














eNode IP/Ethernet Media Converter

Features

-  10BASE-T/ 10BASE-FL or 100BASE-TX/100BASE-FX compliant
-  Shielded RJ-45 connectors or ST-style connectors
-  Compact size
-  Compatible with LonWorks™ over IP networks
-  CNS eNode* Lon/IP Router products
-  Built-in uplink provision
-  Auto-negotiated data rate and flow control on twisted-pair ports
-  Full or Half-Duplex operation
-  DIN-rail mountable
-  Low-voltage AC or DC operation
-  LED's for activity, link, and power
-  Industrial environment EMC compatible
-  CE Approved



Description

The EIMC Series of Industrial Ethernet Media Converters in the CTRLink™ family offers a solution for those industrial applications requiring a trouble-free, robust process of converting between copper and fiber media. Appearing as transparent devices, media converters are a cost-effective approach for adding fiber to a network.

Media converters are available in three models and all support full- or half-duplex operation. The EIMC-10T/F operates at 10 Mbps and meets the signaling requirements for 10BASE-T and 10BASE-FL.

The EIMC-100T/FT is a 100 Mbps device that converts 100BASE-TX twisted-pair signals to 100BASE-FX fiber optic signals and utilizes ST fiber optic connectors.

The EIMC-100T/FC is a similar product but uses SC-style fiber optic connectors.

The front of each model provides a DIPswitch for selecting the operational mode—be it full-duplex mode, half-duplex mode or transparent mode. In full-duplex mode, all models can span 2 km with 62.5/125 μm fiber cables. If the 100 Mbps devices are operated in half-duplex mode, the cable length is limited by the collision domain to 412 m. The 10 Mbps model can operate with 2-km segments in either half- or full-duplex mode. The copper link has no required minimum distance, but the fiber link is 2m. In transparent mode, the copper segments of two media converters linked with fiber will auto-negotiate as if the fibre link were not there. This auto-negotiation will determine the data rate and whether the link will operate in full- or half-duplex mode. Transparent mode will allow a fiber optic link between a 10BASE-T device and a 100BASE-TX device. In this case, the link will operate at 10 Mbps. The copper port of the media converter has both an MDI and MDI-X connector, eliminating the need for a crossover cable. Power, link and activity LED's are provided for convenient front panel diagnostics. An LED glows green when power is applied.










Each port has two LED's;

A flashes green as data is transferred

L indicates the data rate by color: green for 100 Mbps and yellow for 10 Mbps.

All models feature a miniature enclosure and accept a wide range of low-voltage AC or DC power. Power consumption is less than 4 Watts. All models are DIN-rail mounted.

Typical Applications

-  Building Management and Supervision
-  LonWorks™ over IP networks
-  Ethernet I/O
-  Machine Monitoring
-  Environmental Control
-  Test and Measurement
-  Process Control
-  Remote Data Acquisition
-  Communications Gateway

Specification

Electrical	DC	AC
Input voltage:	10-36 Volts	8-24 Volts
Input power:	4 Watts	4VA
Input frequency:	N/A	47-63 Hz
Environmental		
Operating temperature:	0°C to 60°C	
Storage temperature:	-40°C to 85°C	
Functional		
Compliance:	ANSI/IEEE 802.3	
Data rate:	10/100 Mbps	
Signaling:	10BASE-T/10BASE-FL or 100BASE-TX/100BASE-FX	
Fibre wavelength	10BASE-FL – 850nm 100BASE-FX – 1300nm	
Segment length (max):	Copper.....	100m
	Fibre.....	2km
Connectors	Copper.....	Shielded RJ-45
	Fibre.....	ST or SC
*LED indicators:	POWER - Green ACTIVITY – yellow LINK/DATA RATE - green/yellow	

* ACTIVITY and LINK/DATA RATE LED's exist for each port.

