

# 2(1)-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter

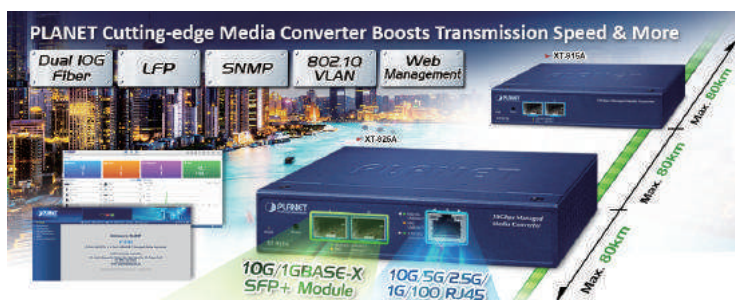


XT-905A/XT-915A/XT-925A

## Ultra-Fast Connections and Easy Management

PLANET XT-900 series high-performance media converter improves network connectivity and provides sophisticated management capabilities. It is **the first 10Gbps media converter** in the industry with **standalone secure management**, making it **the best option for enterprise and telecom remote management and monitoring**. The XT-900 series allows for remote management via an intuitive web interface, command line interface (CLI) and SNMP protocol, enabling easy monitoring and configuration of the converter from anywhere.

Our cutting-edge converter features one 10GBASE-T copper port and two 10G SFP+ ports, providing ultra-fast connectivity for devices with RJ45 interfaces as well as greater flexibility in fiber-optic cabling options. This powerful yet compact solution makes it the ideal choice for businesses looking to boost their network speed and functionality.



## 10GBASE-T and 10GBASE-X SFP+ Dual Media Interfaces for Diversified Bandwidth Applications

The XT-900 series can reach speeds of up to 10Gbps over copper or fiber-optic cabling, greatly improving the performance of large data transmissions. Its built-in 10GBASE-T copper interfaces feature 5-speed auto-negotiation (10G/5G/2.5G/1G/100) and can transmit data at 10Gbps over the existing Cat6A/Cat7 UTP cabling, eliminating the need for expensive upgrades. With its Plug and Play design, installation is easy and hassle-free, so you can enjoy the speed you need without any extra effort.

## Physical Port

- One 10G/5G/2.5G/1G/100BASE-T RJ45 interface with auto MDI/MDI-X function
- Two 10G/2.5G/1G/100BASE-X SFP+ interfaces

## Layer 2 Features

- Storm Control support
  - Broadcast / Multicast / Unknown Unicast
- Supports VLAN
  - IEEE 802.1Q tagged VLAN
  - Supports provider bridging (VLAN Q-in-Q, IEEE 802.1ad)
  - Up to 256 VLAN groups, out of 4096 VLAN IDs
- Supports ITU-T G.8032 ERPS ring with recovery time less than 500ms
- Link Layer Discovery Protocol (LLDP)
- 16K MAC address table with auto-aging
- Jumbo Frame support up to 12Kbytes in size

## Quality of Service

- Ingress Shaper and Egress Rate Limit per port bandwidth control
- 8 priority queues on all converter ports
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Traffic classification
  - IEEE 802.1p CoS
  - IP TOS / DSCP / IP Precedence
  - IP TCP/UDP port number
  - Typical network application

## Management

- IPv4 and IPv6 dual stack management
- Support Link Fault Pass-through
- Management Interfaces
  - Web HTTP/HTTPS management
  - Telnet Command Line Interface
  - SNMP v1, v2c, v3 monitoring
  - SSHv2, TLSv1.2
- System Maintenance
  - Firmware upload/download via HTTP
  - Reset button for system reboot or reset to factory default
  - Dual images
- Simple Network Time Protocol (SNTP)
- User privilege levels control
- SNMP Management
  - SNMP trap for interface link up and link down notification



- Four RMON groups (history, statistics, alarms and events)
- Network Diagnostic
  - SFP-DDM (Digital Diagnostic Monitor)
- Syslog remote alarm
- Local system Log
- ICMPv6 / ICMPv4 remote ping
- PLANET Smart Discovery Utility for deploy management
- PLANET Remote Management
  - PLANET NMS Controller and CloudViewer app for deployment management

