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

Environmentally-robust, ultra-fast Connections and Secure Management

PLANET's Industrial IXT-900 high-performance media converter series is environmentally-robust now that it comes with an extended operating temperature ranging from **-40 to 75 degrees Celsius** designed for challenging environments. This series features **standalone secure management**, setting a **new standard for enterprise and telecom remote management and monitoring**. The IXT-900 Industrial Series allows for seamless remote management through an intuitive web interface, command line interface (CLI), and SNMP protocol, facilitating effortless monitoring and configuration from any location.

Our cutting-edge industrial media converters retain the original's powerful features, boasting 10GBASE-T copper port and 10G SFP+ port. This industrial series comes with the 10G unparalleled transmission speed given its fiber and copper ports. Compact yet powerful, the IXT-900 Series stands as the optimal choice for businesses seeking to enhance network speed and functionality, now designed to thrive in a wide temperature range for increased adaptability.

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

The IXT-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)

Physical Port

- 10G/5G/2.5G/1G/100BASE-T RJ45 interface with auto MDI/MDI-X function
- 10G/2.5G/1G/100BASE-X SFP+ interface
- Note: Please refer to the specifications table to obtain information on the number of ports available on each model.

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 (software-based)
- Link Layer Discovery Protocol (LLDP)
- 16K MAC address table with auto-aging
- Jumbo Frame support up to 9K 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
- Supports 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

and can transmit data over the existing Cat6/Cat6A 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.

- 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 deployment management
- PLANET Remote Management
  - PLANET NMS Controller and CloudViewerPro app for deployment management

Security

- IP address access management to prevent unauthorized intruder
- Static MAC setting and MAC Filtering
- Protected ports (IXT-900-2X1T and IXT-900-2X1PD only)

Case and Installation

- Dual 9~48VDC external power supply, 24VAC or PoE input (only for IXT-900-2X1PD)
- -40 to 75 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

