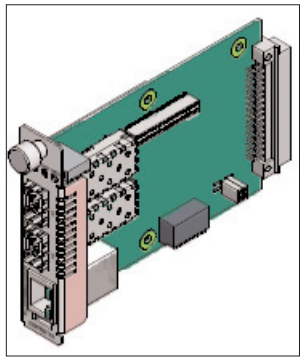
TRANSITION NETWORKS



User's Guide

CGFEB1040-140 Chassis Card Media Converter

- **One Copper, Two Fiber Ports**
- **10/100/1000Base-T to 1000Base-X**

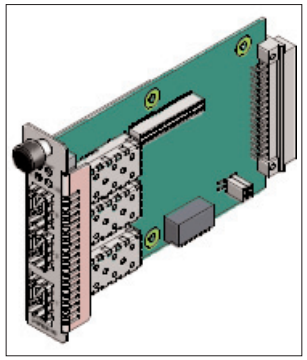
Transition Networks CGFEB1040-140 series media converters are designed to be installed in a PointSystem™ chassis, connecting 10/100/1000Base-T twisted-pair copper cable to SFP 1000Base-X devices.

The CGFEB1040-140 has one copper port and two SFP ports.

Part Number	Port 1 - Copper 10/100/1000-Base-T	Port 2 - SFP 1000Base-X	Port 3 - SFP 1000Base-X
CGFEB1040-140	RJ-45 100 m *(328 ft)*	Empty	Empty

CGFEB4040-180 Chassis Card Media Converter

- **Three SFP Ports**
- **100/1000Base-X SFPs to 1000Base-X SFPs**



Transition Networks CGFEB1040-140 series media converters are designed to be installed in a PointSystem™ chassis, connecting 100/1000Base-X SFP to 1000Base-X SFP devices.

The CGFEB4040-180 three SFP ports.

Part Number	Port 1 - SFP 100/1000Base-X	Port 2 - SFP 1000Base-X	Port 3 - SFP 1000Base-X
CGFEB4040-180	Empty	Empty	Empty

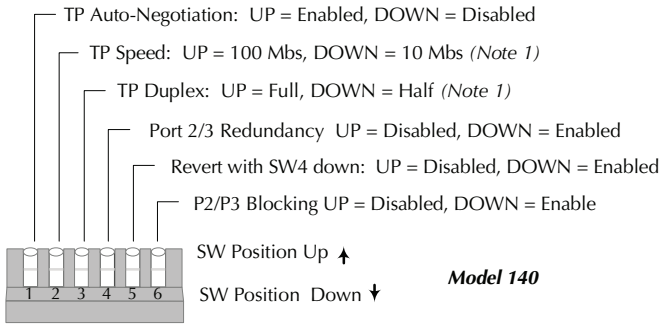
Note: Third-party Multi-Source Agreement (MSA) compliant Small Form Factor Pluggables (SFPs) can be used in the CGFEB1040-140 and the CGFEB4040-180 media converters.

Installation

CAUTION: Wear a grounding device and observe electrostatic discharge precautions when handling the media converter. Failure to observe this caution could result in damage or failure of the media converter.

Six-position switch 140 and 180 models

The 140/180 six-position switch is located on the circuit board of the media converter. Use a small, flat-blade screwdriver *(or a similar device)* to set the switches according to the site requirements *(see the drawing below for the 140)*.



1. Twisted-Pair Auto-Negotiation

   UP Enable Auto-Negotiation for the copper connection.
   DOWN Disable Auto-Negotiation for the copper connection.

2. Twisted-Pair Speed 10Mbs/100Mbs *(See Note 1)*

   UP Set copper connection speed to 100Mbs.
   DOWN Set copper connection speed to 10Mbs.

3. Twisted-Pair Full/Half Duplex *(See Note 1)*

   UP Operate in full-duplex mode.
   DOWN Operate in half-duplex mode of the attached device.

