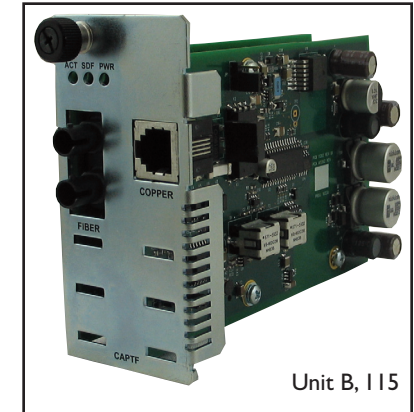
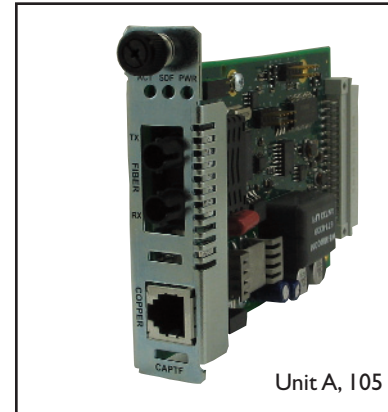


CAPTF33xx-1xx POTS to Fiber Optic Slide-In Card (SIC) User's Guide



Transition Networks CAPTF33xx-1xx POTS to fiber-optic SICs connect central-office, voice-grade signals to distant POTS (*Plain Old Telephone Service*) terminal equipment, using standard telephone signaling. It can extend over fiber, the distance between two voice path communications devices by up to 80 km (*49.7 miles*), using either single mode or multimode fiber cable.

The CAPTF33xx-1xx SICs provide audio transmission, caller ID, ringing at the distant end, and automatic ring-down. Two units are required to implement an end-to-end system. An RJ-11C female connector provides the electrical interface between the CAPTF33xx-1xx SIC and the terminal equipment, or telephone line wall jack.

The CAPTF33xx-1xx SIC is designed to be installed in the Transition Networks PointSystem™ chassis.

Note: The stand-alone version is the SAPTF33xx-1xx module. For more information see the SAPTF33xx-1xx user's guide on-line at: www.transition.com click on Products/Product Finder.

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Unit A: CAPTF33xx-105

Unit A (*CAPTF33xx-105*) SICs connect to a Central Office (CO) telephone line wall jack or a PBX (*Private Branch Exchange*). The SIC mimics telephone terminal equipment (*Foreign Exchange Office (FXO)*) and has the ability to detect ringing voltages. The available models are:

Product Number	Port One – Copper Twisted-Pair	Port Two – Duplex Fiber-Optic
CAPTF3311-105	RJ-11C connector 5 km (3.1 miles)*	ST connector, 1300 nm multimode, 2 km (1.2 miles)*
CAPTF3312-105	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 20 km (12.4 miles)*
CAPTF3313-105	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm multimode, 2 km (1.2 miles)*
CAPTF3314-105	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 20 km (12.4 miles)*
CAPTF3315-105	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 40 km (24.9 miles)*
CAPTF3316-105	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 60 km (37.8 miles)*
CAPTF3317-105	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1550 nm single mode, 80 km (49.7 miles)*

* Typical maximum cable distance. Actual distance is dependent upon the physical characteristics of the network installation.

Unit A: CAPTF33xx-105 — continued

Unit A SICs are also available in single mode, single fiber models.

Product Number	Port One – Copper Twisted-Pair	Port Two – Fiber-Optic Single Mode, Single Fiber
CAPTF3329-105	RJ-11C connector 5 km (3.1 miles)*	SC, 1310 nm (TX) / 1550 nm (RX), 20 km (12.4 miles)*
CAPTF3329-106	RJ-11C connector 5 km (3.1 miles)*	SC, 1550 nm (TX) / 1310 nm (RX), 20 km (12.4 miles)*
CAPTF3329-107	RJ-11C connector 5 km (3.1 miles)*	SC, 1310 nm (TX) / 1550 nm (RX), 40 km (24.9 miles)*
CAPTF3329-108	RJ-11C connector 5 km (3.1 miles)*	SC, 1550 nm (TX) / 1310 nm (RX), 40 km (24.9 miles)*

* Typical maximum cable distance. Actual distance is dependent upon the physical characteristics of the network installation.

The single mode, single fiber models are designed to be installed in pairs—standard configuration. See POTS SIC Configuration section. See Figure 1.

