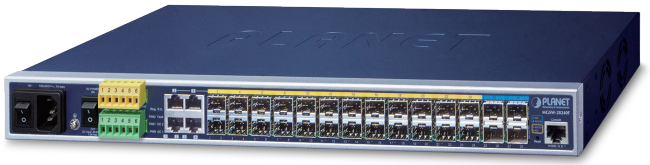
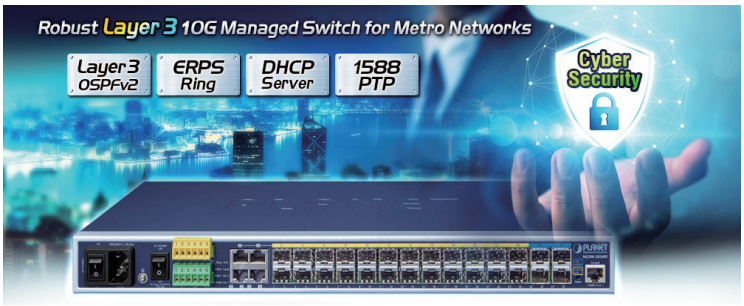
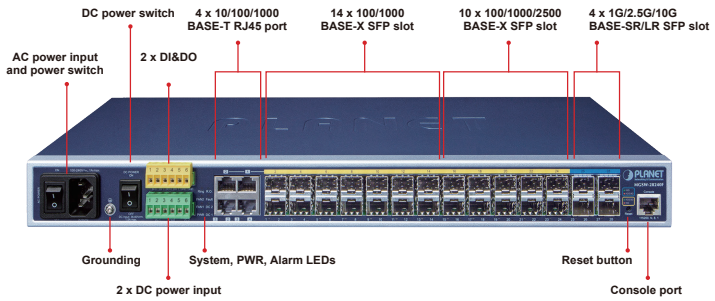
L3 14-Port 100/1G SFP with 4 Shared 10/100/1000T + 10-Port 1G/2.5G SFP + 4-Port 10G SFP+ Metro Ethernet Switch



10Gbps Fiber Ports and Multiple Triple Speed Fiber Ports Deliver High-speed Networking

PLANET MGSW-28240F L3 24-Port 100/1000BASE-X SFP + 4-Port 10G SFP+ Metro Ethernet Switch is specially designed for service providers and enterprises to deliver high-speed networking over longer distances. Its SFP+ and SFP fiber optic ports can be connected to various fiber and Ethernet cables to extend switching functionality throughout the network. The MGSW-28240F is capable of providing non-blocking switch fabric and wire-speed throughput as high as 158Gbps in the temperature range from -10 to 60 degrees C without any packet loss and cyclic redundancy check (CRC) error. It greatly simplifies the tasks of upgrading the enterprise LAN for catering to increasing bandwidth demands.





Flexible and Extendable Fiber Optic Ethernet Solution

10G Ethernet is a big leap in the evolution of Ethernet. Each of the 10G SFP+ ports in the MGSW-28240F supports triple speed, 10GBASE-SR/LR, 2500BASE-X and 1000BASE-SX/LX SFP transceiver modules. With its 4-port, 10Gbps and up to 24-port 1Gbps/2.5Gbps fiber optic Ethernet link capability, the administrator now can flexibly choose the suitable SFP and SFP+ transceiver according to the

Physical Port

- **14 100/1000BASE-X SFP ports**
- **10 100/1000/2500BASE-X SFP ports**
- **4 10/100/1000BASE-T RJ45 ports**, shared with Port-1 to Port-4
- **4 10GBASE-SR/LR SFP+ slots,** compatible with 1000BASE-SX/LX/BX and 2500BASE-X SFP
- RJ45 to RS232 DB9 console interface for basic management and setup

Hardware Conformance

- One 100 to 240V AC or dual 36 to 60V DC power input, redundant power with reverse polarity protection
- 19-inch rack-mountable design
- IP30 metal case
- -10 to 60 degrees C operating temperature

Digital Input and Digital Output

- 2 digital input (DI)
- 2 digital output (DO)
- Integrates sensors into auto alarm system
- Transfers alarm to IP network via email and SNMP trap

Layer 3 IP Routing Features

- IP dynamic routing protocol supports OSPFv2
- Routing interface provides per VLAN routing mode
- Supports maximum 128 static routes and route summarization

Layer 2 Features

- Store-and-forward architecture with runt/CRC filtering that eliminates erroneous packets to optimize the network bandwidth
- Storm control support
  - Broadcast/Multicast/Unknown unicast
- Supports **VLAN**
  - IEEE 802.1Q tagged VLAN
  - Provides Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
  - Private VLAN Edge (PVE)
  - Protocol-based VLAN
  - MAC-based VLAN
  - IP subnet-based VLAN
  - Voice VLAN
  - GVRP(GARP VLAN Registration Protocol)

transmission distance or the transmission speed required to extend the network efficiently. The MGSW-28240F provides broad bandwidth and powerful processing capacity.