### Security

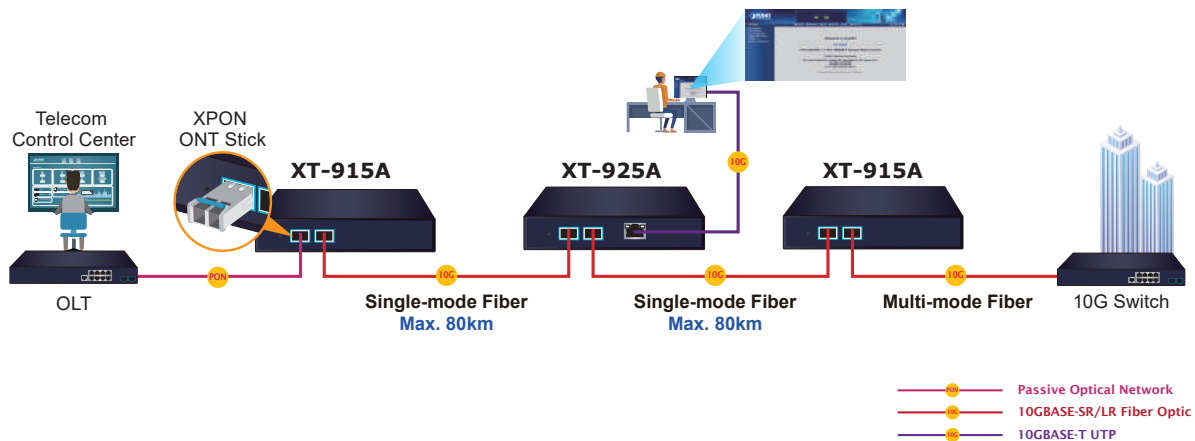
- IP address access management to prevent unauthorized intruder
- Static MAC setting and MAC Filtering
- Protected ports (XT-925A only)

### Case and Installation

- External 12VDC, 1.5A power adapter
- 0 to 50 degrees C operating temperature
- Supports 4KVDC Contact/8KVDC Air Ethernet ESD protection
- Wall-mount and DIN-rail installation (optional)

### Two Fiber Optic Ports Double the Distance of Deployment

Conventional media converters typically support only a single pair of different media conversions, such as converting one fiber to one copper connection. They can extend a 100m copper connection to a maximum of 80km fiber optic connection. In contrast, the XT-915A/XT-925A has two fiber optic ports and one copper port, enabling the two fiber optic cables to connect to devices up to 160km apart so as to significantly extend the deployment distance.



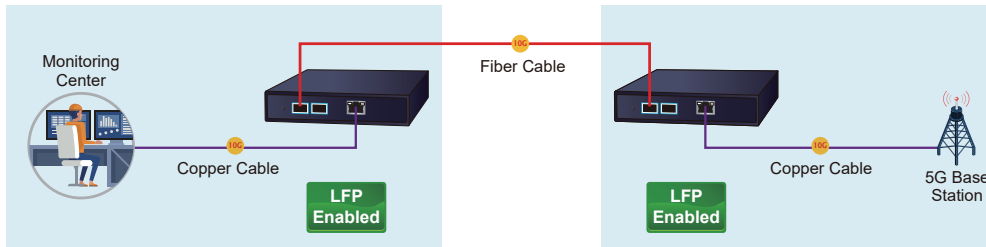
### Link Fault Pass-through

Link Fault Pass-through is a networking feature. It facilitates the detection and propagation of link faults or errors from one network device to another. It helps maintain network reliability and minimizes downtime by allowing devices to dynamically respond to link faults. Link Fault Pass-through improves fault detection and enables faster troubleshooting and resolution processes.

#### How it works:

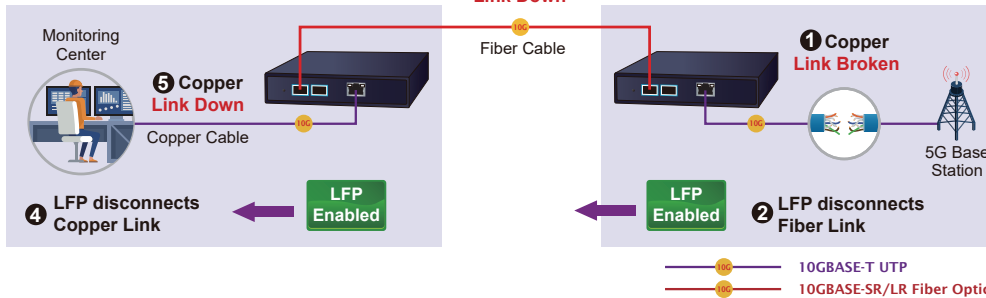
- When a link fault occurs, the device experiencing the fault generates a notification.
- This notification is then forwarded to other connected devices using Link Fault Pass-through.
- Upon receiving the link fault information, the connected devices become aware of the fault.
- This awareness enables them to take appropriate actions, such as rerouting traffic or disabling the affected port.