If this model is installed as Unit A:	Install this model as Unit B:
CAPTF3329-105	CAPTF3329-116
CAPTF3329-106	CAPTF3329-115
CAPTF3329-107	CAPTF3329-118
CAPTF3329-108	CAPTF3329-117

Unit B: CAPTF33xx-11x

Unit B (*CAPTF33xx-11x*) SIC, the reciprocal unit-to-unit A connects to telephone terminal equipment and mimics a CO (*telephone line wall jack or PBX (FXS foreign exchange subscriber)*). The available models are:

Product Number	Port One – Copper Twisted-Pair	Port Two – Duplex Fiber-Optic
CAPTF3311-115	RJ-11C connector 5 km (3.1 miles)*	ST connector, 1310 nm multimode, 2 km (1.2 miles)*
CAPTF3312-115	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 20 km (12.4 miles)*
CAPTF3313-115	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm multimode, 2 km (1.2 miles)*
CAPTF3314-115	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 20 km (12.4 miles)*
CAPTF3315-115	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 40 km (24.9 miles)*
CAPTF3316-115	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1310 nm single mode, 60 km (37.8 miles)*
CAPTF3317-115	RJ-11C connector 5 km (3.1 miles)*	SC connector, 1550 nm single mode, 80 km (49.7 miles)*

* Typical maximum cable distance. Actual distance is dependent upon the physical characteristics of the network installation.

Unit B: CAPTF33xx-11x — continued

Unit B SICs are also available in single mode, single fiber models.

Product Number	Port One – Copper Twisted-Pair	Port Two – Fiber-Optic Single Mode, Single Fiber
CAPTF3329-115	RJ-11C connector 5 km (3.1 miles)*	SC, 1310 nm (TX) / 1550 nm (RX), 20 km (12.4 miles)*
CAPTF3329-116	RJ-11C connector 5 km (3.1 miles)*	SC, 1550 nm (TX) / 1310 nm (RX), 20 km (12.4 miles)*
CAPTF3329-117	RJ-11C connector 5 km (3.1 miles)*	SC, 1310 nm (TX) / 1550 nm (RX), 40 km (24.9 miles)*
CAPTF3329-118	RJ-11C connector 5 km (3.1 miles)*	SC, 1550 nm (TX) / 1310 nm (RX), 40 km (24.9 miles)*

* Typical maximum cable distance. Actual distance is dependent upon the physical characteristics of the network installation.

The single mode, single fiber models are designed to be installed in pairs—automatic ring-down configuration. See POTS SIC Configuration section, Figure 2.

If this model is installed as Unit B: Install this model as the other Unit B:	
CAPTF3329-115	CAPTF3329-116
CAPTF3329-116	CAPTF3329-115
CAPTF3329-117	CAPTF3329-118
CAPTF3329-118	CAPTF3329-117

POTS SIC Configuration

Standard configuration

One Unit A (*CAPTF33xx-105*) SIC and one Unit B (*CAPTF33xx-115*) SIC are required for the standard configuration. The Unit A SIC is connected to the CO or PBX while the Unit B SIC is connected to telephone terminal equipment. See Figure 1.

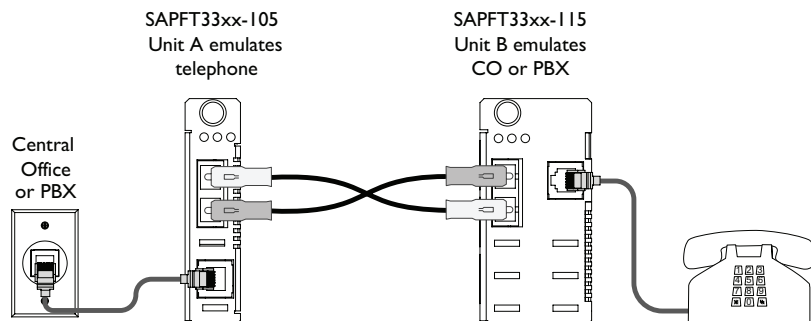


Figure 1: Standard Configuration

Automatic ring-down configuration

Automatic Ring Down (ARD) is a dedicated point-to-point voice system. When one telephone is taken off-hook, the other telephone rings without the need to dial. Two Unit B (*CAPTF33xx-115*) SICs connected via the fiber ports (*a telephone Module at each end*) is the requirement for this configuration. See Figure 2.

