charges and no licensing fees.

No programming skills required

Menu-driven wizards guide users through the entire process of organizing system resources, building a network configuration, and uploading configuration files to the system.

Integrated IP Link device management capabilities

Provides full management and control of IP Link devices within Global Configurator, including setting IP properties, passwords, mail server settings, etc.

GlobalViewer host hierarchy for multiple levels of administration

Allows the creation of hierarchal tree views, in which each administrator can access only a subset of an organization's IP Link devices, while the global administrator can access all devices.

Device configuration copy and paste

Enables replication of an existing IP Link device configuration to one or more similar IP Link devices. Makes it easy to duplicate schedule and monitor settings to multiple devices.

Printable wiring diagrams

Gives a user the ability to print a detailed wiring diagram of each configured IP Link device and its connected sources in Microsoft Word Format.

Free GlobalViewer Software

Remote Technical Support

Technicians can troubleshoot systems remotely because Free GlobalViewer provides real-time status of connected devices. Information such as connection status, power state, or current input selection is displayed in a central location. For many connected devices, technicians can toggle power On/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.

Key Benefits:

- Remote device control and access to device status enables remote troubleshooting
- Users receive a quicker response and faster problem resolution
- Centralized technical support enables better response with fewer support staff

Theft Alerts

Extron IP Link-enabled devices, such as the MLC 104 IP Plus, are always on and routinely poll their attached devices for status information. If any serially controlled device such as a projector or document camera is physically disconnected from the network, the MLC 104 IP Plus monitoring its status will know immediately. In such an event, Free GlobalViewer can be configured to send an e-mail message notifying security personnel of the possible theft. For immediate response, e-mails can be sent to multiple addresses, including cell phones and wireless PDAs.

Key Benefits:

- Monitoring is automatic; 24 hours a day, 7 days a week
- E-mail alerts can be sent to multiple e-mail addresses simultaneously
- Reduction in losses from theft and vandalism saves money

Proactive Maintenance

Free GlobalViewer can store information about connected devices such as serial numbers, owner identification, maintenance history, usage data, and installed firmware versions. This centralized data can be used to reduce 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 104 IP Plus can send an e-mail notification.

Key Benefits:

- Maintenance and usage data can be used to guide purchasing decisions
- Service times can be proactively scheduled for optimum use of resources
- Improved equipment maintenance results in increased system uptime

Event Scheduling

Free 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 Free GlobalViewer and do not 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.

Key Benefits:

- Presentation rooms can be automatically prepared for use prior to the scheduled start time of classes or meetings
- Devices can be powered off automatically, reducing lamp and power usage
- Devices can be configured to respond on schedule or to predefined trigger events

GLOBALVIEWER® ENTERPRISE

GlobalViewer Enterprise server-based software is the next step up for managing larger A/V installations. It provides an easy upgrade path for existing users of Free GlobalViewer using configuration wizards, not programming. Compatible with most Web browsers, GlobalViewer Enterprise provides enhanced help desk functionality as well as:

Enterprise-Wide Scheduling and Monitoring

With GlobalViewer Enterprise, it's a snap to configure global schedules and conditional monitors that are based on location and/or device type. Step-by-step menus simplify the creation of a broad range of scheduled events and conditional monitors.

Data Logging and Reporting Capabilities

GlobalViewer Enterprise includes a SQL-based data repository for logging device and room data. Data is gathered 24/7 and time-stamped for use in preparing valuable management reports covering network connections, device usage, and A/V equipment inventory.

