VILINK
Communications Inc.

4 GB Ports Gigabit Advanced Managed Layer 2 GE Industrial Ethernet Switch w/ 4GB-SFP, and 16x10/100/M-TX

ITS Equipment Series   Model IE416

Overview

The VILINK IE416 is a Advanced Managed Layer 2 GE Industrial Optical Ethernet Switch. It has four 1000Mbps fiber optic ports with optional SFP modules and sixteen 10/100Mbps electrical ports. The IE416 is designed to meet the various industrial application needs and provide a wide range of industrial Ethernet network communication solutions, including linking multiple remote traffic intersections to the Traffic Operation Center. The IE416 also features powerful Web-based, CLI management capabilities, wide input range dual power supply and its support for DIN rail and panel mounting for installation in the industrial environment. "Fast Ring Protection" (FRP) is a proprietary technology that designed specifically for industrial applications, to provide a fast Ethernet ring protection and recovery within 20ms. From the management console, users can choose any port (normal Ethernet port or trunk port) to form an Ethernet ring for faster recovery and wider bandwidth. The 4 GB ports Base-SFP (Small-Form Factor Pluggable) interfaces are designed for extending from 550 meters (Multi-mode fiber) up to above 20/40/100 kilometers (Single-mode fiber) which just provides a high-performance edge device for FTTx solutions.

Applications include ITS Intelligent Traffic Control System, Homeland Security, Metro & Railroad Systems, Oil & Gas Monitoring System, Utility Management, Premise Networks, Military Hardened applications or anything requiring high quality Data Transmission performance.

Features

- *4 x GB SFP Fiber Ports*
- *16 x 10/100M Ethernet Ports*
- *Fast Ring Protection (FRP), Spanning Tree Protocol (STP) and Rapid Spanning Tree Protocol (RSTP)*
- *Support 802.1Q 4K VLAN, port based, protocol based VLAN, Generic Attribute Registration Protocol (GARP), GARP VLAN Registration Protocol (GVRP)*
- *Static and Dynamic port aggregation*
- *Port rate limit, broadcast storm control, port mirroring, rich Quality of Service (QoS) features*
- *Blackhole MAC address filtering, static and dynamic MAC address management*
- *Dual power input for high reliability*
- *DIN rail or panel mount*

Applications

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

Ordering Information

Model	Descriptions
IE416	Managed Layer 2 GE Industrial Optical Ethernet Switch, 4xGB SFP, 16x10/100M, Dual +12VDC *** Please refer to Optical SFP Models for ordering GB SFP***

ITS Equipment Series   Model   IE416

System:

Network Standard	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000-T IEEE 802.3z Gigabit SX / LX IEEE 802.3x Flow Control IEEE 802.3ad Port trunk w/ LACP IEEE 802.1w Rapid spanning tree IEEE 802.1p Class of service IEEE 802.1Q VLAN Tagging IEEE 802.1x Port Authentication
Network Management	Web-based, CLI
Protocols	IGMP1/v2, GVRP, SNMPv1/v2c/v3, DHCP, TFTP, SMTP, RMON, HTTP, HTTPS, Telnet, Syslog, SSH, SNMP inform, SNMP Server/Client
MIB	MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1,2,3,9
Switching Architecure	Non-Blocking Sotre-and-Forward
Priority Queues	4
Address Table	8K MAC w/ Auto Learning
Packet Buffer size	2 Mbit
VLAN ID Range	VID 1 to 4094 @ Max 256 VLANs
Bandwidth Management	Static and Dynamic Ports Aggregation
Protection/ Redundant	Fast Ring Protection Recover <20ms

Physical:

Dimension	5.5" x 4.5" x 2.5"
Power	Dual Input +12VDC@1Amp

Fiber Interface:

GB Ports	4 SFP Slots
Data Rate	100 Mbps & 1000 Mbps
Connector	LC
Distances	2KM@850MM, 20KM@1310SM 40KM@1310SM, 100KM@1550SM

TX Interface:

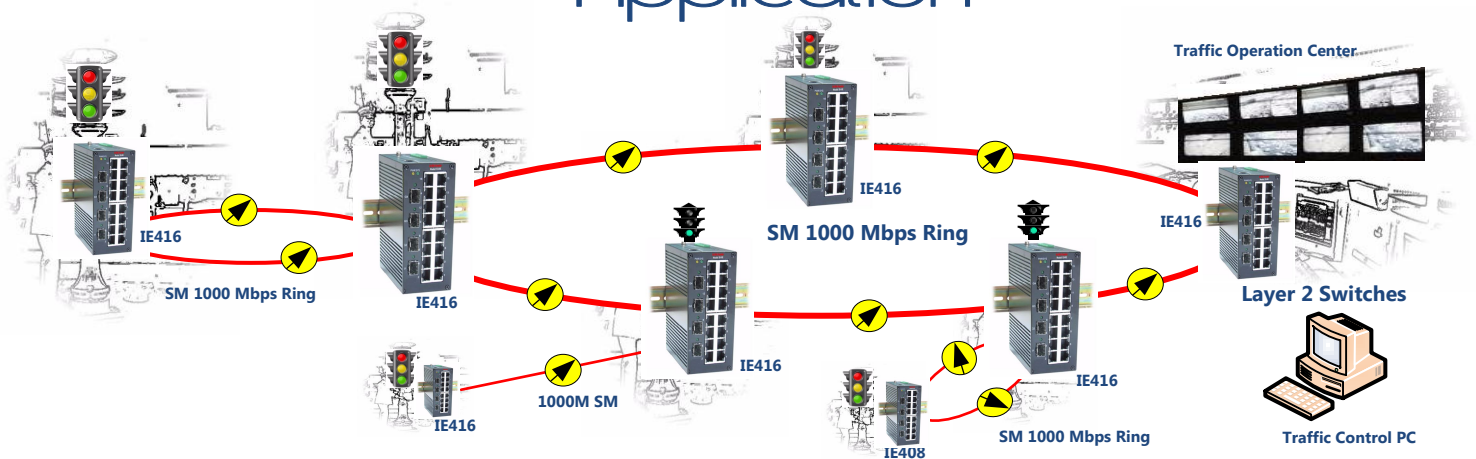|	
Ports	16 RJ45
Data Rate	10/100 Mbps
TX Port	Auto-MDI/MDIX
Transmission Mode	Half/Full Duplex

Network Management:

Interface	Web Browser, CLI
Port Configuration	Port enable, Auto-Negotiation, Full and Half Duplex mode, Flow Control Enable, Bandwidth Control
VLAN	Port-Based / 802.1Q Tagged Based Generic Attribute Registration
Link Aggregation	Supports IEEE 802.3ad LACP
Data Traffic Control	Port rate limit, broadcast control, mirroring and QoS
Console Port	RS-232 – RJ45 Connector

Environment:

Operating	-34^0 C to $+74^0$C
Storage	-40^0 C to $+85^0$C
Humidity	98% Non-Condensing

Application

Typical IE416 Application