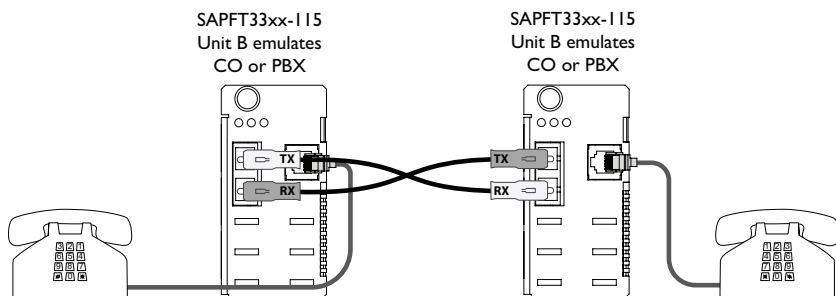


Figure 2: Automatic Ring-Down Configuration

Installation

CAUTION: Wear a grounding device and observe electrostatic discharge precautions when setting the jumpers. Failure to observe this caution could result in damage to the SIC.

Set the jumpers

Note: The jumper (*on pins 1 and 2*) of header JP1 on the -115 only is set at the factory, and must be in place for proper operation.

Using small needle-nosed pliers or similar tool to move the jumper to the desired position.

Standard/automatic ring-down

Header JP2 is used to switch between the Standard and Automatic Ring-Down configurations. The header is located on the top circuit board of Unit B (*CAPTF33xx-115*) SIC. The jumper has been factory set to the standard setting, JP2, pins 1 and 2 as the default.

Figure 3 shows header JP2 jumper settings for the 115 circuit board.

- Set jumper JP2 on the Unit B SIC to the Standard setting when using the Standard configuration (*Unit A connected to a central office line and Unit B directly to a phone*).
- Set jumper JP2 on both Unit B SICs to the Automatic Ring-Down setting when using the Automatic Ring-Down configuration (*fiber connection*).



Figure 3: Jumper Setting for Automatic Ring-Down Configuration

Telephone regulation

The loop current header JP2 is labeled “H” for high loop current ETSI TBR21 standard compliant telephone lines, and “L” for low loop current (*20 – 30 mA*) standard compliant telephone lines. Header JP2 is located on the circuit board of Unit A (*CAPTF33xx-105*) SIC. This feature is required to comply with ETSI telephone-line regulations. The jumper has been factory set to the low loop current setting, JP2, pins 2 and 3 as the default.

Figure 4 shows the jumper settings on the 105 circuit board.

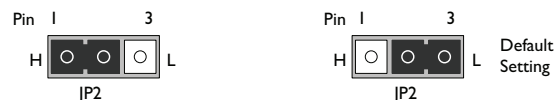


Figure 4: Jumper Setting for Loop Current

Installation — Continued

Install the SIC

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

To install the CAPTF33xx-1xx SIC:

1. Locate an empty installation slot on the Point System chassis. See Figure 5.
2. Carefully slide the SIC into the slot, aligning the circuit board of the SIC to the installation guides.
3. Ensure that the SIC is firmly seated inside the chassis.
4. Push in and rotate the attached panel fastener screw clockwise to secure the SIC to the chassis.

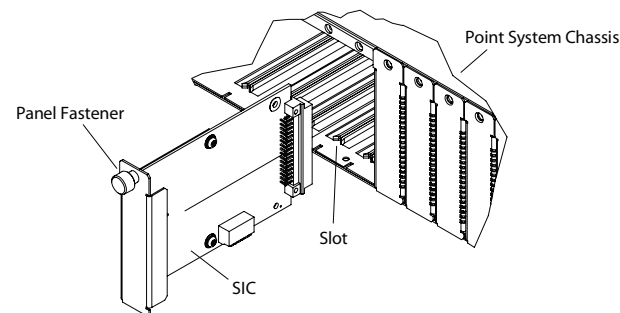


Figure 5: Install the CAPTF33xx-1xx SIC

IMPORTANT

After installing the CAPTF33xx-1xx SIC into the Point System chassis, the chassis **MUST BE** properly grounded through its grounding hardware located on the rear of the chassis.

Install fiber cable (standard configuration)

Note: Unit B must be set to the standard configuration.

