Self-Healing Multi-Drop Ethernet Fiber Optic Switch

Model TC3720

- Ring Self-Heals within 250ms
- Web-Based/Serial Configuration
- IEEE 802.3, 802.3u, 802.3x Compliant
- 6 Ethernet 10/100-Base Auto-Sensing UTP Ports
- 2 Fiber Optic 100Base-FX Ports
- Standard Single Mode Distance of 50km (optional 100km)
- Multimode or Single Mode (1300/1550nm)
- Industrial Hardened (optional)
- 12VDC, Optional 24VDC, -48VDC, 125VDC or 115/230VAC

TC3720 Front View

TC3720 Rear View

Intended for Multidrop Self-Healing Ring topologies, the TC3720 Ethernet Fiber Optic Switch interconnects up to six 10/100M devices at each drop. The ring can consist of either multimode or single mode fibers or CAT5 UTP cables. Fault recovery time is less than 250 milliseconds.

The TC3720 offers a sophisticated Self-Healing Ring scheme. Fault conditions are detected on both Tx and Rx, upstream and downstream of each unit, and automatically re-routed to maintain Ring integrity.

A Web-based configuration user interface is provided to view and change network settings such as IP Address, Subnet, Gateway, Speed, Half/Full Duplex, Name, Password and other parameters. It also monitors the fiber ring status, alarm conditions, fault locations for local and remote units. The TC3720 can also be configured through a serial console (Out-of-Band).

The TC3720's store-forward switching technology eliminates the congestion problem inherent to the contention-oriented Ethernet CSMA/CD protocol. This improves predictable response times under heavy network loads.

The TC3720 offers two multimode (1300nm) or single mode (1300/1550nm) ports and six independent Ethernet 10/100-Base Auto-Sensing switched ports. There are two optional versions (Model TC3720Q & TC3720Z) for extreme temperature applications (-20ºC to 70ºC, -40ºC to 80ºC).

Power is 12VDC, optional 24VDC, -48VDC, 125VDC or 115/230VAC. Power redundancy is standard on 12VDC. The unit is 19" rack mountable. Optical connectors can be ST, FC or SC.

TC COMMUNICATIONS
FIBER OPTIC CONNECTIVITY

Applications

The TC3720 is frequently used to interconnect Remote Terminal Units (RTUs) or Programmable Logic Controllers (PLCs) in Utility substation SCADA Networks that require multiple channels and the reliability of a Self-healing Ring Topology. It is also used for similar connectivity applications in Traffic Control, Industrial Process Control and Security System Networks.

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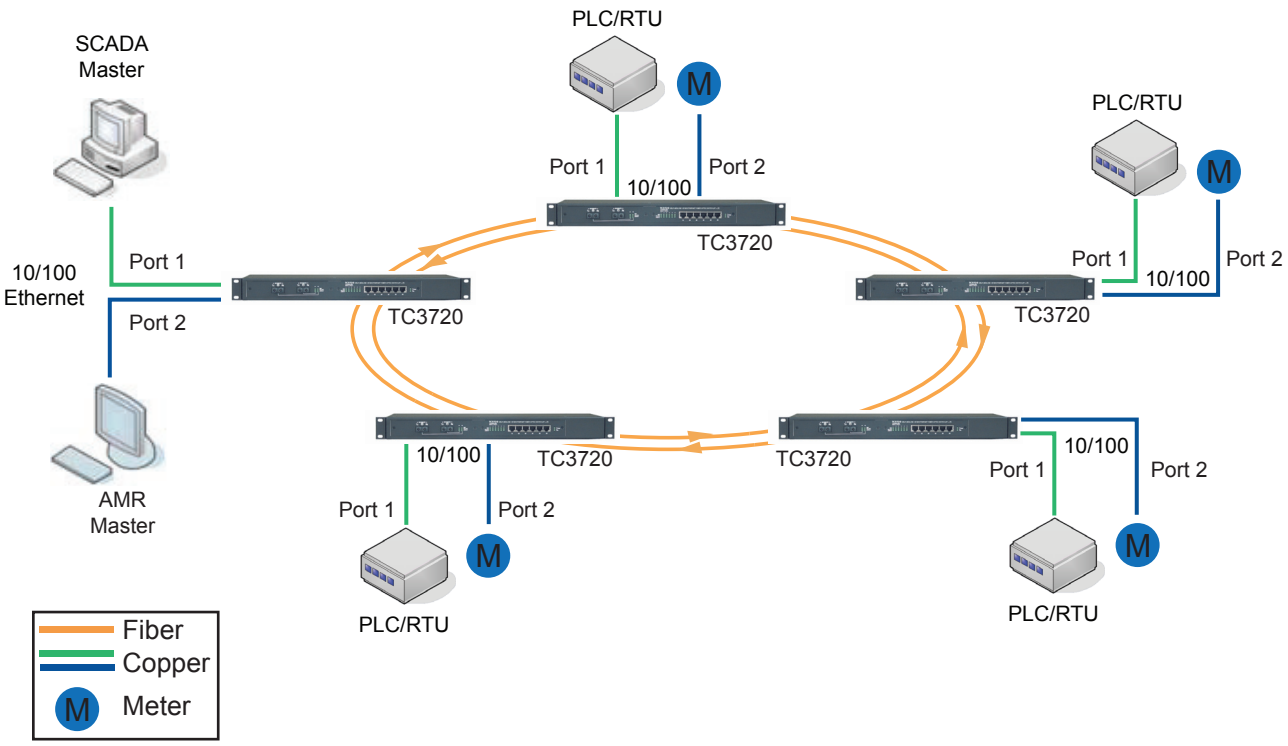

Typical SCADA Application using TC3720 Self-Healing Ethernet Fiber Optic Switches.

Data Rates

.....10/100 Mbps (auto-sensing)

Optical

Transmitter .....ELED/LASER*
Receiver .....PIN Diode
Wavelength
.....1300nm Multimode
.....1300/1550nm Single Mode
Fiber Optic Connectors .....ST
.....Optional FC, SC
Loss Budgets* - 1300/1550nm
LED/ELED....15dB MM @62.5/125µm
LASER.....20dB SM @9/125µm
Interface ..... 2 Ethernet 100Base-Fx

Visual Indicators

System LEDs.....PWR A, PWR B, Vcc
Port Status (each port).....
.....100M, FULL/COL, LINK/ACT

Electrical

Switch Ports 6
Connector .....RJ-45 Female
Interface..... Ethernet 10/100Base-T
Standard .....IEEE 802.3/3u/3x

Power

Standard .....12VDC @ 500mA
Optional .....24VDC, -48VDC,
.....125VDC, 115/230VAC

Temperature

Operating.....−10°C to 50°C
Hi-Temp (option) .....−20°C to 70°C
Extreme Temp (option)..−40°C to 80°C
Storage.....−40°C to 90°C
Humidity.....95% non-condensing

Physical (Rackmount Unit)

Height.....(3.53 cm) 1.39"
Width.....(48.26 cm) 19.0"
Depth.....(24.80 cm) 9.80"
Weight.....(544 gm) 1.2 lbs

**Contact factory for higher requirements*

TC COMMUNICATIONS®
FIBER OPTIC CONNECTIVITY

Certified System™
ISO 9001
QMI-SAI Global
#1045959

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