Front-access Interface Design

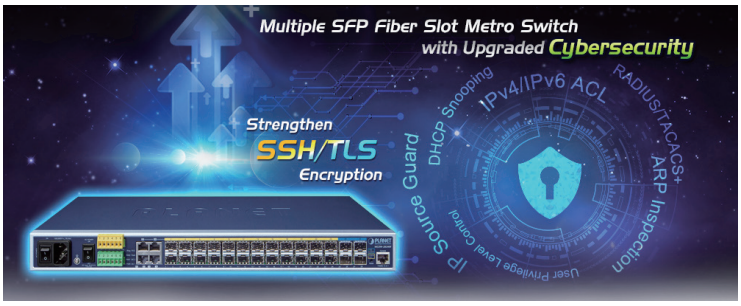
The Metro Ethernet Switch comes with a user-friendly front-access design to help technicians improve wiring and installation efficiency, whereas, in the traditional design, the power socket, console port and even some extension module were always placed on the rear of the product. When technicians are installing or maintaining the older switch model on the rack, they have to be careful with other surrounding online devices as the rear-end of the product cannot be seen clearly. With the front-access design, technicians can avoid messing with other nearby devices.

Layer 3 Routing Support

The MGSW-28240F enables the administrator to conveniently boost network efficiency by configuring Layer 3 IPv4/IPv6 VLAN static routing manually, and the IPv4 OSPFv2 (Open Shortest Path First) settings automatically. The OSPF is an interior dynamic routing protocol for autonomous system based on link state. The protocol creates a database for link state by exchanging link states among Layer 3 switches, and then uses the Shortest Path First algorithm to generate a route table based on that database.

Network with Cybersecurity Helps Minimize Security Risks

The MGSW-28240F comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks, it supports SSHv2, TLSv1.2 and SNMPv3 protocols to provide strong protection against advanced threats. Served as a key point to transmit data to customer's critical equipment in a business network, the cybersecurity feature of the MGSW-28240F protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.



Redundant Ring, Fast Recovery for Critical Network Applications

The MGSW-28240F supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced ITU-T G.8032 ERPS (Ethernet Ring Protection Switching) technology, Spanning Tree Protocol (802.1s MSTP), and redundant power input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a certain, simple Ring network, the recovery time of data link can be as fast as 10ms.

- Supports Spanning Tree Protocol
  - IEEE 802.1D Spanning Tree Protocol (STP)
  - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
  - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), spanning tree by VLAN
  - BPDU Guard
- Supports **Link Aggregation**
  - 802.3ad Link Aggregation Control Protocol (LACP)
  - Cisco ether-channel (static trunk)
  - Maximum 14 trunk groups, with 16 ports for each trunk group
  - Up to 80Gbps bandwidth (full duplex mode)
- Provides port mirror (many-to-1)
- Port mirroring monitors the incoming or outgoing traffic on a particular port
- Loop protection to avoid broadcast loops
- Supports ERPS (Ethernet Ring Protection Switching)
- IEEE 1588 Transparent Clock mode and Synchronous Ethernet network timing

Quality of Service

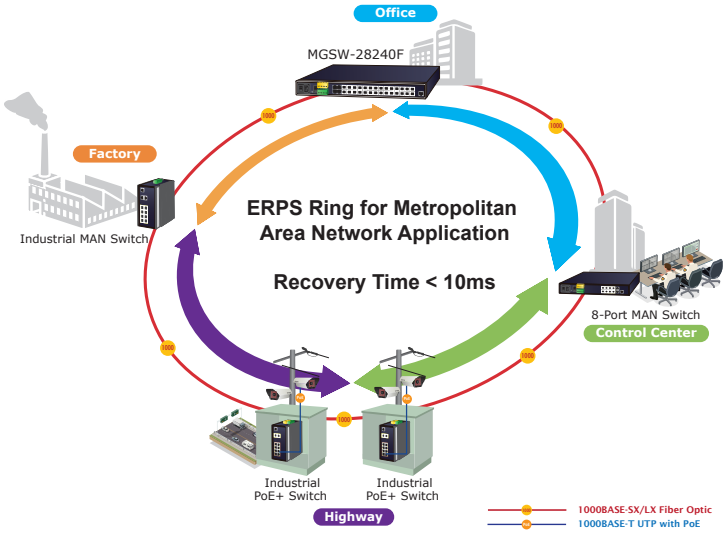
- Ingress Shaper and Egress Rate Limit per port bandwidth control
- 8 priority queues on all switch ports
- Traffic classification
  - IEEE 802.1p CoS
  - TOS/DSCP/IP Precedence of IPv4/IPv6 packets
  - IP TCP/UDP port number
  - Typical network application
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Supports QoS and In/Out bandwidth control on each port
- Traffic-policing on the switch port
- DSCP remarking

