TN-X2-10GB-xR Series Cisco Compatible X2 Transceiver Modules Guide

Transition Networks TN-X2-10GB-xR series X2 transceiver modules are designed to install in any X2 type transceiver port. The TN-X2-10GB-xR modules allow a 10Gbase-SR, -LR or -ER interface connection to the network via its X2 connector. TN-X2-10GB-xR transceivers are designed for bi-directional serial-optical-data communications: 10G Ethernet at speeds up to 10.3 Gbps.

Installation

Installing the transceiver module

To install the tranceirver module, do the following:

1. Position the transceiver at the installation slot with the TN label side up *(standalone device)* or component side of slide-in card.
2. Carefully insert the transceiver fully into the slot.

Fiber cable physical charateristics

The fiber cable physical characteristics must meet or exceed IEEE 802.3ae specifications:

Single mode fiber *(recommended)*:	9 µm
Multimode fiber *(recommended)*:	62.5/125 µm
Multimode fiber *(optional)*:	100/140, 85/140, 50/125 µm

WARNING: Visible and invisible laser radiation when open. DO NOT stare into laser beam or view directly with optical instruments. Failure to observe this warning could result in damage to your eyes or blindness.

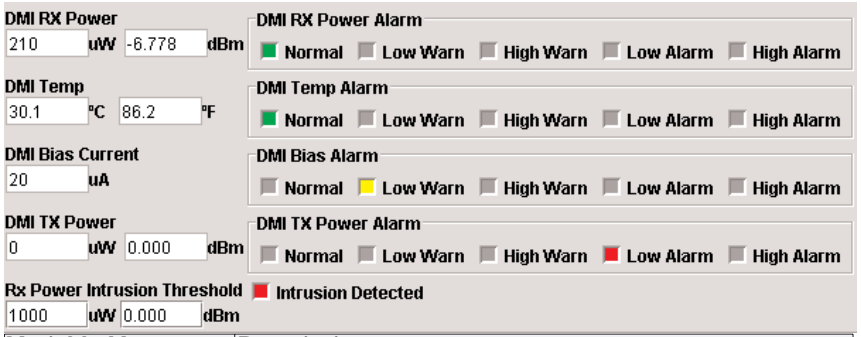
Connecting fiber cables

To install the fiber cable, do the following:

1. Locate the appropriate fiber cable.
2. Install the cable as shown below.

Diagnostic Monitoring Interface (DMI)

The following DMI port screen and explanation table contains brief definitions of the DMI support offered on some Small Form Factor Pluggable TN-X2-10GB-xR Transceiver Modules. For further information, please see the help option on the CPSMM-xxx, SNMP agent or Focal Point Transition Networks' GUI.



Variable Name	Description
DMI Rx Power	Measured receive optical power in microwatts and in decibels relative to 1mW.
DMI Rx Power Alarm	Alarm status of measured receive optical power.
DMI Temp	Internally measured temperature of transceiver in degrees C and degrees F.
DMI Temp Alarm	Alarm status for internally measured temperature of the transceiver.
DMI Bias Current	Measured transmit bias current in microamperes.
DMI Bias Alarm	Alarm status for measured transmit bias current for the interface.
DMI Tx Power	Measured transmit power in microwatts and in decibels relative to 1mW.
DMI Tx Power Alarm	Alarm status of measured transmit power.
Rx Power Intrusion Threshold	Instructs the converter to stop passing traffic when the receive power drops below the new threshold. This feature is sometimes referred to as 'Intrusion Detection,' since tapping into a fiber to intercept traffic leads to a reduction in receive power. This value can be entered in microwatts or in decibels relative to 1mW. **Note:** This feature is not available on all devices.

Fiber Optic Specifications

TN-X2 distances, TX power, RX power, and link budgets can be found on Transition Netwoks' website, document "SFP/XFP Fiber and Copper Connectors."

Technical Specification

For use with Transition Networks' TN-X2-10GB-xR transceiver modules.

TN-X2-10GB-xR Series Cisco Compatible X2

Shipping Weight:	1 lb. *(454 g)* approximately
Voltage:	3.3 volts
Warranty:	Lifetime
Dimensions:	1.42W x 3.58 L x 0.53 H in *(36 mm x 91mm x 13.46 mm)*
Operating Temp:	0°C to 70°C *(32°F to 158° F)*
Storage Temp:	-40°C to 85°C *(-40° to 185°F)*

TN-X2-10GB-xR Series Cisco Compatible X2

Transition Networks' X2 transceiver modules fully comply with the Multi-Sourcing Agreement (MSA). This compliance allows TN X2 transceiver modules to be used in all other MSA compliant X2 platforms. In addition, TN X2 transceiver modules are also compatible with all Cisco X2-based routers and switches, as well as Cisco's IOS software. TN-X2-10GB-xR modules ARE NOT Cisco OEM brand Modules.

Contact Us

Technical support

Technical support is available 24 hours a day.
U.S.A. and Canada: 1-800-260-1312
International: 00-1-952-941-7600

Transition now

Chat live via the Web with Transition Networks Technical Support.
Log onto www.transition.com and then click the Tech Support/Transition Now link.

Web-Based seminars

Transition Networks provides seminars via live web-based training.

Log onto www.transition.com and click the Learning Center link.

E-Mail

Ask a question anytime by sending an e-mail to our technical support staff.
techsupport@transition.com

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telephone: 952-941-7600
toll free: 800-526-9267
fax: 952-941-2322

Compliance Information

FCC regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

Canadian regulations

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications**.**
Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European regulations

Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Achtung !

Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fäll ist der Benutzer für Gegenmaßnahmen verantwortlich.

Attention !

Ceci est un produit de Classe A. Dans un environment domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilsateur de prende les measures spécifiques appropriées.

In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Transition Networks will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.

CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentlickes Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

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