

## Industrial 6-Port 100/1000X SFP + 2-Port 1G/2.5G SFP + 2-Port 10/100/1000T Managed Switch



### Switch with Multiple SFP Fiber Ports for Growing Long-Reach Industrial and Telecom Networks

PLANET IGS-10080MFT is an **Industrial 10-Port Full Gigabit Managed Ethernet Switch** specially designed to build a full Gigabit backbone to transmit reliable, high-speed data in heavy industrial demanding environments and to forward data to remote networks through fiber optic cabling. It features **two 100/1000/2500BASE-X** ports, **six 100/1000BASE-X** SFP fiber optic ports, and **two extra 10/100/1000BASE-T** copper interfaces delivered in an IP30 rugged case with redundant power system. Within such favorable enclosure, it provides user-friendly yet advanced IPv6/IPv4 management interfaces, abundant **L2/L4 switching functions** and Layer 3 static routing capability. The IGS-10080MFT can operate stably under the temperature range from **-40 to 75 degrees C** and allows either DIN-rail or wall mounting for efficient use of cabinet space.



### Cybersecurity Network Solution to Minimize Security Risks

The IGS-10080MFT supports SSHv2 and TLSv1.2 protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as **DHCP Snooping**, **IP Source Guard**, **ARP Inspection** Protection, **802.1x port-based** network access control, **RADIUS** and **TACACS+** user accounts management, **SNMPv3** authentication, and so on to complement it as an all-security solution.

### Physical Port

- 10/100/1000BASE-T Ethernet ports (Ports 1 to 2)
- 2 100/1000/2500BASE-X SFP ports (Ports 3 to 4)
- 6 100/1000BASE-X SFP ports (Ports 5 to 10)

### Industrial Case and Installation

- Redundant power design
  - 12 to 48V DC, redundant power with reverse polarity protection
  - AC 24V power adapter acceptable
  - Backup of catastrophic power failure on one supply
  - Fault tolerance and resilience
- IP30 aluminum case
- DIN-rail and wall-mount designs
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

### Industrial Protocol

- Modbus TCP for real-time monitoring in SCADA system
- IEEE 1588v2 PTP Transparent clock mode (Precision Time Protocol)

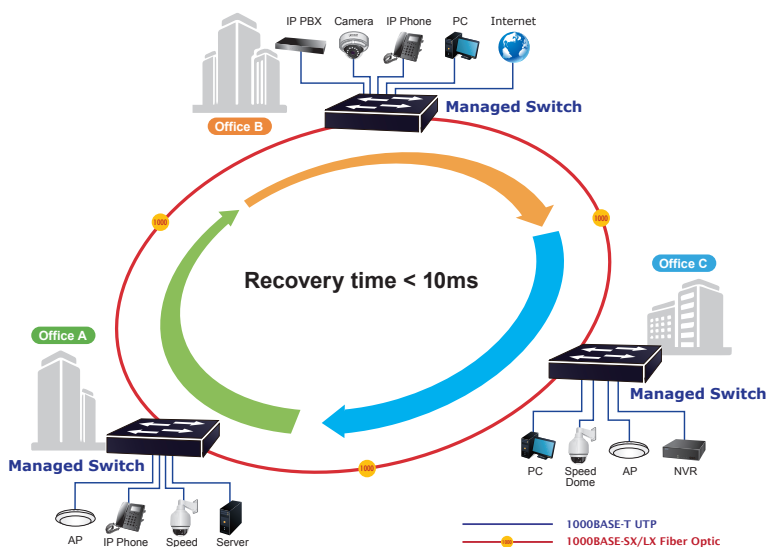
### Layer 2 Features

- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- High performance of Store-and-Forward architecture, and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Storm Control support
  - Broadcast/Multicast/Unicast
- Supports **VLAN**
  - IEEE 802.1Q tagged VLAN
  - Up to 4K VLANs groups, out of 4094 VLAN IDs
  - Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
  - Private VLAN Edge (PVE)
  - Protocol-based VLAN
  - MAC-based VLAN
  - Voice VLAN
  - GVRP (GARP VLAN Registration Protocol)
- 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



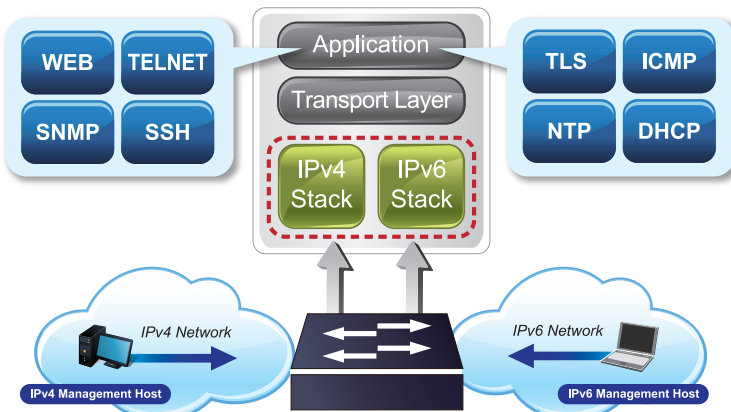
### Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-10080MFT 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 and Spanning Tree Protocol (802.1s MSTP) into customer's network to enhance system reliability and uptime in various environments.



