CONNECTION TECHNOLOGY SYSTEMS

PCM-CHASSIS-08

8-slot PoE Media Converter Chassis

User's Guide

Version: 1.1

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Copyright Statement

FCC Warning

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 limitations are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if no installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your local distributors or an experienced radio/TV technician for help.
- Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications to the equipment, which are not approved by the party responsible for compliance, could affect the user’s authority to operate the equipment.

CE Mark 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.

Revision History

Version	Date	Description
1.0	2025/12/10	First release.
1.1	2026/1/13	**Revised:** Section 1.1.2 Specification – Power Consumption, Max. PoE output budget @ 50 degrees C: 240W Section 2.3 Installing PCM-3002SFP-BT Section 3.1.2 LED of PCM-3002SFP-BT

CTS Contact Information

■ Headquarter/Manufacturer

Connection Technology Systems Inc.
18F-6, No.79, Sec.1, Xintai 5th Rd.,
XiZhi Dist., New Taipei City 221, Taiwan(R.O.C)
Tel: +886-2-2698-9661
Fax: +886-2-2698-3960
Dir.Line:+886-2-2698-9201
www.ctsystem.com

■ Global Authorized Representatives

Connection Technology Systems NE AB
E A Rosengrens gata 31,
421 31 Västra Frölunda, Sweden
Tel: +46-31-221980

E-mail: info@ctsystem.se

Connection Technology Systems Japan
Higobashi Bldg, No3 R503, 1-23-13, Edobori, Nisi-ku,
Osaka 550-0002, Japan
Tel: +81-6-6450-8890

E-mail: cts_japan@ctsystem.com

Connection Technology Systems India Private Limited
No.1,1st Floor,RK Residency Vajarahalli,
Uttarahalli,Talgatpura, Kanakpura MN Rd, Bangalore,
Karnataka, India, 560062

E-mail: cts_in@ctsystem.com

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Introduction

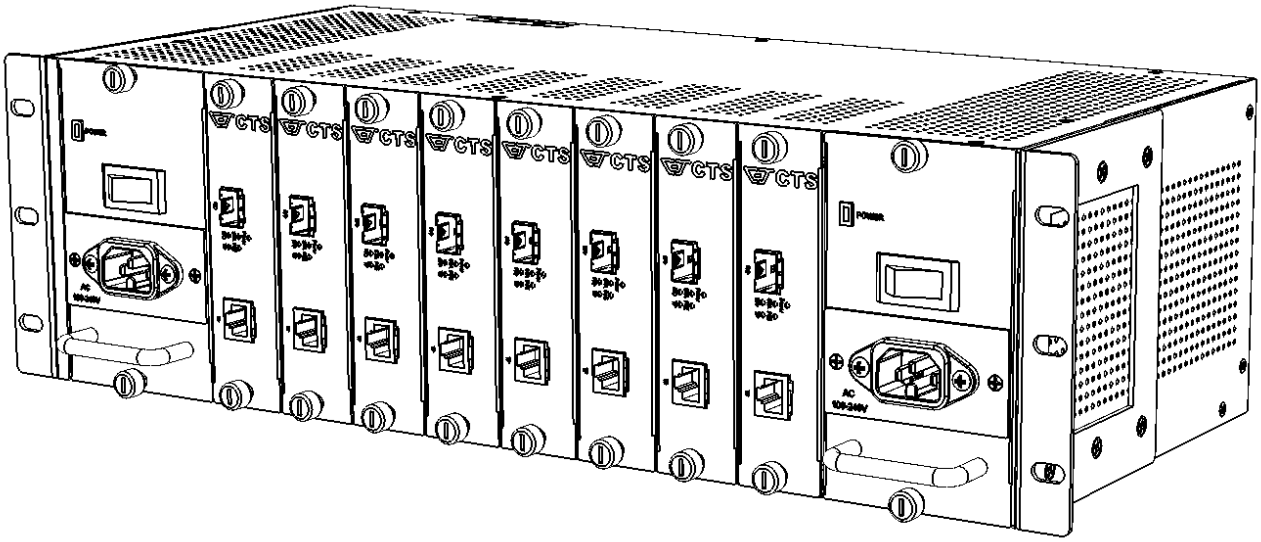
The CTS **PCM-CHASSIS-08** is an 8-slot PoE Media Converter Chassis designed to work with the **PCM-3002SFP-BT** media converter module and **PCM-CHASSIS-08-AC POWER** power module.

