Description

The CPE100 is small form factor device that provides the ability to power multiple Chainable Powered Ethernet (CPE) devices from a single Power over Ethernet (PoE) switch or router port. The CPE100 is fully 802.3af/at compliant, and can be configured to classify as a PoE class 1, 2, 3 or 4 device. The CPE100 enables the utilization of existing PoE infrastructure to power multiple devices improving infrastructure efficiency and reducing installation costs.

1 Features

- Power over Ethernet PoE(802.3af)/PoE+(802.3at) Compliant
- Configurable PoE Classification (1,2,3 or 4)
- Enables standard PoE infrastructure to power chained CPE devices
- Flexible Mounting Options
- FCC Compliant

2 Ordering

Model	Part Number	Description
CPE100	E00660-00739	Power over Ethernet (PoE) to Chainable Powered Ethernet (CPE) adaptor

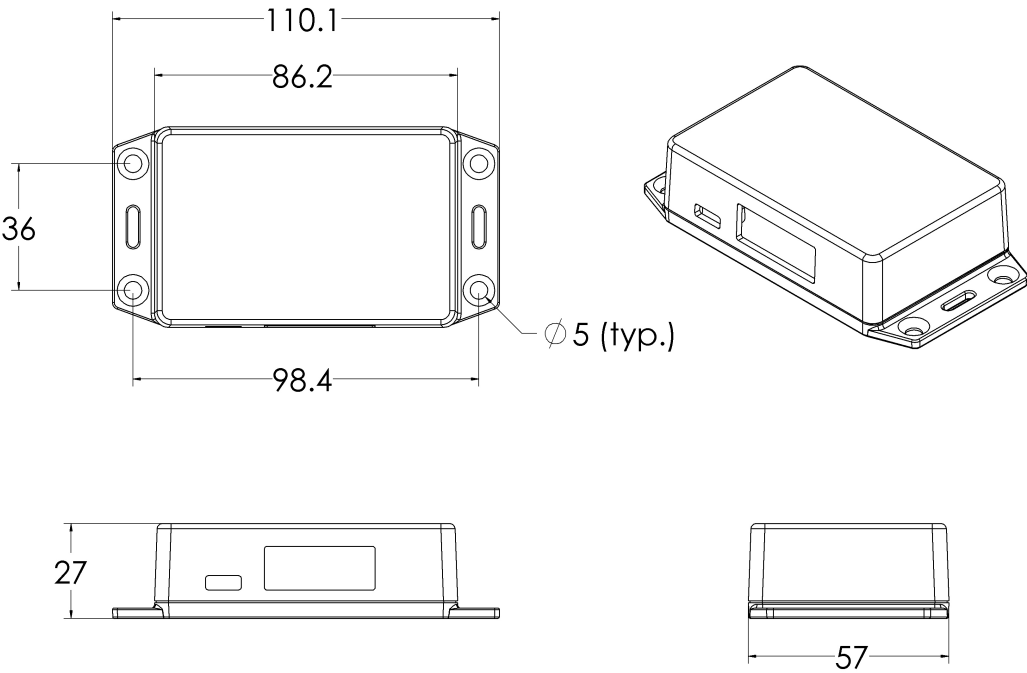Available from the **Ciholas Webshop**

3 Electrical

Parameter	Description	Min.	Typ.	Max	Units
V_{in}	Input Voltage	30	48	57	V
T_o	Operational Temperature	-20		60	°C

4 Mechanical

Parameter	Description	Min.	Typ.	Max	Units
Mass	Device Mass		70		g

Ingress Protection

IP20, protected against fingers or small objects, no protection against liquids

Dimension unit: millimeter

5 Operation

5.1 Installation

The CPE100 was designed with mounting flexibility in mind. The enclosure includes a mounting ear on each side of the device.

Installation of the CPE100 in excessively hot or damp environments should be avoided.

5.2 Configuration

Configure the desired PoE classification using the switch located on the front of the CPE100. The classification options and their maximum power are as follows from left to right:

CLASS	Max DWETH101 Supported	Maximum Power
1	1	3.84 Watts
2	2	6.49 Watts
3	4	12.95 Watts
4[1]	8	25.5 Watts

1. *Requires PoE+/802.3at*

Classification only occurs on connection to Power Sourcing Equipment (PSE). To change classification disconnect power from the CPE100, move the configuration switch to the desired position, and reclassify by connecting to the PSE.

To ensure proper operation, it is recommended that the expected power draw from a port is no more than 80% of the total power provisioned for a classification level. As an example, the CPE100 should be configured for Class 3 when chaining 3 CPE devices each with an expected power draw of 3.0W, 9.0W total.

It is beneficial to configure the CPE100 to classify at the lowest class necessary for the expected power. The lowest class setting ensures that the PSE will not allocate more power than necessary for the port allowing it to reserve power for devices attached to other ports.

5.3 Chaining Devices

The CPE100 is designed to enable a chain of CPE devices to be powered from a single PoE port. To setup a chain of devices, connect the left Ethernet jack labeled 'PoE In' of the CPE100 to a PoE compliant PSE. The right port labeled 'OUTPUT' of the CPE100 connects to the first device in a chain of CPE devices. This output should only be plugged into CPE compliant devices such as the Ciholas DWETH101.

The following diagram demonstrates a typical configuration chaining multiple DWETH101 units.
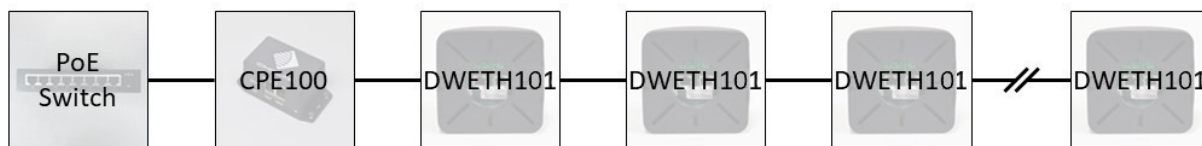
5.4 Regulatory Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits 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 not 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 the dealer or an experienced radio/TV technician for help.

5.5 Product Warnings

- Before working or installing electrical equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents
- The CPE100 is designed for use with equipment specified in the CPE100 User Manual only. Using the power injector with other Ethernet-ready devices can damage the equipment.

- Usage of this product outside the parameters outlined in the user manual can result in bodily injury and damage to this and other equipment. To prevent this, please follow all instructions in the user manual.
- Installation of this equipment must comply with all local and national electrical codes.
- Do not operate any wireless network devices near unshielded blasting caps or in an explosive environment unless the devices have been modified to be especially qualified for such use.
- This product must be connected to a power-over-ethernet (PoE) IEEE 802.3.af/at compliant power source.

5.6 Ciholas Standard Software License and Warranty

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6 More Information

Please visit the following links for more information and documentation regarding Ciholas UWB systems and products:

- Documentation, installation, and usage instructions visit CUWB.io
- To purchase Ciholas UWB products, please visit the Ciholas Shop
- Ask other users questions and find community information in the Community Forum
- Learn more about Ciholas services at www.ciholas.com

7 CPE100 Datasheet Change Log

Version	Date	Change Description
1.0	2018-05-10	Initial Public Release
1.1	2018-06-04	Added Product Warnings Added Warranty Disclaimer Added IP Rating Modified Operation Temperature Range Added max DWETH column to configuration table