

# Compact Industrial 2-Port 10G/2.5G/1G/100BASE-X SFP+ Media Converter



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

The PLANET IXT-815AT is the smallest **compact industrial-grade 10G** Ethernet media converter, delivering non-blocking wire-speed performance and exceptional flexibility for 10 Gigabit Ethernet extension in harsh industrial environments. It features **dual 10G/2.5G/1G/100BASE-X and 100BASE-FX SFP+** fiber interfaces, housed in a rugged yet compact IP30-rated enclosure with a redundant power system and a wide operating temperature range from **-40 to 75 degrees C**.

The IXT-815AT supports single-mode to multi-mode conversion and can cascade fiber optic cables to extend transmission distances. It also functions as a **10GPON to 10G Ethernet bridge** and supports both XGS-PON and GPON ONT SFP modules. With its **plug-and-play** design, no software installation is required, enabling quick and easy deployment.



## Versatile Features to Meet Diverse Networking Needs

The IXT-815AT delivers broad bandwidth and powerful processing capabilities. Its dual 10GBASE-X SFP+ fiber-optic interfaces support multiple speeds—10GBASE-SR/LR, 2500BASE-X, 1000BASE-SX/LX, and 100BASE-FX—allowing administrators to select the appropriate SFP/SFP+ transceiver based on distance and speed requirements. The device also supports flexible conversion between multi-mode and single-mode fiber, extending transmission distances from 300 meters to 80 kilometers using 10GBASE-SR or 10GBASE-LR modules.

## Physical Port

- Media conversion between 10GBASE-X SFP+, 2.5GBASE-X, 1000BASE-X, and 100BASE-FX fiber optic interfaces.
- Dual 10GBASE-X SFP+ fiber optic ports supporting:
  - Multi-mode fiber with LC connector
  - Single-mode fiber with LC connector
- SFP transceivers support auto-detection for 10G/2.5G/1G/100Mbps

## Layer 2 Features

- Fully compliant with IEEE 802.3ae/bz/an Ethernet standards
- Non-blocking full wire-speed forwarding performance
- Supports 12K jumbo frames for handling large data transmissions
- Transparent IEEE 802.1Q VLAN tagging and multicast pass-through
- IEEE 802.3x full-duplex flow control and back-pressure to prevent packet loss

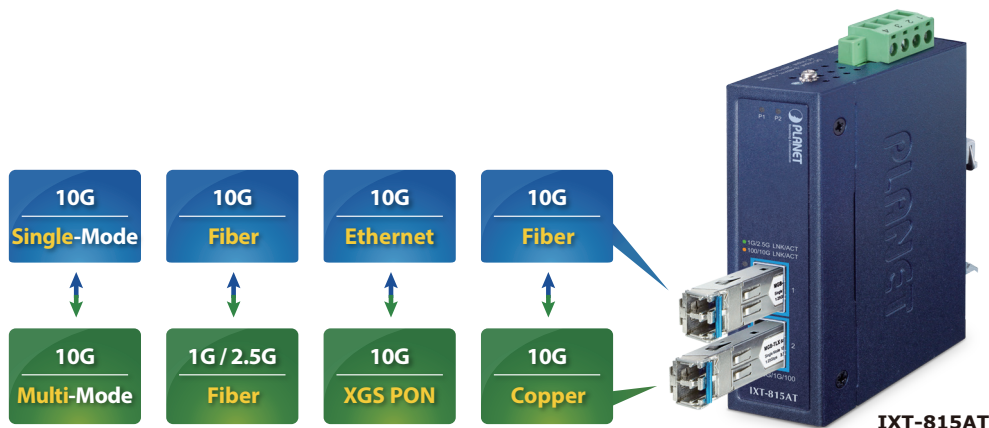
## Industrial Case and Installation

- Slim-type IP30 durable metal casing for enhanced reliability
- DIN rail and wall-mount design
- Redundant power design
  - 9 to 48V DC redundant power with polarity reverse protection
  - AC 24V power adapter supported
- Supports 6000 VDC Ethernet ESD protection
- LED indicators to facilitate network diagnostics
- -40 to 75 degrees C operating temperature
- Operating temperature range: -40 to 75 degrees Celsius
- Compact size and plug-and-play installation