**Remote Link Normal (Copper to Fiber Pair)**

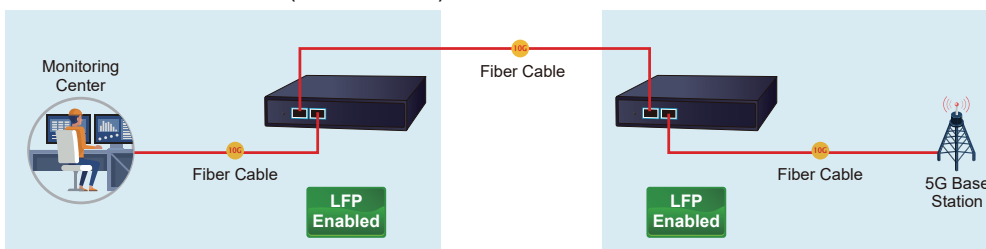


**Remote Link Broken**

Copper and Fiber are configured based on LFP group

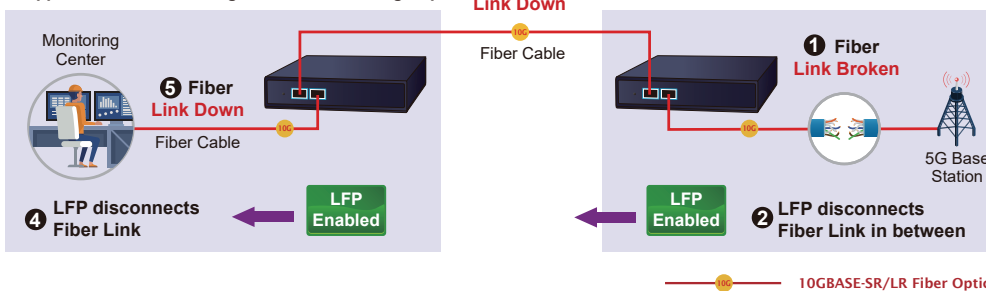


**Remote Link Normal (Fiber to Fiber Pair)**



**Remote Link Broken**

Copper and Fiber are configured based on LFP group



*Network with Cybersecurity Helps Minimize Risks*

The XT-900 series is equipped with enhanced cybersecurity features to fend off cyber threats and attacks. It supports SSHv2, TLSv1.2, and SNMPv3 protocols to provide strong protection against advanced threats. As a key point for transmitting data to a customer's critical equipment in a business network, the XT-900 series cybersecurity feature protects network management and enhances the security of mission-critical networks without incurring any additional deployment cost or effort.

