



CCD-POE Series (LC/ST/SC)

**10/100/1000Base-TX, 2.5G & 10G Multi-Gigabit to
1000Base-X / 2.5G / 10GBASE-R**

PoE (PSE) Media Converter User Manual

Brief introduction

This product supports IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3z (1G), IEEE802.3bz (2.5G), SFF-8431 / 10GBASE-R(10G) and IEEE802.3af/at/bt PoE PSE applications. It converts copper-based Ethernet signals into optical signals for fibre connections. The internal AC/DC power supply and PSE controller can output up to 30Watts (802.3at) or 15.4Watts (802.3af) per port into CAT twisted-pair cable, rising to 90Watts (802.3bt) on certain models.

Items Included

- 1 x PoE (PSE) Media Converter
- 1 x Power Cable
- 1 x User Manual
- 1 x SFP / SFP+ optical module (SFP models only)

Installation

RJ-45 Interface

The maximum supported length for Category twisted-pair cabling is 100 metres (330 feet). CAT5e supports data rates of up to 1 Gbps and IEEE 802.3at PoE. CAT6 or CAT6A cabling is recommended for 2.5 Gbps and 10 Gbps connections, and for IEEE 802.3bt high-power PoE applications.

Fibre Interface

The duplex fibre interface uses two connections: transmit (TX) and receive (RX). When connecting two optical transceivers or connecting the media converter to a switch with a duplex fibre interface, cross-connect the fibres so that TX at one end connects to RX at the other, and RX connects to TX. For a single-fibre transceiver module, connect the fibre directly between the two compatible modules.

SFP / SFP+ Interface

SFP models support removable SFP (1 Gbps or 2.5 Gbps) and SFP+ (10 Gbps) optical modules with LC connectors. Insert the module firmly into the SFP cage until it locks into place, then connect the fibre cable. The modules at both ends of the link must have matching data rates, wavelengths and fibre types.

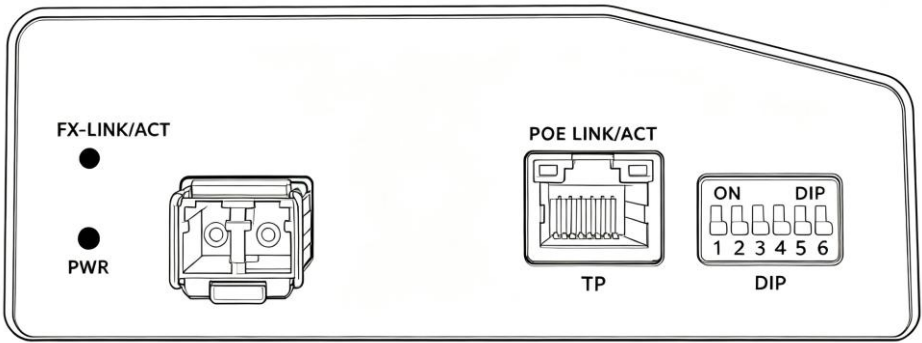
Power Interface

Connect the supplied AC power cable to the IEC C14 inlet on the rear of the media converter. Set the adjacent rocker switch to ON (I) to power on the unit, or to OFF (O) to disconnect power. Always switch the unit OFF before inserting or removing an SFP or SFP+ module.

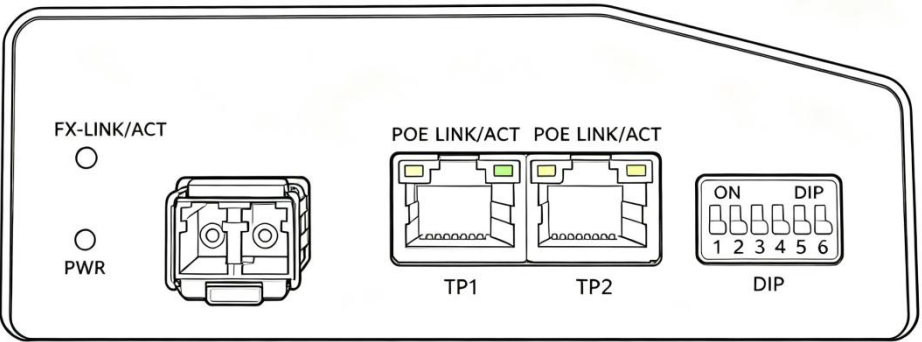
Connection

Connect the network device to the RJ-45 port using twisted-pair cable, then connect the multimode or single-mode fibre to the SC, ST or LC (SFP) interface. Connect the AC power cable and switch on the unit.