Supported conversion scenarios include:

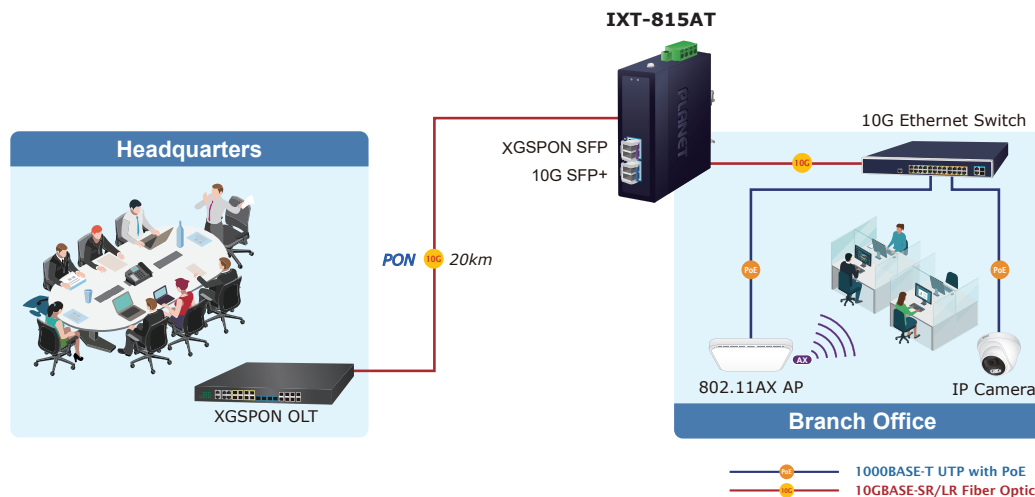
- **10GBASE-X fiber to 2.5G/1G/100BASE-X fiber**
- **Multi-mode fiber to single-mode fiber**
- **Duplex fiber to simplex fiber**
- **10Gbps XGSPON / 2.5Gbps GPON fiber to 10Gbps Ethernet fiber**

With dual high-speed ports, the IXT-815AT can connect to servers, switches, storage systems, and wireless access points. It also supports bridging between 10GPON and 10Gbps Ethernet, making it ideal for data center cloud computing, enterprise backbone networks, and inter-building deployments.



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

The IXT-815AT provides two 10G fiber ports that support both single-mode and multi-mode fiber, enabling conversion between PON and Ethernet. With fiber optic connectivity on both ends, the transmission distance can reach up to 120 km, significantly extending service coverage and deployment flexibility.



#### Stable and Efficient Chipset with High Network Performance

The IXT-815AT features two built-in 10GBASE-X SFP+ ports to ensure stable and high-speed data transmission. With a **40Gbps** switching fabric and support for **12K jumbo frames**, it efficiently handles large volumes of data traffic. In addition, its **4K MAC address table** and VLAN pass-through functionality enhance overall network management and performance.

#### Environmentally Hardened Design

The IXT-815AT features a slim-type IP30-rated metal case, allowing easy deployment in demanding industrial environments. With IP30 protection, it offers a high level of immunity against electromagnetic interference and heavy electrical surges, which are commonly encountered on plant floors or in curbside traffic control cabinets. Designed to operate in extreme temperatures ranging from **-40 to 75 degrees C**, the IXT-815AT can be installed in nearly any harsh environment. It also supports both DIN rail and wall mounting for efficient use of cabinet space.

### Convenient and Reliable Power System

To enhance operational reliability and flexibility, the IXT-815AT is equipped with two DC power input connectors for redundant power supply installation. It also features an integrated power source that supports a wide voltage range (**9 to 48V DC or 24V AC**), making it suitable for global applications requiring dual or backup power inputs. This design allows seamless integration into the customer's automation network, improving overall system reliability and uptime.

