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

Flexible, Reliable and Industrial-grade Backbone Network Distance Extension Solution

PLANET IXT-705AT is the smallest, an Industrial Industrial-grade 10 GGigabit Ethernet Media Converter providing non-blocking wire-speed performance and great flexibility for 10 Gigabit Ethernet extension in harsh industrial environment. It is equipped with **one 100Mbps,1Gbps, 2.5Gbps, 5Gbps and 10GBASE-T** RJ45 copper interface and one 10GBASE-X SFP+ fiber optic interface delivered in an IP30 rugged but compact-sized strong case with redundant power system.

The IXT-705AT is ideal for wide applications forrom copper to fiber media conversion wherever 10 Gigabit bandwidth is required in climatically demanding environments with wide temperature rangeing from **-40 to 75 degrees C.**

High Performance 10Gbps Ethernet Capacity

The IXT-705AT offers the wire-speed transfer of packets transfer performance without the risk of packet loss. The high data throughput of 20Gbps internal fabric and the auto negotiation support in its 10 Gigabit ports The high data throughput of the device makes it ideal for most 10 Gigabit environments. With a 20Gbps internal fabric and featuring auto negotiation support in its 10 Gigabit ports. With 16K jumbo frame feature support, the IXT-705AT can handle extremely large amounts of data transmission in a secure topology linking to a backbone or high-power serversdata center cloud computing, enterprise backbones, campus networks, and carrier infrastructure.

Physical Port

- 1--port 10000/5000/2500/1000/100BASE-T RJ45 interface with auto MDI/MDI-X function
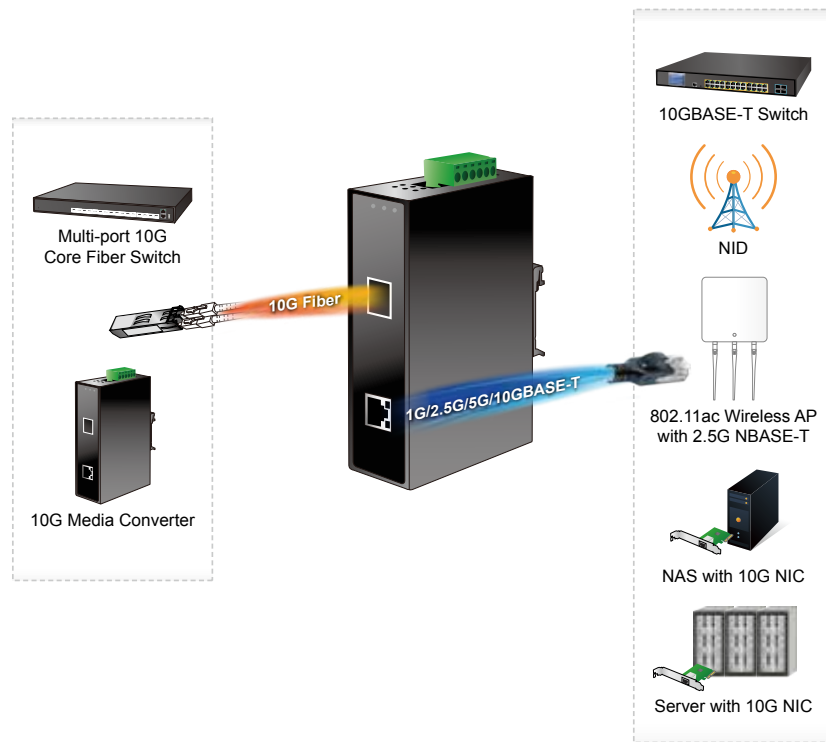- 1-port 10GBASE-X SFP+ slot interface

Layer 2 Features

- IEEE 802.3u/802.3ab/802.3bz/802.3ae Ethernet standard compliant
- Supports auto-negotiation and 100Mbps half/full duplex and 1/2.5/5/10Gbps full duplex mode
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- 16K jumbo frame size support
- Automatic address learning and address aging

