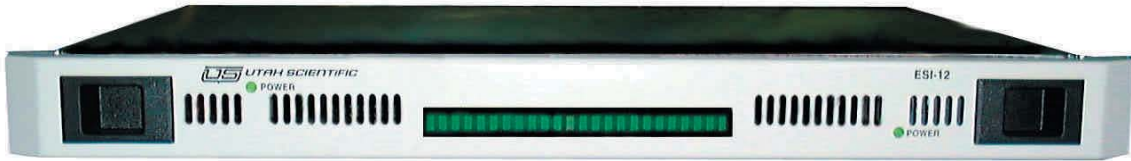


# ESI-2020

## CONTROL INTERFACE UNIT



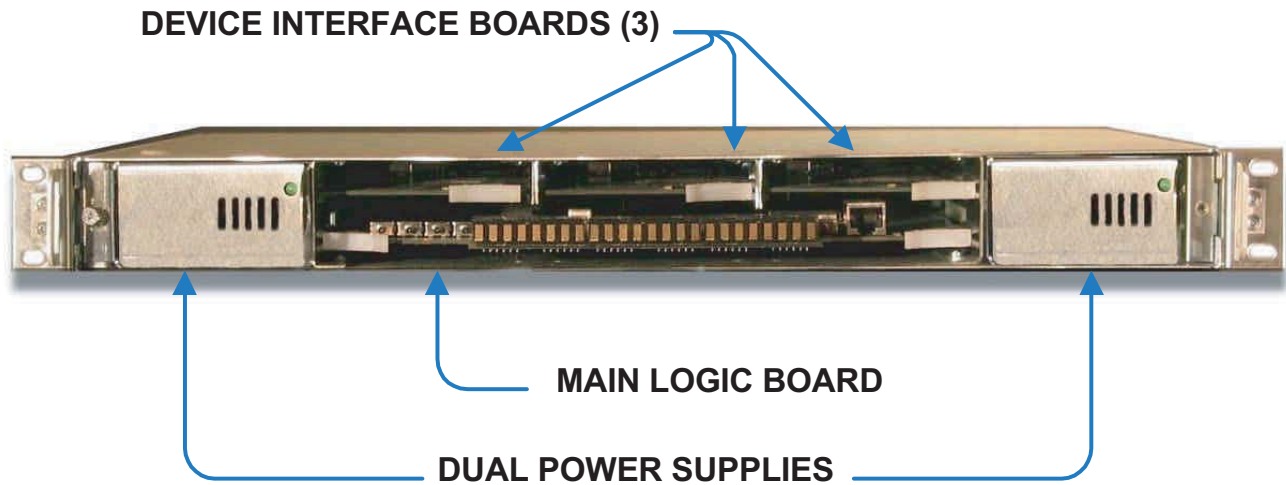
The ESI-2020 is a multi-purpose interface device that is designed to support a number of communications functions in Utah Scientific router / master control systems.

The ESI-2020 hardware platform is housed in a 1RU rack mount chassis with dual power supplies, a main logic board, and up to three device interface boards. A front panel display is used to show device status and to provide feedback on a number of diagnostic and set-up procedures.

The main logic board supports several different embedded software packages that tailor the ESI-2020 to certain applications. Some of the specific configurations of the ESI-2020 are described inside.