### IPv6/IPv4 Dual Stack Management

Supporting both IPv6 and IPv4 protocols, the IGS-10080MFT helps the SMBs to step in the IPv6 era with the lowest investment as their network facilities need not be replaced or overhauled if the IPv6 FTTx edge network is set up.



- Supports **Link Aggregation**
  - 802.3ad Link Aggregation Control Protocol (LACP)
  - Cisco ether-channel (static trunk)
- Provides port mirror (many-to-1)
- Port mirroring to monitor the incoming or outgoing traffic on a particular port
- Loop protection to avoid broadcast loops
- Supports G.8032 ERPS (Ethernet Ring Protection Switching)
- Compatible with Cisco uni-directional link detection(UDLD) that monitors a link between two switches and blocks the ports on both ends of the link if the link fails at any point between the two devices

### Layer 3 IP Routing Features

- Supports maximum 32 static routes and route summarization

### 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
  - IP TOS/DSCP/IP precedence
  - 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 IPv6 MLD snooping v1 and v2
- Querier mode support
- IPv4 IGMP snooping port filtering
- IPv6 MLD snooping port filtering
- MVR (Multicast VLAN Registration)

### Security

- Authentication
  - IEEE 802.1x port-based/MAC-based network access authentication
  - IEEE 802.1x authentication with guest VLAN
  - Built-in RADIUS client to cooperate with the RADIUS servers
  - RADIUS/TACACS+ users access authentication
  - Guest VLAN assigns clients to a restricted VLAN with limited services
- Access Control List
  - IP-based Access Control List (ACL)

### SMTP/SNMP Trap Event Alert

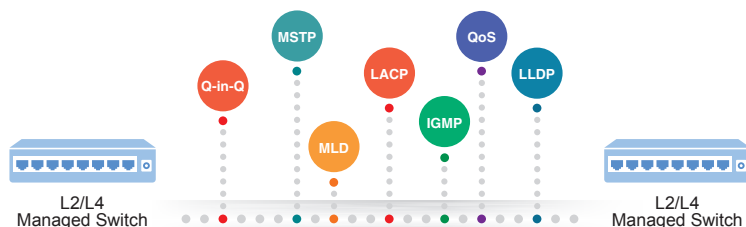
The IGS-10080MFT provides event alert function to help to diagnose the abnormal device owing to whether or not there is a break of the network connection, or the rebooting response.

### Layer 3 IPv4 and IPv6 Software VLAN Routing for Secure and Flexible Management

To help customers stay on top of their businesses, the IGS-10080MFT not only provides ultra high transmission performance and excellent Layer 2 technologies, but also IPv4/IPv6 software VLAN routing feature which allows to cross over different VLANs and different IP addresses for the purpose of having a highly-secure, flexible management and simpler networking application.

### Robust Layer 2 Features

The IGS-10080MFT can be programmed for advanced switch management functions such as dynamic port link aggregation, 802.1Q VLAN, **Q-in-Q VLAN**, **Multiple Spanning Tree Protocol (MSTP)**, Loop and **BPD Guard**, **IGMP Snooping**, and **MLD Snooping**. Via the link aggregation, the IGS-10080MFT allows the operation of a high-speed trunk to combine with multiple ports such as a 16Gbps fat pipe, and supports fail-over as well. Also, the **Link Layer Discovery Protocol (LLDP)** is the Layer 2 protocol included to help discover basic information about neighboring devices on the local broadcast domain.



### Efficient Traffic Control

The IGS-10080MFT is loaded with robust QoS features and powerful traffic management to enhance services to business-class data, voice, and video solutions. The functionality includes broadcast/multicast/unicast **storm control**, per port **bandwidth control**, 802.1p/CoS/IP DSCP QoS priority and remarking. It guarantees the best performance in VoIP and video stream transmission, and empowers the enterprises to take full advantage of the limited network resources.

### Powerful Security

PLANET IGS-10080MFT offers comprehensive **IPv4/IPv6** Layer 2 to Layer 4 **Access Control List (ACL)** for enforcing security to the edge. It can be used to restrict network access by denying packets based on source and destination IP address, TCP/UDP ports or defined typical network applications. Its protection mechanism also comprises **802.1X port-based** user and device authentication, which can be deployed with RADIUS to ensure the port level security and block illegal users. With the **protected port** function, communication between edge ports can be prevented to guarantee user privacy. Furthermore, **Port security** function allows to limit the number of network devices on a given port. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

- 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 and Telnet Command Line Interface
  - HTTP web switch management
  - SNMP v1 and v2c switch management
  - SSHv2, TLSv1.2 and SNMP v3 secure access
- SNMP Management
  - Four RMON groups (history, statistics, alarms, and events)
  - SNMP trap for interface Link Up and Link Down notification
- **IPv6** IP address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System Maintenance
  - Firmware upload/download via HTTP
  - Reset button for system reboot or reset to factory default
  - Dual images
- DHCP Relay
- DHCP Option 82
- DHCP Server
- User Privilege levels control
- Network Time Protocol (NTP)
- 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
- System Log
- PLANET Smart Discovery Utility for deployment management
- PLANET NMS system and CloudViewer for deployment management