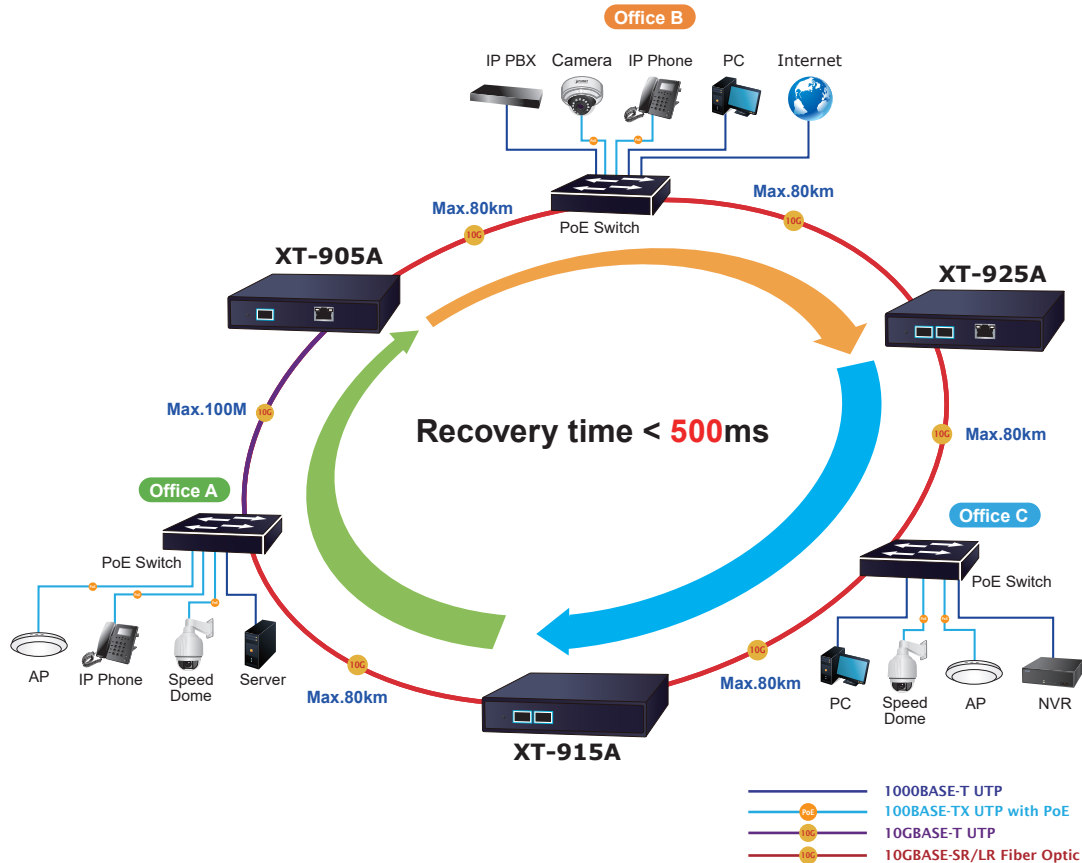
**XT-900 Series**

**Secure Management**

TLS<sub>v1.2</sub>    SNMP<sub>v3</sub>    SSH<sub>v2</sub>

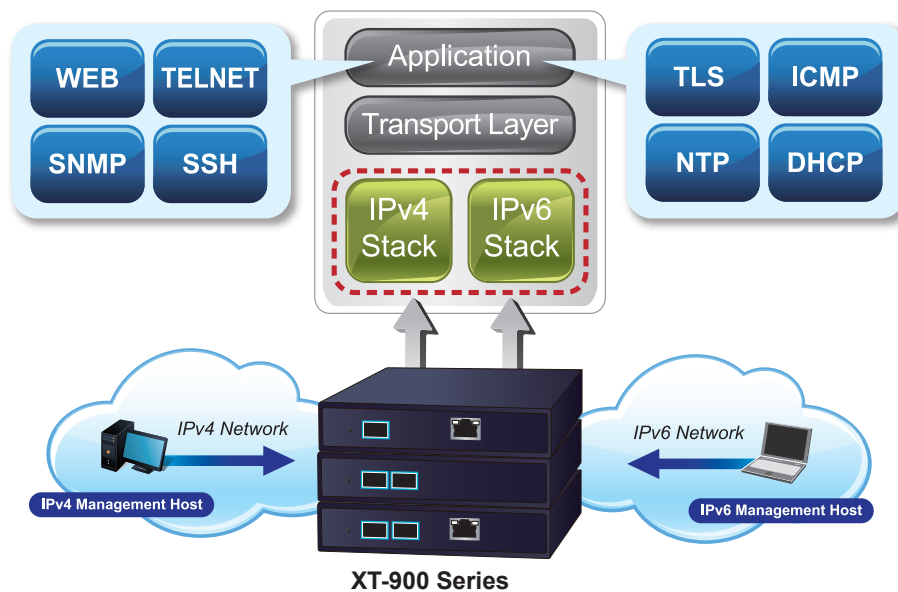
**Redundant Ring, Fast Recovery for Critical Network Applications**

The XT-900 series supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruption and external intrusions. It incorporates advanced ITU-T G.8032 ERPS (Ethernet Ring Protection Switching) technology, ensuring rapid self-recovery in ring networks. With this advanced feature, the data link recovery time can be as fast as 500ms.



**IPv6/IPv4 Dual Stack Management**

Supporting both IPv6 and IPv4 protocols, the XT-900 series help 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.



**SNMP for Comprehensive Network Monitoring and Centralized Control**

SNMP (Simple Network Management Protocol) provides network monitoring and management capabilities by gathering real-time information about network devices. By proactively identifying and addressing network issues, reliability and performance are improved. SNMP also facilitates centralized control of network devices, allowing for monitoring and configuration of multiple devices from a single location, reducing manual effort and enhancing operational efficiency.