### ESI-2020 FEATURES

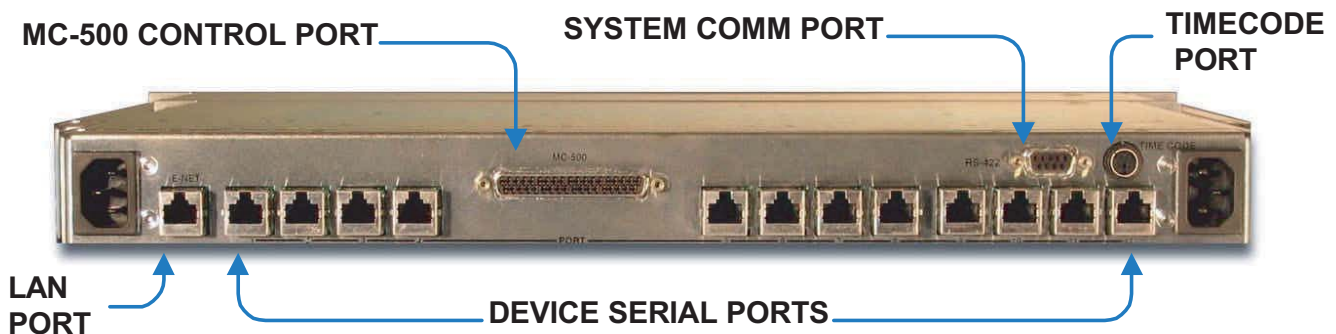
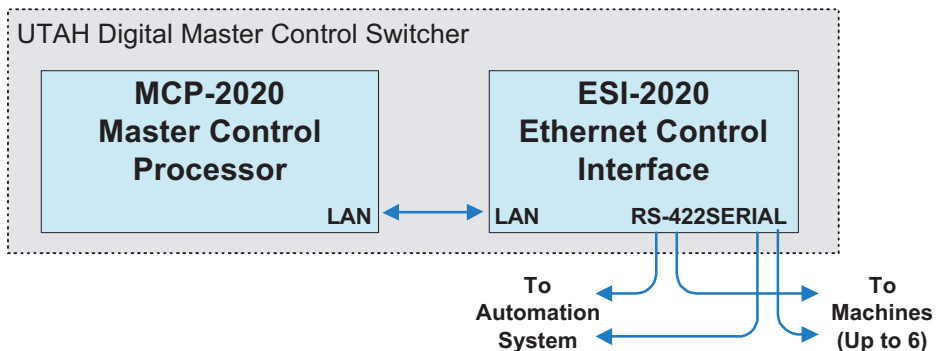
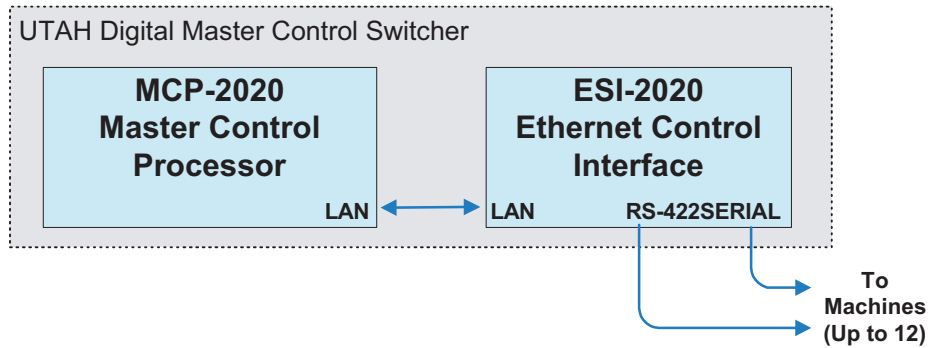
- Master Control Machine Interface --up to 12 machines per unit
- Dual redundant power supplies are standard equipment.
- Optional Automation Pass-through configuration.
- Space-saving 1 RU package.
- Also supports other applications in remote control and master control systems.



**Machine Control Applications– ESI-2020**

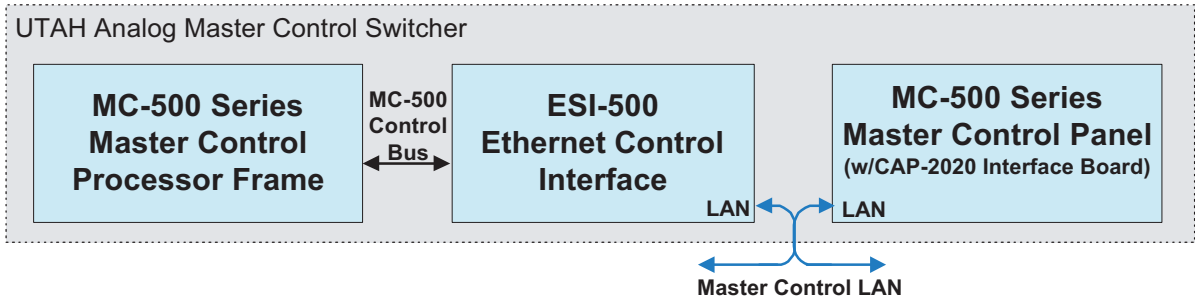
In this configuration, the ESI-12 is used to provide RS-422 machine control links to devices that are under the control of the MC-2020 Master Control Switcher. Up to 12 devices can be connected to each ESI-2020 unit, multiple units can be used to add capacity as needed.

