COMMELL

DC-PD

PoE⁺ Module

User's Manual

Edition 1.81
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Packing List:

Please check the package content before you starting using the board.

1 x DC-PD-5V/12VT   or   1 x DC-PD-5V/12VR

1 x DC Output Power Cable
(OALDC-DC3/1040614)

Accessories for DC-PD-5V/12VR-02

1 x MPX-350

1 x CN_LAN Cable
(OALPOE-02/1040628)

1 x Adapter LAN Cable
(OALGLAN-A-20 / 1040617)
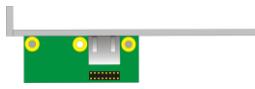
1 x Single LAN Adapter
(BADPGLAND_A / 4120007011)

Accessories for DC-PD-5V/12VR-03

1 x MPX-210D

1 x CN_LAN Cable
(OALPOE-03/1040629)

1 x Driver CD

1 x Driver CD

1. <Product Specification>

Product Description

Interface	RJ45 for connecting with PSE
	Internal 12-pin head for connecting with MPX-350 or MPX-210D
	Internal 2-pin terminal block for DC input of powered board
Accessories	OALPOE-02 and OALPOE-03 for MPX-350 or MPX-210D
	OALDC-DC3 for DC output
Dimensions (L x W)	84.05mm x 40.00mm

Operating Conditions

Power Requirement	T series DC Input voltages from 37V to 57V
	R series from Power Sourcing Equipment
Temperature	Operating within -40°C ~+85°C
	Storage within -40°C ~+85°C

Ordering Code

DC-PD-5VT	DC to DC, with Terminal Block, DC Input 37~57V, DC Output 5V / 7A
DC-PD-5VR	Compliant IEEE802.3at/af, and LTPoE++™ 90W with RJ45 connector, DC Output 5V / 7A
DC-PD-5VR-02	Same as DC-PD-5VR, with MiniPCIe MPX-350
DC-PD-5VR-03	Same as DC-PD-5VR, with MiniPCIe MPX-210D
DC-PD-12VT	DC to DC, with Terminal Block, DC Input 37~57V, DC Output 12V / 6A
DC-PD-12VR	Compliant IEEE802.3at/af, and LTPoE++™ 90W with RJ45 connector, DC Output 12V / 6A
DC-PD-12VR-02	Same as DC-PD-12VR, with MiniPCIe MPX-350
DC-PD-12VR-03	Same as DC-PD-12VR, with MiniPCIe MPX-210D

2. < Block Diagram >

2.1 <DC-PD-5V/12VR>

```
              ┌─────────────────────┐
              │   Power Sourcing    │
              │     Equipment       │
              └─────────────────────┘
                         │
                      Input
                         ▼
              ┌─────────────────────┐
              │        LAN          │
              │     Connector       │
              └─────────────────────┘
                  │            │
                  ▼            ▼
         ┌──────────┐   ┌──────────┐
         │ CN_LAN   │   │    PD    │
         │          │   │Controller│
         └──────────┘   └──────────┘
              │              │
         LAN signal      DC output
              ▼              ▼
         ┌─────────────────────┐
         │       Device        │
         └─────────────────────┘
```

