Fiber Optic
NEMA Media Converter
10/100M Ethernet

VILINK
Communications Inc.

ITS Equipment Series

Model MC100

Overview

The Vilink MC100 Web Management Media Converter series is designed to operate in high temperature NEMA environment with 1 x 10/100Mbps copper port1 and 1 x 100Base Fiber Optic Fast Ethernet Port. The converter mediates between a 10/100M Base-TX segment and a 100Base-FX segment. It is primarily designed for large, higher speed/bandwidth demanding workgroups that require expansion of the Ethernet network. It can extend the conventional 10M Ethernet or 100M Fast Ethernet to 20Km~100Km via the Gigabit Ethernet Fiber-optical Line. It is high-performance, cost effective and flexible solutions for a wide range of applications in the field of LAN campus network.

With its built-in Web-based management, the MC100 offers an easy-to-use and configuration facility, via the WEB interface, it can be programmed for basic management functions such as per port speed duplex settings, Port Trunking, VLAN, Port Mirroring, network security authentication and misc configurations. Additionally, the firmware includes advanced features such as IGMP snooping, QoS (Quality of Service), broadcast storm and bandwidth control, to enhance bandwidth utilization. The extended temperature capability for meeting NEMA specifications satisfies very critical applications requiring high quality data transmission performance with high reliability.

Applications include ITS Intelligent Traffic System, Metro Operation, HDTV Broadcasting System, IP cameras Surveillance, Homeland Security, Utility Management, Premise Networks, Military Hardened applications or anything requiring high speed Ethernet Network performance.

Features

- *Complies with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.33z 100Base FX*
- *Supports Auto-Negotiation, Auto Recovery*
- *Auto-MDI / MDI-X detection*
- *Built-in Web Interface for Remote Management*
- *Manual IP Setting / DHCP Client for IP Assignment*
- *Prevents packet loss with back pressure (Half-Duplex) and 802.3x PAUSE frame flow control (Full-Duplex)*
- *9K Jumbo frame supports at all speed*
- *Supports Maximum Frame Size to 16 K*
- *Loop Detection / Broadcast /Multicast Storm Control*
- *Supports IEEE 802.1Q VLAN and Q-in-Q VLAN groups*

Applications

- *ITS Traffic Applications*
- *SCADA Networks*
- *Metro Networks*
- *Gas & Oil Fields Monitoring Applications*
- *Railroad Networks*
- *Military Applications*
- *Data Acquisition Applications*

Ordering Information

Model	Descriptions
MC100ST03	Fiber Optic NEMA 10/100M Media Converter, Web managed, SC SM 50Km, +12 VDC
MC100RST03	Fiber Optic NEMA 10/100M Media Converter Card, Web managed, SC SM 50Km, +12 VDC

*** Please Consult Factory for Additional Model Numbers***

System:

Error Rate	1 in 10^{12} or Better
Network Standard	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3z FX IEEE 802.3x Flow Control IEEE 802.3ad Port trunk with LACP IEEE 802.3w RSTP IEEE 802.1Q VLAN Tagging
Indicators	PWR, TP, FO, 100M
Ports	1 x 10/100Base-T 1x 100Base- FX
Frame Flow Control	Full Duplex Mode
Frame size	16K Bytes
Jumbo Frame	9000 Bytes
Layer 2 Management	Store-and Forward Remote Monitoring (RMON) Far-end Fault Indication (FEFI) Link Fault Pass Through (LFP) Auto Recovery Remote Management and Set Up Manual IP Address Setting / DHCP Loopback, Broadcast, Multicast, Unicast storm control Speed Duplex Mode Configuration Bandwidth Control on TP/FX

Physical:

Dimension	6.5" x 5.5" x 1.5"
Power	+5 VDC @1 Amp

Fiber Interface:

Port	1 x 100Base-FX
Data Rate	100 Mbps
Connector	SC
Distances	2KM@850MM, 10KM@1310MM 40KM@1310SM, 100KM@1550SM

TX Interface:

TX Port	1 x 10/100Base-TX Auto-Negotiation MDI/MDIX
Data Rate	10/100 Mbps
Connector	RJ45
Transmission Mode	Half/Full Duplex

Network Management :

Interface	Web Browser, SNMPv1, v2c Monitor
Port Configuration	Port enable, Auto-Negotiation, Full and Half Duplex mode, Flow Control Enable, Bandwidth Control
VLAN	16 IEEE 802.1Q VLAN / Q-in-Q VLAN
Link Aggregation	Supports IEEE 802.3ad LACP
QoS	802.1p Priority, DSCP field in IP
IGMP Snooping	IGMP (v1/v2) Snooping, up to 64 Multicast groups
SNMP MIBs	RFC-1213 MIB-2, RFC-1573 MIB RFC-2819 RMON MIB (Group 1)

Environment:

Operating	-34^0 C to $+74^0$C
Storage	-40^0C to $+95^0$C
Humidity	98% Non-Condensing

Application