4. Redundancy *(Ports 2 and 3)*

   UP Disabled
   DOWN Enabled

5. Primary/Secondary revert with SW4 DOWN

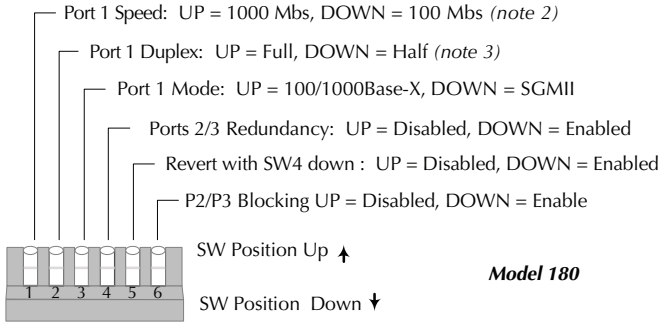
   UP Disabled *(continues to use the secondary port after primary port has been restored)* recommended setting
   DOWN Enabled *(reverts to the primary port after it has been restored)*

6. Port 2 to Port 3 Blocking

   UP Disabled
   Down Enabled

Note 1: Only use when Auto-Negotiation is disabled.

Installation—continued



Note 2: Only use if in 100/1000Base-X mode, SW3 UP.

Note 3: Only use if in 100/1000Base-X mode and in 100 Mbs mode, SW3 UP; SW1 DOWN

1. Speed *(Port 1) (See Note 2)*

   UP 1000 Mbs
   DOWN 100 Mbs

2. Duplex *(Port 1) (See Note 3)*

   UP Full
   DOWN Half

3. Mode *(Port 1)*

   UP 100/1000Base-X.

   DOWN SGMII *(Port 1 copper, model 140 only)*

4. Redundancy *(Ports 2 and 3)*

   UP Disabled
   DOWN Enabled

5. Primary/Secondary revert with SW4 DOWN

   UP Disabled *(continues to use the secondary port after primary port has been restored)* recommended setting

   DOWN Enabled *(reverts to the primary port after it has been restored)*

6. Port 2 to Port 3 Blocking

   UP Disabled

   Down Enabled

Installation—Continued

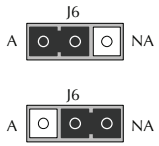
AutoCross jumper

The AutoCross feature allows either straight-through (MDI) or crossover (MDI-X) cables to be used when connecting to 10Base-T, 100Base-TX, or 1000Base-T devices such as hubs, transceivers, or network interface cards (NICs). AutoCross determines the characteristics of the cable connection and automatically configures the unit to link up to its companion device regardless of the cable configuration.

The AutoCross jumper is the three-pin header J6 on the circuit board labeled NA = No Autocross and A = AutoCross. See Jumper positions below.

Note: Use small needle-nose pliers to set the jumper.

A	Either straight-through or crossover cable can be used for all twisted-pair copper links.
NA	Straight-through or crossover twisted-pair cable, depending on installed site devices, MUST be installed at EACH end of the twisted-pair copper link.



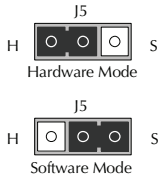
Note: Factory default is "A" enabled. Transition Networks recommends leaving the jumper in the enabled position.

Hardware/software jumper

The hardware/software jumper is the three-pin header J5 on the circuit board labeled H and S. See jumper positions below.

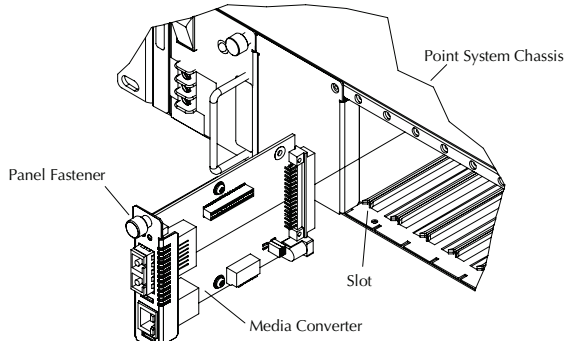
Note: Use small needle-nose pliers to set the jumper.

Hardware	The media converter mode is determined by the 6-position DIP switch settings.
Software	The media converter mode is determined by the most-recently saved, on-board microprocessor settings.