2.2 <DC-PD-5V/12VT>

```
┌─────────────────┐
│   DC input      │
│   37V-57V       │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│                 │
│   54V_IN        │
│                 │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│   PD            │
│   Controller    │
└─────────────────┘
         │  DC output
         ▼
┌─────────────────┐
│                 │
│   Device        │
│                 │
└─────────────────┘
```
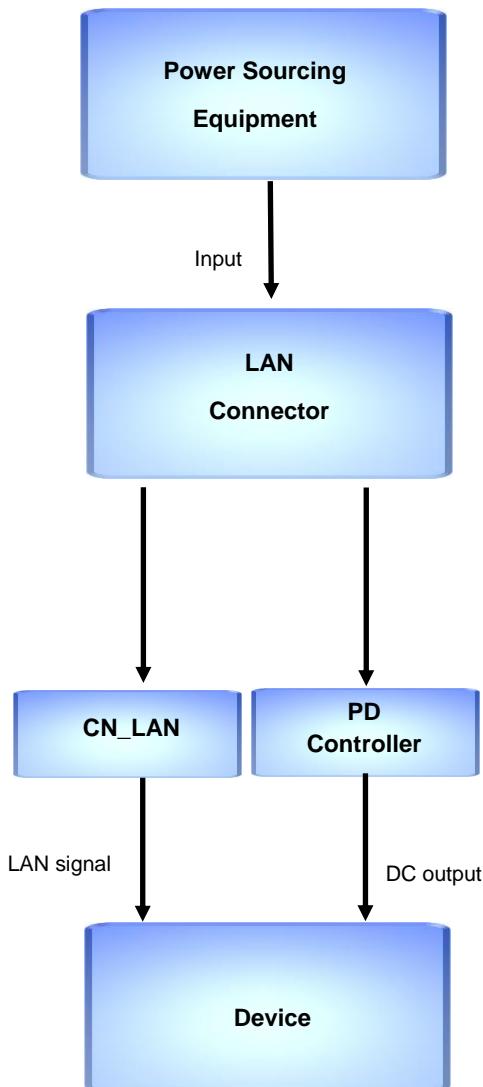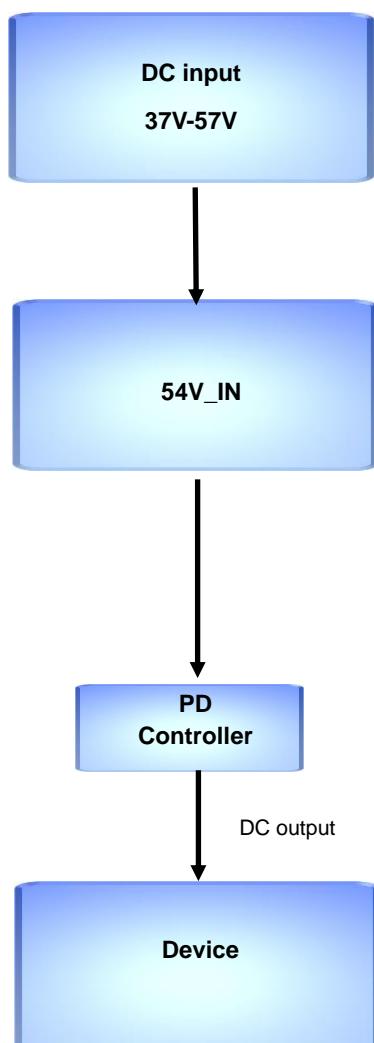
3. < Mechanical Drawing >
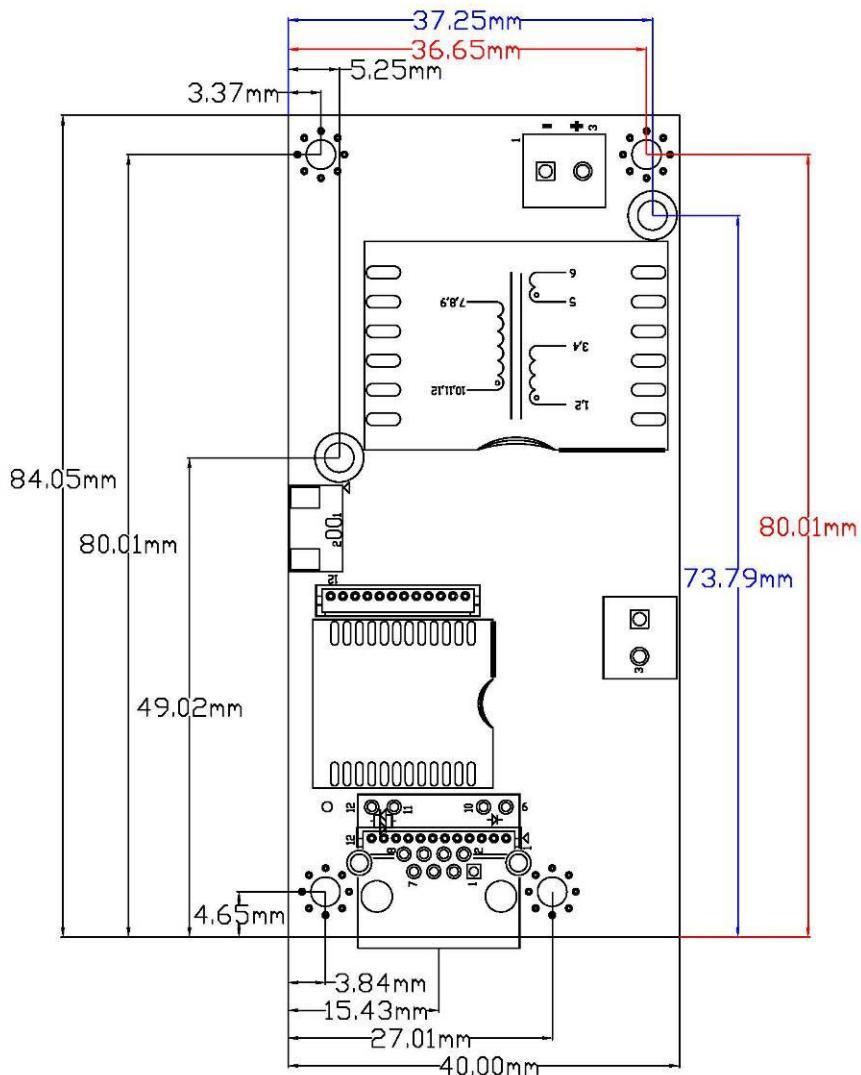
4. < Connector Location and Reference >