**Layer 2 Features**

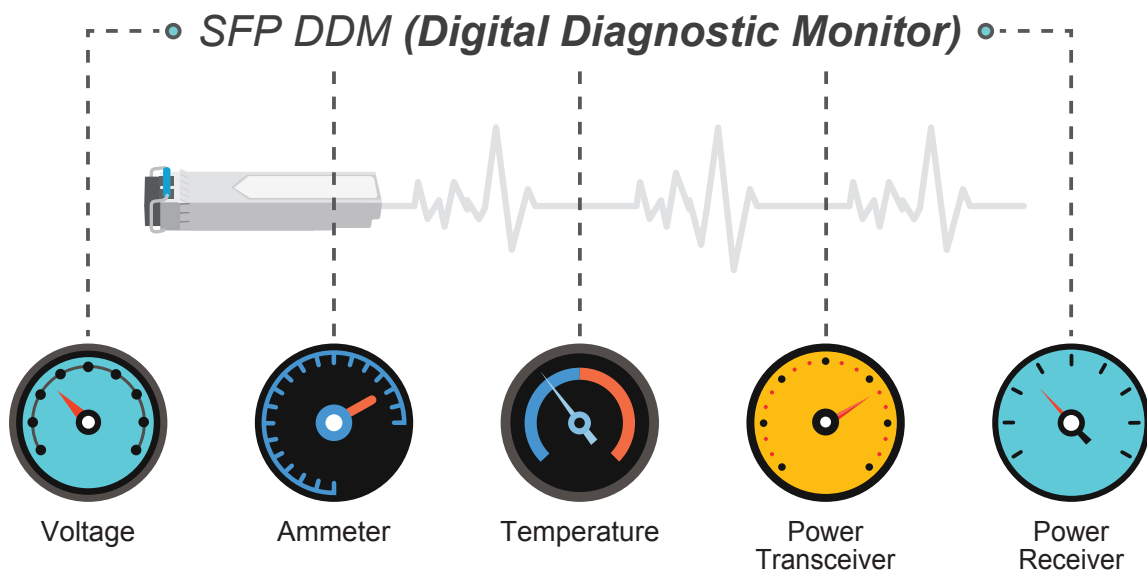
The device has a 16K-entry MAC address table that automatically removes inactive addresses. Its backbone supports speeds of up to 40Gbps, and it can handle Jumbo Frames up to 12Kbytes in size. The device is equipped with Storm Control to manage Broadcast/Multicast/Unknown-Unicast traffic, and features an IPv6 MAC/VLAN/Multicast Address Table and Loop Protection.

**Efficient Traffic Control**

The XT-900 series media converter boasts advanced QoS features and robust traffic management capabilities, optimizing the delivery of business-class data, voice, and video solutions. Its feature set includes broadcast/multicast/unicast storm control, per-port bandwidth control, and 802.1p CoS/DSCP/IP Precedence QoS priority and remarking. These capabilities guarantee optimal performance for VoIP and video stream transmission, maximizing the utilization of limited network resources for enterprises

**Intelligent SFP Diagnosis Mechanism**

The XT-900 series supports the SFP-DDM (digital diagnostic monitor) function, which greatly helps network administrators easily monitor real-time parameters of the SFP transceivers. These parameters include optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.