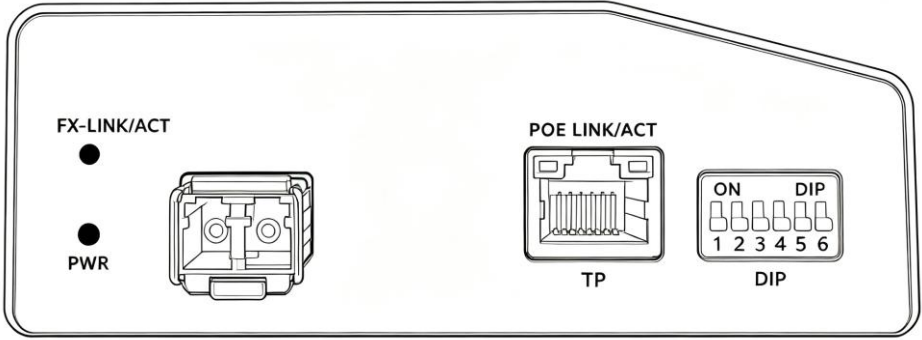
Front Panel — All Models



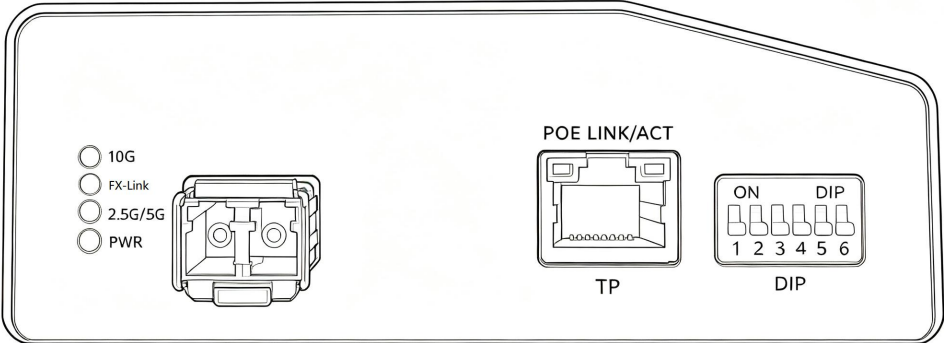
CCD-POE-1G-1xx series



CCD-POE-1G-2xx series



CCD-POE-2.5G-1xx series



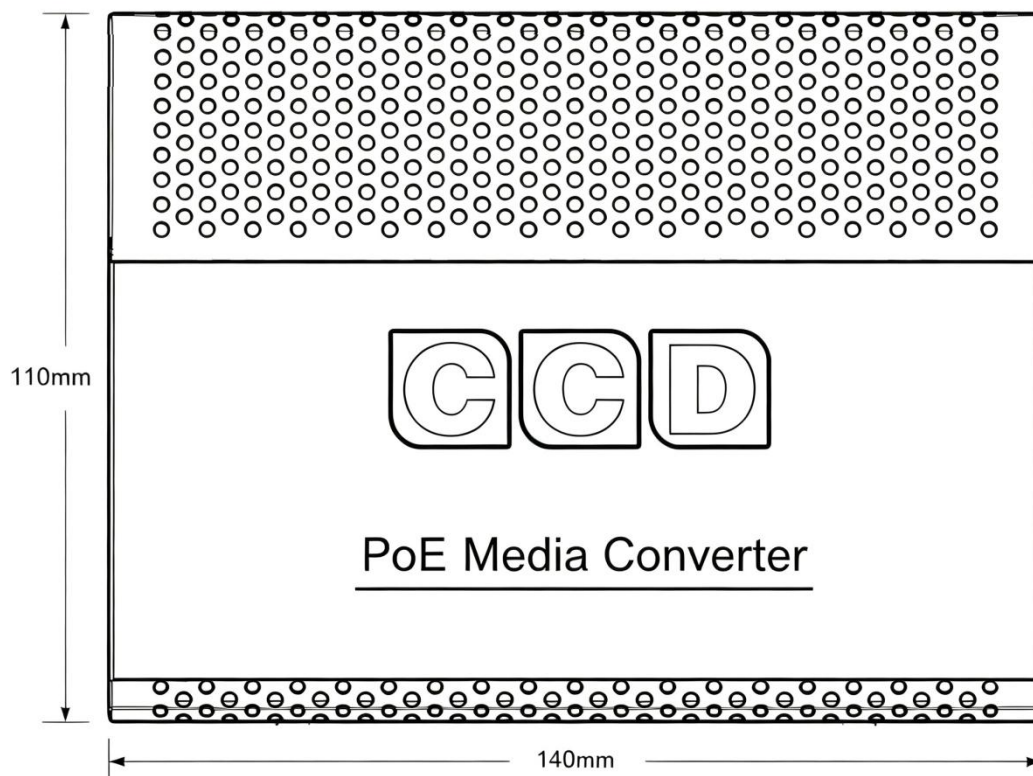
CCD-POE-10G-1xx series

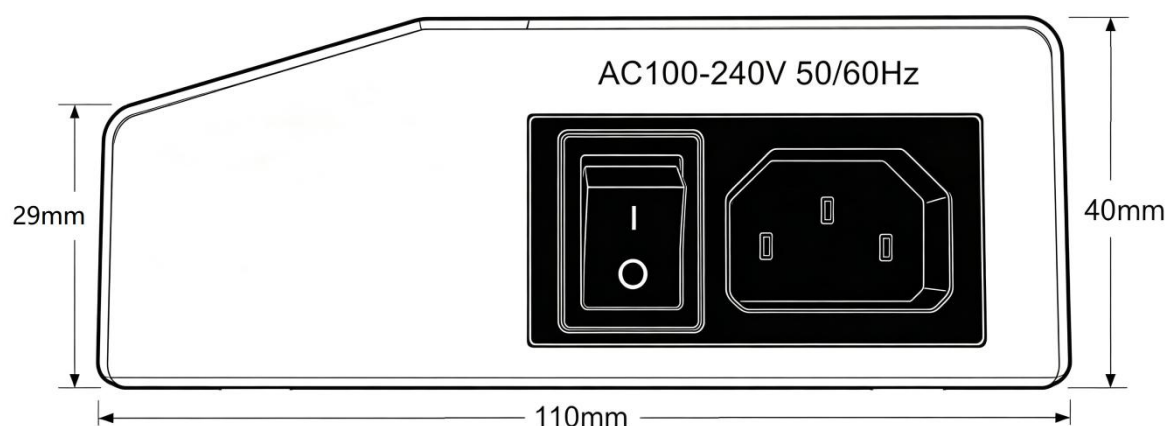
LED Indicators

PWR	ON when the power supply is turned on
Link/Act (FX)	ON when fibre-optic cable is connected, with no data transmission
	Blinking while receiving data
Link/Act (TP)	ON when twisted-pair cable is connected, with no data transmission
	Blinking while receiving data
10G	ON when Copper speed is 10G
	OFF when 10G not available
2.5G/5G	ON Copper speed 2.5Gbps / Blinking: 5Gbps
	OFF when 2.5G/5G not available
POE	ON when connected to a PD load
	OFF when no load or wrong load
	Blinking when load is abnormal

The 1 Gbps models include PWR, FX-LNK/ACT, TX-LNK/ACT and POE LEDs. The 2.5G, 5G and 10G models also include 2.5G/5G and 10G speed indicator LEDs.

Dimensions (Unit : mm)





Introduction to DIP Switches

CCD-POE-1G-1xx series

NO.	Function	Status	Specification
SW1-1	FX Reset	OFF	FX Reset Disabled
		ON	FX Reset Enabled
SW1-2	FX Speed	OFF	FX 1000M (Default)
		ON	FX 100M
SW1-3	POE Shutdown	OFF	POE Shutdown Disabled
		ON	POE Shutdown Enabled
SW1-4	LFP	OFF	LFP Disabled
		ON	LFP Enabled
SW1-5	ALS (SFP optical module only)	OFF	ALS Disabled
		ON	ALS Enabled
SW1-6	AI POE	OFF	AI POE Disabled
		ON	AI POE Enabled

FX Reset: When enabled, the unit power-cycles after the fibre link is lost.

AI PoE: When enabled, PoE power restarts if no data is received for two minutes.

