

CAN GATEWAY FOR SERIAL EQUIPMENT

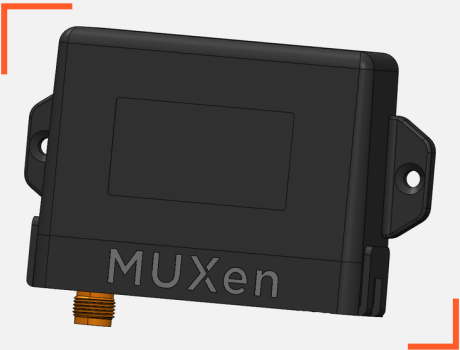
CAN-SERIAL

Integration of serial equipment into the MUXEN network, seen and controlled like any native device.

Four channels, four pieces of equipment on one box. Each channel carries its own device with its own instance number, and a channel that falls silent does not affect the other three. An integrated device behaves like any other on the boat: its state and its faults show on the screens and in the alarm list, and the Brain can log them over time.

A CAN-SERIAL is ordered in one of two channel modes. SERIAL runs the four channels at VE.Direct levels, full duplex; MODBUS runs them as half-duplex RS-485 lines. The board is the same one either way — direction, duplex, termination, speed and framing come from the firmware — but the equipment connector is not: brown on a SERIAL box, black on a MODBUS one.

- SERIAL
- MODBUS



CAN-SERIAL GATEWAY

KEY SPECIFICATIONS

MUXEN CAN port	500 kbit/s, fixed · M12 orange, 5-pin	
Serial channels	4, independent · up to 4 pieces of equipment connected	
Channel protocol	SERIAL	VE.Direct, full duplex
	MODBUS	Modbus RTU, half duplex
Equipment connector	SERIAL	Amphenol AT16-18SD-EK02 (brown, key D)
	MODBUS	Amphenol AT16-18PB-K004 (black, key B)
Relay output	Dry contact, NO/NC · 1.5 A at 32 V · switched from the MUXEN bus	
Analog input	1 channel, 0 – 5 V, resolution 1 mV	
Configuration	With Raken	
Supply voltage	9 – 18 V DC	
Firmware	Signed · updated over the CAN bus	
Diagnostics	One system LED	
Size	120 × 75 × 30 mm	
Weight	160 g	
IP rating	IP65	

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THE CATALOGUE

GATEWAY APPLICATIONS

The hardware is the same for every application; the firmware decides which third-party equipment the box integrates.

> VE.DIRECT

SERIAL

A **SERIAL** box carries up to **four Victron devices**, one per channel: MPPT solar chargers, battery monitors, Phoenix inverters, mains chargers and DC/DC converters. Each becomes the matching MUXEN device with nothing to declare, and can be **forced on or off** from a screen.

> BLUE AIRCO

MODBUS

Up to four Blue Airco units on a **MODBUS** box, EVO and pre-EVO both **detected automatically**. Each becomes one MUXEN HVAC device: cabin temperature, set point, mode and fan speed. On/off and set point are sent the other way; an EVO unit raises its faults as **MUXEN alarms**.

> FRIGOMAR

MODBUS

Up to four Frigomar air-conditioning units on a **MODBUS** box, each republished as its own **MUXEN HVAC device**: cabin temperature, set point, mode, fan speed and power module faults. Screens switch a unit on or off and write its set point; a **battery pack** not powerful enough stops it.

> GENERIC I/O

SERIAL

MODBUS

Not a gateway in its own right but an **extension** carried by **either box**. The relay output and the analog input are published on the **MUXEN bus** alongside whatever the box translates: a valve controlled from a screen, a tank sender read ten times a second in millivolts.

NOT IN THE LIST?

A CAN-SERIAL is one box with four serial channels; which protocol they use and what sits on them is up to the firmware. Tell us what you need to connect and we will build the application for it.