Multicast

- Supports IPv4 IGMP snooping v1, v2 and v3
- Supports MLD snooping v1 and v2
- Querier mode support
- IGMP snooping port filtering
- MLD snooping port filtering
- MVR (Multicast VLAN Registration)

Security

- Authentication
  - IEEE 802.1x port-based/MAC-based network access authentication



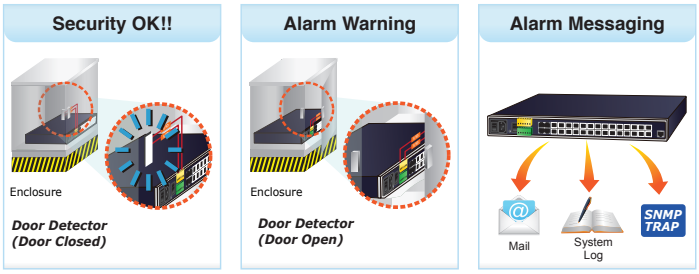
AC and DC Redundant Power to Ensure Continuous Operation

The MGSW-28240F possesses a **100~240V** AC power supply and dual **36~60V DC** power supply utilized as redundant power supply to ensure its continuous operation. Its redundant power system is specifically designed to handle the demands of high-tech facilities requiring the highest power integrity. Furthermore, with the 36~60V DC power supply implemented, the MGSW-28240F can be applied as the telecom level device and placed in almost any difficult environment.

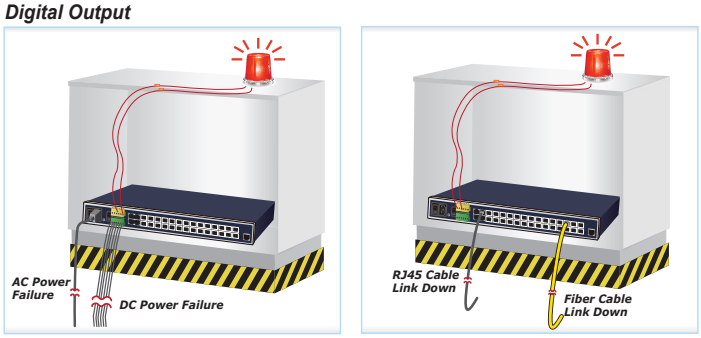
Digital Input and Digital Output for External Alarm

The MGSW-28240F helps the network administrators efficiently manage the unexpected network situations by providing Digital Input and Digital Output for external alarm device on the front panel. The Digital Input can be used to detect and log the status of the external devices such as door intrusion detector. The Digital Output could be used to send alarm whenever the MGSW-28240F has port link-down or power failure.

Digital Input



Digital Output



- IEEE 802.1x authentication with guest VLAN
- Built-in RADIUS client to cooperate with the RADIUS servers
- RADIUS/TACACS+ users access authentication

- Access Control List
  - IP-based Access Control List (ACL)
  - MAC-based Access Control List (ACL)
- Source MAC/IP address binding
- **DHCP Snooping** to filter distrusted DHCP messages
- **Dynamic ARP Inspection** discards ARP packets with invalid MAC address to IP address binding
- **IP Source Guard** prevents IP spoofing attacks
- IP address access management to prevent unauthorized intruder

Management

- IPv4 and IPv6 dual stack management
- Switch Management Interfaces
  - Console/Telnet command line interface
  - Web switch management
  - SNMP v1, v2c, and v3 switch management
  - SSHv2 and TLSv1.2 secure access
- **IPv6** address/NTP management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System Maintenance
  - Firmware upload/download via HTTP/TFTP
  - Reset button for system reboot or reset to factory default
  - Dual images
- DHCP relay and option 82
- User privilege levels control
- NTP (Network Time Protocol)
- Link Layer Discovery Protocol (LLDP) and LLDP-MED
- Network diagnostic
  - SFP-DDM (Digital Diagnostic Monitor)
  - Cable diagnostic technology provides the mechanism to detect and report potential cabling issues
  - ICMPv6/ICMPv4 remote ping
- SMTP/Syslog remote alarm
- Four RMON groups (history, statistics, alarms and events)
- SNMP trap for interface link up and link down notification
- System Log
- PLANET Smart Discovery Utility for deployment management