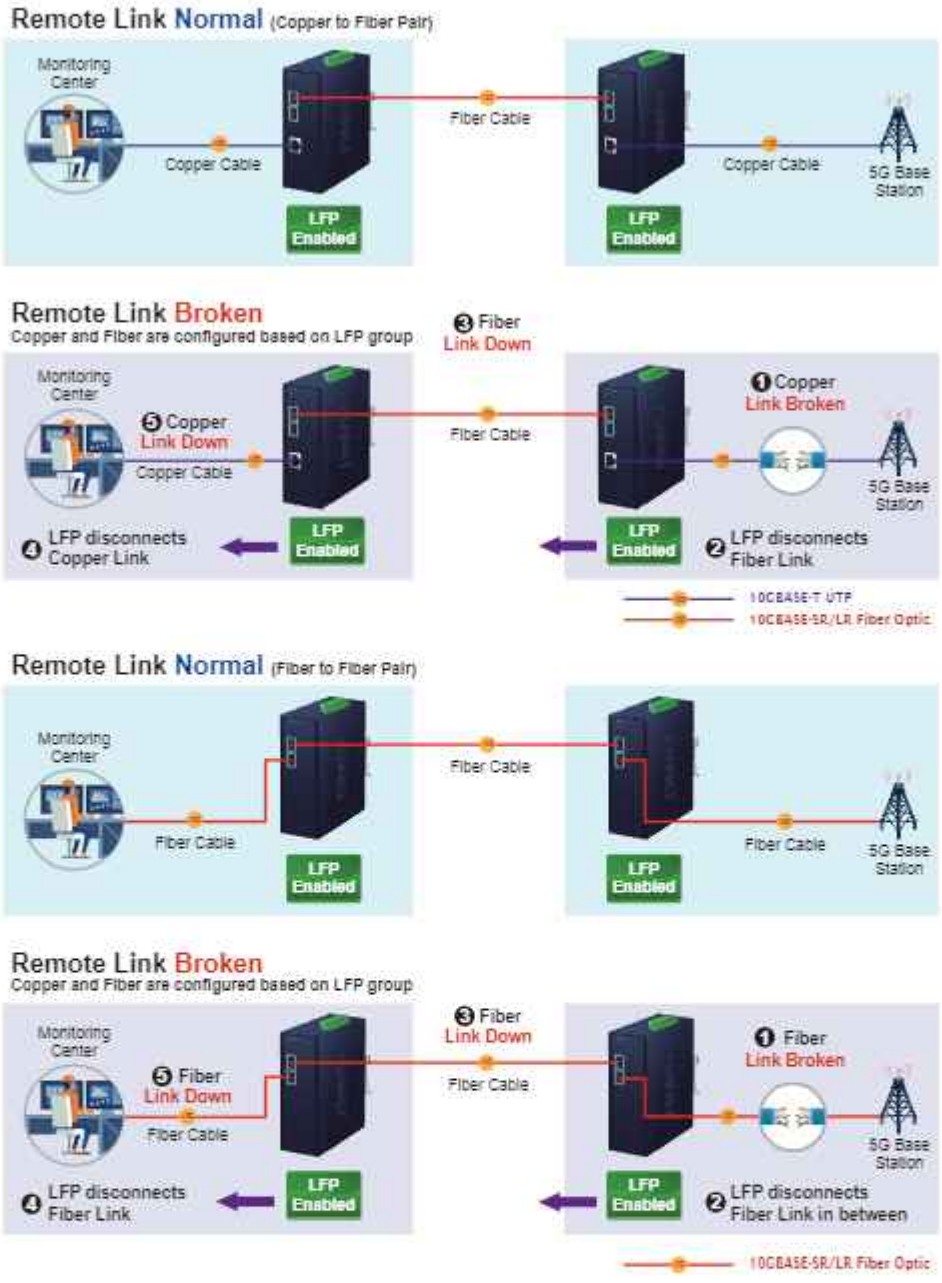
Conventional media converters typically support only a single pair of different media conversions, such as converting one fiber to one copper connection. They can extend a 100m copper connection to a maximum of 80km fiber optic connection. In contrast, the IXT-900-2X/IXT-900-2X1T/IXT-900-2X1PD has two 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.