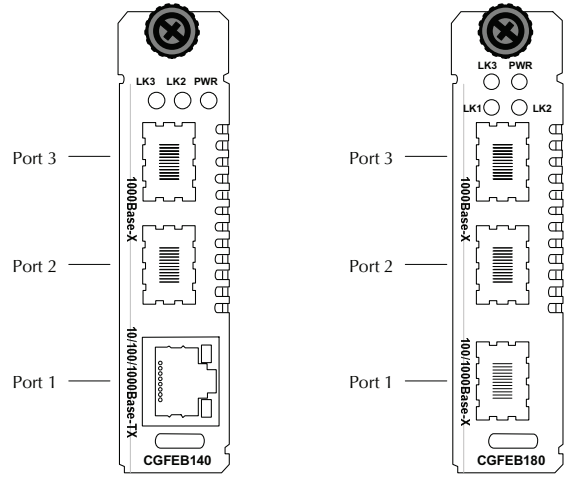
Install the chassis card

1. Remove one chassis slot cover from the Point System Chassis *(keep the slot cover and screw)*.
2. Carefully slide the media converter into the installation slot(s), aligning it with the slot guides.
3. Ensure that the media converter is firmly seated inside the chassis.
4. Push in and rotate the attached panel fastener screw clockwise to secure the module to the chassis. See illustration below.



Port Locations

The CGFEBxx40-1xx media converters have three ports.The drawings below illustrate the locations of Port 1, Port 2, and Port 3



140s	180s
Port 1: 10/100/1000Base-T	Port 1: 100/1000Base-X SFP Slot
Port 2: 1000Base-X SFP	Port 2: 1000Base-X SFP Slot
Port 3: 1000Base-X SFP	Port 3: 1000Base-X SFP Slot

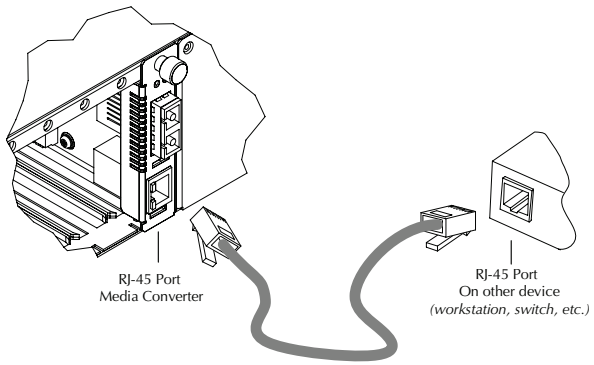
Installation—continued

Install the cable

Port 1: 10/100/1000Base-TX Copper Port

1. Locate10, 100, or 1000Base-TX compliant copper cables with male, RJ-45 connectors installed at both ends.
2. Connect the RJ-45 connector at one end of the cable to the media converter's 10/100/1000Base-TX RJ-45port *(port 1)*.
3. Connect the RJ-45 connector at the other end of the cable to the 10, 100, or 1000Base-TX RJ-45 port on the other device *(switch, workstation, etc.)*.

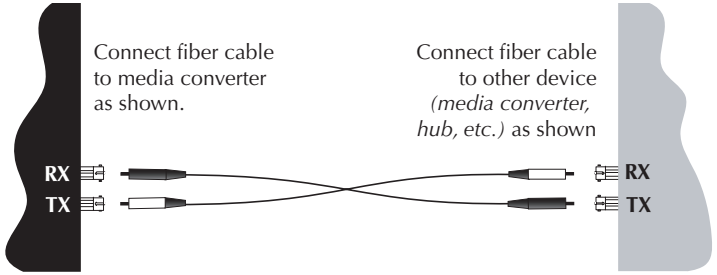
Note: The AutoCross feature allows the use of either straight-through or crossover cables.



Installation -- continued

Port 2: 1000Base-X Fiber Port

1. Locate a 1000Base-X compliant fiber cable with male, two-stranded TX to RX connectors installed at both ends.
2. Connect the fiber cables to the media converter's 1000Base-X fiber port *(port 2)* as described:
   - Connect the male TX cable connector to the female TX connector.
   - Connect the male RX cable connector to the female RX connector.
3. Connect the fiber cables to the 1000Base-X fiber port on the other device *(another media converter, hub, etc.)* as described:
   - Connect the male TX cable connector to the female RX connector.
   - Connect the male RX cable connector to the female TX connector.



Operation

Status LEDs

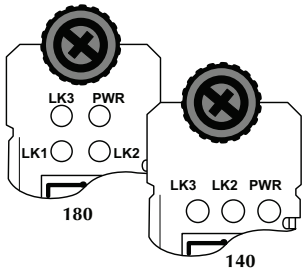
Use the status LEDs to monitor media converter operation in the network.

Fiber status LEDs

The status LEDs for the SFP connection *(PWR and LKx)* are located next to the fiber port *(Port 2)*.