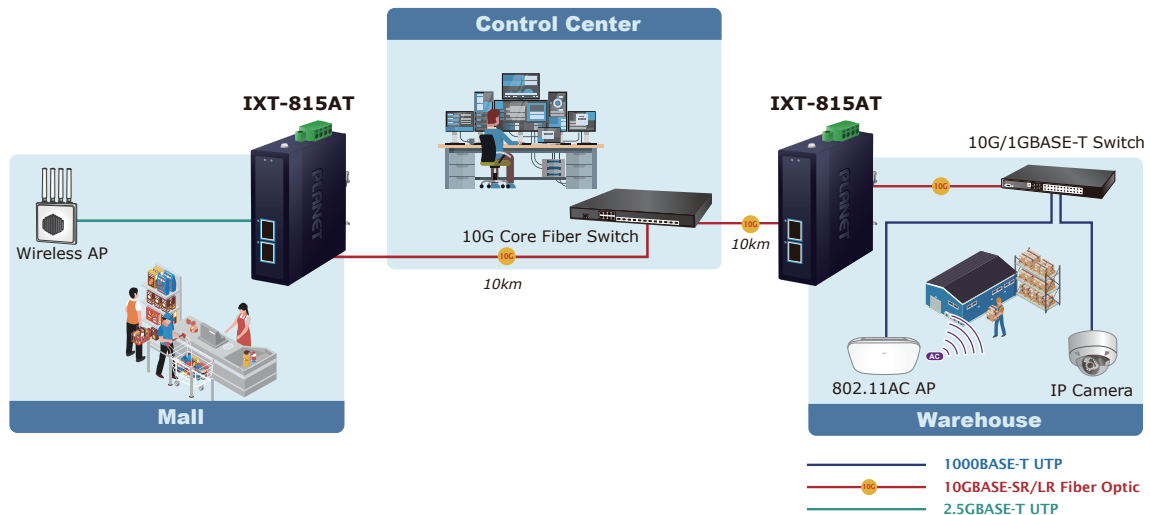
### Robust Protection

The IXT-815AT provides Ethernet ESD protection with  $\pm 6\text{kV}$  DC contact discharge and  $\pm 8\text{kV}$  DC air discharge, enhancing product stability and protecting users' networks from damaging ESD attacks. This ensures stable and uninterrupted operation.

## Applications

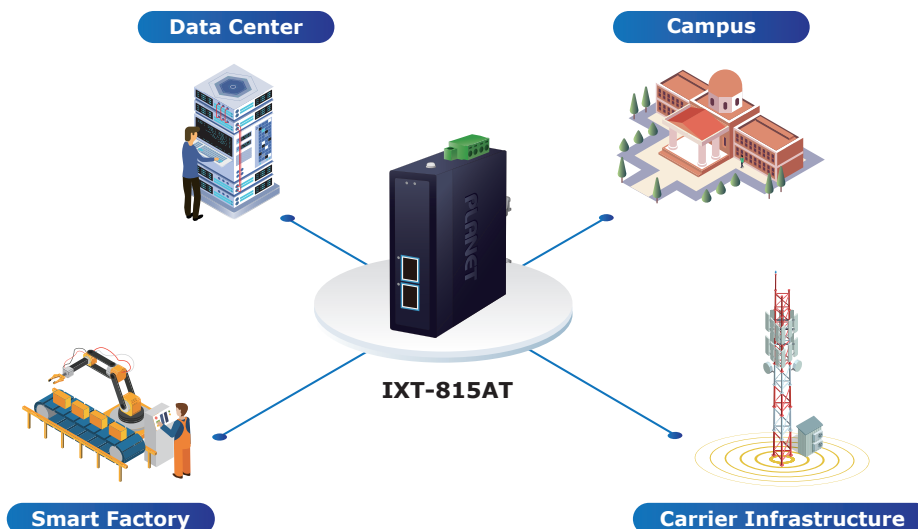
### Hardened Environment Application

PLANET IXT-815AT 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.