CN_LAN
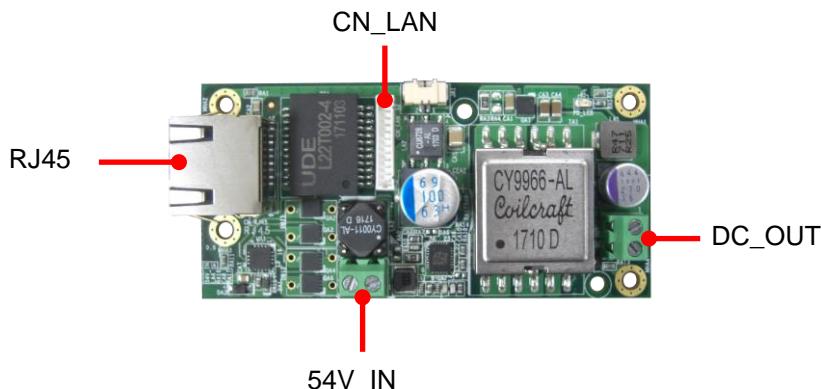
RJ45

DC_OUT

54V_IN

Connector	Function
CN_LAN	12-pin Ethernet Connector
RJ45	RJ-45 LAN Port
54V_IN	2-pin power input with Terminal Block
DC_OUT	2-pin power output with Terminal Block

4.1 <Power Input>

Note : DC input used by T series modules

Connector : 54V_IN

Pin	Description	Pin	Description
1	GND	3	Power input

1 —

3 +

4.2 <Power Output>

Connector : DC_OUT

Pin	Description	Pin	Description
1	GND	3	Power output

For DC-PD-5V , with **+5V / 7A** Output

For DC-PD-12V , with **+12V / 6A** Output
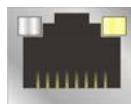
4.3 <PoE Input>