Industrial Case and Installation

- Slim-type IP30 metal case
- DIN rail and wall-mount design
- Redundant power design
  - 12 to 48V DC, redundant power with polarity reverse protect function
  - AC 24V power adapter acceptable
- Supports 6000 VDC Ethernet ESD protection
- 100 meters over Cat 6A at 10Gbps
- -40 to 75 degrees C operating temperature
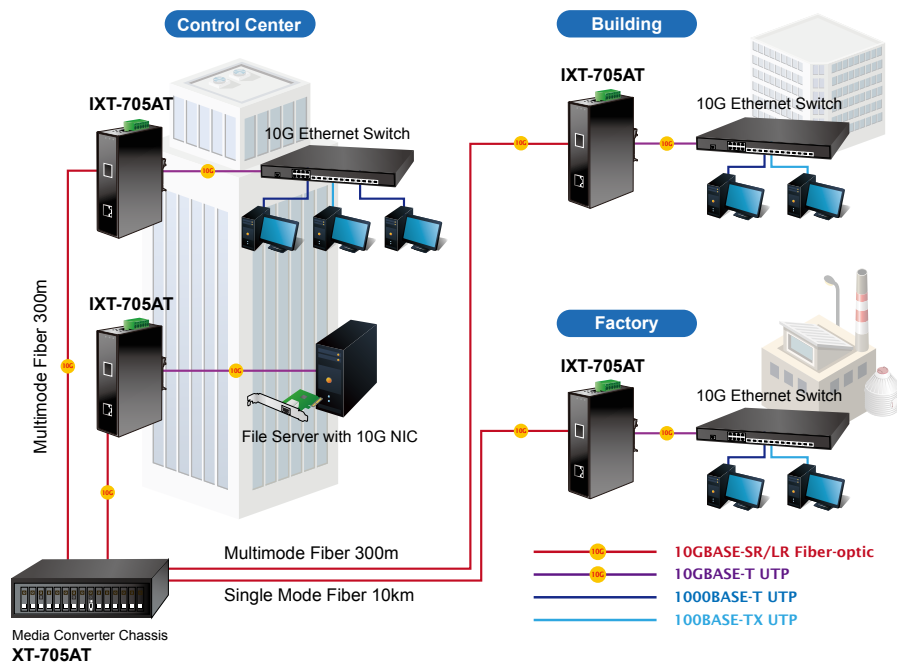- Plug and Play installation

10Gbps Fiber to Copper Media Converter Application

- 10GBASE-T Switch
- NID
- 802.11ac Wireless AP with 2.5G NBASE-T
- NAS with 10G NIC
- Server with 10G NIC
- Multi-port 10G Core Fiber Switch
- 10G Media Converter
- 10G Fiber
- 1G/2.5G/5G/10GBASE-T

Fiber-optic Linking Capability Enables Extension of Network Deployment

The SFP+ slot of the IXT-705AT is compatible with **10GBASE-SR** or **10GBASE-LR** (Small Form Factor Pluggable) fiber-optic transceivers. The fiber optic uplink capability guarantees the throughput to all nodes hooked into the network and the 10 Gigabit Ethernet distance can be extended from 300 meters (multi-mode fiber cable) to 10/40/60 kilometers (single-mode fiber cable). It is ideal for applications within the factory data centers and distributions.

Fiber to Ethernet Can Support Large-scale Retail Networks

- Control Center
- Building
- Factory
- IXT-705AT
- 10G Ethernet Switch
- File Server with 10G NIC
- Multimode Fiber 300m
- Single Mode Fiber 10km
- Media Converter Chassis **XT-705AT**
- **10GBASE-SR/LR Fiber-optic**
- **10GBASE-T UTP**
- **1000BASE-T UTP**
- **100BASE-TX UTP**

Environmentally Hardened Design

The IXT-705AT is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IXT-705AT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curbside traffic control cabinets. Being able to operate under the temperature range from **-40 to 75 degrees C**, the IXT-705AT can be placed in almost any difficult environment. The IXT-705AT also allows either DIN rail or wall mounting for efficient use of cabinet space.

Convenient and Reliable Power System

To enhance the reliability and flexibility of the operation, the IXT-705AT is equipped with two DC power input connectors for redundant power supply installation. It also possesses an integrated power supply source with wide-ranging voltages (**12** to **48V DC** or **24V AC**) for worldwide high availability applications requiring dual or backup power inputs, incorporated into customer's automation network to enhance system reliability and uptime.
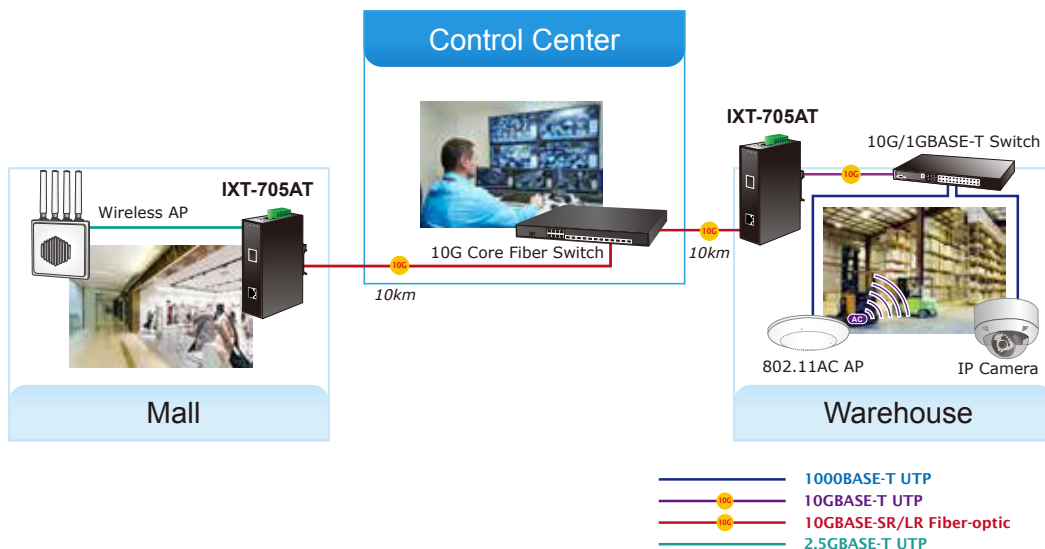
Robust Protection

