

MediaLink® Controller

MLC 104 PLUS

- Bidirectional RS-232 port for universal display control
- Three digital I/O ports
- Dedicated IR Port
- IR learning capability
- Support for optional IRCM - Infrared Control Modules
- Discrete ON and OFF display power controls
- Inactivity timer for display shutoff
- Front panel security lockout
- Configurable buttons
- Macro capability
- Tri-color, backlit buttons can be custom labeled for easy identification
- Volume control knob with volume indication for display or MediaLink Switcher



The Extron MLC 104 Plus MediaLink® Controller offers a simplified user interface and centralized control of audio, video, and computer sources. It is ideal for use in classrooms or meeting rooms, and the brushed aluminum finish complements many architectural environments.



Extron® Electronics

www.extron.com

DESCRIPTION

The Extron **MLC 104 Plus** MediaLink® Controller is an easy-to-use control panel for any small classroom or meeting room. The MLC 104 Plus standardizes the control interface for all systems, making A/V systems simple to use. Standardization also makes setup and maintenance easier to support.

The flexible MLC 104 Plus acts as an extended remote control panel by communicating via IR or bidirectional RS-232 to control power, input selection, and volume settings with virtually any display device. Three configurable digital I/O ports are available for interfacing with a variety of room devices, such as sensors, switches, LEDs, and relays. The MLC 104 Plus features a brushed aluminum faceplate for a professional and attractive addition to any decor.

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

Easy System Configuration Using Extron Free Global Configurator Software

The MLC 104 Plus can be fully configured using Extron's Global Configurator software. Extron creates and administers a wide selection of drivers for use with the MLC 104 Plus. Drivers enable the MLC 104 Plus 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. The MLC 104 Plus is also capable of learning IR commands for centralized control of external sources, or display devices.

The MLC 104 Plus is designed to work with almost every Extron switcher, including the MediaLink Switchers, which are specifically designed to complement MediaLink Controllers. MediaLink 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 104 Plus can also work as a stand-alone device to control a display without the aid of a switcher.

Note: IP Link® network remote control and compatibility with Extron's GlobalViewer® resource management software is available with the MLC 104 IP Plus, part # 60-818-04

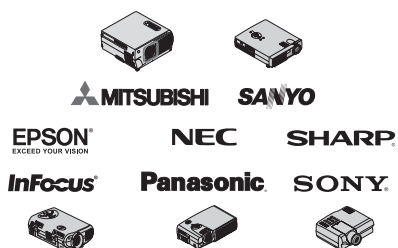


The MLC 104 is easy to configure using Extron's Free Global Configurator; no programming knowledge is required

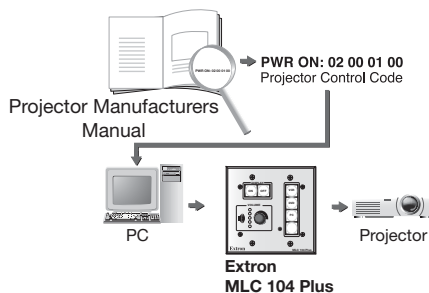
FEATURES

- **Bidirectional RS-232 port for universal display control** – The MLC 104 Plus has a dedicated port for communicating with virtually any projector or flat panel display via bidirectional RS-232. Control drivers can be downloaded or created using the intuitive software.
- **Three digital I/O ports** – Each one is configurable as a digital input or digital output and can interface with a variety of devices, such as sensors, switches, LEDs, and relays.
- **Dedicated IR Port** – For control of IR-controllable display devices and source equipment, such as VCRs and DVD players.
- **IR learning capability** – For capturing IR remote codes from a device's handheld remote control.
- **Support for optional IRCM - Infrared Control Modules** – For controlling external sources, such as DVD players and VCRs.
- **Discrete ON and OFF display power controls** – Simplifies system operations and eliminates the need for an external display remote.
- **RS-232 port for MediaLink Switcher support** – For controlling an optional Extron MediaLink Switcher.
- **Inactivity timer for display shutoff** – Adjustable timer controls automatic shutdown to conserve energy, prevent plasma burn-in, and extend projector lamp life.
- **Front panel security lockout** – When the security lockout mode is engaged, the MLC 104 Plus front panel becomes inoperable unless a user-defined PIN number is entered. No controller functions can be activated.
- **Configurable buttons** – Can be assigned to trigger a variety of functions such as selecting an input or sending a serial command or IR command signal.
- **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 MLS - 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.
- **Removable button caps** – Make it easy to label each button to clearly indicate its function; labels can be quickly changed and don't require programming or engraving.
- **Volume control knob with volume indication for display or MediaLink Switcher** – Allows for convenient, centralized control without additional remotes. The five LEDs provide a clear indication of the current audio setting.
- **External universal power supply included** – Provides worldwide power compatibility.

THREE WAYS TO CONFIGURE



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



Extron-provided software allows for customized projector control



Extron MLC 104 Plus



IR Learning for VCR and DVD control

Free Display Device Drivers

Extron creates and administers a wide selection of commonly used display control drivers. These IR and serial RS-232 drivers allow MediaLink Controllers to communicate with a display device. They enable control of basic 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 display devices.

Custom Serial RS-232 Control

In environments where customizable 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 display device.

IR Learning

Serial RS-232 is the preferred method of control; however, many ultra portable projectors can only support IR control. The MLC 104 Plus 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.