### Perfect Applications for Advanced Networks

The IXT-815AT is ideal for reliable, high-performance, and long-distance networking. With 10G data transmission and easy installation, it is well-suited for FTTH, FTTC, and FTTB deployments by ISPs and small to medium-sized businesses. Designed for industrial control applications, it supports a wide operating temperature range of  $-40$  to  $75^{\circ}\text{C}$ , ensuring stable operation in harsh environments such as transportation systems, factory floors, and outdoor installations where extreme high or low temperatures are common. This rugged and versatile design makes the IXT-815AT an excellent choice for both mission-critical industrial deployments and large-scale fiber networks.



## Product Specifications

Model	IXT-815AT
<b>Hardware Specifications</b>	
SFP+ Port	Dual 10GBASE-X SFP+ interfaces Backward compatible with 100BASE-FX, 1000BASE-X and 2500BASE-X SFP transceivers
Fiber Mode	May vary on SFP+/SFP module
Fiber Port Type (connector)	SFP, LC type
Fiber Maximum Distance	May vary on SFP module
Network Cables	May vary on SFP+ and SFP modules
Connector	Removable 4-pin terminal block Pin 1/2 for Power 1, Pin 3/4 for Power 2
Enclosure	Metal case
LED	System: PWR1, PWR2 (Green) SFP+ Interfaces 2.5Gbps/1Gbps LNK/ACT(Green) 10Gbps /100Mbps LNK/ACT(Amber)
ESD Protection	Contact ±6KV DC
Enclosure	IP30 type metal case
Installation	DIN-rail kit and wall-mount ear
Dimensions (WxDxH)	30 x 70 x 104mm
Weight	254g
Power Requirements	DC 9~48V or 24V AC
Power Consumption	Max. 1.17 watts / 3.99 BTU/h @9V DC input (Power on without any connection) Max. 8.46 watts / 8.46 BTU/h @9V DC input (Full loading)
<b>Layer 2 Features</b>	
Switch Architecture	Store-and-Forward
Flow Control	Half duplex: Back pressure eliminates packet loss Full duplex: IEEE 802.3x pause frame support for efficient flow control
Fabric	40Gbps backbone to ensure high-speed data transmission
Forwarding Rate	Non-blocking, full wire-speed forwarding rate
MAC Address Table	4K MAC address table, auto-aging
Jumbo Frame	12K
VLAN Support	Transparent 802.1Q VLAN pass-through for seamless integration in tagged network environments
Priority Switching	8-level QoS priority switching for traffic optimization Supports 802.1p priority for efficient traffic management
<b>Standards Conformance</b>	
Regulatory Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3z Gigabit SX/LX IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3x Flow Control IEEE 802.3az Energy Efficient Ethernet IEEE 802.1p Class of Service IEEE 802.1Q VLAN pass-through
<b>Environment</b>	
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)

## Ordering Information

IXT-815AT	Compact Industrial 2-Port 10G/2.5G/1G/100BASE-X SFP+ Media Converter
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## Related Products

XT-705A	10G/5G/2.5G/1G/100M Copper to 10GBASE-X SFP+ Media Converter
XT-715A	10GBASE-T to 10GBASE-X SFP+ Media Converter
XT-815A	2-Port 10G/2.5G/1G/100BASE-X SFP+ Media Converter
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
IXT-900-2X1T	Industrial 2-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter
IXT-900-2X	Industrial 2-Port 10GBASE-X SFP+ Managed Media Converter
IXT-900-2X1PD	Industrial 2-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T PoE PD Managed Media Converter
IXT-900-1X1T	Industrial 1-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter
IXT-900-1X1UP	Industrial 1-Port 10G SFP+ + 1-Port 10GBASE-T 802.3bt PoE++ Managed Media Converter
IXT-900-2X1UP	Industrial 2-Port 10G SFP+ + 1-Port 10GBASE-T 802.3bt PoE++ Managed Media Converter

