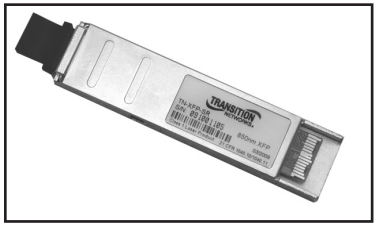


**TN-XFP-xxx-xxx**
**10 Gigabit Small Form Factor Pluggable (XFP) Transceiver modules**

The Transition Networks MSA compliant 10 gigabit, TN-XFP-xxx-xxx small from factor pluggable (XFP) modules are designed to install in any XFP port, They connect 10GBase-xx fiber-optic cable to the network through the XFP connector. The TN-XFP-xxx-xxx transceivers are designed for serial-optical data communications such as 10G Ethernet or 10G fiber channel at speeds up to 10.52 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.

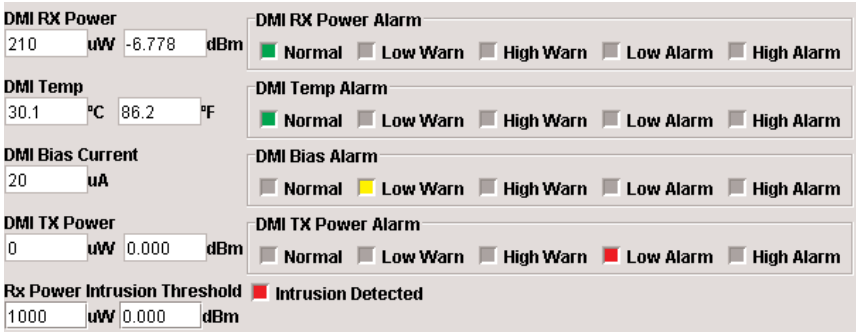
## Connecting fiber cables

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 XFPs 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.<br><br>**Note:** This feature is not available on all devices. |

# Fiber Optic Specifications

TN-XFP 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' SFP/XFP transceiver modules.

**TN-XFP-xxx-xxx**

| | |
|---|---|
| Shipping Weight: | 1 lb. *(454 g)* approximately |
| Voltage: | 3.3 volts |
| Warranty: | Lifetime |
| Dimensions: | 0.87 x 3.08 x 0.33" *(22.15 mm x 78 mm x 8.5 mm)* |
| OP Temp: | TN-XFP-SR<br>-0°C to 70°C *(32°F to 158°F)*<br>TN-XFP-LRx, TN-XFP-xx:<br>-5°C to 70°C *(23°F to 158° F)*<br>TN-XFP-xxx-x:<br>-40°C to 85°C *(-40° to 185°F)* |
| Storage Temp: | -40°C to 85°C *(-40° to 185°F)* |

TN-XFP-xxx-xxx

Transition Networks' SFP modules fully comply with Multi-Sourcing Agreement (MSA). This compliance allows our SFP modules to be used inother MSA compliant SFP platforms without any problems.

# 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

### Address

Transition Networks
10900 Red Circle Drive
Minnetonka, MN 55343, U.S.A.
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.

### Trademark notice

All trademarks and registered trademarks are the property of their respective owners.