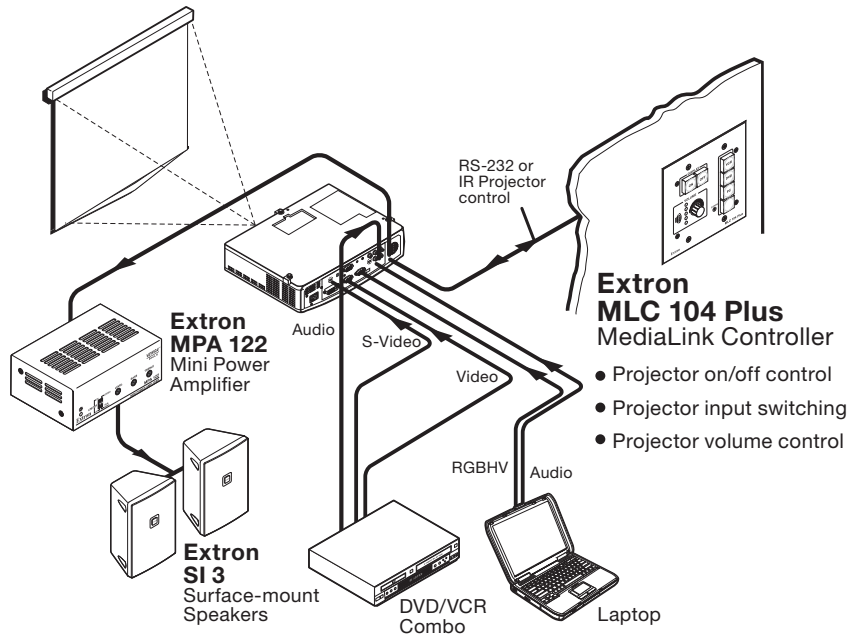
SPECIFICATIONS

CONTROL — HOST PORTS	
Serial host port.....	1 bidirectional RS-232 front panel 2.5 mm mini stereo jack
Baud rate and protocol.....	38400, 8 data bits, 1 stop bit, no parity
Serial control pin configurations.....	Mini stereo jack: tip = TX, ring = RX, sleeve = GND
Secondary control panel (SCP).....	(1) 3.5 mm 5-pole direct insertion captive screw connector
Program control.....	Extron's Global Configurator for Windows®, version 2.5 or later Extron's Simple Instruction Set (SIS™)
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 (± 5V)
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
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

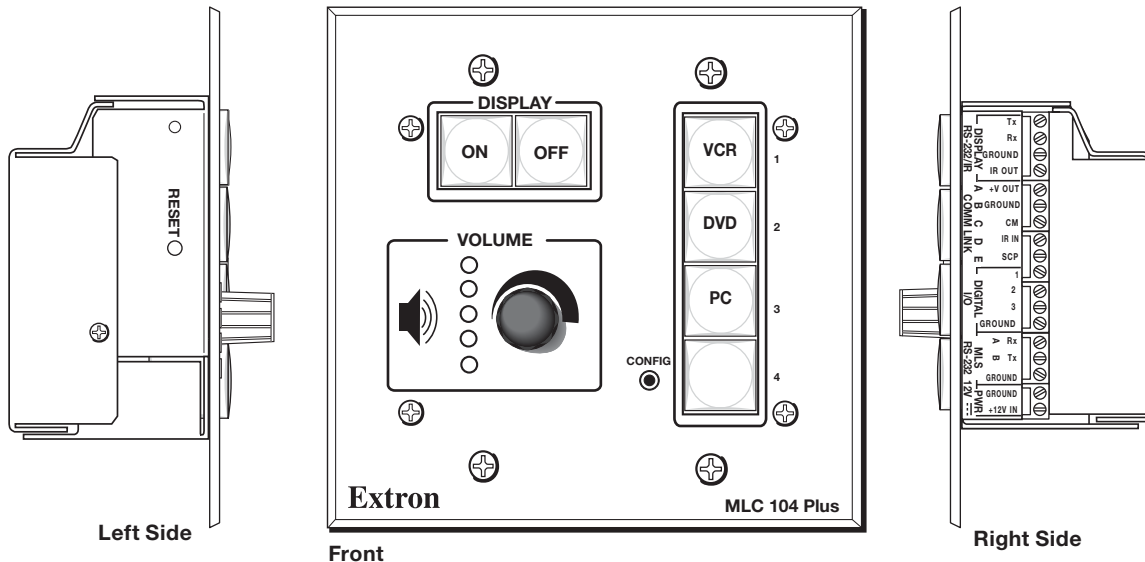
GENERAL		
External power supply.....	100 VAC to 240 VAC, 50/60 Hz, external; to 12 VDC, 1 A, regulated	
Power input requirements.....	12 VDC, 0.285 A (0.305 A if used with an optional IRCM-DV+)	
NOTE: An MLC 104 Plus controller must be powered by its own power supply. It cannot be powered by an MLS switcher.		
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.....	Yes, with optional rack mounting kits	
Wall mount.....	Yes, wall- and furniture-mountable with optional mounting kits	
Enclosure type..... Metal faceplate, metal rear enclosure		
Enclosure dimensions		
MLC 104 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)	
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.....	1.9 lbs (0.9 kg)	
Shipping weight.....	6 lbs (3 kg)	
Vibration.....	ISTA 1A in carton (International Safe Transit Association)	
Regulatory compliance		
Safety.....	CE, C-tick, CUL, 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	
Warranty.....	3 years parts and labor	
NOTE: All nominal levels are at ±10%.		
Model	Version Description	Part number
MLC 104 Plus	Brushed Aluminum.....	60-1014-04
MediaLink Controller with IP Link		
MLC 104 IP Plus	Brushed Aluminum.....	60-818-04

Specifications are subject to change without notice.

APPLICATION DIAGRAM



PANEL DRAWINGS



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