MTB-Series 10G Module



Product Features

- Complies with the IEEE 802.3ae 10 Gigabit Ethernet Standard
- Compact RJ45 connector assembly
- SFP+ multi-source agreement compliant
- SFF-8472 diagnostic monitoring interface for optical transceivers
- For established fiber link distance up to 300m over 50/125μm multi-mode fiber cable
- For established fiber link distance up to 60km over 9/125μm single-mode fiber cable
- Cost-effective at up to 30m distance on UTP cables
- 10 Gigabit Ethernet over Cat6a/Cat7 cable
- Plug and Play Installation

The PLANET MTB family of 10G SFP+ fiber optic module that is designed to work with PLANET products with 10G SFP+ interface provides a high-performance 10G Ethernet network for enterprises, telecoms and ISPs. The MTB family is also well applicable for data center cloud computing. The deployment distance can be extended from 300 meters (multi-mode, LC) to up to 60 kilometers (single-mode, LC).

To meet the increasing demand of the Industrial Ethernet fiber solution, PLANET has released the MTB-T series 10GBASE-SR/LR/BX transceivers that can operate reliably in an electrically harsh, climatically demanding, and -40 to 85 degrees C operating temperature environment. The MTB-T series is definitely easier and faster to connect than the 1000BASE-SX/LX/BX counterpart.

The 10GBASE-T SFP+ Copper Transceiver is specifically designed for high-speed communication links that require 10 gigabit Ethernet over Cat 6a/7 cable. It is the first SFP+ transceiver that offers 10Gb/s communication over fiber optic media.

Interoperability with legacy Ethernet equipment via auto-negotiation is of particular significance as it enables data center to expand without added expenses. The added benefit is that it provides backward compatibility with legacy networks by adopting standard-based technology of the familiar RJ45 connector.

Applications

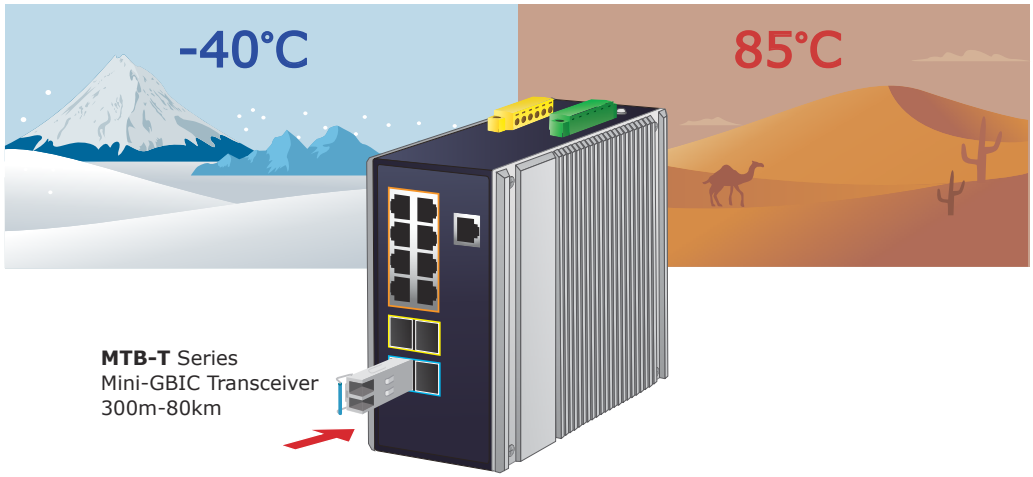
Applying 10Gbps SFP+ with 10G PCI Express Server Adapter

The 10GBASE-LR/SR/BX/T mini-GBIC module can be installed into PLANET products with 10G SFP+ interface like PLANT ENW-9801 PCI-e NIC card. The 10G SFP+ slots of the ENW-9801 are hot-pluggable and hot-swappable. With the ENW-9801 installed in the PC, you can plug and pull out the 10GBASE-LR/SR/BX/T mini-GBIC module in and from the 10G SFP+ slot of the ENW-9801, respectively, without having to power off the PC.





The MTB-T series 10GBASE-SR/LR/BX transceiver is an ideal solution for -40 to 85 degrees C wide temperature industrial equipment with 10GBASE-SR/LR/BX SFP interfaces. The deployment distance can be extended from 300m (multi-mode, LC) to 10/20/40/60 kilometers (single-mode, LC).