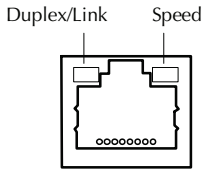
PWR *(Power)* — ON Green = connection to external AC power.

LK1/LK2/LK3: — Link Activity
ON Green = A link has been established for the fiber connection.
Flashing = The fiber connection is transmitting or receiving data.



Copper status LEDs *(140 only)*

The status LEDs for the copper connection are integrated into the RJ-45 port. These LEDs are not labeled. Refer to the drawing to the right for their locations.



10/100/1000BaseT

Duplex/Link:

Orange:	A link in half-duplex mode has been established for the copper connection.
Flashing Orange:	The copper connection is transmitting/receiving data in half-duplex mode.
Green:	A link in full-duplex mode has been established for the copper connection.
Flashing Green:	The copper connection is transmitting/receiving data in full-duplex mode.

Speed:

OFF:	10 Mb/s operation.
Orange:	100 Mb/s operation.
Green:	1000 Mb/s operation.

Operation—continued

Product features

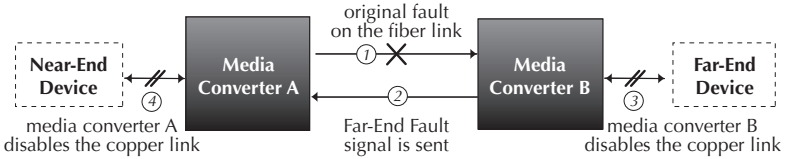
Auto-Negotiation

The Auto-Negotiation feature allows the CGFEBxx40-1xx media converter to configure itself automatically to achieve the best possible mode of operation over a link. The media converter broadcasts its speed *(10 Mb/s, 100 Mb/s, or 1000 Mb/s)* and duplex capabilities *(full or half)* to the other device and negotiates the best mode of operation. Auto-Negotiation allows quick and easy installation because the optimal link is established automatically—no user intervention required.

A scenario where the media converter is linked to a non-negotiating device is a case where the user may want to disable Auto-Negotiation. In this instance, the mode of operation will drop to the least common denominator between the two devices *(e.g. 100 Mb/s, half-duplex)*. Disabling this feature provides the ability to force the connection to the best mode of operation.

Far-end fault *(model 180, Port 1 only)*

When a fault occurs on an incoming fiber link (1), the media converter transmits a Far-End Fault signal on the outgoing fiber link (2). In addition, the Far-End Fault signal also activates the Link Pass-Through, which, in turn, disables the link on the copper portion of the network (3) and (4).



Fiber redundancy

The CGFEBxx40-1xx media converters have two fiber SFP ports: one can be configured as the primary port and one as the secondary port. When redundancy is enabled *(SW4 Down)*, any fault on the primary port results in the secondary port becoming operational. There is the option to revert back to the primary port once it has been restored *(revert "enabled," SW5 down)*. These configurations are set by the user.

Operation—continued

Product features—continued

Half-Duplex network *(512-Bit Rule)*

In a half-duplex network, the maximum cable lengths are determined by the round trip delay limitations of each Fast Ethernet collision domain. *(A collision domain is the longest path between any two terminal devices; e.g. a terminal, switch, or router.)*

The 512-Bit Rule determines the maximum length of cable permitted by calculating the round-trip delay in bit-times (BT) of a particular collision domain. If the result is less than or equal to 512 BT, the path is good.

For more information on the 512-Bit Rule, see the white paper titled "Collision Domains" on the Transition Networks website at: www.transition.com.

Pause

The pause feature is used to suspend data transmission temporarily in order to relieve buffer congestion. If a media converter needs some time to clear network congestion, it will send a pause signal to the media converter at the other end, which will wait a predetermined amount of time before re-transmitting the data. This feature reduces data bottlenecks, allowing for a more efficient use of the network devices, and prevents the loss of valuable data.

In Hardware mode, the pause feature can be set to the following:

- Disable *(i.e., no pause)*
- Enable *(i.e., symmetrical pause)*

In Software mode, the pause feature can be set to one of four settings:

- Disable *(i.e., no pause)*
- Symmetrical pause
- Asymmetric TX (*transmit)* pause
- Asymmetric RX *(receive)* pause

Note: Enable the pause feature if it is present on ALL network devices attached to the media converter(s). Otherwise, disable the pause feature.