This guide provides essential information about the chassis, media converter, and power module, including installation, operation, and maintenance details.

1.1 The PCM-CHASSIS-08

Connection Technology Systems (CTS) PCM-CHASSIS-08 provides 8 dedicated slots for PCM-3002SFP-BT media converter modules, plus 2 additional slots for PCM-CHASSIS-08-AC POWER modules for redundant power operation. The PCM-CHASSIS-08 features a front-access design for easy maintenance, including power modules, LED indicators, and media converter slots. The fan less design enhances reliability while reducing maintenance needs.

The chassis can be used as a tabletop unit or mounted in a standard 19-inch rack using the 19-Inch brackets, included in the package.



Key Features

- 8 hot-swappable slots for **PCM-3002SFP-BT** media converter modules
- 2 hot-swappable power slots for **PCM-CHASSIS-08-AC POWER** modules
- Power redundancy for uninterrupted operation
- Operating temperature range: -10~60°C
- Fan less design for quiet operation
- Compact design for space-saving installation

1.1.1 Front Panel of PCM-CHASSIS-08

The slots for power and media converter modules are located at the front of PCM-CHASSIS-08.

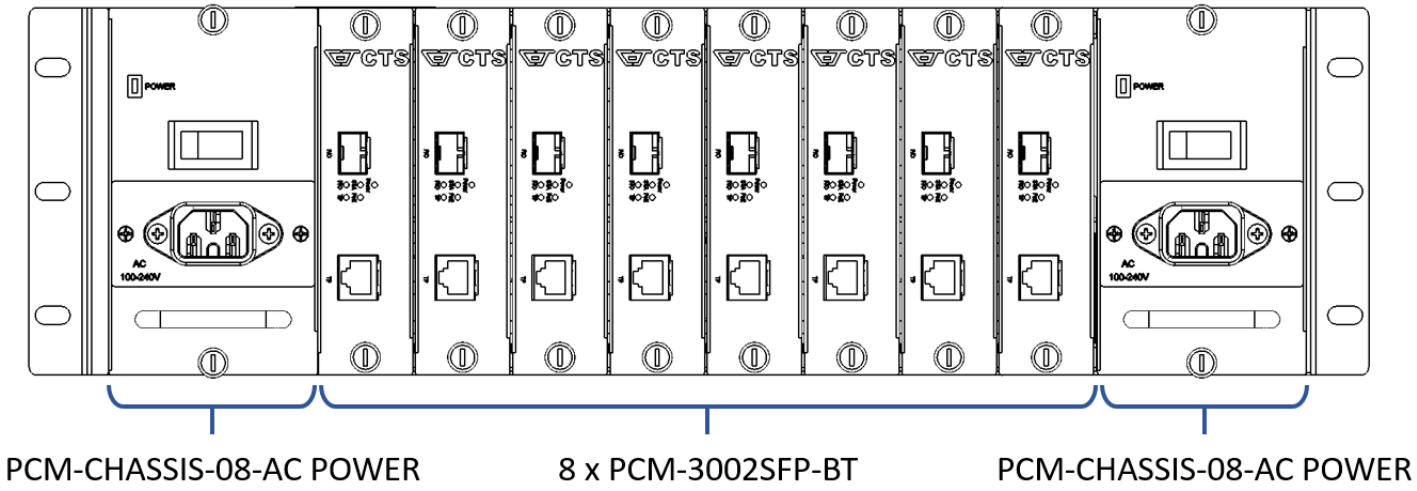


Figure 1. PCM-CHASSIS-08
with 2 x PCM-CHASSIS-08-AC POWER and 8 x PCM-3002SFP-BT installed

PCM-CHASSIS-08-AC POWER: Power module for the PCM-CHASSIS-08. The chassis supports up to two power modules for redundancy. Refer to Section 1.2 for details.

PCM-3002SFP-BT: Media converter module for the PCM-CHASSIS-08. The chassis supports up to eight media converter modules. Refer to Section 1.3 for details.