**Remote Management Solution**

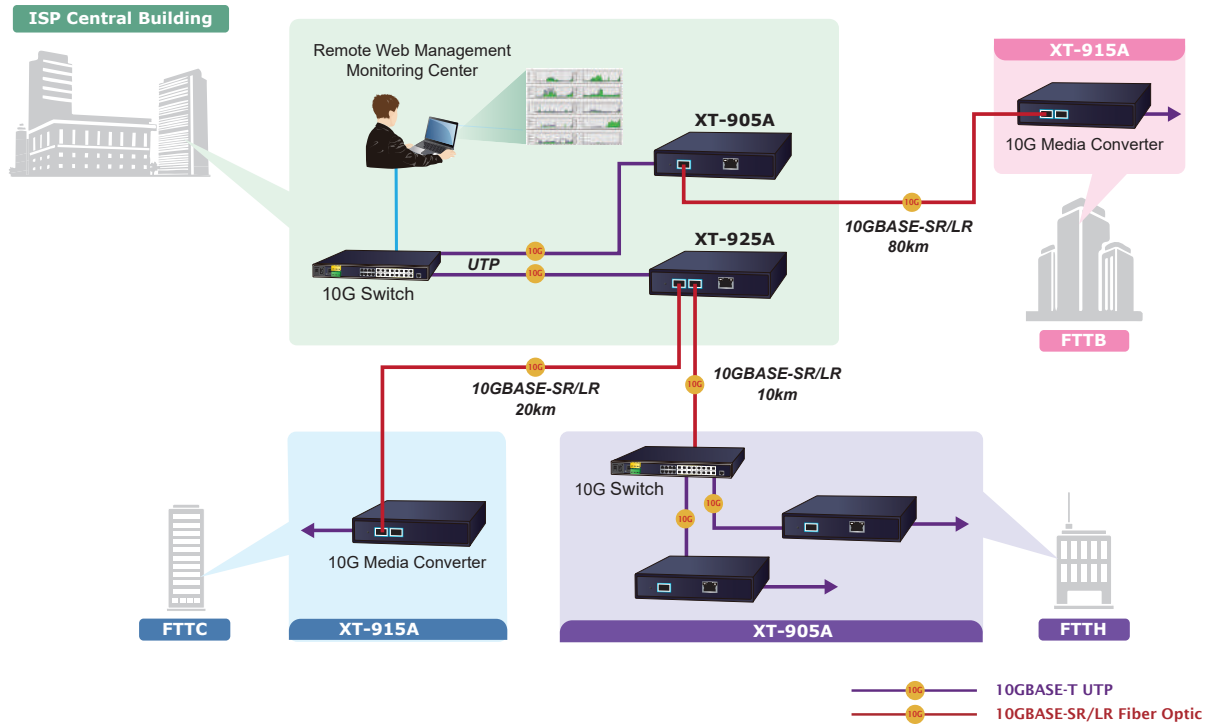
PLANET's Universal Network Management System (UNI-NMS) and CloudViewer app support IT staff in remotely managing all network devices and monitoring the operation statuses of XT-900 series. These systems are designed for both enterprises and industries where the deployments of the XT-900 series can be remote. This allows bugs or faulty conditions to be found without having to go to the actual location. With UNI-NMS or CloudViewer app, all kinds of businesses can now be speedily and efficiently managed from one platform.



## Applications

### Fiber-optic Networking for ISPs, Enterprises and Homes

With high-speed data transmission and easy installation, the XT-900 series can build FTTH (Fiber to the Home) and FTTC (Fiber to the Curb) for ISPs, and FTTB (Fiber to the Building) for enterprises. The XT-900 series enables network administrators to easily monitor operations via the Web management interface.



## Specifications

Model	XT-905A	XT-915A	XT-925A
<b>Hardware Specifications</b>			
Copper Interface	1x 10G/5G/2.5G/1G/100BASE-T RJ45 interface with auto MDI/MDI-X function	-	1x 10G/5G/2.5G/1G/100BASE-T RJ45 interface with auto MDI/MDI-X function
Fiber Interface	1x 10G/2.5G/1G/100BASE-X SFP+ interface	2x 10G/2.5G/1G/100BASE-X SFP+ interface	2x 10G/2.5G/1G/100BASE-X SFP+ interface
Reset Button	< 5 sec.: System reboot > 5 sec.: Factory default		
ESD Protection	4KVDC Contact / 8KVDC Air		
Enclosure	Compact-sized metal case		
Installation	Wall-mount kit and DIN-rail kit installation (optional)		
Dimensions (W x D x H)	135 x 87.8 x 20mm		
Weight	429g (device only)	407g (device only)	437g (device only)
Power Requirement	DC 12V, 1.5A, external power adapter		
Power Consumption (XT-925A)	3.24 watts/11.06 BTU/hr (No loading) / 12.5 watts/42.65 BTU/hr (Full loading)		
LED Indicator	<b>System:</b> PWR, (Green) <b>Per 10GBASE-T RJ45 Port:</b> 1G/100 LINK/ACT (Green) 2.5G/5G LINK/ACT (Green) 10G LINK/ACT (Amber) <b>Per 10GBASE-X SFP+ Port:</b> 1G LINK/ACT (Green) 2.5G LINK/ACT (Green) 10G LINK/ACT (Amber)		
<b>Transmission Specifications</b>			
Processing Scheme	Store and Forward		
Fabric	40Gbps	40Gbps	60Gbps
Throughput (packet per second)	29.76Mpps@64bytes		44.64Mpps@64bytes