ALS: Supported only by SFP optical modules with DDM; fixed 1×9 optical modules do not support this function.

CCD-POE-1G-2xx series

NO.	Function	Status	Specification
SW1-1	FX Reset	OFF	FX Reset Disabled
		ON	FX Reset Enabled
SW1-2	FX Speed	OFF	FX 1000M (Default)
		ON	FX 100M
SW1-3	POE Shutdown	OFF	POE Shutdown Disabled
		ON	POE Shutdown Enabled
SW1-4	LFP	OFF	LFP Disabled
		ON	LFP Enabled
SW1-5	ALS (SFP optical module only)	OFF	ALS Disabled
		ON	ALS Enabled
SW1-6	AI POE	OFF	AI POE Disabled
		ON	AI POE Enabled

FX Reset: When enabled, the unit power-cycles after the fibre link is lost.

AI PoE: When enabled, PoE power restarts if no data is received for two minutes.

ALS: Supported only by SFP optical modules with DDM; fixed 1×9 optical modules do not support this function.

CCD-POE-2.5G-1xx series

NO.	Function	Status	Specification
SW1-1	FX Reset	OFF	FX Reset Disabled
		ON	FX Reset Enabled
SW1-2	FX Speed	OFF	FX 2.5G (Default)
		ON	FX 1000M
SW1-3	POE Shutdown	OFF	POE Shutdown Disabled
		ON	POE Shutdown Enabled
SW1-4	LFP	OFF	LFP Disabled
		ON	LFP Enabled
SW1-5	ALS	OFF	ALS Disabled
		ON	ALS Enabled
SW1-6	AI POE	OFF	AI POE Disabled
		ON	AI POE Enabled

FX Reset: When enabled, the unit power-cycles after the fibre link is lost.

AI PoE: When enabled, PoE power restarts if no data is received for two minutes.

ALS: Supported only by SFP optical modules with DDM;

CCD-POE-10G-1xx series

NO.	Function	Status	Specification
SW1-1	FX Reset	OFF	FX Reset Disabled
		ON	FX Reset Enabled
SW1-2	FX Speed	OFF	FX Speed Follow TX Speed
		ON	FX Speed Fixed to 10G
SW1-3	POE Shutdown	OFF	POE Shutdown Disabled
		ON	POE Shutdown Enabled
SW1-4	LFP	OFF	LFP Disabled
		ON	LFP Enabled
SW1-5	ALS	OFF	ALS Disabled
		ON	ALS Enabled
SW1-6	AI POE	OFF	AI POE Disabled
		ON	AI POE Enabled

FX Reset: When enabled, the unit power-cycles after the fibre link is lost.

AI PoE: When enabled, PoE power restarts if no data is received for two minutes.

ALS: Supported only by SFP+ optical modules with DDM;

Model Configurations

Option	Available Configurations
Speeds	10/100/1000Mbps (1G), 2.5Gbps, 10Gbps
TP ports	1 x RJ-45 or 2 x RJ-45
PoE	802.3af/at: 30W (1–2 ports) or 802.3bt: 90W (1–2 ports)
Optics	SFP / SFP+ (LC) Slot, or Fixed SC / ST (1Gbps Models Only)
Fibre	Multi-Mode (MM) or Single-Mode (SM)
Wavelength	850nm, 1310nm, 1550nm
Distance	Up to 550m MM (1G) / 300m MM (10G); up to 80km SM

Maximum distance varies by transceiver module and wavelength.

Main Features

1. IEEE 802.3i, 802.3u, 802.3ab, and 802.3z compliant.
2. IEEE 802.3bz (2.5G) & SFF-8431 / 10GBASE-R (select models).
3. IEEE 802.3af/at PoE PSE; 802.3bt on select models.
4. IEEE 802.3x full-duplex & back-pressure half-duplex.
5. 1 Mbit buffer memory with store-and-forward.
6. Auto-Negotiation and Auto-MDI/MDI-X support.
7. Integrated Link Fault Pass-Through (LFPT).
8. Available in 1 x RJ-45 or 2 x RJ-45 options.

