

# MX-Lator

## CONTROL TRANSLATION UNIT



The MX-Lator Control Translation Unit is designed to provide a simple, reliable, and cost-effective way to integrate the control of external routers into an SC-4 / SC-400 control system. When bringing an external router under the control of a Utah Scientific controller, it is necessary to provide a translation of the router commands between the internal (MX-Bus) control architecture and the remote control port provided by the external router. This job is handled by the MX-Lator.

In addition to translating the command protocol instructions, MX-Lator is capable of maintaining a memory image of the remote router, allowing the remote router to be fully integrated into the Utah Scientific control system, even in the absence of a full bi-directional control capability in the external router.

### MX-LATOR FEATURES

- Fully integrates external routers into a Utah Scientific control system.
- Redundant translator board option for maximum operational reliability.
- Dual redundant power supplies are standard equipment.
- Full range of control protocol options for most popular third-party routers.
- Includes control protocol support for all earlier Utah Scientific routers.
- Optional internal controller board(s) for stand-alone operation.

The MX-Lator Control Translator is packaged in a 2 RU frame with redundant power supplies for maximum reliability.

Dual redundant MX-Lator boards are available as an option for critical applications.

The MX-Lator frame also offers support for dual SC-400 System Controller boards for applications where there is no existing SC-4 or SC-400 System Controller present.

**Applications**

- Control of external routers from other manufacturers. Third-party control interfaces are offered on many brands of routing switchers. For controlling these routers, the MX-Lator offers 6 RS-422 serial ports. In addition to the industry-standard SMPTE control interface protocols, several dedicated interfaces are available for use in communicating with the native control interfaces on the more popular brands of routing switchers. Custom-developed interface protocols are also available.
- Control of Utah Scientific SC-Bus systems. The MX-Lator is equipped with a pair of SC-Bus ports for use with Utah Scientific AVS-2 routing switcher systems, allowing the AVS-2 routers and compatible control systems to be integrated in an MX-Bus system.
- Control of Utah Scientific Data-Bus systems. The MX-Lator is equipped with a pair of Utah Scientific Data-Bus ports for use with Utah Scientific AVS-1B routing switcher systems, allowing these routers and their control systems to be integrated in an MX-Bus system.

An MX-Lator system can be configured with one third-party interface and both of the legacy Utah Scientific interfaces operating simultaneously. If multiple third-party interfaces are required, an MX-Lator unit should be added for each interface.