An optional configuration of this device is for control of six machines with each machine assigned to a pair of ports. The second port for each machine is connected to an automation system. In this application, the ESI-2020 listens to the status messages from the machines to provide feedback to the operator and when manual intervention is required the operator can take control of the machine from the MC-2020 control panel.



**Master Control Interface Applications– ESI-500**

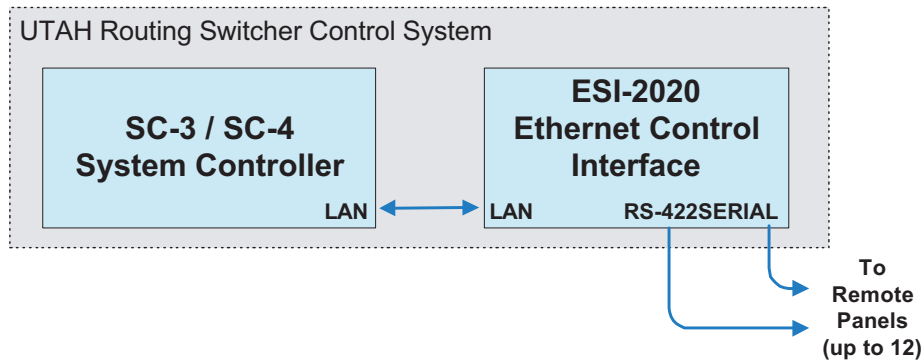
In this configuration, the ESI-12 serves as a bridge between the Utah Scientific Master Control ethernet LAN and earlier MC-500 signal processor units, allowing the MC-500 series analog master control switchers to be integrated into a new MC-2020 multi-channel master control switcher system.



**Remote Control Processing Applications– ESI-12 RCP**

In this configuration, the ESI-12 is used as a data concentrator to provide interface between the Utah Scientific routing system's ethernet control LAN and up to 12 RS-232/422 serial ports.

A typical application for this device is in systems where router control panels are located remotely from the router with serial links connecting the panels to the router location. These links can be direct cable connections or modem links, either dial-up or leased-line.



**Additional Applications – ESI-12 xxx**

The ESI-12 offers a very flexible platform for extensions to the Utah router control and master control systems. When a particular set of functions is required that are not efficiently addressed by extending the basic software of the control systems, the ESI-12 can be used as an application-specific interface to provide those functions.

An example of this is in adding the ability to control third-party switching systems from an SC-3 / SC-4 system. The basic controllers provide support for industry standard interface protocols such as ES-Bus, but in many cases a specific interface protocol is required for communication with routers from other manufacturers. Rather than burdening the basic controller's software with a wide variety of external control interface options, we can implement an application-specific translation process in the ESI-12's main logic board to handle the details of each router interface.

**ESI-2020 PRODUCT SPECIFICATIONS**

Mechanical Dimensions:	19"W x 22" D x 1.75"H (1 ru EIA rack mount)	
Connectors:	Network Port:	RJ-45 (Ethernet)
	System Comm. Port:	DB-9F Subminiature 9-pin D connector with female pins.
	Timecode Port:	Mini-Din Connector (5-pin).
	Device Serial Ports:	RJ-45 (12 ea RS-232 / RS-422 switchable).
	MC-500 Control Port:	DB-50F Subminiature 50-pin D connector with female pins.
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.



New Directions in Digital Switching

4750 Wiley Post Way Suite 150 Salt Lake City, Utah 84116  
 Phone: (801) 575-8801 Fax: (801) 537-3099  
 EMail: sales@utsci.com www.utahscientific.com