Bandwidth allocation

It allows setting the bandwidth in varied increments, starting at 64Kps to full bandwidth.

Rate Limiting based on frame priorities can also be configured. Each higher priority frame can be configured to get twice the bandwidth of lower priority frames; e.g., priority "3" frame configurations can get twice the bandwidth of priority "2" frames.

Egress bandwidth allocation in 64Kbits/sec increments:

- Rate limit all frames

Ingress bandwidth allocation in 64Kbits/sec increments with four filter selections:

- Rate limit all frames
- Rate limit multicast, flooded unicast, and broadcast
- Rate limit multicast and broadcast
- Rate limit broadcast

Operation—continued

Product features—continued

RMON Counter on each port

RMON statistics such as packet size counters, collision errors, and packet type are kept for each port.

Virtual cable test (VCT) on UTP port *(copper port only)*

The VCT feature utilizes Time Domain Reflectometry (TDR) technology to remotely and non-evasively diagnose the quality and characteristics of the attached cable plant. Using this technology, the devices detect and report potential cabling issues such as cable opens, cable shorts or any impedance mismatch in the cable and accurately report *(within one meter)* the distance of the fault. Additionally, VCT technology will detect pair swaps, pair polarity reversal and excessive pair skew.

IEEE802.1q VLAN tagging and double tagging *(Q in Q)*

The 802.1Q specification establishes a standard method for inserting virtual LAN (VLAN) membership information *(called a tag into Ethernet frames to break large networks into smaller parts or to address security concerns)*. Q in Q support simply adds another layer of IEEE 802.1Q tag to the 802.1Q tagged packets that enter the network. The purpose is to expand the VLAN space by tagging the tagged packets, thus producing a "double-tagged" frame.

VLAN tagging can be configured to one of the following settings:

- Normal = frames are unmodified when passing through the converter
- Untag = all tagged frames will have their tag removed when passing through converter
- Tag = all untagged frames are tagged with the source port default VLAN ID
- Double Tag = all egress frames are double tagged using the source port default VLAN ID for the extra tag. This also enables ingress double tag removal.

Ingress:

a. Frame does not contain a tag, frame is not modified
b. Frame contains one 802.3ac tag, tag is removed
c. Frame contains two 802.3ac tags, the first tag is removed

Egress:

a. Frame is untagged, tag is added
b. Frame contains one 802.3ac tag, tag is added before the current one becomes the frames new 802.3ac tag

IEEE802.1p QoS, IPv4 ToS/Diffserv, IPv6 Traffic class

The 802.1p specification is an extension of the IEEE 802.1Q standard and works in tandem to define the prioritization of the Ethernet frame for traffic class expediting and dynamic multicast filtering. IEEE 802.1p establishes eight levels of priority *(0 ~ 7)* with 7 being the highest priority. Each egress Ethernet frame can be prioritized using IEEE 802.1p *(MAC level)* Traffic Class, or IPV4 TOS and/or DiffServ and/or IPV6 Traffic Class.

Operation—continued

Automatic link restoration

The converter will automatically restore the link between networked devices after a fault condition has been corrected. Competitors' products, in contrast, require the user to power down, then power up the converters after a fault condition has been corrected.

SNMP

See the on-line documentation that comes with Transition Networks FocalPoint™ software for applicable commands and usage.

Use SNMP for the 140 model 10/100/1000Base-TX port only at an attached terminal or at a remote location to monitor the media converter by monitoring:

- Copper and fiber link status
- Copper and fiber port duplex
- Copper port speed
- Enable/Disable Auto-negotiation

Advertised Modes

- 10bps HDX Enable/Disable
- 10bps FDX Enable/Disable
- 100bps HDX Enable/Disable
- 100bps HDX Enable/Disable
- 1000bps FDX Enable/Disable
- Pause Enable/Disable
- Select TX/RX Pairs MFI/MFI-X/Auto

Use SNMP for the 140 and 180 models to enter network commands that:

- Set age time *(x15 seconds)*
- Factory reset Yes/No
- Reset counters *(all ports)* Yes/No
- Reset switch Yes/No
- Enable/Disable Factory Redundancy

Use SNMP for 140 and 180 all ports to enter network commands that:

