# FPOE-DMG-EZW

DC12-56V Multi Gigabit Wide Temperature/Voltage to 4Pair 90Watt PoE++ Adapter



## **User's Guide**

#### **FCC Certifications**

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 his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

#### **CE Mark Warning**

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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# **Unpacking Information**

Thank you for purchasing our PoE series products. Before installation, please check that your package contains the following items.

Open the shipping cartons of the unit and carefully unpack its contents. The package should contain the following items:

#### 1. FPOE-DMG Main Unit x 1

- 2. PoE Kit x1
- 3. Inside diameter 2.1(PHY) mm DC to DC cable x1
- 4. Quick Installation Guide x 1
- 5. Warranty Card x 1

#### Hardware Overview



# Introduction

# **CERIO FPOE-DMG-EZW is a Passive type DC12-56V Multi Gigabit Wide Temperature /Voltage to 4Pair 90Watt PoE++ Adapter** supports wide range DC 12-56V input voltage. It can automatically boost and conversion to the best transmission performance PoE 56V output. And the hardware design for PoE output power safety has a max. limit of 90 Watt. For the environment only available with 12/24/37.5/48V power voltage configuration, it automatically boosted to PoE 56V output to PD device through the screw terminal block power input, it provides the best and economical solution.

# Functionality

**CERIO FPOE-DMG-EZW** is a great ideal for the application of vehicle power system. Ex. fixed or mobile batteries, solar or power engine combined independent power systems etc. When the environmental input voltage range is limited to below 55V and over 12V, the **POE-DMG-EZW** can be used to boost voltage to the best transmission performance and compatible with IEEE 802.3bt POE Class8 and backward POE 56V power level output to PD device through the network cable. It's a very convenient and economical solution. The applications include 12V or 24V or 48V battery system/solar system and automotive markets, such as 24V BUS, Railway transportation or 48V power system which needs to be converted to POE 56V power output to the powered devices, such as Multi-Gigabit POE IP cameras, POE video displays, POE wireless base stations, etc.

## Installation

#### Before Installation

**CERIO FPOE-DMG-EZW** is a great ideal for the application of vehicle power system. You can have two choices for power input methods to power your FPOE-DMG-EZW. As shown in the figure:

#### Multi Power Input:

Screw Terminal Block In (For boost voltage system)

(For PoE constant voltage input)

DC In



Note: The DC input does not have a boost function.

# Wall mounting installation

This device can be locked on the wall. (Screws are included in the package)



WALL MOUNTING



# Product Main Application (As Injector)

#### **CERIO DC12-56V Multi Gigabit Wide Temperature/Voltage to 4Pair 90Watt PoE++ Adapter** can provide both data and power for distances of up to 100 meters (328 feet) from the power source when using CAT6 or up cabling.

#### Automatic Boost:

(Boost adapter to POE Injector) • Connect power source (12-56V) to the '<u>screw</u> <u>terminal block</u>' (V+ connection +, V- connection -) in for boosted voltage to POE 56V Output.

**'Screw Terminal Block'** 



•Connect your Ethernet cable from your data source to the "Data In port".

•Connect "Power+Data" output through Ethernet cable to your PD device.



# Extra Application (As Edge POE Ethernet)

**CERIO POE-DMG-EZW** supports an additional 90Watt power extension function. By using the included POE Kit and DC to DC power cable, you can easily expand the power to a multi-port POE switch.

#### PoE Extender (Boost adapter to POE Switch)

•Connect power source (12-56V) to the '<u>screw terminal block</u>' (V+ connection +, V- connection -) in for boosted voltage to POE 56V Output. •Connect " PWR+Data IN" port on "PoE Kit " and "PWR+ Data Out" port form "DMG" with Ethernet cable.(Make sure "Power" LED of "PoE Kit " is on.) •Connect "Power OUT"DC cable on "PoE Kit " to power DC Jack of the network device .

•Connect "Data OUT" Ethernet cable on "PoE Kit" to RJ45 port of network device. (Ex. POE Switch and any POE device)



Extra application method of Boost adapter to POE SWITCH

# Extra Application (As Splitter)

**CERIO POE-DMG-EZW** can use as a boost adapter for power over Ethernet application, also can be used with CERIO POE splitter which can receive network power + data, then separate to only DC/Power output and only Ethernet/ Data output.