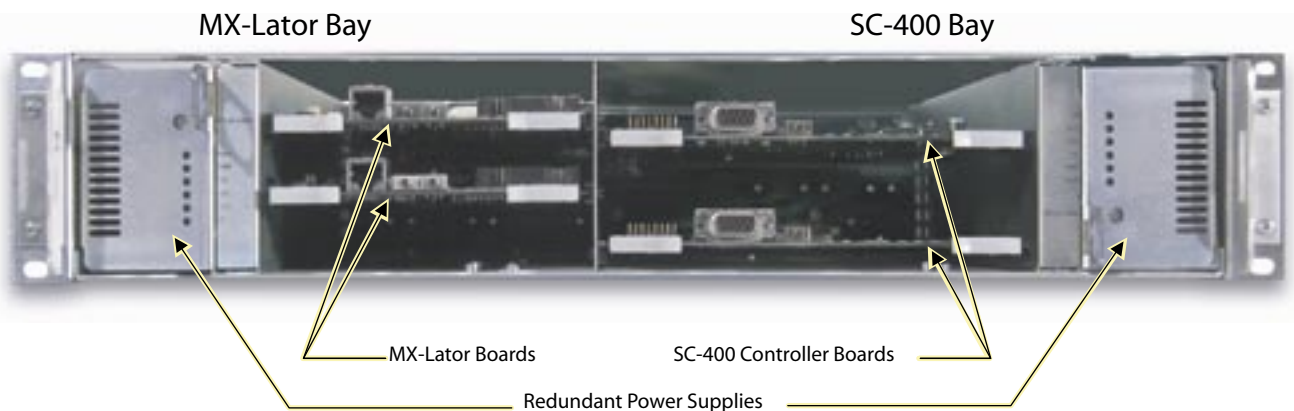
**System Connections**

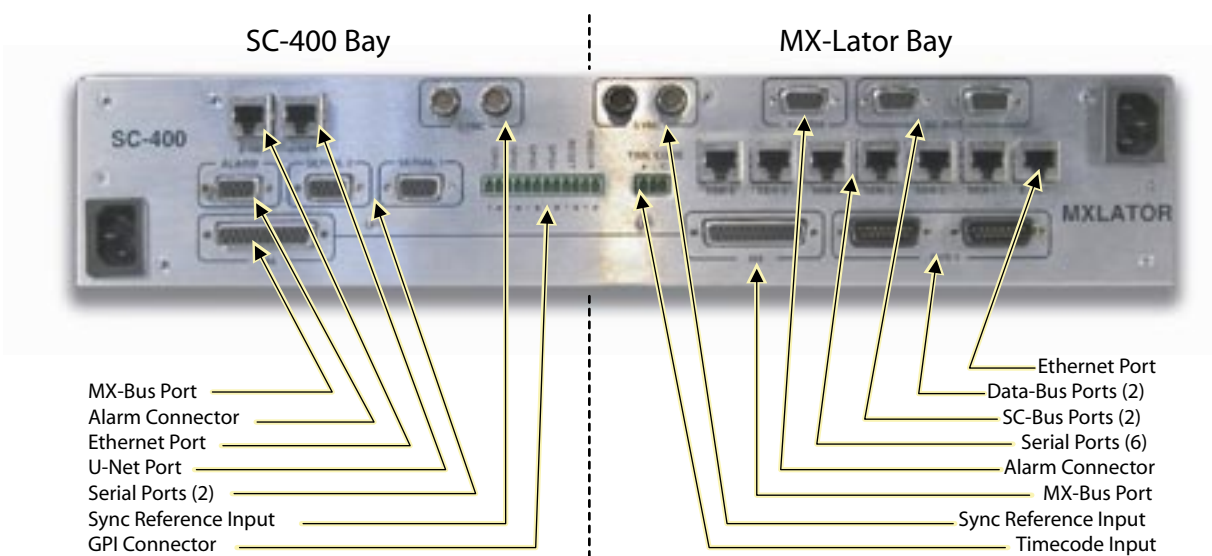
In addition to the connection ports described above, the MX-Lator rear panel carries an RJ-45 ethernet port, an alarm connector for reporting power supply and board faults, a looping input for a vertical interval reference signal, and a timecode input.

**SC-400 System Controller Option**

With the internal controller(s) installed, the MX-Lator can be controlled by any of the wide range of Utah Scientific U-Net or ethernet control panels, allowing the user to select exactly the right panels for the control requirements of the application.

When multiple MX-Bus router frames are used in a system, such as separate audio and video frames, they are connected to the MX-Lator frame by running MX-Bus cables to each frame in a daisy-chain connection.





The internal SC-400 controller offers one U-Net port for connecting the UCP and SCP series Utah control panels and an ethernet port for connecting to computer(s) running the configuration, management, and control applications that are designed for use with the SC-4 and SC-400 system controllers. The ethernet port can also be used with UCP and SCP series control panels that are configured for ethernet rather than U-Net communications.

The SC-400 controller also offers two serial ports for use with external devices such as automation controllers, Under Monitor Displays, etc.

A looping sync input is provided for connection of a composite video vertical interval reference signal. Both PAL and NTSC signal formats are supported.

An alarm connector is provided for remote connection of the SC-400's operating alarms which report major internal faults such as power supply failures, internal temperature alarm, and controller failures.

### SC-400 FEATURES

- **Compatible with all Utah routers - Provides a wide range of control options.**
- **Graphical User Interface (GUI) applications for configuring, managing, and operating the system.**
- **Dual Standard Sync Input - Supports NTSC and PAL vertical blanking interval switching.**
- **Tie Line Management Feature – Simplifies multi-format routing.**
- **Redundant Control Boards in One Frame - Preserves valuable rack space.**

## MX-LATOR SPECIFICATIONS

Mechanical Dimensions:	19"W x 22" D x 3.5"H (2 ru EIA rack mount)	
MX-Lator Bay Connectors:	Sync:	BNC (looping input for analog PAL, NTSC, or Tri-Level HD sync signals)
	Network Ports:	RJ-45 (One Ethernet)
	Timecode Input:	Terminal Strip (3 contacts)
	Alarm Port:	DB-9F Subminiature 9-pin D connector with female pins.
	Serial Control Ports:	RJ-45 (6 ea)
	SC-Bus Ports:	DB-9F Subminiature 9-pin D connector with female pins (2 ea)
	Data-Bus Ports:	DB-15M Subminiature 15-pin D connector with male pins (2 ea)
	MX-Bus Ports:	DB-25F Subminiature 25-pin D connector with female pins (2 ea) (shared with SC-400 bay)
SC-400 Bay Connectors:	Sync:	BNC (looping input for analog PAL or NTSC sync signals)
	Network Ports:	RJ-45 (One Ethernet, One U-Net)
	GPI/O Connector:	Terminal Strip (six pairs of contacts)
	Alarm Port:	DB-9F Subminiature 9-pin D connector with female pins.
	Serial Control Ports:	DB-9F Subminiature 9-pin D connector with female pins (2 ea)
	SC-Bus Ports:	DB-9F Subminiature 9-pin D connector with female pins (2 ea)
	Data-Bus Ports:	DB-15M Subminiature 15-pin D connector with male pins (2 ea)
Environmental:	Temperature:	10-40°C
	Relative Humidity:	0-90% (non-condensing)
AC Power:	110 / 240VAC 50 / 60 Hz	Chassis consumption is 35 VA max. Dual redundant power supplies are standard equipment.

### FOR FURTHER INFORMATION

on the other products in the Utah Scientific control system family,  
please refer to the detailed data sheets that are available on our  
Web Site:  
[www.utahscientific.com](http://www.utahscientific.com)

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