Fiber Optic Gigabit Ethernet Internal 170 Controller Module Fault Tolerant Self-Healing Data (ODT/R), 10/100/1000M TX Port

VILINK Communications Inc.

Overview

The VILINK ES170 is an extremely reliable Fiber Optic Gigabit Ethernet Link Module plugs in to the 170 Traffic Controller. It is designed to link multiple remote 170 Controllers (slave units) from various Traffic Intersections to the main 170 controller (master unit) at the Traffic Operation Center via one or two single mode fiber optic cables.

The ES170 can operate in harsh environment with wide range temperature and compliant to the intelligent traffic system standard NEMA specifications. Combining with its fiber optic interface ports, the ES170 provides excellent Gigabit Ethernet Redundant Ring and Self-Healing Data (ODT/R) transmission to all of the 170 traffic controllers in ring. The 10/100/1000M TX Ethernet port provides network connection for CCTV video system, HD-IP cameras, smart cameras and Violation detector IP cameras or to another Gigabit Ethernet switch. The RS-232 internal data port connected to the 170 controller is capable of transmitting broadcast data through the network with data speed from 75 Bps up to 38.4 Kbps. In addition, the ES170 provides a second data port with RS-232 or RS-422 interface switch selectable for controlling PTZ cameras. Fiber optic ports support one or two fibers ring in Daisy-Chain or Redundant Ring configurations, multimode or single mode with SC connectors, distances up to 50 Km between intersections.

Features

- *Fiber Optic Gigabit Redundant Ring*
- *170 Controller Internal Module*
- *Self Healing Internal RS-232 Data*
- *1x10/100/1000M TX Ethernet Port*
- *Asynchronous Data Speed Up To 38.4 Kbps*
- *Additional Bi-Directional Data Port*
- *Broadcasting Transmission*
- *Up to 50 Km between Traffic Intersections*
- *One of Two Fibers system*

Applications

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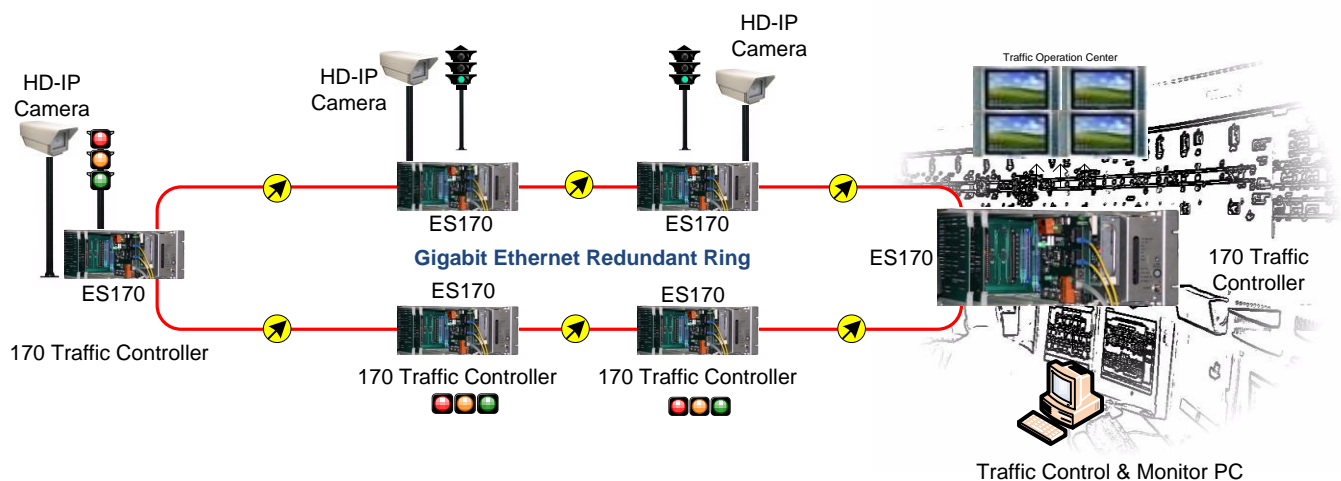
Ordering Information

Model	Descriptions
ES170SC03	Internal Module 170 Controller, Remote Unit with Two Fibers SM SC, 1310nm, 50Km
ES170MSC03	Internal Module 170 Controller, Master Unit with Two Fibers SM SC, 1310nm, 50Km

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

450 Goddard, Irvine, California 92618 – Tel: 714-809-0345 – Fax: 714-908-7710
Email: sales@vilinknet.com – Web: www.vilinknet.com

System:

Error Rate	1 in 10^{12} or Better
Ports	
Copper	(1) 10/100/1000M TX
Fiber	(2) 1000M SX
Data	(1) RS-232/422 External
	(1) RS-232 Internal Modem
Switch Processing	Store and Forward
MAC Address	4K Entries, Auto-learning/Ageing
Queue Buffer	256K Shared Buffer
Packet Control	Runt and CRC Filtering
Network Standards	IEEE 802.3, IEEE 802.1w IEEE 802.3u, IEEE 802.3x IEEE 802.ab

Environment:

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

Physical:

Dimension	9.5" x 6.5" x 1"
Power	Internal +5 VDC @1 Amp

Optical Ports:

Ports	2
TX Power	-3 dBm min @single mode
RX Sensitivity	-28 dBm PIN-TIA
Wavelength	1310nm SM (Nominal) 850nm MM (short Distance) 1550nm SM (Long Distance)
Connectors	SC

Internal Data & PTZ Ports:

Interface	EIA-RS-232
Data Rate	75 bps to 38.4 Kbps
Default Set Up	9.6 Kbps
Mode	Slave, Master, Sub-Master
Redundant	Self-Healing

IP Video Ethernet Port:

Standards	IEEE 802.3, TIA/EIA 785
Data	10/100/1000 Mbps
UTP Crossover	Straight, Crossed
UTP	Auto Negotiation
Mode	Half/Full Duplex
Connector	RJ45

Application

Typical ES170 Application