- Port Mode 1000base-X/SGMII
- Set Administrative State UP pass traffic/Down do not pass traffic
- Enable/Disable Auto-Negotiation
- Enable/Disable Far End Fault
- Select Speed 10Mbps/100Mbps
- Duplex FDX/HDX
- Set Egress and Ingress rate Unlimited/Incremental
- Enable/Disable Default Forward Unknown Muliticasts
- Enable/Disable Forward Unknown Unicast
- Set VLAN Tagging *(normal/untag/tag/double tag)*

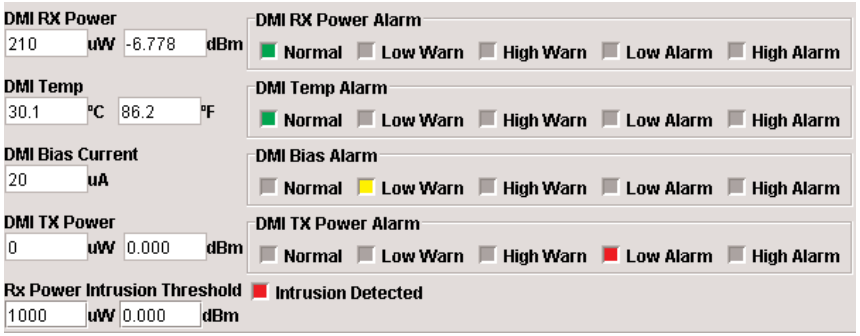
Operation—continued

SNMP -- continued

- Enable/Disable Discard Tagged Frames
- Enable/Disable Discard Untagged Frames
- Enable/Disable Use IP
- Enable/Disable Use Tag
- Tag if both *(use tag/use IP)*
- Set Default Priority *(1 thru 7)*
- Set Default VID
- Set IEEE priority remapping *(tags 0 thru 7)*
- IEEE 802.1q VLAN
- IEEE 802.1p QoS
- Far-End Fault *(100Base-FX setting on Port 1, model 180 only)*
- Dual Speed Capability *(Port 1, 180 models only)*
- Fiber Redundancy
- Virtual Cable Test *(copper port, model 140 only)*
- Bandwidth Allocation
- SGMII Support on Port 1 *(model 180 only)*
- RMON Counter, each port
- Port 2 to Port 3 Blocking
- Automatic Link Restore

Diagnostic Monitoring Interface (DMI)

The following DMI port screen and explanation table contains brief definitions of the DMI support offered on Transition Networks SFP optical interfaces. 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 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.

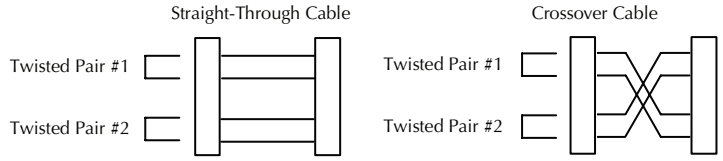
Cable Specifications

Copper cable

Category 5 *(minimum requirement)*

Gauge:	24 to 22 AWG
Attenuation:	22.0 dB /100 m @ 100 MHz
Maximum Cable Distance:	100 meters

- Straight-through OR crossover twisted-pair cable may be used.
- Shielded (STP) OR unshielded (UTP) twisted-pair cable may be used.
- All pin pairs *(1&2, 3&6, 4&5, 7&8)* are active pins in a Gigabit Ethernet network.
- Use only dedicated wire pairs for the active pins:
  (e.g., blue/white & white/blue, orange/white & white/orange, etc.)
- Do not use flat or silver satin wire.



Fiber cable

Bit Error Rate:	$<10^{-9}$
Single mode fiber *(recommended)*:	9 µm
Multimode fiber *(recommended)*:	62.5/125 µm
Multimode fiber *(optional)*:	100/140, 85/140, 50/125 µm

Technical Specifications

For use with Transition Networks Model CGFEBxx40-1xx..

