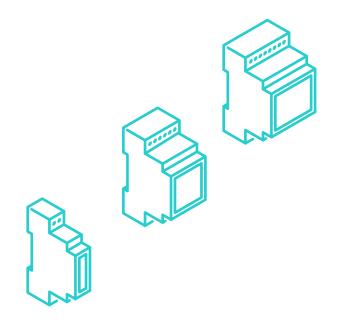


# Universal Communication Modules

Connect a wide range of standard energy system devices straight out of the box







## Overview

Each device in an energy system speaks its own language. It's possible to get all equipment from a single supplier, ensuring that it's language compatible. But aside from creating a vendor lock-in, this may not be viable or possible with many projects. The support of new device vendors or specific device models is often required in different applications.

In response to this challenge Enapter designed Universal Communication Modules (UCMs) to homogenise all data (properties, telemetry, commands, and alerts) and transform it using a unified interoperability model.

A single UCM allows you to monitor the connected device and send basic commands to control device behavior. Several UCMs work together to ensure consistent energy management across different energy system components.



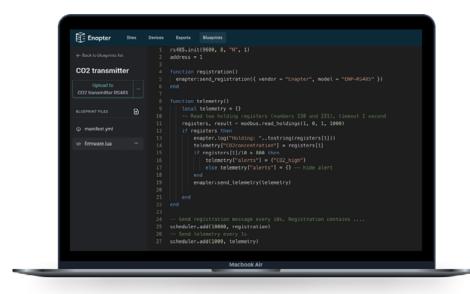
Find more technical details about Enapter Blueprints on developers.enapter.com

#### Easy Integrations with Enapter Blueprints

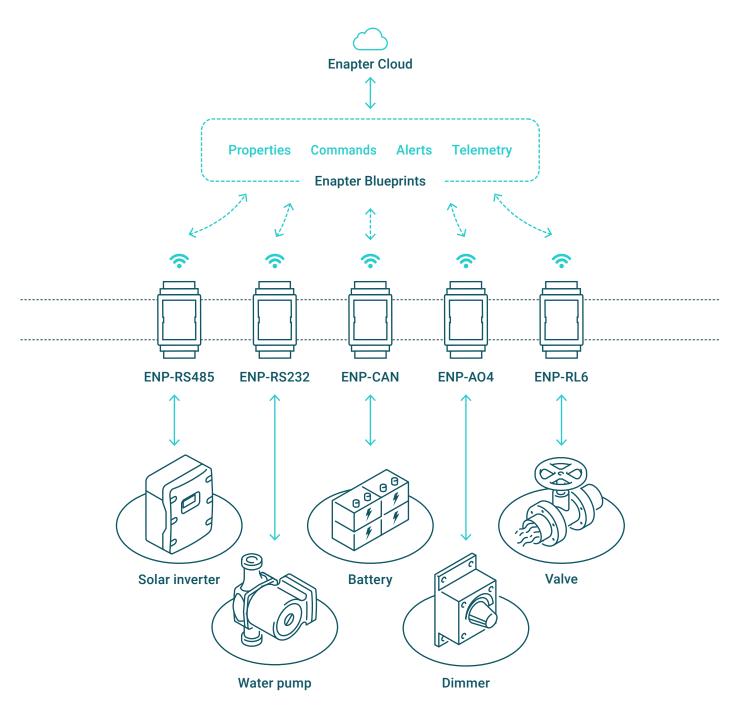
Enapter Blueprints are low-code templates for system integrators and component manufacturers which help integrate Enapter solutions into their products.

Describe any device according to rules which defines the interface and capabilities of device (properties, telemetry, commands, and alerts) and the Enapter platform will know:

- which charts should be shown on a telemetry dashboard,
- which commands can be executed,
- when to notify you with device alerts,
- and how the device can interact with other parties of an energy system.









Find more technical details and connection guides on handbook.enapter.com

At a hardware level, every UCM implements one major industrial communication standard. Different standards require different UCMs.

# **Modules Price List**

To order, please contact us at info@enapter.com.



### Modbus

#### ENP-RS485

Connect devices using RS-485 interface; works with the Modbus RTU, Profibus and others. Examples of connected devices are: irradiance sensors, ventilation systems, pumps or charge controllers.

↓ ENP-RS485 Datasheet



## Modbus

#### ENP-RS232

Connect devices such as irradiance sensors, ventilation systems, pumps, solar charge controllers or battery inverters using the RS-232 interface.

↓ ENP-RS232 Datasheet



#### CAN bus

**ENP-CAN** 

Connect devices such irradiance sensors, solar charge controllers or battery inverters using the CAN bus interface.

↓ ENP-CAN Datasheet

Date: 26/04/2021. This price list is valid until a newer version replaces it. Incoterms EXW Lavoria, Pisa. VAT, other taxes and/or customs not included. Payment terms are 60% advance at order confirmation, 40% before shipment. € 170

€ 125



Analog Output

#### ENP-AO4

Connect analog devices and control them with a 0-10 V signal. For example, a valve, a sensor or a dimmer.

↓ ENP-AO4 Datasheet



# Analog Input

€ 160

€ 140

Connect analog sensors with a signal of -50 to +50 V or 4–20 mA. For example a thermometer, a pressure sensor, measuring voltages on each battery cell and other uses.

↓ ENP-AI4 Datasheet



# Digital Input

€ 160

Monitor the status of discrete signals such as contactors, relays, signal lamps, intermediate contactors and others.

↓ ENP-DI7 Datasheet



#### Relay ENP-RL6

€ 180

Control of a low-power load without high inrush currents. For example, a normal closed valve, a normal open valve, signal lamps or intermediate contactors.

↓ ENP-RL6 Datasheet

Date: 04/06/2021. This price list is valid until a newer version replaces it. Incoterms EXW Lavoria, Pisa. VAT, other taxes and/or customs not included. Payment terms are 60% advance at order confirmation, 40% before shipment.