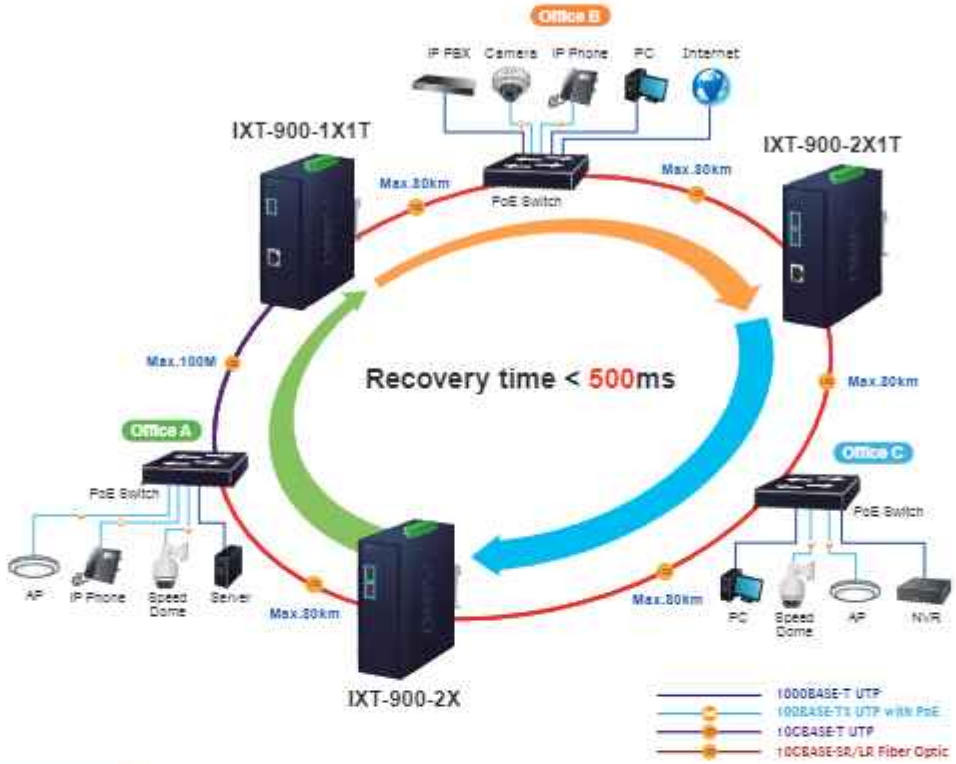


Network with Cybersecurity Helps Minimize Risks

The IXT-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. Thus, transmitting data to a customer's critical equipment in a business network is very secure. The IXT-900 series protects network management and enhances the security of mission-critical networks without incurring any additional deployment cost or effort.

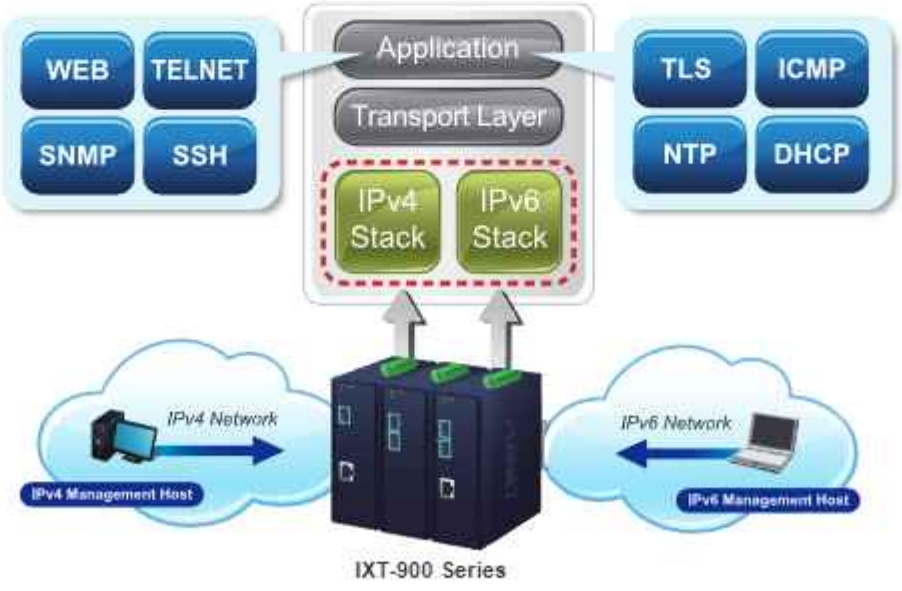
Redundant Ring, Fast Recovery for Critical Network Applications

The IXT-900 series supports software-based 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 IXT-900 series 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.