1.1.2 Technical Specification

Slots	8 x media converter module (PCM-3002SFP-BT), 2 x power module (PCM-CHASSIS-08-AC POWER)
Operation Temperature	-10˚C ~60˚C
Storage Temperature	-20˚C ~70˚C
Humidity	5% ~ 90% RH, non-condensing
Power Input	100~240VAC, 50/60Hz (via PCM-CHASSIS-08-AC POWER)
Power Consumption	Full-load < 292W (996 BTU/h), including PoE load
Max. PoE output budget	100~240V AC @ 50˚C : 240W 200~240V AC @ 60˚C : 240W 110V AC @ 60˚C : 230W 100V AC @ 60˚C : 200W
Dimension	440 x 200 x 132 mm (W x D x H)
Weight	4.25 Kg (without power and converter module)
Certifications	CE/FCC Class A, VCCI, UKCA, RCM, RoHS 2.0

1.2 The PCM-CHASSIS-08-AC POWER

The PCM-CHASSIS-08-AC POWER is the dedicated power module for the PCM-CHASSIS-08. The chassis supports up to two power modules, enabling a redundant power system that ensures uninterrupted operation even if one module fails. Each module connects to a standard 100~240V AC power source (50/60Hz, 1.5A) and supports hot-swapping for maintenance without affecting system performance.

1.2.1 Front Panel

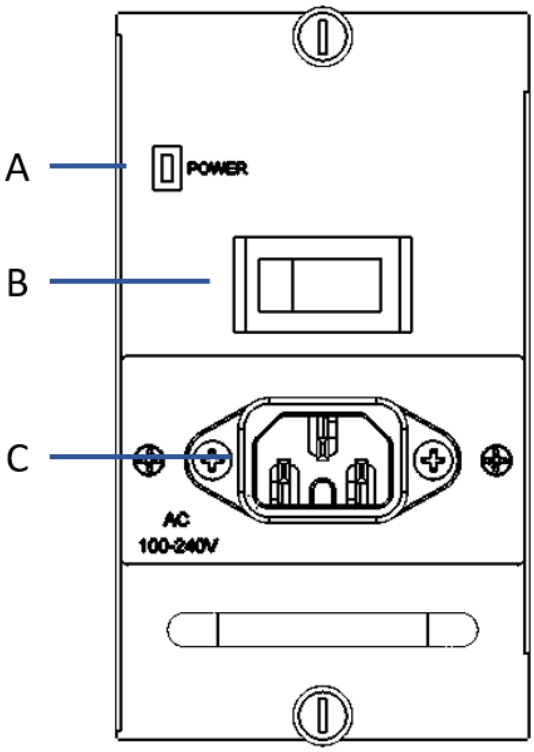


Figure 2. Front panel of PCM-CHASSIS-08-AC POWER

The interfaces on the front panel of the PCM-CHASSIS-08-AC POWER are described below:

A. Power LED: Indicates the status of power module.

B. Power Switch: Turns the power module on or off.

C. Connector: Connects to an AC 100~240V, 50/60Hz, 1.5A power source via a power cord.

1.2.2 Technical Specification

Power Input	100~240VAC, 50/60Hz, 1.5A
Operation Temperature	-10˚C ~60˚C
Storage Temperature	-20˚C ~70˚C
Humidity	5% ~ 90% RH, non-condensing
Dimension	75 x 181 x 132 mm (W x D x H)
Weight	2.0 Kg
Certifications	CE/FCC Class A, VCCI, UKCA, RCM, RoHS 2.0

1.3 The PCM-3002SFP-BT

The PCM-3002SFP-BT is a media converter module for the PCM-CHASSIS-08, offering PoE support and versatile network connectivity. The module includes one SFP slot for fiber-optic connections and one RJ-45 port for copper Ethernet. The PCM-3002SFP-BT is designed to be hot-swappable, allowing for easy installation and maintenance within the chassis.

1.3.1 Front Panel and Rear Panel

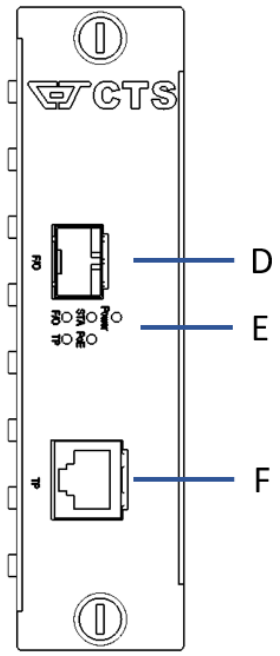


Figure 3. Front panel of PCM-3002SFP-BT

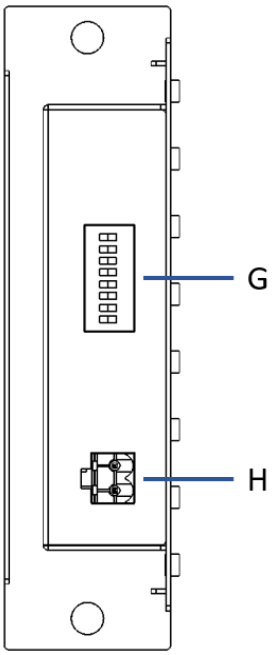


Figure 4. Rear panel of PCM-3002SFP-BT

The interfaces on the panel of the PCM-3002SFP-BT are described below:

D. 1 x 1000/100Base-X SFP slot

E. LEDs

- Includes Power, Status, PoE, F/O (Link/Act/Speed) and TP (Link/Act/Speed). For more details, please refer to Section 1.4 LED Definitions.