Technical Parameters

1. Interfaces: 1 or 2 RJ-45, 1 SFP/SFP+ (LC) or fixed SC/ST (1G only), 1 AC power.
2. Duplex Modes: Full-duplex and half-duplex.
3. Power Input: 100–240V AC, 50/60Hz.
4. Power Output: DC 48V–52V.
5. PoE Budget: Up to 30W/port (802.3af/at); up to 90W/port (802.3bt, CCD-POE-1G-296 model).
6. Operating Temp: 0°C to 50°C.
7. Operating Humidity: 5%–90% non-condensing.
8. Ethernet Cabling: Cat5e minimum (Cat6/6A recommended for 2.5G, 10G, and 802.3bt).
9. Fiber Media: Multi-Mode (50/125, 62.5/125, 100/140μm); Single-Mode (8.3/125, 8.7/125, 9/125μm).
10. Wavelengths: 850nm, 1310nm, 1550nm.
11. Dimensions: 140 mm × 110 mm × 40 mm (L × W × H).

Installation

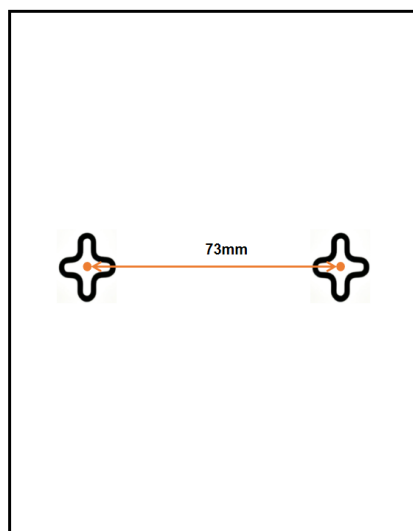
Wall Mount Installation

Installation steps are as follows:

STEP 1 : Measure 73mm center-to-center between the hanging holes.

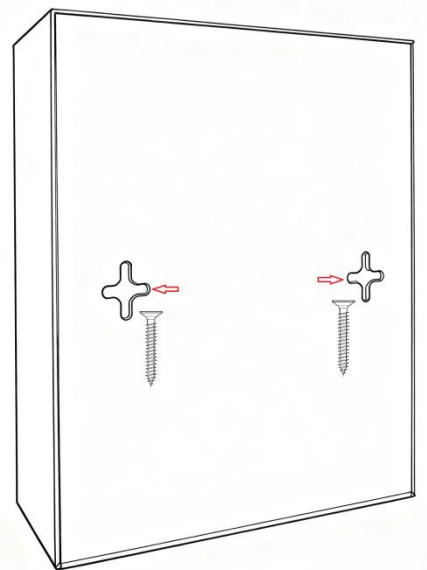


STEP 2 : Mark the mounting hole locations on the wall.



STEP 3 : Drill holes spaced **73 mm center-to-center**, insert expansion anchors, and secure the screws within the expansion anchors.

STEP 4 : Secure the media converter to the screws.



Cautions

1. Indoor use only.
2. Keep fibre dust caps fitted when unused.
3. Single-fibre transceivers must be used in pairs.
4. Do not exceed total PoE budget across both RJ-45 ports.

Trouble shooting

- **Speed Mismatch:** Ensure connected devices match port speed (10M/100M/1G/2.5G/10G).
- **High Fibre Loss:** Inspect cables, splices, and connectors for damage or dirt.
- **PD Won't Power:** Check PD wattage limits, set SW1-3 (PoE) to OFF, and use Cat6/6A for 802.3bt.
- **Fibre Link Down:** Ensure SFP modules match speed, wavelength, and fibre type, and verify TX/RX crossover.

WARNING: Do not point the media converter's fibre optic laser into your eyes.

Warranty

This product is covered by a 3-Year Warranty.

Ordering Information

Part number	RJ-45	Max PoE
CCD-POE-1G-130 (LC/SC/ST)	1	30W
CCD-POE-1G-196 (LC/SC/ST)	1	90W
CCD-POE-1G-230 (LC/SC/ST)	2	30W
CCD-POE-1G-296 (LC/SC/ST)	2	90W
CCD-POE-2.5G-130 (LC)	1	30W
CCD-POE-10G-130 (LC)	1	30W
CCD-POE-10G-196 (LC)	1	90W

- The optical connector type (LC, SC, or ST) is specified at ordering.
- LC models include a removable SFP/SFP+ transceiver.
- IEEE 802.3bt (90W) PoE is exclusive to model CCD-POE-1G-296, while all other models supply up to 30W total across 1 or 2 ports.