Standards:	IEEE 802.3, IEEE 802.3ab, IEEE203.u, IEEE802.3z IEEE802.1P, IEEE802.1q
Dimensions:	5.0" x 3.4" x 0.86" *(127 x 86 x 22 mm)*
Weight:	1 lb oz *(0.45 kg)*
Power Consumption:	6 watts
Data Rate *(copper)*:	10/100/1000 Mbps, Port 1 TP, *(model 140 only)*
Data Rate *(fiber)*:	100/1000 Mbps *(SFP Port 1, model 180 only)* 1000 Mbps *(SFP Port 2 and Port 3)*
Mac Address:	8K bytes
Max Frame Size:	802.3ac tagged 1628 bytes Untagged 1632 bytes
MTBF:	474,662 hours *(MIL217F2V5.0) (MIL-HDBK-217F)* 1,317,534 hours *(Bellcore7 V5.0)*
Environment:	Tmra*: 0°C to 50°C *(32°F to 122°F)*
Storage Temp:	-40°C to 85°C *(-40°F to 185°F)*
Humidity:	5% to 95%, non-condensing
Altitude:	0 to 10,000 feet
Warranty:	Lifetime

* Manufacturer's rated ambient temperature: Tmra range for the CGFEB1x40-1xx depends on the Transition Networks PointSystem™ chassis in which this slide-in-module will be installed.

The information in this user's guide is subject to change. For the most up-to-date information, see the user's guide on-line at: www.transition.com.

WARNING: Visible and invisible laser radiation when open. Do not stare into the beam or view the beam directly with optical instruments. Failure to observe this warning could result in an eye injury or blindness.

WARNING: Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

Copper based media ports, e.g., Twisted Pair (TP) Ethernet, USB, RS232, RS422, RS485, DS1, DS3, Video Coax, etc., are intended to be connected to intra-building *(inside plant)* link segments that are not subject to lightening transients or power faults. Copper based media ports, e.g., Twisted Pair (TP) Ethernet, USB, RS232, RS422, RS485, DS1, DS3, Video Coax, etc., are NOT to be connected to inter-building *(outside plant)* link segments that are subject to lightening transients or power faults.

Troubleshooting

1. Is the Power LED illuminated?

   NO
   - Is the media converter inserted properly into the chassis?
   - Is the power cord properly installed in the chassis and in the grounded AC outlet?
   - Does the AC outlet provide power?
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

   YES
   - Proceed to step 2.

2. Is the Duplex/Link LED illuminated orange OR green*(model 140 only)*?

   NO
   - Check that the RJ-45 cable is properly inserted into the ports at both ends of the cable.
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

   YES - Orange
   - The media converter has selected half-duplex mode. If this is not the correct mode, disconnect and reconnect the copper cable to restart the initialization process.
   - Proceed to step 3.

   YES - Green
   - The media converter has selected full-duplex mode. If this is not the correct mode, disconnect and reconnect the copper cable to restart the initialization process.
   - Proceed to step 3.

3. Is the Speed LED illuminated copper port *(model 140 only)*?

   NO
   - The media converter has selected 10 Mb/s operation. If this is not the correct speed, disconnect and reconnect the copper cable to restart the initialization process.
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

   YES - Flashing Orange
   - The media converter has selected 100 Mb/s speed. If this is not the correct speed, disconnect and reconnect the copper cable to restart the initialization process.
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

   YES - Flashing Green
   - The media converter has selected 1000 Mb/s operation. If this is not the correct speed, disconnect and reconnect the copper cable to restart the initialization process.
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

Troubleshooting—continued

4. Is the LACT LED illuminated?
   NO
   - Check the fiber cables for proper connection.
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

   YES
   - Proceed to step 5.

5 Is the DPX LED illuminated *(model 180 only)*?
   YES
   - The converter has selected full-duplex mode for the fiber link. If this is not the correct mode, disconnect and reconnect the fiber cable to restart the initialization process.
   - Check the configuration
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

   NO
   - The converter has selected half-duplex mode for the fiber link. If this is not the correct mode, disconnect and reconnect the fiber cable to restart the initialization process.
   - Check the configuration.
   - Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600..

Contact Us

Technical Support
Technical support is available 24 hours a day.
US 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 click the 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

Declaration of Conformity

Name of Mfg:	Transition Networks 10900 Red Circle Drive Minnetonka MN 55434 U.S.A.
Model:	CGFEB1x40-14x Series Media Converters
Part Number(s):	CGFEB1040-140, CGFEB4040-180
Regulation:	EMC Directive 89/336/EEC

Purpose: To declare that the CGFEBxx40-1xx to which this declaration refers is in conformity with the following standards.

CISPR/EN 55022 Class A; EN 55024, EN61000, FCC Class A

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

March, 2008
Date

Compliance Information

CISPR/EN55022 Class A + EN55024, EN61000, FCC Class A
CE Mark

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 lass 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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