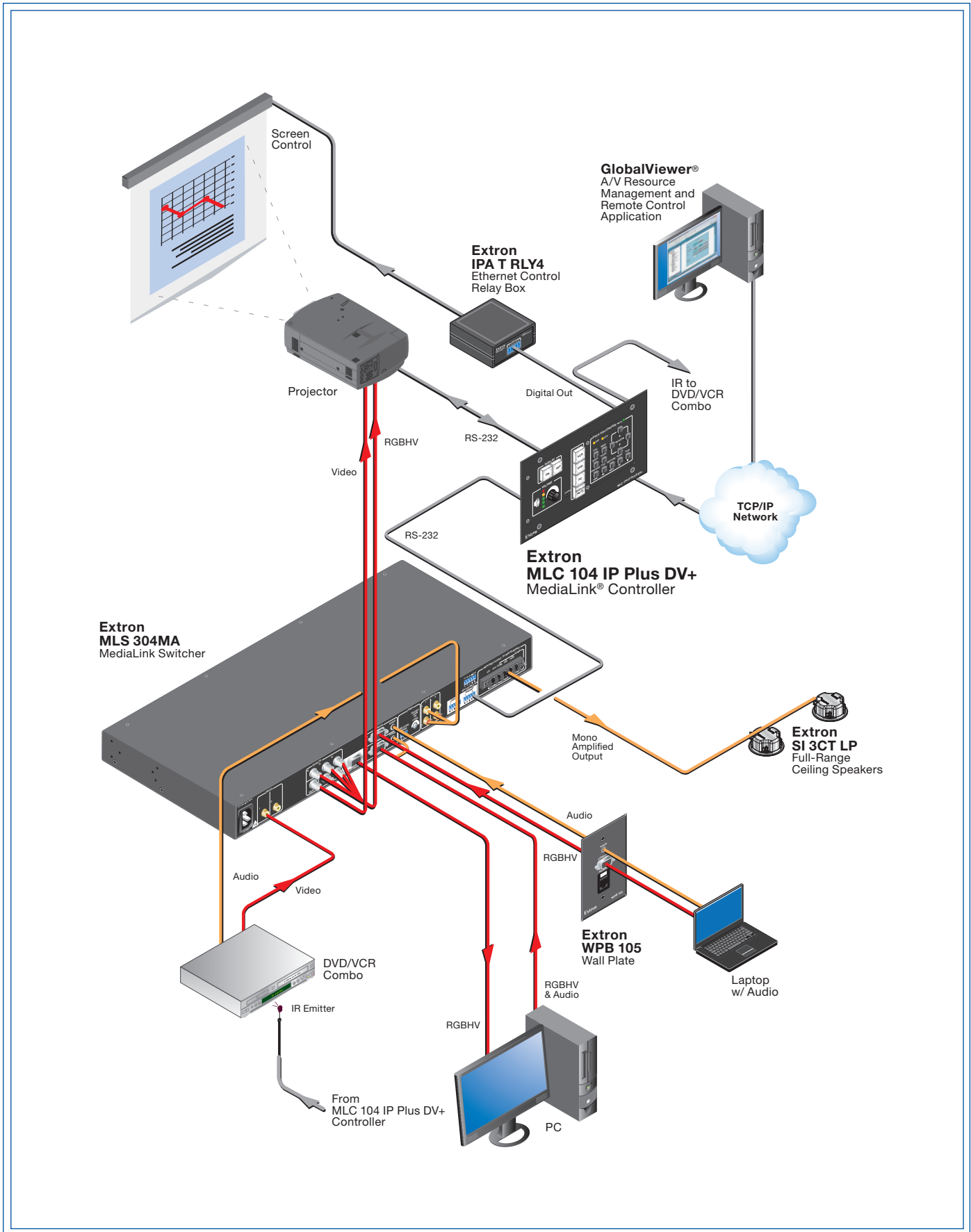
Multiple User Roles and Permissions

Controlling access for multiple users is made simple through the creation of customized user roles.

Third-Party Scheduling System Integration

GlobalViewer Enterprise supports seamless integration with Microsoft Outlook® via Microsoft Exchange® Server or several of the other popular campus scheduling applications, allowing instant access to room availability and the power to schedule meetings, enhance room usage reports, and even override scheduled display shut-offs automatically.

Application Diagram



Specifications

CONTROL – HOST PORTS

Serial host port	1 bidirectional RS-232 front panel 2.5 mm mini stereo jack
Baud rate and protocol	38400 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configuration	Mini stereo jack: tip = TX, ring = RX, sleeve = GND
Ethernet host port	1 RJ-45 female
Ethernet data rate	10/100Base-T, half/full duplex with autodetect
Ethernet protocol	ARP, ICMP (ping), IP, TCP, DHCP, HTTP, SMTP, Telnet
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
Program control	Extron Global Configurator for Windows® Extron Simple Instruction Set (SIS™) Microsoft® Internet Explorer®, Telnet
IR learning frequencies	30 kHz to 62 kHz
IR learning distance	2" (5.1 cm) to 12" (30.5 cm) from the top panel

CONTROL – SERIAL PORTS

Display control port	(1) 3.5 mm direct insertion captive screw connector, 3 pole, for bidirectional RS-232 control (± 5 V)
Switcher control port	(1) 3.5 mm direct insertion captive screw connector, 3 pole, for bidirectional RS-232 control (± 5 V)
Baud rate and protocol (RS-232)	115200 to 300 baud (9600 baud = default); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity

CONTROL – IR PORT

IR control port	(1) 3.5 mm direct insertion captive screw connector, 2 pole TTL level (0 to 5 V) infrared control up to 1 MHz
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DIGITAL I/O CONTROL

Number/type	3 digital input/output (configurable)
Connector	(1) 3.5 mm direct insertion captive screw connector, 4 pole
Pin configuration	1, 2, 3 = digital inputs/outputs 1, 2, and 3; GND = GND
Digital inputs	
Input voltage range	0-12 VDC
Input impedance	28k ohms
Programmable pullup	2k ohms to +5 VDC
Threshold low to high	>2.8 VDC
Threshold high to low	<2.0 VDC
Digital outputs	250 mA sink from 24 VDC, maximum