Fiber

1. Locate a fiber cable with male, two-stranded TX to RX connectors installed at both ends.

Installation — Continued

Install fiber cable (standard configuration) — continued

2. Connect the fiber cables to Unit A (CAPTF33xx-105) SIC as described:
 - Connect the male TX cable connector to the female TX port. See Figure 6.
 - Connect the male RX cable connector to the female RX port.
3. Connect the fiber cables to Unit B (CAPTF33xx-115) SIC as described:
 - Connect the male TX cable connector to the female RX port.
 - Connect the male RX cable connector to the female TX port.

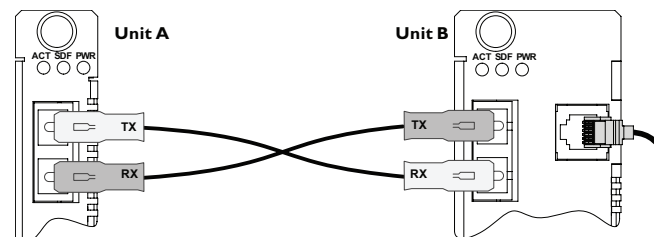


Figure 6: Connect Fiber Cable from Unit A SIC to Unit B SIC

Install RJ-11C cable

1. Locate a copper cable with male, RJ-11C connectors installed at both ends.
2. Connect the RJ-11C cable to the Unit A (CAPTF33xx-105) SIC as described:
 - Connect the RJ-11C connector at one end of the cable to the RJ-11C port on Unit A.
 - Connect the RJ-11C connector at the other end of the cable to the RJ-11C telephone line jack or FXS.
3. Connect the RJ-11C cable to the Unit B (CAPTF33xx-115) SIC as described:
 - Connect the RJ-11C connector at one end of the cable to the RJ-11C port on Unit B.
 - Connect the RJ-11C connector at the other end of the cable to the RJ-11C port on the telephone terminal equipment or FXO.

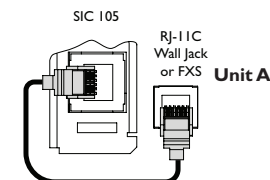


Figure 7: Connected Copper Cable to Wall Jack or FXS

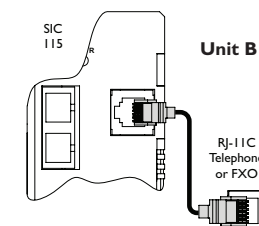


Figure 8: Connected Copper Cable to Telephone or FXO

Installation — Continued

Install cables — automatic ring-down configuration

Note: Both Unit B SICs must be configured for automatic ring-down.

Install fiber cable

1. Locate a fiber cable with male, two-stranded TX to RX connectors installed at both ends.
2. Connect the fiber cables to the first Unit B (*CAPTF33xx-115*) SIC as described:
 - Connect the male TX cable connector to the female TX port.
 - Connect the male RX cable connector to the female RX port.
3. Connect the fiber cables to the second Unit B (*CAPTF33xx-115*) SIC as described:
 - Connect the male TX cable connector to the female RX port.
 - Connect the male RX cable connector to the female TX port.

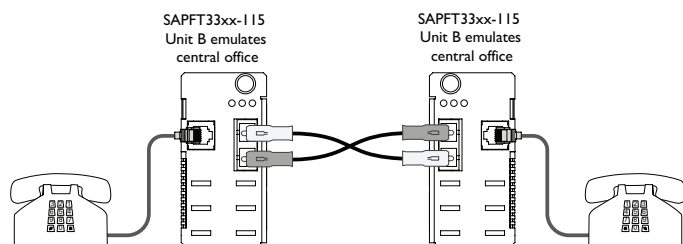


Figure 9: Connect Fiber Cable for Automatic Ring-Down Configuration

Install RJ-11C cable

1. Locate a copper cable with male, RJ-11C connectors installed at both ends.
2. Connect the copper cables to both Unit B (*CAPTF33xx-115*) SICs as described:
 - Connect the RJ-11C cable connector to the RJ-11C port on the first Unit B.
 - Connect the other end of the cable to the RJ-11C port on the telephone terminal equipment (FXO).
3. Connect the copper cables to the second Unit B (*CAPTF33xx-115*) SICs as described in step 2.

