# ECHELON



### Description

The MPR-50 Multi-Port Router provides ANSI/CEA-709.1 compliant routing among five channels: four TP/FT-10 Free Topology Twisted Pair (ANSI/CEA-709.3) channels and one LONMARK<sup>®</sup> standard TP/XF-1250 channel. Each of the TP/FT-10 channel connections is fully compatible with link powered channels. The MPR-50 can be used to connect two, three, or four TP/FT-10 channels together, or it can be used to connect these TP/FT-10 channels to a high speed TP/XF-1250 backbone. Used in small- and large-scale Echelon control network installations, the MPR-50 substantially reduces the installation time and cost any time multiple channels are used.

The MPR-50 is compliant with the European Directive 2002/95/EC on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment.

The MPR-50 Multi-Port Router is compatible with all network management systems, including the LNS® network operating system and end-users tools such as the LonMaker® Integration Tool. In addition, the MPR-50 can be installed as an intelligent repeater—without any tools whatsoever.

Because the power inputs accept either AC or DC voltage and the TP/FT-10 and TP/XF-1250 connections are likewise polarity insensitive, wiring the MPR-50 is straightforward and foolproof. Since each of the five channels includes a standard 3.5mm mono phone jack on the front panel, plugging in a network management or diagnostics tool is quick and easy. Also helping to simplify installation, the Neuron<sup>®</sup> Chip IDs of the routers and monitor are printed on the side of the MPR-50.

## MPR-50 Multi-Port Router Model 42150R

- Low-cost 5 channel LONWORKS<sup>®</sup> (ANSI/CEA-709.1) router (one TP/XF-1250 channel and four TP/FT-10 channels)
- Screw terminal wiring connections
- High network throughput and performance
- Rugged design
- DIN rail and wall mount compatible
- ▼ Flexible 9-28VAC 40-70Hz, 9-35VDC power input
- All five channels individually accessible from 3.5mm mono phone jacks on front panel
- ▼ Intelligent LONMARK<sup>®</sup> certified monitor cuts installation time and cost
- ▼ CE, UL, cUL, and TÜV

#### Mounting

The MPR-50 is designed for easy installation on a 35mm DIN rail, and can also be hung on a wall using the screw capture cutouts on the back of the housing. Score lines on the top of the unit provide visual and tactile feedback for the installer to know where to align the MPR-50 with the screws. All of these features result in reduced installation costs regardless of how the unit is mounted.

#### Integration

A CD-ROM included with the MPR-50 contains the user's guide, quick start guide, and for unsurpassed ease-of-installation with the LonMaker tool, a Visio<sup>®</sup> stencil that contains MPR-50 Multi-Port Router master shapes.

The internal LONMARK certified monitor observes and reports on the health of the five routers and attached channels. Status is shown on front panel tri-color LEDs, and is also available through the network. In addition, the monitor also maintains a timestamped error log of recent error events, and makes this error log available through the network for human machine interface (HMI) and network diagnostics applications.

#### **Specifications**

Router 1 Transceiver	TP/XF-1250 (LonMark standard channel type)
Router 2-5 Transceiver	TP/FT-10 (ANSI/CEA-709.3 and LONMARK standard channel type);
	link power compatible
Network Connectors	
Permanent	Captive, screw terminals
Convenience	Front panel-mounted 3.5mm mono phone jacks; compatible with PCC-10 PC Card and
	U10 USB Network Interface cable accessories

Service Switches	Six, recessed and finger-accessible
Operating Input Voltage	9-28VAC 40-70Hz, 9-35VDC
Operating Input Current	500mA maximum
LED Indicators	Power (one—green), Status (six—green, yellow or amber);
	Status LED legend on front panel
Temperature	
Operating	$0 \text{ to } +70^{\circ} \text{ C}$
Non-operating	$-20^{\circ}$ to $+85^{\circ}$ C
Humidity	
Operating (non-condensing)	25 to 90% RH @ +50° C
Non-operating (non-condensing)	95% RH @ +70° C
Shock and Vibration	ETSI300 019-2-3 T3.2
Dimensions	157.5mm (9 TE) wide, 80mm high, 80mm deep
EMC	FCC Part 15 Level B, EN55022 Class B, EN55024, CISPR 22 Class B, VCCI Class B
Agency Listings	U.L. 60950, cU.L. C22.2 No. 60950-00, TÜV EN60950, CE, C-Tick

#### **Documentation**

The MPR-50 Multi-Port Router User's Guide and MPR-50 Multi-Port Router Quick Start Guide are provided in PDF format on the included CD-ROM. These guides are also available from www.echelon.com.

Document	Echelon Part Number
MPR-50 Multi-Port Router User's Guide	078-0308-01
MPR-50 Multi-Port Router Quick Start Guide	078-0309-01

#### **Ordering Information**

Product	Echelon Model Number
MPR-50 Multi-Port Router	42150R

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