F. 1 x 1000/100/10Base-T RJ-45 port

G. DIP Switch: Indicates the status of power module. Refer to Section 1.3.2 for details.

H. Chassis Connector: Connects the PCM-3002SFP-BT to PCM-CHASSIS-08, providing power.

1.3.2 DIP Switch Setting

The default setting for all Pin is ON.

Pin NO.	Function	OFF / Down	ON / Up
1	TP Auto-Negotiation	Manual	Auto
2	TP Speed	100Mbps	1000Mbps
3	Fiber Mode	Force	Auto
4	Fiber Speed	100Mbps	1000Mbps
5	Link Alarm	Enabled	Disabled
6	Data-diode	Enabled	Disabled
7	Data-diode Direction	Block fiber to TP port direction	Block TP to fiber port direction
8	PSE Auto Power Off (PAPO)	Enabled	Disabled

NOTE:

1. Pin 2 can only be activated when Pin 1 is in the OFF position.
2. Pin 4 can only be activated when Pin 3 is in the OFF position.
3. Pin 7 can only be activated when Pin 6 is in the OFF position.
4. Pin 7 can determine the blocking direction of Data-diode when Pin 6 is in the OFF position.
5. Pin 8 (PSE Auto Power Off) can only be activated when Pin 5 (Link Alarm) is in the OFF position. The PAPO function only works as the Link Alarm function is enabled.
6. **Link Alarm:**
   (1) When the fiber link goes down, the RJ-45 interface will be automatically shut down.
   (2) When the fiber link is restored, the RJ-45 connection will automatically be reactivated.
   (3) When the RJ-45 link goes down, the Fiber interface will be automatically shut down.
   (4) When the RJ-45 link is restored, the Fiber connection will automatically be reactivated.
7. **PSE Auto Power Off (PAPO):**
   (1) When the fiber link goes down, the PoE output on the RJ-45 interface will be automatically shut down. Once the fiber link is restored, the PoE output will be reactivated.

1.3.3 Technical Specification

Standards		IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX/FX IEEE 802.3ab 1000Base-T IEEE 802.3z 1000Base-X IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet + IEEE 802.3bt Power over Ethernet ++
Interface		1 x 100/1000M SFP Slot 1 x 10/100/1000M RJ-45 with 802.3af/at/bt PoE injector
LED		Power, Status, TP Link/Act/Speed, F/O Link/Act/Speed, PoE
Power Input		54 VDC
Max. PoE Output		90W
Power Consumption		Full-load < 95W (324 BTU/hr), under BT 90W loading
Weight		270 g
Dimensions		34 x 94 x 132 mm (W x D x H)
Operation Temperature		-10˚C ~ 60˚C
Storage Temperature		-20˚C ~ 70˚C
Humidity		5%~90% RH, Non-Condensing
Certification		CE/FCC Class A, VCCI, UKCA, RCM, RoHS 2.0
Media	**TP**	EIA/TIA-568 CAT 5e, 1000M
	Fiber	50/125 or 62.5/125μm multi-mode

2

Installation

To properly install the **PCM-CHASSIS-08**, please follow the procedures listed below. These procedures will be described in detail in the following sections.