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

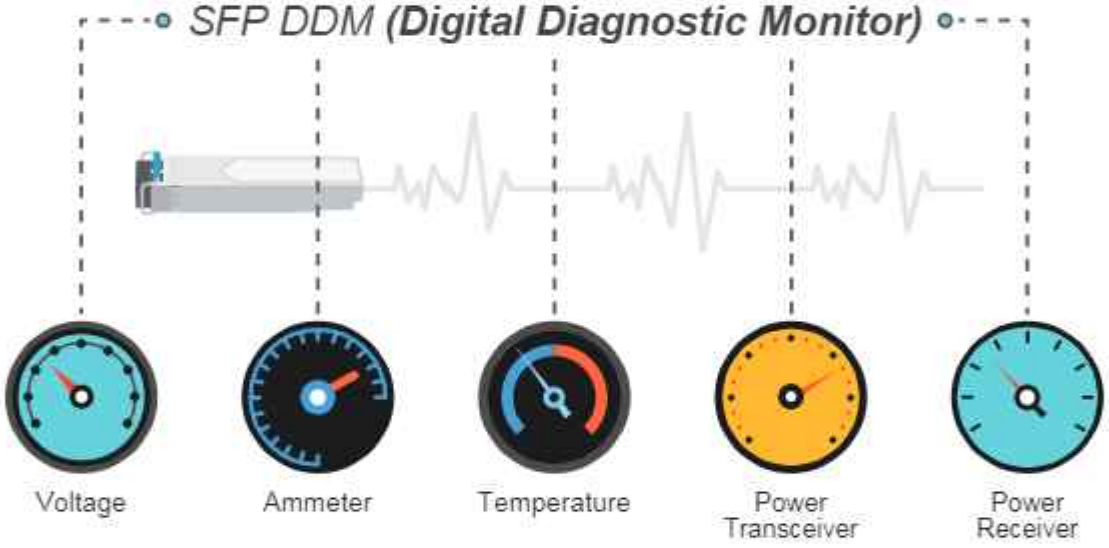
The device has a 16K-entry MAC address table that automatically removes inactive addresses. Its backbone supports speeds of up to 40Gbps, and it can handle Jumbo Frames up to 9K in size. The device is equipped with Storm Control to manage Broadcast/Multicast/Unknown-Unicast traffic, and features an IPv6 MAC/VLAN/Multicast Address Table and Loop Protection.

Efficient Traffic Control

The IXT-900 media converter series boasts advanced QoS features and robust traffic management capabilities, optimizing the delivery of business-class data, voice, and video solutions. Its features include 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 IXT-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.