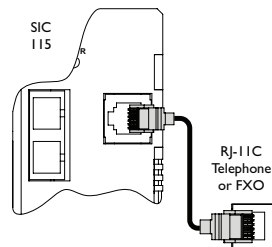


Figure 10: Connect Copper Cable to Telephone or FXO

Operation

Power

The CAPTF33xx-1xx SIC is powered through the Transition Networks *PointSystem™* chassis.

Status LEDs

Use the status LEDs to monitor the CAPTF33xx-1xx SIC operation in the network.

PWR (power)

ON = The SIC is connected to external power.

SDF (signal detect fiber link)

ON = The fiber link is active.

ACT (activity)

ON = The telephone Module is in use (*off-hook*).

Flashing = The telephone Module is ringing or pulse-dialing.

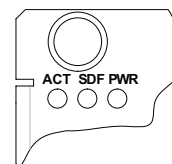


Figure 11: SIC LEDs

SNMP

Use SNMP at an attached terminal or at a remote location to monitor the following :

- Power
- Copper and fiber link status
- Copper in-use status
- Speed

Also, use SNMP to enter network commands that disable the SIC.

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

Operation — Continued

Loop-start operation

Loop-Start Service – commonly known as “Plain Old Telephone Service” (POTS) is the primary analog signaling method used between telephone switches, such as the Central Office (CO) and a telephone Device. Loop-start provides a way to indicate on-hook and off-hook conditions, which facilitates outgoing and incoming calls in a voice network.

When a customer wants to make an outgoing call, the customer takes the telephone Device off-hook. This action completes the loop, which signals the CO that a customer desires to use the telephone line. To signal the customer of an incoming call, the CO applies a ring voltage to alert the customer.

The three states of the loop-start signaling protocol are described below:

Idle state (*on-hook*)

1. The CO applies a battery voltage to the ring lead and monitors the tip-ring current for closure of the tip-ring.
2. The telephone Device draws less than 10 μ A from the line.

Telephone in-use (*off-hook*)

1. The customer takes the telephone Device off-hook, drawing a minimum of 20 mA of current.
2. The CO senses the tip-ring current and issues a dial tone on the line.
3. Communication can now begin.

Central office (CO) rings the telephone

1. The CO places an AC pulse-ringer voltage on top of the -48VDC ring lead signal.
2. The telephone Device uses the AC pulse-ringer voltage to operate the ringer, which alerts the customer of an incoming telephone call.
3. The customer takes the phone off-hook, which closes the tip-ring connection and allows the tip-ring current to flow.
4. The CO senses in DC current level and connects the call to the telephone line.
5. Communication can now begin.

Cable Specifications

Copper cable

ISO/IEC 11801; TIA/EIA 568-B Standards

Cable types: Shielded (STP) or unshielded (UTP) twisted-pair is acceptable.

Maximum Cable Length: 5 km (3.1 mi)

Fiber cable

Bit error rate:	$\leq 10^{-9}$	
Single mode fiber (<i>recommended</i>):	9 μ m	
Multimode fiber (<i>recommended</i>):	62.5/125 μ m	
Multimode fiber (<i>optional</i>):	100/140, 85/140, 50/125 μ m	
CAPTF3311-105, CAPTF3311-115	1300 nm multimode	
Fiber Optic Transmitter Power:	min: -19.0 dBm	max: -12.0 dBm
Fiber Optic Receiver Sensitivity:	min: -31.0 dBm	max: -8.0 dBm
Link Budget:	12.0 dB	
CAPTF3312-105, CAPTF3312-115	1310 nm single mode	
Fiber Optic Transmitter Power:	min: -15.0 dBm	max: -8.0 dBm
Fiber Optic Receiver Sensitivity:	min: -32.0 dBm	max: -5.0 dBm
Link Budget:	17.0 dB	
CAPTF3313-105, CAPTF3313-115	1300 nm multimode	
Fiber Optic Transmitter Power:	min: -19.0 dBm	max: -12.0 dBm
Fiber Optic Receiver Sensitivity:	min: -31.0 dBm	max: -8.0 dBm
Link Budget:	12.0 dB	
CAPTF3314-105, CAPTF3314-115	1310 nm single mode	
Fiber Optic Transmitter Power:	min: -18.0 dBm	max: -7.0 dBm
Fiber Optic Receiver Sensitivity:	min: -32.0 dBm	max: -3.0 dBm
Link Budget:	14.0 dB	
CAPTF3315-105, CAPTF3315-115	1310 nm single mode	
Fiber Optic Transmitter Power:	min: -27.0 dBm	max: -10.0 dBm
Fiber Optic Receiver Sensitivity:	min: -34.0 dBm	max: -14.0 dBm
Link Budget:	13.0 dB	
CAPTF3316-105, CAPTF3316-115	1310 nm single imode	
Fiber Optic Transmitter Power:	min: -5.0 dBm	max: 0.0 dBm
Fiber Optic Receiver Sensitivity:	min: -38.0 dBm	max: -7.0 dBm
Link Budget:	33.0 dB	
CAPTF3317-105, CAPTF3317-115	1550 nm single mode	
Fiber Optic Transmitter Power:	min: -5.0 dBm	max: 0.0 dBm
Fiber Optic Receiver Sensitivity:	min: -34.0 dBm	max: -3.0 dBm
Link Budget:	29.0 dB	