- Installation Requirements
- Checking the Package Contents
- Installing the PCM-3002SFP-BT Media Converter Module
- Installing the PCM-CHASSIS-08
- Installing and Removing SFP Module
- Connecting the PCM-3002SFP-BT Media Converter Module to Network
- Installing the PCM-CHASSIS-08-AC POWER Power Module
- Power on the PCM-CHASSIS-08

2.1 Installation Requirements

Basic requirements for installation are as follows:

- Environmental conditions
  - Two power outlets (one for primary power and one for redundant power)
  - Proper ventilation
  - Proper isolation to electrical noise, radio, etc.
  - UTP cables should not run in the same duct with power and phone line cables
- Required PCM-3002SFP-BT slide-in media converter module.
- Required PCM-CHASSIS-08-AC POWER power module.
- Required SFP Transceivers and Fiber or UTP cables
- Redundant power supply
- Rack mounting tools

2.2 Checking the Package Contents

Unpack the package carefully and check the package contents. The package should contain the following items:

- PCM-CHASSIS-08 / PCM-CHASSIS-08-1A / PCM-CHASSIS-08-2A package
  - PCM-CHASSIS-08 media converter chassis x 1
  - Quick Guide x 1 (with QR code on it)
  - Rubber foot x 4
- PCM-3002SFP-BT package
  - PCM-3002SFP-BT media converter module x 1
  - Quick Guide x 1 (with QR code on it)
- PCM-CHASSIS-08-AC POWER package
  - PCM-CHASSIS-08-AC POWER power module x 1
  - Power Cord x 1

If any of the above items is missing or damaged, please contact your local sales representative for support or replacement.

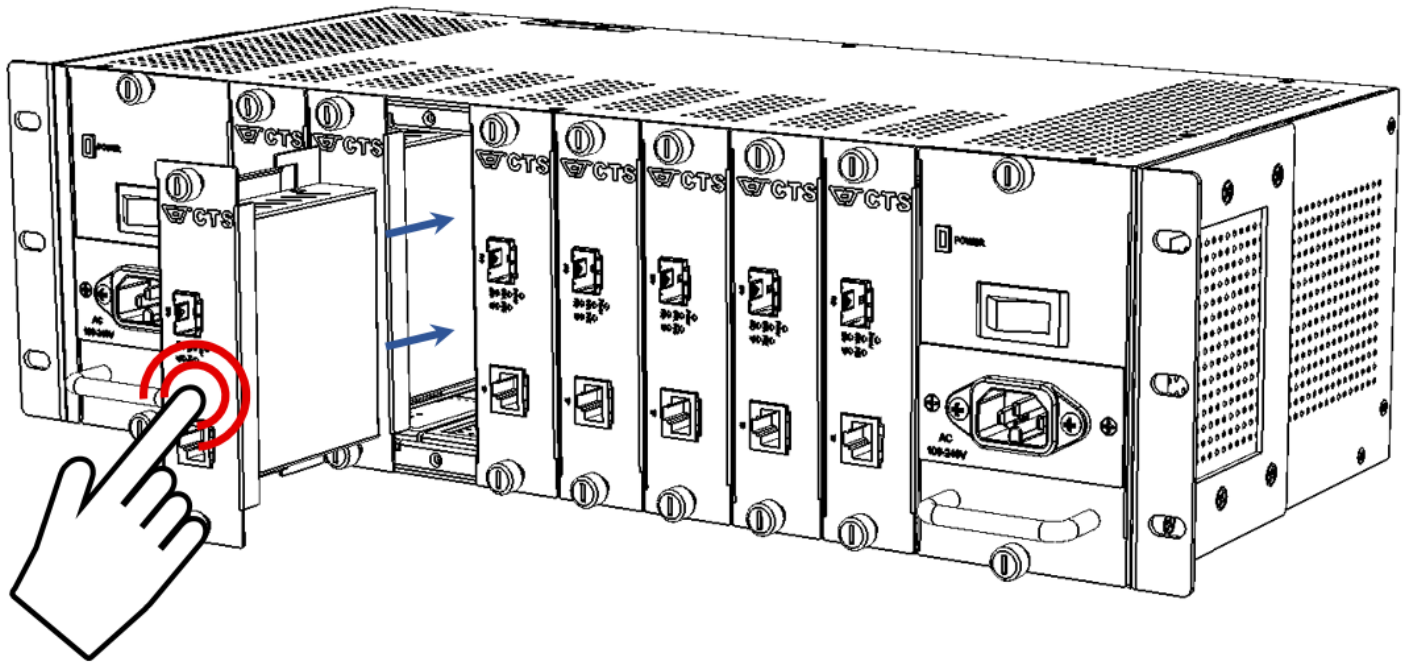
2.3 Installing PCM-3002SFP-BT

CAUTION

To prevent any damage or failure of the PCM-3002SFP-BT, please wear a grounding device and observe electrostatic discharge precautions before installing into the PCM-CHASSIS-08.