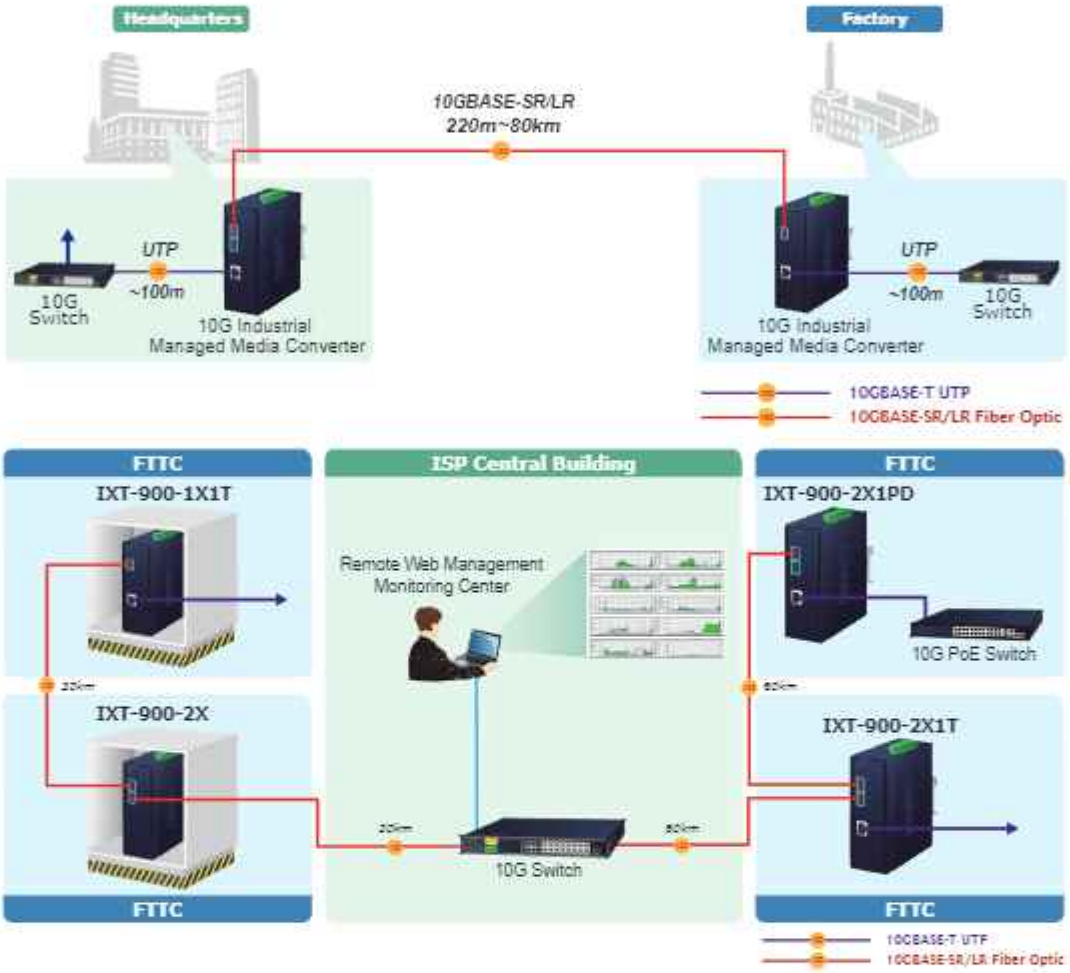
Remote Management Solution

PLANET's Universal Network Management System (UNI-NMS) and CloudViewer Pro app provide robust support for IT staff in effectively managing and monitoring all network devices, including the IXT-900 series, from remote locations. Tailored for deployment in both enterprises and industries where the IXT-900 series is utilized remotely, these systems enable the identification of bugs or faulty conditions without the need for on-site visits. Whether using UNI-NMS or the CloudViewerPro app, businesses of all types can now be swiftly and efficiently managed through a unified platform, streamlining operational oversight.

Applications

Fiber-optic Networking for ISPs, Enterprises and Homes

With high-speed data transmission and easy installation, the IXT-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 IXT-900 series enables network administrators to easily monitor operations via the Web management interface.



