Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

The N-TRON® 1002MC is an unmanaged 10/100/1000BaseT to 1000BaseSX/LX Industrial Media Converter. It is housed in a hardened, metal, DIN-Rail enclosure, and is designed for use in industrial data acquisition, control, and Ethernet I/O applications.

PRODUCT FEATURES

- Compact Size, Small Footprint
- Unmanaged Operation
- Full IEEE 802.3, 802.3u, 802.3z, and 802.3ab Compliance
- Converts 10/100/1000BaseT to 1000BaseSX/LX
- Choose from Multimode or Singlemode LC Style SFP (Mini-GBIC) Gigabit Fiber Transceivers
- Extended Environmental Specifications
  - -40ºC to 85ºC Operating Temperature
  - >2M Hours MTBF
- RJ-45 Port Supports Full/Half Duplex Operation
- Up to 2.0 Gb/s Maximum Throughput
- Supports up to 1,024 MAC Addresses
- Store-and-Forward Technology
- RJ-45 Port Auto Senses Speed and Flow Control
- Full Wire Speed Communications
- MDIX Auto Cable Sensing (RJ-45)
- Hardened Metal DIN-Rail Enclosure
- LED Link/Activity Status Indication
- Redundant Power Inputs (10-30 VDC)

PRODUCT OVERVIEW

The 1002MC Industrial Media Converter is designed to allow the connection of 10/100/1000BaseT Ethernet devices to your 1000BaseSX/LX fiber cabling infrastructure.

The 1002MC provides one RJ-45 auto sensing 10/100/1000BaseT port and one 1000BaseSX/LX SFP port. The RJ-45 port is full/half duplex capable, using "state of the art" Ethernet switching technology. The switch auto-negotiates the speed and flow control capabilities of the copper port, and configures itself automatically. The 1000BaseSX/LX fiber optic port utilizes industry standard SFP transceivers with LC style connectors and is configured for full duplex operation. Both multimode and singlemode fiber models are available.

Since the 1002MC uses switching technology, unlike most media converters, 10Mbps devices can be connected today and upgraded to 1000Mbps tomorrow. The switching fabric simply scales up or down automatically to match your specific network environment.

The 1002MC supports up to 1,024 MAC addresses, providing support for extremely sophisticated and complex network architectures.

The N-TRON 1002MC is well suited to convert 10/100/1000 BaseT industrial devices to fiber, allowing you to take advantage of your fiber based infrastructure and it's inherent advantages. Compared to copper based systems, fiber provides increased noise immunity and longer cable lengths.

The 1002MC is engineered to withstand the extremes of industrial environments and carries an impressive operating temperature rating of -40ºC to 85ºC. For cost savings and convenience the media converter can be DIN-Rail mounted alongside Ethernet I/O or other Industrial Equipment.

The unique compact size provides a small footprint, conserving space in the most critical dimension. In addition, as with other DIN-Rail devices, the 1002MC can be panel mounted by using our 1000-PM kit.

To increase reliability, the 1002MC contains redundant power inputs. LEDs are provided to display the link status and activity of each port, as well as power on/off status.

1002MC SPECIFICATIONS

Case Dimensions
Height:	4.0"	(10.2 cm)
Width:	1.0"	(2.6 cm)
Depth:	3.7	(9.4 cm)
Weight:	0.60 lbs.	(0.22 kg)
DIN-Rail:	35mm	

Electrical
Input Voltage:	10-30 VDC
Input Current:	200mA@24V
BTU/hr:	16.4@24VDC
Inrush:	13Amp/0.8ms@24V

Environmental
Operating Temperature:	-40°C to 85°C
Storage Temperature:	-40°C to 85°C
Operating Humidity:	10% to 95% (Non Condensing)
Operating Altitude:	0 to 10,000 ft.

Network Media
10BaseT:	>Cat3 Cable
100BaseT:	>Cat5 Cable
1000BaseT:	>Cat5e Cable
1000BaseSX Multimode:	50-62.5/125µm
1000BaseLX Singlemode:	7-10/125µm

Connectors
10/100/1000BaseT:	One (1) RJ-45 TX Port
1000BaseSX/LX SFP:	One (1) SFP LC Duplex Gigabit Fiber Port

Recommended Wiring Clearance
Front:	4" (10.16 cm)
Top:	1" (2.54 cm)

SFP Gigabit Fiber Transceiver Characteristics

Fiber Length	550m for 50/125µm 275m @62.5/125µm	10km**	40km**	80km**
TX Power Min	-9.5dBm	-9.5dBm	-2dBm	0dBm
RX Sensitivity Max	-17dBm	-20dBm	-22dBm	-24dBm
Wavelength	850nm	1310nm	1310nm	1550nm
Assumed Fiber Loss	3.5 to 3.75 dB/km	.45dB/km	.35dB/km	.25dB/km

* SX Fiber Optic Cable
** LX Fiber Optic Cable

BENEFITS

Industrial Media Converter
- Compact Size, Small Footprint
- Converts 10/100/1000BaseT to 1000BaseSX/LX
- High Reliability/Availability
- Extended Environmental Specifications
- Hardened Metal DIN-Rail Enclosure
- High Performance
- High MTBF >2M Hours (measured)
- ESD Protection Diodes on RJ-45 Ports
- Surge Protection Diodes on Power Inputs

Ease of Use
- Plug & Play Operation
- RJ-45 Auto Sensing 10/100/1000BaseT Port
- RJ-45 Port Auto Senses Duplex,Speed, and Cable Type
- Compact DIN-Rail Package

Increased Performance
- Full Wire Speed Capable
- 1000BaseSX/LX Fiber Uplink
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism

Regulatory Approvals
FCC/CE (CFR 47, Part 15, Subpart B, Class A)
EN 61000-6-2/4, IEC 61000-4-2/3/4/5/6
EN 55011, ICES-003

UL/cUL: Class I, Division 2, Groups A, B, C and D; T4A
UL 508, ICE and ANSI/ISA-12.12.01-2007
ABS Type Approval for Shipboard Applications
DNV Type Approval Certification
RoHS Compliant

Designed to comply with:
IEEE 1613 for Electric Utility Substations
NEMA TS1/TS2 for Traffic Control

Contact Information

N-TRON Corp.
820 S. University Blvd., Suite 4E
Mobile, AL 36609 USA
TEL: (251) 342-2164
FAX: (251) 342-6353
Website: www.N-TRON.com
Email: N-TRON_info@N-TRON.com

N-TRON Asia
Suite #: 2267, 22/F, One Lujiazui
68 Yin Cheng Road Center,
Pudong New Area
200120 Shanghai, P.R. China
Phone: +86 (0) 21 6194 6777
Fax: +86 (0) 21 6194 6699

N-TRON Europe GmbH
Alte Steinhauserstr 19
6330 Cham / Zg Switzerland
TEL: +41 41 7406636
FAX: +41 41 7406637

REV 100513

Ordering Information

1002MC-SX	1000BaseSX multimode fiber
1002MC-LX-ZZ	1000BaseLX singlemode fiber
1000-PM	Panel Mount Kit
NTPS-24-1.3	DIN-Rail Power Supply
	24V@1.3 Amp

Where "ZZ" is:
10 for 10km max. fiber segment length
40 for 40km max. fiber segment length
80 for 80km max. fiber segment length