The IXT-705AT provides contact discharge of ±6KV DC and air discharge of ±8KV DC for Ethernet ESD protection. It also supports ±4KV surge immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

Applications

Hardened Environment Application

PLANET IXT-705AT Industrial Gigabit Media Converter offers full port 10 Gigabit speed, and has a strong, stable and long-distance connection and flexible industrial networking deployment. It provides very high reliability and security features to make sure the continuous operation in harsh environments such as transportations, factories, outdoors and places where extremely low or high temperatures can be experienced.

Specifications

Product	IXT-705AT
Hardware Specifications	
Copper Interface	1 x 10000/5000/2500/1000/100 BASE-T RJ45 Auto-MDI/MDI-X, auto-negotiation
Fiber Optic Interface	1 10GBASE-SR/LR SFP+ interface
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V
LED	System: Fault Alert (Red), PWR (Green) 10000/5000/2500/1000/100 BASE-T RJ45 Interfaces 1/10G LNK(Orange) 5000/2500/100M LNK (Green)
ESD Protection	6KV DC
Enclosure	IP30 type metal case
Installation	DIN-rail kit and wall-mount ear
Dimensions (W x D x H)	32 x 87 x 135mm
Weight	458g
Power Requirements	DC 12~48V or 24V AC
Converter Specifications	
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Fabric	20Gbps
Address Table	9K entries, automatic source address learning and aging
Jumbo Frame	16K
Network Cables	**10G/5G/2.5G/1G/100M BASE-T:** 10G – Cat 6A/7 5G – Cat 6/6A/7 1G/2.5G – Cat 5e/6/6A/7 100M – Cat 5/5e/6/6A/7 Cat 5/5e/6/6A/7 UTP cable (100 meters, max.) EIA/TIA-568 100-ohm STP (100 meters, max.) **10GBASE-LR/SR/BX :** 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 300m 9/125µm single-mode fiber optic cable, up to 60km
Standards Conformance	
System Configuration	IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3bz 2.5G/5GBASE-T IEEE 802.3an 10GBASE-T IEEE 802.3ae 10Gbps Ethernet IEEE 802.3x full-duplex flow control
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)

Ordering Information

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

Related Products

SGS-6340-16XR	Layer 3 16-Port 10GBASE-SR/LR SFP+ Stackable Managed Switch (100~240V AC, -48~-60V DC)
XGS-6350-12X8TR	Layer 3 12-Port 10G SFP+ + 8-Port 10/100/1000T Managed Switch with Dual 100~240V AC Redundant Power
XT-705A	10G/5G/2.5G/1G/100M Copper to 10GBASE-X SFP+ Media Converter
ENW-9801	10Gbps SFP+ PCI Express Server Adapter
ENW-9803	10GBASE-T PCI Express Server Adapter
MTB-Series Transceiver	10GBASE-LR/SR SFP+ Transceiver

Available 10Gbps Modules

MTB-RJ	10GBASE-T Copper Fiber optic module – 30m
MTB-SR	10GBASE-SR mini-GBIC module – 300m
MTB-LR	10GBASE-LR mini-GBIC module – 10km
MTB-TSR	10GBASE-SR mini-GBIC module –¬ 300m (-40~75 degrees C)
MTB-TLR	10GBASE-LR mini-GBIC module – 10km (-40~75 degrees C)
MTB-LA20	10GBASE-LX (WDM,TX:1270nm) mini-GBIC module – 20km
MTB-LB20	10GBASE-LX (WDM,TX:1330nm) mini-GBIC module – 20km
MTB-LA40	10GBASE-LX (WDM,TX:1270nm) mini-GBIC module – 40km
MTB-LB40	10GBASE-LX (WDM,TX:1330nm) mini-GBIC module – 40km
MTB-LA60	10GBASE-LX (WDM,TX:1270nm) mini-GBIC module – 60km
MTB-LB60	10GBASE-LX (WDM,TX:1330nm) mini-GBIC module – 60km

IXT-705AT