Specifications

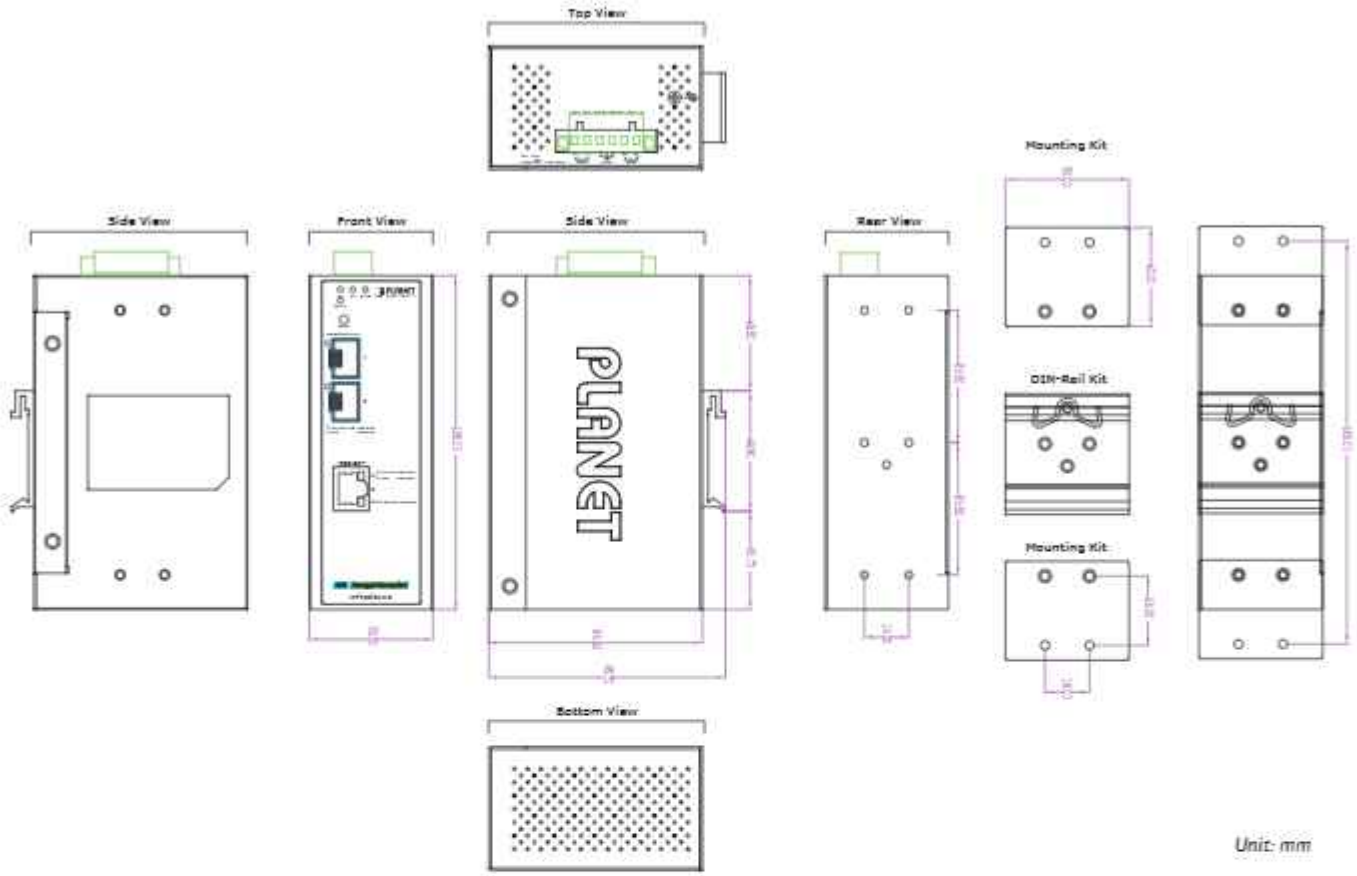
Model	IXT-900-1X1T	IXT-900-2X	IXT-900-2X1T	IXT-900-2X1PD
Hardware Specifications				
Copper Interface	1x 10G/5G/2.5G/1G/100BASE-T RJ45 interface with auto MDI/MDI-X function	-	1x 10G/5G/2.5G/1G/100BASE-T RJ45 interface with auto MDI/MDI-X function	
PoE PD	-	-	-	1
Fiber Interface	1x 10G/2.5G/1G/100BASE-X 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 88 x 49mm			
Weight	578g	576g	607g	604g
Power Requirement	Dual 9~48V DC, 24V AC or PoE input (Only for IXT-900-2X1PD)			

Power Consumption (No loading)	3.7W/12.6BTU	3.2W/10.9BTU	3.7W/12.6BTU	3.9W/13.3BTU
Power Consumption (Full loading)	10.7W/36.5BTU	5.6W/19.1BTU	10.3W/35.1BTU	9.5W/32.4BTU
LED Indicator	**System:**			
	PWR, (Green)			
	Per 10GBASE-T RJ45 Port:			
	100/1G LINK/ACT (Green)			
	2.5G/5G LINK/ACT (Green)			
	10G LINK/ACT (Amber)			
	Per 10GBASE-X SFP+ Port:			
	100/1G LINK/ACT (Green)			
	2.5G LINK/ACT (Green)			
	10G LINK/ACT (Amber)			
Transmission Specifications				
Processing Scheme	Store and Forward			
Switching Fabric	40Gbps	40Gbps	60Gbps	60Gbps
Throughput (packet per second)	29.76Mpps@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	9K			
Shared Buffer	12Mbits			
Layer 2 Function				
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 and 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			
Security Function				
Access Security	Remote management protocols support SSH, Telnet, HTTP and HTTPs			
	Protected ports (IXT-900-2X1T and IXT-900-2X1PD only)			
System Management				
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			
	PLANET CloudViewerPro 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
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (free fall)
	IEC60068-2-27 (shock)
	IEC60068-2-6 (vibration)
Standards Compliance	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
Environment	
Operating	Temperature: -40 ~ 75 degrees C
	Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C
	Relative Humidity: 5 ~ 95% (non-condensing)