GENERAL

External power supply	100 VAC to 240 VAC, 50-60 Hz, external; to 12 VDC, 1 A, regulated
Power input requirements	
MLC 104 IP Plus DV+	12 VDC, 0.305 A (includes MLC 104 IP Plus and IRCM-DV+)
All other models	12 VDC, 0.285 A (0.305 A if used with an optional IRCM-DV+)
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling	Convection, unvented
Mounting	
Rack mount	
All models except MLC 104 IP Plus DV+	Yes, with optional rack mounting kits
Furniture or wall mount	Yes, all models

Enclosure type

MLC 104 IP Plus controller only	No faceplate, metal rear enclosure
MLC 104 IP Plus, MLC 104 IP Plus DV+	High-impact plastic faceplate, metal rear enclosure
MLC 104 IP Plus in RAL9010, MLC 104 IP Plus AAP, MLC 104 IP Plus L	Metal faceplate, metal rear enclosure

Enclosure dimensions

MLC 104 IP Plus faceplate	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) (2 gang)
MLC 104 IP Plus AAP and MLC 104 IP Plus DV+ faceplates	4.5" H x 8.2" W x 0.1" D (11.4 cm H x 20.9 cm W x 0.3 cm D) (4 gang)
MLC 104 IP Plus L faceplate	3.15" H x 6.5" W x 0.1" D (8.0 cm H x 16.5 cm W x 0.3 cm D)
MLC 104 IP Plus DV+ device	2.7" H x 3.4" W x 1.8" D (6.9 cm H x 8.6 cm W x 4.6 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 knobs and buttons. Fits some 4 gang wall boxes. Allow at least 1.9" [4.8 cm] depth in the wall or furniture.)
All other models' device	2.7" H x 3.4" W x 1.8" D (6.9 cm H x 8.6 cm W x 4.6 cm D) (Depth excludes knob and buttons. Fits some 2 gang boxes. Allow at least 1.9" [4.8 cm] depth in the wall or furniture.)

Product weight

MLC 104 IP Plus DV+	2.1 lbs (1.0 kg)
All other models	1.9 lbs (0.9 kg)

Shipping weight

	6 lbs (3 kg)
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Vibration

	ISTA 1A in carton (International Safe Transit Association)
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Regulatory compliance

Safety	CE, c-UL, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
Accessibility	Complies with the appropriate requirements of Section 508 of the Rehabilitation Act (29U.S.C.794d).

MTBF

	30,000 hours
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NOTE: All nominal levels are at $\pm 10\%$.

Model	Version Description	Part Number
MLC 104 IP Plus	Black & White Faceplates	60-818-03
MLC 104 IP Plus DV+	Integrated DVD and VCR IR control, Black & White Faceplates	60-818-82
MLC 104 IP Plus AAP	AAP Opening, Black Faceplate	60-818-12
MLC 104 IP Plus AAP	AAP Opening, White Faceplate	60-818-13
MLC 104 IP Plus L	Black Lectern Faceplate	60-818-32
MLC 104 IP Plus L	White Lectern Faceplate	60-818-33
MLM 104 2GWP	Brushed Aluminum	70-822-04

Included Accessories

MLC 104 IP Plus / MLC 104 IP Plus DVR / MLC 104 IP Plus AAP / MLC 104 IP Plus L		
12V/1Amp power supply		70-055-01
Button labels text		33-954-01
Button labels icon		33-955-01

Optional Accessories

CM-9BLB	Nine-Button Control Module - Quad Space AAP	70-494-0X
CFG Cable 9 DB	Female-2.5 mm TRS Config. Cable	70-335-01
IPA T RLY4	IP Link® Accessory with Four Relays	60-545-03
IRCM-DV+	Dual-Function DVD and VCR IR Control Module - Quad Space AAP	70-220-0X
IR Emitter and Shield Kit	IR Emitter Kits	70-283-01
MLC IR/RS-232	One Projector Communication Cable - Plenum	26-621-06
MLS 100 A	Four Input Stereo Audio MLS - MediaLink™ Switcher	60-497-01
MLS 102 VGA	Two Input VGA-QXGA and Four Input Stereo Audio MLS - MediaLink™ Switcher	60-497-04
MLS 304MA	Four Input MLS - MediaLink™ Switcher w/ Mono Audio Amplifier	60-550-01
MPA 152	Stereo Power Amp - 15 Watts Per Channel	60-844-01
SCP 104	SCP - Secondary Control Panel for MLC 104 IP Plus	60-672-0X
UC50' (50' / 15 m)	Universal Projector Control Cable 50' (15.2 m)	26-518-01
UCM RAAP	Universal Controller Mounting Rack Kit - Black	70-344-02
NETXC M-M	6' RJ-45 Crossover Cable	26-591-01

Specifications are subject to change without notice.



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