Follow the guidelines to install the media converter modules:

1. Plan the PCM-3002SFP-BT modules slot positions.
   - All slots are identical
   - PCM-3002SFP-BT media converter module can be installed into any slots.
2. Remove the protective plate from selected installation slot, if present.
3. Insert the PCM-3002SFP-BT module carefully into the selected slot.
   - Apply pressure to the lower-middle of the module's front panel (just above the RJ-45 port) to **ensure it slides straight into the tracks**. Avoid inserting the module at an angle, as this may prevent a proper connection.
   - Make sure that the PCM-3002SFP-BT module is firmly connected with the middle plane connector.
4. Fix the fastener screw.
5. Repeat steps 2 to 4 for all the PCM-3002SFP-BT modules.



2.4 Installing the PCM-CHASSIS-08

CAUTION

To prevent any damage or failure of the PCM-CHASSIS-08 and PCM-3002SFP-BT media converter modules, do not block the ventilation holes of the PCM-CHASSIS-08.

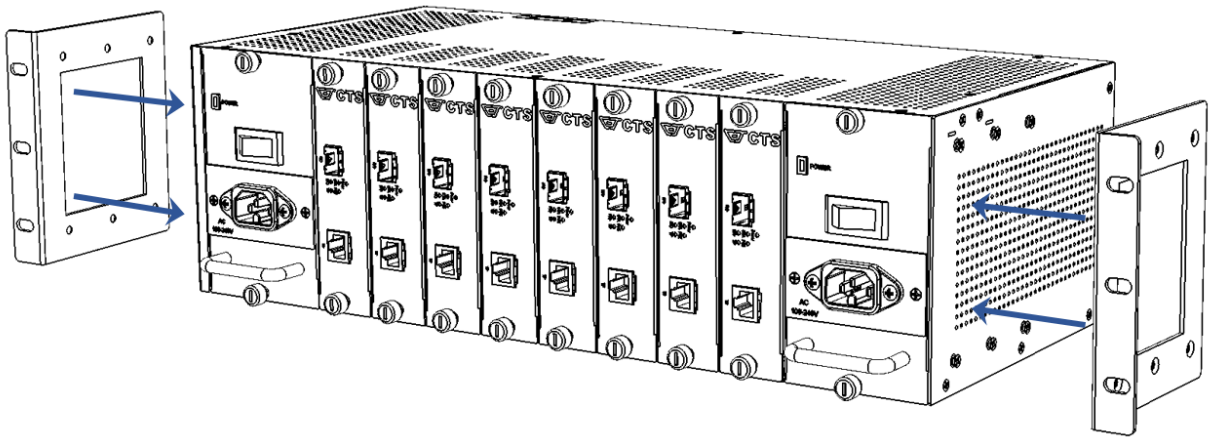
2.4.1 Standard 19-inch Rack Installation

CAUTION

Please mount the PCM-CHASSIS-08 firmly in rack otherwise the PCM-CHASSIS-08 may fall and cause system damage and possible injury to personnel.

Follow the guidelines to mount the PCM-CHASSIS-08 in rack:

1. Plan the PCM-CHASSIS-08 rack positions.
2. Fix both mounting brackets into the selected mounting rail position.



3. Align the PCM-CHASSIS-08 with mounting bracket into the selected mounting rail position.
4. Fix the PCM-CHASSIS-08 with mounting brackets into the selected mounting rail position carefully and firmly.

2.4.2 Desk Top Installation

1. Plan the PCM-CHASSIS-08 desk top position.
2. Place the PCM-CHASSIS-08 on a well ventilated, flat and firmly desk.

2.5 Installing and Removing SFP Modules

2.5.1 Installing SFP Modules in PCM-3002SFP-BT

To connect the fiber transceiver and LC cable, please refer to the following guidelines:

1. Position the SFP transceiver with the handle on top.
2. Locate the triangular marking in the slot and alin it with the bottom of the transceiver.
3. Insert the SFP transceiver into the slot until it clicks into place.
4. Make sure the module is seated correctly before sliding the module into the slot. A click sounds when it is locked in place.

Note: *If you are attaching fiber optic cables to the transceiver, continue with the following step. Otherwise, repeat the previous steps to install the remaining SFP transceivers in the device.*

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1. Remove the protective plug from the SFP transceiver.

Note: *Do not remove the dust plug from the transceiver if you are not installing the fiber optic cable at this time. The dust plug protects hardware from dust contamination.*

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2. Insert the fiber cable into the transceiver. The connector snaps into place and locks.