Dimensions

■ IXT-900-2X1PD



Unit: mm

Ordering Information

IXT-900-1X1T	Industrial 1-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter
IXT-900-2X	Industrial 2-Port 10GBASE-X SFP+ Managed Media Converter
IXT-900-2X1T	Industrial 2-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter
IXT-900-2X1PD	Industrial 2-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T PoE PD Managed Media Converter

Related Products

IXT-705A	Industrial 10G/5G/2.5G/1G/100M Copper to 10GBASE-X SFP+ Media Converter
XT-905A	10G/5G/2.5G/1G/100M Copper to 10GBASE-X SFP+ Media Converter
XT-915A	2-Port 10GBASE-X SFP+ Managed Media Converter
XT-925A	2-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter

Available 10Gbps Modules for IXT-900 Series

MTB-TSR2	1-Port 10GBASE-LR SFP+ Fiber Optic Module – 2km (-40~85 degrees C)
MTB-TLR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km (-40~85 degrees C)
MTB-TLR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km (-40~85 degrees C)
MTB-TLA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm) (-40~85 degrees C)
MTB-TLB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm) (-40~85 degrees C)
MTB-TLA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm) (-40~85 degrees C)
MTB-TLB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm) (-40~85 degrees C)
MTB-TLA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm) (-40~85 degrees C)
MTB-TLB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm) (-40~85 degrees C)
MTB-LA10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1270nm RX:1330nm)
MTB-LB10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1330nm RX:1270nm)

Available 2.5Gbps Modules for IXT-900 Series

MGB-2GTSR	1-Port 2.5G SFP Transceiver (Multi-mode, 850nm, DDM, -40~85 degrees C)
MGB-2GTLA20	1-Port 2.5G SFP Transceiver (Single mode WDM, TX:1310nm RX:1550nm, DDM, -40~85 degrees C)
MGB-2GTLB20	1-Port 2.5G SFP Transceiver (Single mode WDM, TX:1550nm RX:1310nm, DDM, -40~85 degrees C)
MGB-2GTLR20	1-Port 2.5G SFP Transceiver (Single mode, 1310nm, DDM, -40~85 degrees C)
MGB-2GTLR2	1-Port 2.5G SFP Transceiver (Single mode, 1310nm, DDM, -40~85 degrees C)

Available 1Gbps Modules for IXT-900 Series

MGB-TSX	1-Port SFP-Port 1000BASE-SX mini-GBIC module - 550m (-40~85 degrees C)
MGB-TSX2	1-Port SFP-Port 1000BASE-SX mini-GBIC module – 2km (-40~85 degrees C)
MGB-TLX	1-Port SFP-Port 1000BASE-LX mini-GBIC module - 20km (-40~85 degrees C)
MGB-TL40	1-Port SFP-Port 1000BASE-LX mini-GBIC module - 40km (-40~85 degrees C)
MGB-TL80	1-Port SFP-Port 1000BASE-LX mini-GBIC module - 80km (-40~85 degrees C)
MGB-TLA10	1-Port SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40~85 degrees C)
MGB-TLB10	1-Port SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40~85 degrees C)
MGB-TLA20	1-Port SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40~85 degrees C)
MGB-TLB20	1-Port SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40~85 degrees C)
MGB-TLA40	1-Port SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40~85 degrees C)
MGB-TLB40	1-Port SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40~85 degrees C)
MGB-TLA80	1-Port SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40~85 degrees C)
MGB-TLB80	1-Port SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40~85 degrees C)
MGB-TSA	1-Port SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 2km (-40~85 degrees C)
MGB-TSB	1-Port SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 2km (-40~85 degrees C)
MGB-TGT	1-Port SFP-Port 1000BASE-T Module – 100m (-40~85 degrees C)
MGB-TLA120	1-Port SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 120km (-40~85 degrees C)
MGB-TLB120	1-Port SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 120km (-40~85 degrees C)

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