

## User's Guide

### TN-J48xxx HP Compatible Small Form Factor Pluggables (SFPs) Transceiver Module

The Transition Networks TN-J48xxx SFP series small form factor pluggable (SFP) transceiver modules are designed to install in any SFP port.

The TN-J48-xxx SFP transceivers are designed for bi-directional, serial-optical data communications such as Gigabit Ethernet or fiber channels at speeds up to 1.25 Gbps.

Part Number	Port Description
<b>TN-J4858C</b>	1000Base-SX, duplex LC, 850 nm, multimode 220 m (722 ft)* on 62.5/125 μm fiber 550 m (1804.5 ft)* on 50/125 μm fiber
<b>TN-J4859C</b>	1000Base-LX, duplex LC 1310 nm, single mode up to 20 km (12.3 miles)*
<b>TN-J4860C</b>	1000Base-LX/ZX, duplex LC 1550 nm, single mode up to 80 km (49.7 miles)*

\*Unless otherwise indicated, the distances listed are the typical maximum cable distance. The actual maximum cable distance is dependent on the physical characteristics of the network installation.

**Notice:** Transition Networks' SFP modules fully comply with the Multi-Sourcing Agreement (MSA). This compliance allows our SFP modules to be used in other MSA compliant SFP platforms without problems. In addition, TN SFP modules specified in this manual are also compatible with all HP SFP-based ProCure Switches, including the software. TN SFP modules ARE NOT HP OEM brand modules.

Installation	2
Cable Specifications	3
Technical Specifications	4
Contact Us	6
Compliance Information	7

## Installation

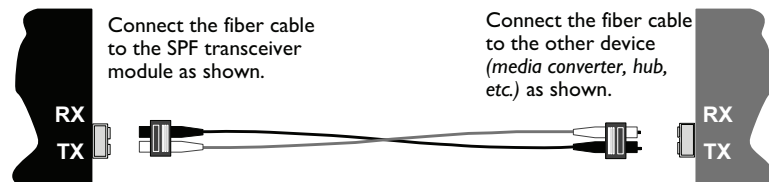
### Installing the SFP transceiver

To install the SFP module into a network switch or media converter, do the following:

1. Position the module at the installation slot so that the label side faces up.
2. Carefully slide the module into the installation slot, aligning it with the internal installation guides.

### Installing the fiber cable

1. Locate a 1000Base-SX compliant or 1000Base-LX compliant fiber cable with male Tx to Rx connectors installed at both ends.
2. Install the fiber cable as shown below.



## Cable Specifications

### Fiber cable

The physical characteristics must meet or exceed IEEE 802.3z™ specifications.

Single mode fiber ( <i>recommended</i> ):	9 μm	
TN-J4858C	850 nm multimode	
Fiber Optic Transmitter Power:	min: -9.0 dBm	max: -3.0 dBm
Fiber Optic Receiver Sensitivity:	min: -18.0 dBm	max: -0.0 dBm
Link Budget:	9.0 dB	
TN-J4859C	1310 nm multimode	
Fiber Optic Transmitter Power:	min: -9.0 dBm	max: -3.0 dBm
Fiber Optic Receiver Sensitivity:	min: -25.0 dBm	max: -3.0 dBm
Link Budget:	16.0 dB	
TN-J4860C	1550 nm single mode	
Fiber Optic Transmitter Power:	min: -0.0 dBm	max: -5.0 dBm
Fiber Optic Receiver Sensitivity:	min: -24.0 dBm	max: -3.0 dBm
Link Budget:	24.0 dB	

## Technical Specification

For use with Transition Networks Model TN-J48-xxx or equivalent.

Standard:	IEEE 802.3 2003; ANSI X3.297-1997 <u>TN-J48xxx SFP modules compliant with:</u> IEEE 802.3z Gigabit Ethernet
Dimensions:	0.52 x 2.22 x 0.33 in ( <i>13.4 x 56.5 x 8.5 mm, Fiber</i> )
Weight:	1 oz. ( <i>28 g</i> ) approximately
Power:	3.3V, Fiber 0.66 W
Operating Temp:	0°C to 70°C ( <i>32°F to 158°F</i> )
Storage Temp:	-40°C to 85°C ( <i>-40° to 185°F</i> )
Humidity:	5% to 95%, non-condensing
Warranty:	Lifetime

**Note:** Transition Networks' SFP modules fully comply with the Multi-Sourcing Agreement (MSA). This compliance allows our SFP modules to be used in other MSA compliant SFP platforms without 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](http://www.transition.com) and click the Transition Now link.

### Web-Based seminars

Transition Networks provides seminars via live web-based training.  
Log onto [www.transition.com](http://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](mailto: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



## Declaration of Conformity

Name of Mfg: Transition Networks  
10900 Red Circle Drive, Minnetonka MN 55343 U.S.A.

Model: TN-J48xxx SFP Series Transceiver Modules  
Part Number(s): TN-J4858C, TN-J4859C, TN-J460C

Regulation: EMC Directive 89/336/EEC  
Purpose: To declare that the TN-J48xxx to which this declaration refers is in conformity with the following standards:

IEC 60825-1; IEC60825-2; FC1X/2X SM-LC-L FC-PI; IEEE 802.3z 2003; ANSI X3.27 1997; Class A; FDA 21; CFR1040.10; CFR1040.11

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

  
Stephen Anderson, Vice-President of Engineering

August 2009  
Date

## Compliance Information

**CE Mark: IEC-60825; FDA 21; CFR 1040.10 and 1040.11**

### 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 Fall ist der Benutzer für Gegenmaßnahmen verantwortlich.

#### Attention !

Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures 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 öffentliches Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweiligen 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.

**Copyright restrictions** © 2009 Transition Networks. All rights reserved. No part of this work may be reproduced or used in any form or means (*graphic, electronic, mechanical*) without written permission from Transition Networks.