3. Repeat the previous procedures to install any additional SFP transceivers in the PCM-3002SFP-BT. The fiber port is now set up.

2.5.2 Removing SFP Modules from PCM-3002SFP-BT

To disconnect an LC connector, please refer to the following guidelines:

1. Press down and hold the locking clips on the upper side of the optic cable.
2. Pull the optic cable out to release it from the transceiver.
3. Hold the handle on the transceiver and pull the transceiver out of the slot.

2.6 Connecting the PCM-3002SFP-BT media converter module to Network

1. Attach fiber cable from the Converter to the fiber network.
2. Attach a UTP cable from the 10/100/1000Base-T network to the RJ-45 port on the PCM-3002SFP-BT media converter module.

2.7 Installing the PCM-CHASSIS-08-AC POWER power module

CAUTION: SHOCK HAZARD

The PCM-CHASSIS-08 supports hot-swappable power modules (PCM-CHASSIS-08-AC POWER) and may operate with two active power sources.
Removing a single power module does not interrupt system operation.

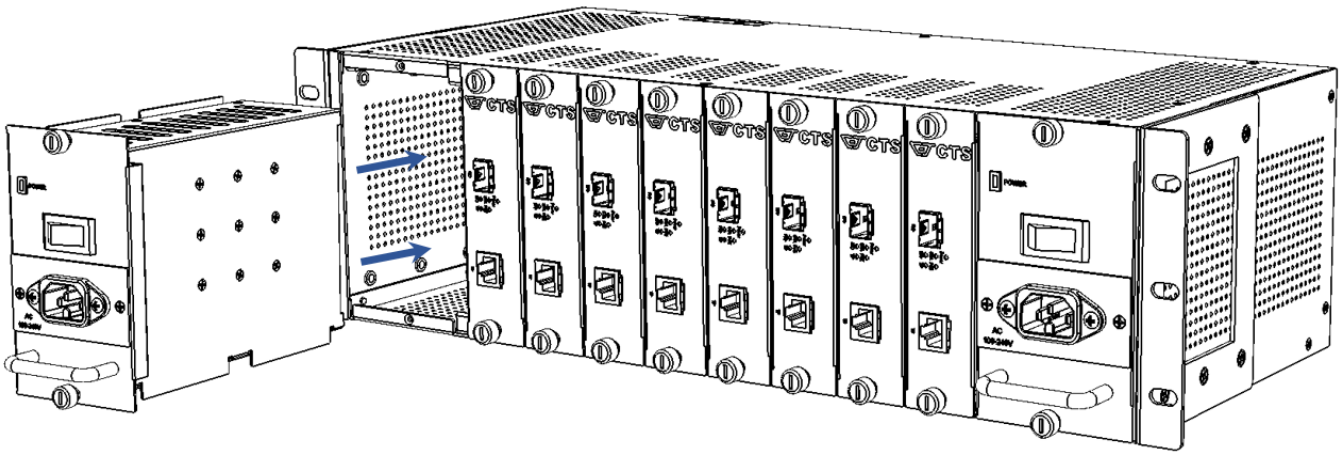
To avoid shock hazard:

- **Do NOT touch internal connectors or exposed pins**
- **Do NOT connect power source to the PCM-CHASSIS-08-AC POWER before inserting it into the PCM-CHASSIS-08.**
- **Always ensure the power switch on the PCM-CHASSIS-08-AC POWER is turned OFF before inserting into PCM-CHASSIS-08**

Inappropriate operation may cause system damage, possible injury, or casualty.

Follow the guidelines to install the PCM-CHASSIS-08-AC POWER modules:

1. Remove the protective plate from selected installation slot, if present.
2. Insert PCM-CHASSIS-08-AC POWER module carefully into the slot. **Ensure the power switch of the module being installed is turned off.**
    - Make sure that the PCM-CHASSIS-08-AC POWER module is firmly connected with the middle plane connector.



3. Fix the fastener screw.
4. Repeat steps 1 to 3 for another PCM-CHASSIS-08-AC POWER module.

NOTE:

1. The PCM-CHASSIS-08-AC POWER power module is hot-swappable and can be installed while another power module is operating. However, before inserting a power module, ensure the power switch of the module being inserted is turned off.

2.8 Power on the PCM-CHASSIS-08

Follow the guidelines to power on PCM-CHASSIS-08:

1. Check the power outlet.
2. Connect the power cord to the outlet
3. Turn on the power source and the power switch of the **PCM-CHASSIS-08-AC POWER** power module.
4. Verify the status of PCM-CHASSIS-08
5. Ensure the Power LED is on.