## Available 10Gbps Modules

MTB-TSR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m (-40~85 degrees C)
MTB-TLR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km (-40~85 degrees C)
MTB-TLR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km (-40~85 degrees C)
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)

## Available 2.5Gbps SFP Modules

MGB-2GTSR	2.5G SFP Transceiver (Multi-mode, 850nm, DDM, -40~85 degrees C) - 300m
MGB-2GTLA20	2.5G SFP Transceiver (Single mode WDM, TX:1310nm RX:1550nm, DDM, -40~85 degrees C) - 20km
MGB-2GTLB20	2.5G SFP Transceiver (Single mode WDM, TX:1550nm RX:1310nm, DDM, -40~85 degrees C) - 20km
MGB-2GTLR20	2.5G SFP Transceiver (Single mode, 1310nm, DDM, -40~85 degrees C) - 20km
MGB-2GTLR2	2.5G SFP Transceiver (Single mode, 1310nm, DDM, -40~85 degrees C) - 2km

## Available 1Gbps SFP Modules

MGB-TSX	SFP-Port 1000BASE-SX mini-GBIC module - 550m (-40~85 degrees C)
MGB-TSX2	SFP-Port 1000BASE-SX mini-GBIC module - 2km (-40~85 degrees C)
MGB-TLX	SFP-Port 1000BASE-LX mini-GBIC module - 20km (-40~85 degrees C)
MGB-TL40	SFP-Port 1000BASE-LX mini-GBIC module - 40km (-40~85 degrees C)
MGB-TL80	SFP-Port 1000BASE-LX mini-GBIC module - 80km (-40~85 degrees C)
MGB-TGT	SFP-Port 1000BASE-T Module - 100m (-40~85 degrees C)

MGB-TSA	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 2km (-40~85 degrees C)
MGB-TSB	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 2km (-40~85 degrees C)
MGB-TLA10	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40~85 degrees C)
MGB-TLB10	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40~85 degrees C)
MGB-TLA20	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40~85 degrees C)
MGB-TLB20	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40~85 degrees C)
MGB-TLA40	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40~85 degrees C)
MGB-TLB40	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40~85 degrees C)
MGB-TLA80	SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40~85 degrees C)
MGB-TLB80	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40~85 degrees C)
MGB-TLA120	SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 120km (-40~85 degrees C)
MGB-TLB120	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 120km (-40~85 degrees C)

## Available 100Mbps SFP Modules

MFB-TFX	SFP-Port 100BASE-FX Transceiver (1310nm) -2km (-40~85 degrees C)
MFB-TF20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km (-40~85 degrees C)
MFB-TF120	SFP-Port 100BASE -FX Transceiver (1550nm) - 120km (-40~85 degrees C)
MFB-TSA	SFP-Port 100BASE-BX (Multi-mode/WDM,TX:1310nm) mini-GBIC module-2km (-40~85 degrees C)
MFB-TSB	SFP-Port 100BASE-BX Transceiver (Multi-mode/WDM,TX:1550nm RX:1310nm / DDM) - 2km (-40~85 degrees C)
MFB-TFA20	SFP-Port 100BASE-BX (WDM, TX:1310nm) mini-GBIC module-20km (-40~85 degrees C)
MFB-TFB20	SFP-Port 100BASE-BX (WDM, TX:1550nm) mini-GBIC module-20km (-40~85 degrees C)
MFB-TFA40	SFP-Port 100BASE-BX (WDM, TX:1310nm) mini-GBIC module-40km (-40~85 degrees C)
MFB-TFB40	SFP-Port 100BASE-BX (WDM, TX:1550nm) mini-GBIC module-40km (-40~85 degrees C)
MFB-TFA60	SFP-Port 100BASE-BX (WDM, TX:1310nm) mini-GBIC module-60km (-40~85 degrees C)
MFB-TFB60	MFB-TFB60 SFP-Port 100BASE-BX (WDM, TX:1550nm) mini-GBIC module-60km (-40~85 degrees C)