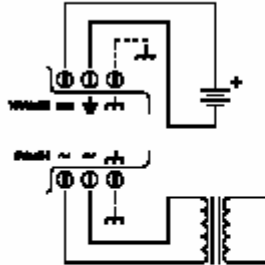
**MDI-X* 10BASE-T/100BASE-TX Port
Assignments**

RJ-45	Usage
1	TD+
2	TD-
3	RD+
4	Not Used
5	Not used
6	RD-
7	Not Used
8	Not Used

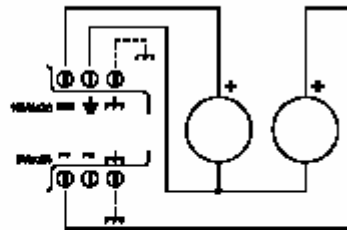
*Unit has both a MDI and an MDI-X port

Power Supply Options-

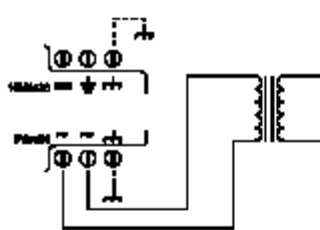
AC POWERED WITH BATTERY BACKUP



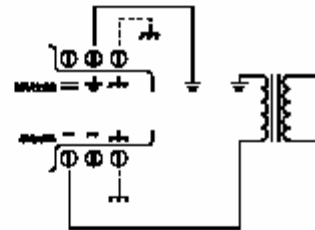
REDUNDANT DC POWERED



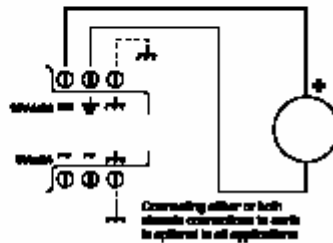
AC POWERED (ungrounded secondary)



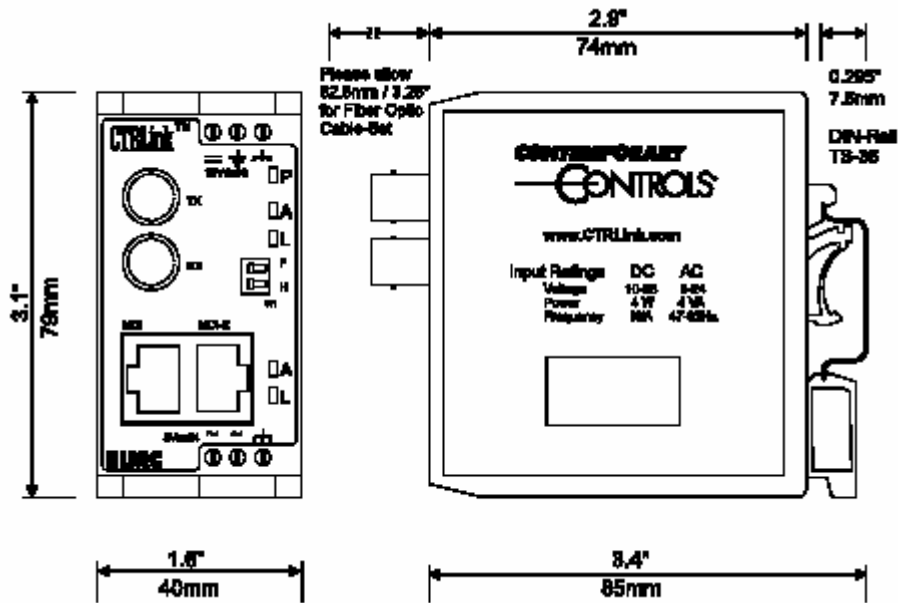
AC POWERED (grounded secondary)



DC POWERED



Mechanical Drawing -



Ordering Information

Model	Description
CNSEIMC-10T/F	Media Converter 10BASE-T/10BASE-FL (850nm)w/ST connectors
CNSEIMC-100T/FT	Media Converter 100BASE-TX/100BASE-FX (1300nm) w/ST connectors
CNSEIMC-100T/FC	Media Converter 100BASE-TX/100BASE-FX (1300nm) w/SC connectors
Accessories	
Model	Description
CNSAL-XFMR	Wall mounted transformer 120VAC (nom)
CNSAL-XFMR-E	Wall mounted transformer 220VAC (nom)

Contact Details

Control Network Solutions Ltd

The Manor House,
Lutyens Close,
BASINGSTOKE,
Hampshire, RG24 8AG, England

Tel: +44 (0) 1256 392747

Fax: +44 (0) 1256 392748

Email: cns@control-network-solutions.co.uk

Web: <http://www.control-network-solutions.co.uk>

CTRLink is a registered trademark of Contemporary Control Systems, Inc., LonWorks is a registered trademark of Echelon Corporation Inc., **eNode** is the brand name of CNS's IP hardware products and forms part of its family of IP Network Infrastructure Products (INIP's) for control networks.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, in part or in whole, without prior permission of Control Network Solutions. We reserve the right to make changes without notice to any products herein as part of its continued product development and improvements. We do not assume any liability arising out of the application or use of any product or circuit described herein.