Address Table	16K entries, automatic source address learning and aging
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Jumbo Frame	12Kbytes
Shared Buffer	12Mbits
<b>Layer 2 Function</b>	
Port Configuration	Port disable/enable Auto-negotiation 100Mbps, 1/2.5/5/10Gbps full and half duplex mode selection Flow control disable/enable
Port Status	Display each port's link status, speed, auto-negotiation status, duplex mode, flow control status
VLAN	IEEE 802.1Q tag-based VLAN IEEE 802.1ad Q-in-Q tunneling Up to 256 VLAN groups, out of 4096 VLAN IDs
Bandwidth Control	Per port bandwidth control Ingress: 16~10,000,000Kbps Egress: 16~10,000,000Kbps
QoS	Traffic classification based, strict priority and WRR 8-level priority for switching Traffic classification: - Cos/802.1p - DSCP - IP Precedence
Ring	Supports ERPS, and complies with ITU-T G.8032 Recovery time < 500ms
<b>Security Function</b>	
Access Security	Remote management protocols support: SSH, Telnet, HTTP and HTTPs Protected ports (XT-925A only)
<b>System Management</b>	
Basic Management Interfaces	Telnet, Web browser, SNMP v1, v2c
Secure Management Interfaces	SSHv2, TLS v1.2, SNMP v3
System Management	Firmware upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP LLDP protocol SNTP PLANET Smart Discovery Utility PLANET NMS Controller and PLANET CloudViewer mobile app
Event Management	Remote syslog Local system log SNMP trap
SNMP MIBs	RFC 1213 MIB-II RFC 2863 IF-MIB RFC 1493 Bridge MIB RFC 1643 Ethernet MIB RFC 2863 Interface MIB RFC 2665 Ether-Like MIB RFC 2737 Entity MIB RFC 2819 RMON MIB (Groups 1, 2, 3 and 9) RFC 3411 SNMP-Frameworks-MIB LLDP MAU-MIB
<b>Standards Conformance</b>	
Regulatory Compliance	FCC Part 15 Class A, CE Class A
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)

Standards Compliance	<p>IEEE 802.3u, 100BASE-TX/FX          IEEE 802.3ab, 1000BASE-T          IEEE 802.3bz, 2.5G/5GBASE-T          IEEE 802.3an, 10GBASE-T          IEEE 802.3z, 1000BASE-SX/LX          IEEE 802.3ae 10GBASE-SR/LR          IEEE 802.3x full-duplex flow control          IEEE 802.1p Class of Service          IEEE 802.1Q VLAN tagging          IEEE 802.1ad Q-in-Q VLAN stacking          IEEE 802.1ab LLDP          RFC 768 UDP          RFC 2474 DSCP          RFC 791 IP          RFC 792 ICMP          RFC 2068 HTTP          ITU-T G.8032 ERPS Ring</p>
<b>Environment</b>	
Operating	<p>Temperature: 0 ~ 50 degrees C          Relative Humidity: 5 ~ 95% (non-condensing)</p>
Storage	<p>Temperature: -10 ~ 70 degrees C          Relative Humidity: 5 ~ 95% (non-condensing)</p>

## Ordering Information

XT-905A	1-Port 10G/5G/2.5G/1G/100BASE-T + 1-Port 10G/1GBASE-X SFP+ Managed Media Converter
XT-915A	2-Port 10G/1GBASE-X SFP+ Managed Media Converter
XT-925A	1-Port 10G/5G/2.5G/1G/100BASE-T + 2-Port 10G/1GBASE-X SFP+ Managed Media Converter

## Related Products

XT-705A	10G/5G/2.5G/1G/100M Copper to 10GBASE-X SFP+ Media Converter
IXT-705A	Industrial 10G/5G/2.5G/1G/100M Copper to 10GBASE-X SFP+ Media Converter

## Available 10Gbps Modules for XT-925A Series

CB-DASFP-0.5/2M	10G SFP+ Directly-attached Copper Cable (0.5/2M in length)
MFB-Series Transceiver	100BASE-FX SFP Transceiver
MGB-Series Transceiver	1000BASE-SX/LX SFP Transceiver
MGB-2G Series Transceiver	2500BASE-X SFP Transceiver
MTB-Series Module	10GBASE-LR/SR/BX/T Modules