LAN Connector: RJ45

8   1

Pin	Description	Pin	Description
1	MI0+	2	MI0-
3	MI1+	4	MI2+
5	MI2-	6	MI1-
7	MI3+	8	MI3-
9	LINKLED	10	ACTLED
11	LINK100	12	LINK1000
13	GND	14	GND

12   1

Connector: CN_LAN (Part number: 53047-1210 or equivalent)

| Pin	Description	Pin	Description
1	ACTLED	2	LINK0
3	RTD0+	4	RTD0-
5	RTD1+	6	RTD1-
7	RTD2+	8	RTD2-
9	RTD3+	10	RTD3-
11	LINK1H	12	LINK1G

5. < DC-PD T-series Installation Guide >

1. Check your 54V power supply works correctly.

2. Connect 54V power supply to 54V_IN connector, and then DC_OUT is

12V if you use DC-PD-12VT

54V Power supply

12V / 6A

54V
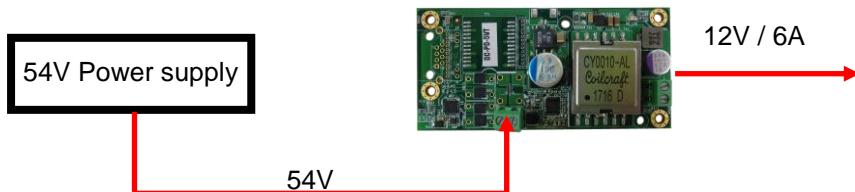
6. < DC-PD R-series Installation Guide >

1. Check your Power Sourcing Equipment (PSE) works correctly

2. Connect MPX-350 / MPX-210D to DC-PD with CN_LAN cable

(There are LAN ports in MPX-350.Put the CN_LAN cable into

CN_LAN1 or CN_LAN2, the other for LAN adapter.)

OALPOE-02 Cable   CN_LAN1   **MPX-350**

CN_LAN

CN_LAN2

LAN Adapter Cable

OALPOE-03 Cable
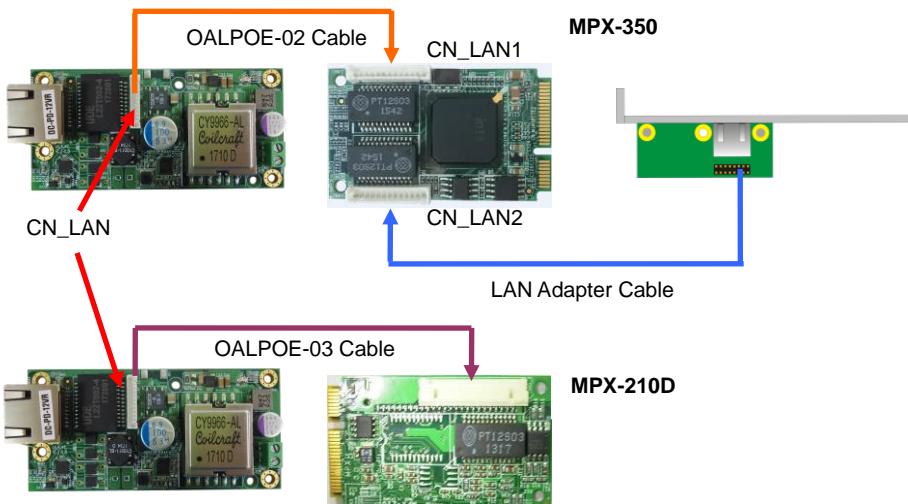
MPX-210D

3. Put MPX-350 or MPX-210D into motherboard.

4. Connect your PSE device to DC-PD with RJ45 cable, and then the

DC_OUT is 12V if you use DC-PD-12VR.

RJ45 Cable

PSE

12V / 6A

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Contact information

Any advice or comment about our products and service, or anything we can help you please don't hesitate to contact with us. We will do our best to support you for your products, projects and business.

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