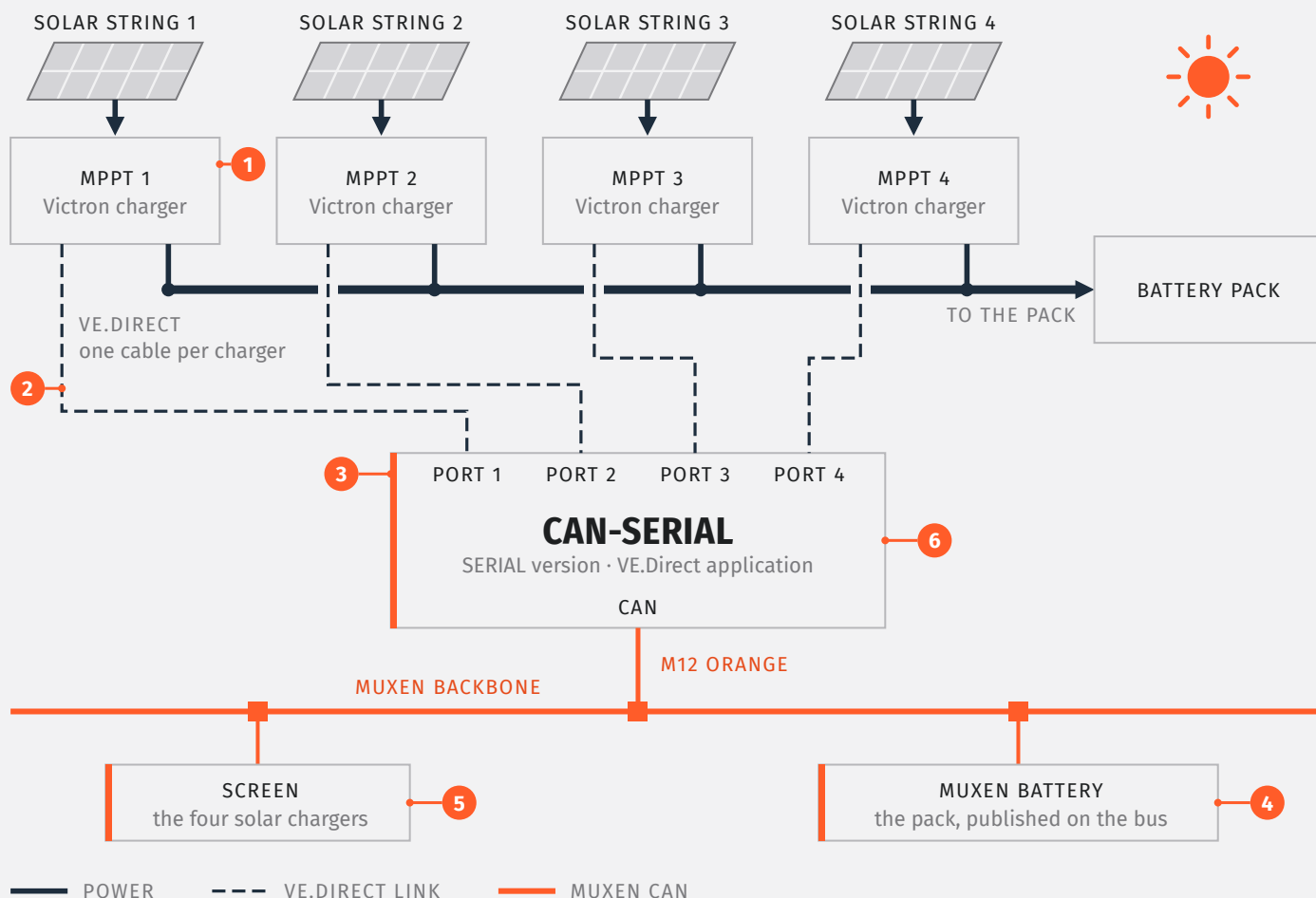
Contact us by email: contact@muxen.fr

WIRING IT IN

TYPICAL INSTALLATION

Four solar strings on four Victron MPPT chargers, and one CAN-SERIAL in its SERIAL version: one VE.Direct cable per charger. Each charger appears on the MUXEN bus automatically, as a solar charger of its own.

FOUR STRINGS, FOUR CHARGERS, ONE BOX



1 THE CHARGERS

Victron MPPT chargers with a VE.Direct port, installed and set up with the [Victron tools](#). The box reads each charger and switches it on or off; it changes no setting.

2 ONE CABLE PER CHARGER

VE.Direct is **point to point**: one cable from each charger to one port of the box. Nothing else may sit on the charger's port: no dangle, no display, no Cerbo.

3 ONE INSTANCE PER CHANNEL

By default the chargers are numbered from their port: port 1 is solar charger 1. Each **channel's instance** can be set, to match the numbers the boat's project uses.

4 THE PACK DECIDES

Each charger follows the charge request of its pack, read from a **MUXEN battery** on the bus. If no battery is published for that pack, the chargers stay switched off.

5 WHAT THE BOAT READS

Per charger: panel voltage and current, battery voltage and current, charge state and temperature. Faults are raised as **MUXEN alarms**. A screen can force it on or off.

6 FOUR PORTS, ANY MIX

A Victron battery monitor, inverter or mains charger takes a port in the same way. Air-conditioning units wire likewise, one per port, on a **MODBUS box**.

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