## DC Output Device:

#### (High - Power Splitter to DC equipment)

Connect power source (12-56V) to the '<u>screw terminal block</u> '\_(V+ connection +, V- connection -)in for boosted voltage to POE 56V Output.
Connect "PWR+DATA IN" port on "Splitter" and "PWR+ Data Out" port form "DMG" with Ethernet cable.(Make sure "Power" LED of "Splitter" is on.)
Connect "Power OUT"DC cable on "Splitter" to power DC Jack of the network device .

• Connect "Data OUT" Ethernet cable on "Splitter" to RJ45 port of network device. (Ex. Multi Giga Industrial PC and any Multi Giga DC In Device)



# **Product Specifications**

Sta	ndards & Hardware Specifications
	IEEE 802.3 10BASE-T
Standard	IEEE 802.3u 100BASE-TX
Standard	IEEE 802.3ab 1000BASE-T
	IEEE 802.3bz 2.5G/5GBASE-T
	10BASE –T: UTP Cat. 3 or up 100BASE-TX: UTP Cat. 5 or up
Network Media	1000BASE-TX: UTP Cat. 5 or up
	2.5G/5G BASE-T: UTP Cat. 5 or up
	10M/100M/1G/2.5G/5G (Half-duplex),
Data Transfer Rate	20M/200M/2G/5G/10G (Full-duplex)
Data PIN	PIN 1/2, 3/6 & 4/5, 7/8
Power PIN	PIN 1/2, 3/6 or 4/5, 7/8(Power + Data Pin)
РоЕ Туре	Passive POE
	Output: RJ45 Passive 802.3bt PoE Out
Power Interface	Input: Screw Terminal Block In (Main PWR input using
	for boost voltage system) & DC In (Extra PWR input using
	for PoE constant voltage input)
Ethernet Connector	RJ-45 x1 for Power + Data input RJ-45 x1 for Data output
	Supports ESD (Electro Static Discharge)
ESD Protection	Over Voltage protection and Short Circuit Protection
<b>F</b>	
Environmental & Mechanical Characteristics	
Power Output	4Pair 90Watt (Max)
Power Output Power Requirement	12~57V Power source
•	12~57V Power source Overall wide voltage range : DC 12 ~ 57V
•	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V
Power Requirement	$12 \sim 57V$ Power source Overall wide voltage range : DC $12 \sim 57V$ Auto booster voltage range : DC $12 \sim 55V$ (When using STB input for auto boosted voltage and
•	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V
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Power Requirement Input Voltage	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) PoE constant voltage range : DC 50~57V (When using DC Input)
Power Requirement Input Voltage Max Input Current	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) PoE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A
Power Requirement Input Voltage Max Input Current LED Indicators Operating/Storage	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) POE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A System: Power (Green)x1
Power Requirement Input Voltage Max Input Current LED Indicators Operating/Storage Temperature Operating/Storage	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) PoE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A System: Power (Green)x1 -40° to 75° C / -40° to 85° C
Power Requirement Input Voltage Max Input Current LED Indicators Operating/Storage Temperature Operating/Storage Humidity	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) PoE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A System: Power (Green)x1 -40° to 75° C / -40° to 85° C 5% to 90% non-condensing
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Power Requirement Input Voltage Max Input Current LED Indicators Operating/Storage Temperature Operating/Storage Humidity Dimension Unit Weight	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) POE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A System: Power (Green)x1 -40° to 75° C / -40° to 85° C 5% to 90% non-condensing 130 x 27 x 82mm ( $W \times H \times D$ ) 230g
Power Requirement Input Voltage Max Input Current LED Indicators Operating/Storage Temperature Operating/Storage Humidity Dimension Unit Weight Form Factor	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) PoE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A System: Power (Green)×1 -40° to 75° C / -40° to 85° C 5% to 90% non-condensing 130 x 27 x 82mm ( W × H × D ) 230g Desktop/Wall mounting installation
Power Requirement Input Voltage Max Input Current LED Indicators Operating/Storage Temperature Operating/Storage Humidity Dimension Unit Weight Form Factor Case of Materials	12~57V Power source Overall wide voltage range : DC 12 ~ 57V Auto booster voltage range : DC 12 ~ 55V (When using STB input for auto boosted voltage and conversion to compatible 802.3af/at standard PoE 56V output) PoE constant voltage range : DC 50~57V (When using DC Input) DC 12V/5A , 24V/3.75A, 37.5V/2.4A, 48V/1.875A System: Power (Green)x1 -40° to 75° C / -40° to 85° C 5% to 90% non-condensing 130 x 27 x 82mm <b>(W x H x D)</b> 230g Desktop/Wall mounting installation Metal