3

Operation

The PCM-CHASSIS-08 is easy to operate; no special training is required. However, customers may perform local or remote status monitor through LED status.

3.1 LED Status

The Chassis is Plug & Play compliant. The real-time operational status can be monitored through a set of LED indicators located on the PCM-CHASSIS-08-AC POWER and PCM-3002SFP-BT.

3.1.1 LED of PCM-CHASSIS-08-AC POWER

LED	Color	Operation
Power	OFF	The power module is not available or works abnormally
	Green	The power module is available and operating normally.

3.1.2 LED of PCM-3002SFP-BT

LED	Color	Operation
Power	OFF	Device is powered down or works abnormally.
	Green	Lit when the power is operating normally.
Status	Green	Both TP and F/O links are up.
	Orange	TP or F/O link is down.
PoE	OFF	The port is not delivering power to powered device.
	Green	**Lit** when the port is providing PoE to remote powered device.
		Blinks when the PoE function is experiencing issues, such as: the input voltage being too low or too high, the PoE PD output being short-circuited, or the current exceeding power budget.
TP (Link/Act/Speed)	OFF	No link is established.
	Green	**Lit** when 100Mbps or 10Mbps link is established.
		Blinks when the port is receiving and transmitting data at the speed of 100Mbps or 10Mbps
	Orange	**Lit** when 1000Mbps link is established.
		Blinks when the port is receiving and transmitting data at the speed of 1000Mbps.
F/O (Link/Act/Speed)	OFF	No link is established.
	Green	**Lit** when 100Mbps link is established.
		Blinks when the port is receiving and transmitting data at the speed of 100Mbps.
	Orange	**Lit** when 1000Mbps link is established.
		Blinks when the port is receiving and transmitting data at the speed of 1000Mbps.

4

Maintenance

PCM-CHASSIS-08 is easy to maintain, refer to the following sections when problem occur.

4.1 Fault Identification

Fault identification can help users quickly locate the problem and take proper actions to solve the problems.

4.1.1 Local Check

Check all CPC-CHASSIS-08 LED status and cable connections.

- When the whole system fails to function,

    1. Check Power LED status
    2. Check Power connection
    3. Reset PCM-CHASSIS-08 power

- When certain network link fails to function,

    1. Locate related PCM-3002SFP-BT media converter modules
    2. Check the connection between PCM-3002SFP-BT and the middle plane.
    3. Check the Power LED of PCM-3002SFP-BT module.
    4. Check the TP and F/O LED of PCM-3002SFP-BT module.
    5. Check UTP connection between the PCM-3002SFP-BT modules and related device.
    6. Check Fiber connection between the PCM-3002SFP-BT modules and related device.
    7. Reset PCM-3002SFP-BT media converter module.

4.2 Hardware Replacement Procedures

CAUTION

The PCM-CHASSIS-08 contains no user-serviceable parts.

Only hot-swappable module replacement is supported. Internal service or disassembly is prohibited.

DO NOT, UNDER ANY CIRCUMSTANCES, open and attempt to repair it. Failure to observe this warning could result in personal injury or death from electrical shock.

Failure to observe the above warning will immediately void any Warranty.

Replace PCM-3002SFP-BT Media Converter Modules

Procedure:

1. Remove the existing PCM-3002SFP-BT media converter module
2. Insert new PCM-3002SFP-BT media converter module carefully into the slot
   - ✓ Make sure that the PCM-3002SFP-BT media converter module is firmly connected with the middle plane connector.
3. Fix the fastener screw.

Replace PCM-CHASSIS-08-AC POWER Power Module

Procedure:

1. Remove the existing PCM-CHASSIS-08-AC POWER Power Module
   - ✓ Ensure that the power switch of the module being removed is turned off before removing.
2. Insert new PCM-CHASSIS-08-AC POWER Power Module carefully into the slot
   - ✓ Ensure that the power switch of the module being installed is turned off before installation.
   - ✓ Make sure that the PCM-CHASSIS-08-AC POWER Power Module is firmly connected with the middle plane connector.
3. Fix the fastener screw.

18F-6, No.79, Sec.1, Xintai 5th Rd.,
XiZhi Dist., New Taipei City 221, Taiwan(R.O.C)
Tel: +886-2-2698-9661
Fax: +886-2-2698-9662
Dir.Line:+886-2-2698-9201
www.ctsystem.com