Specifications

MTB-RJ	
Package	SFP+
PHY Type	IEEE 802.3an 10 Gigabit Ethernet Standard
Fiber Type	--
Connector	RJ45 Copper
Wavelength	--
Maximum Distance	30m
Operating Temperature	0~70 degrees C
MTB-SR	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Multi-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	850nm
Maximum Distance	300m
Operating Temperature	0~60 degrees C
MTB-SR2	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	2km
Operating Temperature	0~60 degrees C

MTB-LR	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	10km
Operating Temperature	0~60 degrees C
MTB-LR20	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	20km
Operating Temperature	0~60 degrees C
MTB-LR40	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	40km
Operating Temperature	0~60 degrees C
MTB-LR60	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1550nm
Maximum Distance	60km
Operating Temperature	0~60 degrees C
MTB-LR80	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1550nm
Maximum Distance	80km
Operating Temperature	0~60 degrees C
MTB-LA10	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	10km
Operating Temperature	0~60 degrees C
MTB-LB10	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	10km
Operating Temperature	0~60 degrees C
MTB-LA20	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes

Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	20km
Operating Temperature	0~60 degrees C
MTB-LB20	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	20km
Operating Temperature	0~60 degrees C
MTB-LA40	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	40km
Operating Temperature	0~60 degrees C
MTB-LB40	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	40km
Operating Temperature	0~60 degrees C
MTB-LA60	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	60km
Operating Temperature	0~60 degrees C
MTB-LB60	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	60km
Operating Temperature	0~60 degrees C
MTB-LA70	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	70km
Operating Temperature	0~60 degrees C
MTB-LB70	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes

Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	70km
Operating Temperature	0~60 degrees C
MTB-TRJ	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	--
Connector	RJ45 Copper
Wavelength	--
Maximum Distance	30m
Operating Temperature	-40~85 degrees C
MTB-TSR	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Multi-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	850nm
Maximum Distance	300m
Operating Temperature	-40~85 degrees C
MTB-TSR2	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	2km
Operating Temperature	-40~85 degrees C
MTB-TLR	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	10km
Operating Temperature	-40~85 degrees C
MTB-TLR20	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	20km
Operating Temperature	-40~85 degrees C
MTB-TLR40	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1310nm
Maximum Distance	40km
Operating Temperature	-40~85 degrees C
MTB-TLR60	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes
Wavelength	1550nm
Maximum Distance	60km
Operating Temperature	-40~85 degrees C
MTB-TLR80	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Dual LC/UPC
DDM	Yes

Wavelength	1550nm
Maximum Distance	80km
Operating Temperature	-40~85 degrees C
MTB-TLA20	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	20km
Operating Temperature	-40~85 degrees C
MTB-TLB20	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	20km
Operating Temperature	-40~85 degrees C
MTB-TLA40	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1270nm RX: 1330nm
Maximum Distance	40km
Operating Temperature	-40~85 degrees C
MTB-TLB40	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	40km
Operating Temperature	-40~85 degrees C
MTB-TLA60	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	60km
Operating Temperature	-40~85 degrees C
MTB-TLB60	
Package	SFP+
PHY Type	IEEE 802.3ae 10 Gigabit Ethernet Standard
Fiber Type	Single-mode
Connector	Simplex LC/UPC
DDM	Yes
Wavelength	TX: 1330nm RX: 1270nm
Maximum Distance	60km
Operating Temperature	-40~85 degrees C

Ordering Information

MTB-RJ	1-Port 10GBASE-T SFP+ Copper Fiber Optic Module - 30m
MTB-SR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m
MTB-SR2	1-Port 10GBASE-SR SFP+ Fiber Optic Module – 2km
MTB-LR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km
MTB-LR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km
MTB-LR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km
MTB-LR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km
MTB-LR80	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 80km
MTB-TRJ	1-Port 10GBASE-T SFP+ Copper Fiber Optic Module - 30m (-40~85 degrees C)
MTB-TSR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m (-40~85 degrees C)
MTB-TSR2	1-Port 10GBASE-SR SFP+ Fiber Optic Module – 2km (-40~85 degrees C)
MTB-TLR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km (-40~85 degrees C)
MTB-TLR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km (-40~85 degrees C)
MTB-TLR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km (-40~85 degrees C)
MTB-TLR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km (-40~85 degrees C)
MTB-TLR80	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 80km (-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)
MTB-LA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm)
MTB-LB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm)
MTB-LA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm)
MTB-LB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm)
MTB-LA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm)
MTB-LB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm)
MTB-LA70	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 70km (TX:1270nm RX:1330nm)
MTB-LB70	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 70km (TX:1330nm RX:1270nm)

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