Fiber cable — continued

CAPTF3329-105, CAPTF3329-115 CAPTF3329-106, CAPTF3329-116	1310 nm single mode
Fiber Optic Transmitter Power:	min: -13.0 dBm max: -6.0 dBm
Fiber Optic Receiver Sensitivity:	min: -32.0 dBm max: -3.0 dBm
Link Budget:	19.0 dB

CAPTF3329-107, CAPTF3329-117 CAPTF3329-108, CAPTF3329-118	1310 nm single mode
Fiber Optic Transmitter Power:	min: -8.0 dBm max: -3.0 dBm
Fiber Optic Receiver Sensitivity:	min: -33.0 dBm max: -3.0 dBm
Link Budget:	25.0 dB

The fiber optic transmitters on this Device meets Class I Laser safety requirements per IEC-825/CDRH standards and complies with 21 CFR1040.10 and 21CFR1040.11.

FXS/FXO Specification**Unit A SIC (telephone emulation)**

Connector:	RJ-11C
Impedance:	600 Ω
ACTA-IC:	ACTA - 0.3B, I.C.- 0.2B
Loop Current:	20 to 60 mA
Insertion Loss:	0.0 ± 1.0 dB at 1000 Hz (When both ports are terminated at 600 Ω)
Facility Interface Code:	02LS2
Service Code:	9.0Y
Network Interface Code:	LS
Equipment Category #:	25

Unit B SIC (central office emulation)

Connector:	RJ-11C
Impedance:	600 Ω
Battery Source:	48 VDC +/- 5V
Ring Supply:	90 Vp-p
Ring Frequency:	25 Hz
Ring Cadence:	Reproduces the cadence detected by Unit A.
Max REN:	Up to 3B
Insertion Loss:	0.0 ± 1.0 dB at 1000 Hz (When both ports are terminated at 600 Ω)

Technical Specification

These specifications are for the model CAPTF33xx-1xx SIC or equivalent.

Dimensions	115: 3.4" x 5.0" x 1.75" (86 mm x 182 mm x 43 mm) 105: 3.4" x 5.0" x 0.86" (86mm x 182mm x 22 mm)
Weight	16 oz. (699 g) approximately
Power Consumption	115: 7.0 watts; 105: 4:0 watts
Power Source	12VDC@ 1.0 amp minimum (See note)
MTBF	250,000 hours (MIL-HDBK-217F) 678,500 hours (Bellcore)
Environment	Tmra*: 0° to 50°C (32° to 122° F) Storage Temp: -25° to 85°C (-13° to 185°F) Humidity: 5 to 95%, non-condensing
Warranty	Lifetime

*Manufacturer's rated ambient temperature. Tmra range for the SIC depends on the physical characteristics and the installation configuration of the Transition Networks PointSystem™ chassis in which this slide-in card will be installed.

The information in this user's guide is subject to change. For the most up-to-date information on the CAPTF33xx-1xx SIC, view the user's guide on-line at: www.transition.com.

CAUTION: Visible and invisible laser radiation when open. DO NOT stare into beam or view directly with optical instruments.

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

Note: Typically, power adapters are rated to operate at 0° to 40°C (32° to 104°F), below 2000 meters. Power adapters must be derated outside these conditions.

