

### Features

- Provides 100Mb Ethernet media conversion between twisted pair and fiber, FDX and HDX transparent
- Supports IEEE 802.3u auto-negotiation on the RJ-45 port to enable an attached switch port to operate at 100Mb/s full-duplex for full 100Mb fiber distance
- Available with fiber connectors for SC, ST, or MTRJ types, multi-mode or 20km single-mode, or 40km "long reach" single mode
- Link Pass-Through feature included
- Comes with a compact durable metal enclosure and has an external power supply



Magnum™ 14E Media Converters offer a compact, cost-effective way to incorporate fiber media into a 100BASE-TX Ethernet network. Each Magnum 14E supports both full-and half-duplex mode via auto-negotiation so that an attached auto-negotiating RJ-45 switch or hub port operates at its highest performance level. A manual AN/reg switch on the Magnum 14E allows the user to select auto-negotiation, and then the 14E transmits applicable auto-negotiation Fast Link Pulses (FLPs) to the attached device at LINK-enable. Operation on both the copper port and the fiber port is at 100Mb/s F/H transparent in any case, providing system support for full length 100Mb fiber media distances on all fiber types.

The up-link switch on the Magnum 14Es TX port allows the unit to gracefully fit into any installation without crossover cables. All Magnum 14E models come with two (2) sets of LED indicators, one set on the front for viewing convenience when the 14E is wall-mounted, and one LED set mounted in the end adjacent to the media ports for easy viewing when units are in a rack-mount tray.

The Link Pass-Through feature is standard in all Magnum 14E units. LINK LEDs are only lit when both attached cable segments are ready for data transmission, so that the attached RJ-45 hub or switch can "see through" the media converter for the LINK indication on the fiber cable as well as on the copper cable.

Magnum 14Es can be mounted securely on a wiring closet wall or on the side of a cabinet, or by using the metal mounting clips included with all 14E models. The Magnum 14E Media Converters and other Magnum products are designed and manufactured in the USA and backed by a three-year warranty.

## PERFORMANCE:

Data Rate: 100Mb/s, FDX and HDX mode, transparent  
Auto-negotiation support on the RJ-45 port user selectable (factory default set to auto)  
Link Pass-through feature is standard.

## NETWORK STANDARDS:

Ethernet IEEE 802.3u; 100BASE-TX, 100BASE-FX  
Magnum 14E Media Converters are physical-layer Ethernet products and operate independent of all software.

## OPERATING ENVIRONMENT:

Ambient Temperature: 32° to 120°F (0° to 50°C)  
Storage: -20°C to 60°C  
Ambient Relative Humidity: 10% - 95% (non-condensing)

## POWER SUPPLY (EXTERNAL):

Power Input Voltage: 95-125vac at 60 Hz for "-d" models, 100-240vac at 50 Hz for "-i" models that have IEC power connector in the external power unit.

**Note: an optional -48vdc or 24vdc external power unit is available**

DC jack: 9vdc, 1 amp, center positive  
Power Consumption: 4 watts typical

## PACKAGING:

Enclosure: Rugged high-strength sheet metal. Suitable for wiring closet wall, shelf, desktop, or rack-mounting. Metal brackets included.

## RACK-MOUNT OPTION - see Model MC14 -TRAY

## CONNECTORS:

100BASE-TX: RJ-45 shielded, female (accepts EIA 568 Category 5 UTP and STP data-grade twisted pair cable)  
100BASE-FX-SC: fiber optic multi-mode and single-mode with SC type connector  
100BASE-FX-ST: fiber optic multi-mode with ST type 2 Km  
100BASE-FX-SSC: fiber optic single-mode with SC-type, 20km  
100BASE-FX-SSCL: fiber optic single-mode with SC-type, "Long Reach" 40km  
100BASE-FX-MTRJ: fiber optic multi-mode with MTRJ connector

## SWITCHES:

UP-LINK: Thumb-operated slide switch, converts RJ-45 TX port from a regular (= position) user segment port to a crossover (X position) up-link port for connection to a shared or switched hub.  
AN /reg: Manually select auto-negotiation support on the RJ-45 port, or regular operation.

## LINK PASS-THROUGH:

Link pulses are transmitted from the 14E to the attached device on the copper port only when LINK is detected by the 14E on the fiber port's receive line. There is no LED indicator for this.

## LED INDICATORS (dual, front & end):

POWER: ON for power applied  
LINK, Fiber port: Steady ON when both attached cable segments are operational at the other end, blinking when receiving remote fault from the other end of fiber cable.  
LINK, Copper port: Steady ON when both attached cable segments are operational at the other end.  
RX/ACT: Activity, blinking when receiving packets.

## MECHANICAL:

Dimensions of units: 3.5 in H x 3.0 in W x 1.0 in D  
(8.9 cm x 7.6 cm x 2.5 cm)  
Weight: unit is 4.6 oz (130g)  
Power supply is 1.0 lb. (455 gr.)  
Cooling Method: Convection

## AGENCY APPROVALS:

UL Listed (UL 1950), cUL, CE Certified  
Emissions: Meets FCC Part 15 Class B, CE

## WARRANTY:

Three years

Made in USA

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**MC14-TRAY illustrated with 14Es in  
a variety of fiber media types**

## Ordering Information

Magnum 14E-SC-d,i:	Fast Ethernet Media Converter with 100BASE-TX multi-mode fiber SC-type port, RJ-45 port with up-link switch and manually selectable auto-negotiating support. Link-Pass-through feature included. External 15vac 60Hz or 230vac 50Hz power supply. Metal brackets for wall mounting included.
Magnum 14E-ST-d,i:	Same as Magnum 14E-SC but with 100Mb multi-mode ST fiber port
Magnum 14E-MTRJ-d,i:	Same as Magnum 14E-SC but with 100Mb multi-mode MTRJ Small Form Factor fiber port.
Magnum 14E-SSC-d,i:	Same as Magnum 14E-SC but with 100Mb single-mode SC standard 20km fiber port.
Magnum 14E-SSCL-d,i:	Same as Magnum 14E-SSC but with 100Mb single-mode SC 40km "Long Reach" fiber port
Magnum 14E-SST-d,i:	Same as Magnum 14E-SSC but with 100Mb single-mode ST 20km fiber port

Use -d with the model number to specify external power supply at 115vac 60Hz, use -i to indicate 230vac 50Hz.

MC14-TRAY	Rack-mount tray, holds up to 16 units of the 100Mb 14E, and the 10Mb 14-series Magnum Media Converters, mix and match.
MC14-TR+PS9 Media	Rack-mount tray, supports up to 10 units of the 100Mb 14E and the 10Mb 14-series Magnum Media Converters, mix and match. Includes the power supply unit and connectors to power up to 10 Media Converters at 9vdc as required. Auto-ranging AC input to the power supply.



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