Troubleshooting

1. Is the PWR (*power*) LED illuminated?
 - NO
 - Is the SIC installed properly in the chassis?
 - Is the power cord properly installed in the chassis and into external AC power source?
 - Is the external power source active?
 - Contact Technical Support: US/Canada: 1-800-260-1312, International: 00-1-952-941-7600.
 - YES
 - Proceed to step 2.
2. Is the SDF (*signal detect fiber Link*) LED illuminated?
 - NO
 - Check the fiber cables for proper connection.
 - Verify that the TX and RX cables on the first SIC are connected to the RX and TX ports, respectively, on the second SIC.
 - Contact Technical Support: US/Canada: 1-800-260-1312, International: 00-1-952-941-7600.
 - YES
 - Proceed to step 3.
3. Is the ACT (*active*) LED illuminated?
 - NO
 - Ensure that the local unit is off-hook.
 - Contact Technical Support: US/Canada: 1-800-260-1312, International: 00-1-952-941-7600.
 - YES
 - Contact Technical Support: US/Canada: 1-800-260-1312, International: 00-1-952-941-7600.

Consumer Information

ACTA compliance

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the Administrative Council for Terminal Attachments (ACTA). A label on the side of the face plate contains, among other information, a product identifier in the following format: “US: alphanumeric characters.” If requested, this number must be provided to the telephone company.

Plug and jack

A plug and jack used to connect this equipment to the facility’s wiring and telephone network must comply with the applicable FCC Part 68 rules and the requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Ringer equivalence number (REN)

The Ringer Equivalence Number (REN) (*listed on the label on the side of the face plate*) is used to determine the number of Devices that may be connected to a telephone line. Excessive ringer loading on a telephone line may result in the Devices not ringing properly in response to an incoming call. In most, but not in all areas, the sum of the RENs should not exceed five. To be certain of the number of Devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

Harm to the telephone network

If the CAPTF33xx-1xx causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

Changes to the telephone company’s network

The telephone company can make changes in its facilities, equipment, operations, or procedures that could affect the operation of the CAPTF33xx-1xx. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

Problems with the equipment

If trouble is experienced with the CAPTF33xx-1xx, for repair or warranty information, please contact Transition Networks at 800-260-1312 or at www.transition.com then click Tech Support/Warranty. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Repairs to the equipment

Aside from the jumper settings, the CAPTF33xx-1xx is not intended to be serviced by the user. If the equipment requires repair, contact Transition Networks at 800-260-1312 or at www.transition.com then click Tech Support/Warranty.

Party lines

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

Alarm dialing equipment

If your facility has specially wired alarm equipment connected to the telephone line, ensure the installation of the CAPTF33xx-1xx does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

Customer Information — Continued

Industry Canada requirement

The Ringer Equivalence Number (REN) is an indication of the maximum number of Devices allowed to be connected to a telephone interface. The termination on an interface can consist of any combination of Devices subject only to the requirement that the sum of the RENs of all Devices does not exceed five. This product meets the applicable Industry Canada technical specifications.

L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5. Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

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.

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Declaration of Conformity

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

Model Number(s): CAPTF3311-105, CAPTF3312-105, CAPTF3313-105, CAPTF3314-105, CAPTF3315-105, CAPTF3316-105, CAPTF3317-105, CAPTF3329-105, CAPTF3329-106, CAPTF3329-107, CAPTF3329-108
CAPTF3311-115, CAPTF3312-115, CAPTF3313-115, CAPTF3314-115, CAPTF3315-115, CAPTF3316-115, CAPTF3317-115, CAPTF3329-115, CAPTF3329-116, CAPTF3329-117, CAPTF3329-118

Purpose: To declare that the CAPTF33xx-1xx POTS to Fiber-Optic SICs to which this declaration refers are in compliance with the following directive(s) and standard(s):

EMC Directive 2004/108/EC; EN 55022:2006+A1:2007 Class A;
EN55024:1998+A1:2001+A2:2003; EN6100-2-3; EN6100-3-3; CFR Title 47 Part 15 Subpart B Class A. Low Voltage Directive: 2006/95/EC; EN 60950-1:2006; CFR Title 21 Section 1040.10 Class I.

CFR Title 47 Part 68, ACTA, TIA-968-A-5; ETSI ES 203 021-3, V2.1.2 (2006-01), TBR21; IC CS-03 Issue 9 Part 1; R&TTE Directive 1999/5/EC Class I.2

I, the undersigned, hereby declare that the model numbers listed in this declaration of conformity conform to the Directive(s) and Standard(s) herein.


Stephen Anderson, Vice-President of Engineering

March 2010
Date

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.

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.

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