Cerbo GX & Amptron BluEdge

VE.CAN Setup Manual

Connecting via VE.CAN

Overview

This manual covers how to connect a **Victron Cerbo GX** monitoring device to an **Amptron BluEdge** smart Lithium battery using the **VE.CAN** interface. Once configured, the Cerbo GX will read real-time battery data (state of charge, voltage, current, temperature, and cell-level diagnostics) directly from the BluEdge battery's built-in Battery Management System (BMS).

What You'll Need

- **Victron Cerbo GX** (with VE.CAN port) — the Cerbo GX MKII has two independent ports: **VE.CAN1** and **VE.CAN2**; you will use one of these
- **Amptron BluEdge** smart Lithium battery (with communication ports)
- **Amptron BluEdge CAN bus cable adapter:**
    - For ABS case batteries and the Egon 48V 105Ah / 100A LiFePO4 Metal Vented BluEdge batteries:
        - One of the following adapter cables will be required to expose the CAN bus port: AT-BE-CAN-RS485-COMM-BV01, AT-BE-CAN-RS485-COMM-IP-1M-BV01 or AT-BE-CAN-RS485-COMM-0.1M-DV01.
        - For more than one battery connected in parallel, an additional BluEdge parallel communication cable is also required (one per additional battery)
- **RJ45 patch cable** (straight-through, Cat5 or better)
- **RJ45 CAN bus termination resistor (120 Ω)** — for the last device on the bus

Access to the Cerbo GX via one of the following:

- **GX Touch 50 or GX Touch 70** touchscreen connected directly to the Cerbo GX
- **Venus OS Remote Console** via a web browser on the local network (enter the Cerbo GX's IP address)
- **Victron Remote Management (VRM) portal** at vrm.victronenergy.com

Part 1 — Physical Wiring

1.1 Locate the Correct Ports

On the Cerbo GX:

The VE.CAN port is an RJ45 socket on the rear of the unit. Do not confuse it with the VE.Bus port, which looks identical.

> **Note**
> **Cerbo GX MKII:** The MKII model has **two** independent VE.CAN ports — **VE.CAN1** and **VE.CAN2**. Either port can be used for the BluEdge connection; simply choose one and configure that port's profile in software (see Section 2.1). The unused port can be left empty or configured separately for other CAN devices.

On the Amptron BluEdge battery:

The CAN communication port is an RJ45 socket. This socket is directly available on the metal slimline and blade batteries, and for other models the adapter cable will expose either a single RJ45 socket, or if you use a dual socket cable, select the socket labelled **CAN**.

1.2 Connect the Cable

1. Plug one end of a straight-through RJ45 patch cable into a **VE.CAN port** on the Cerbo GX (**VE.CAN1** or **VE.CAN2** on the MKII — your choice; note which one you use).
2. Plug the other end into the **CAN port** on the Amptron BluEdge battery or adapter cable.
3. If connecting multiple batteries in a daisy-chain, run a cable from the first battery's P2 port to the next battery's P1 port, and so on.

1.3 Install the Termination Resistor

CAN bus networks require a 120 Ω termination resistor at **each end** of the bus:

- The **Cerbo GX end** is terminated internally — no action needed.
- The **Cerbo GX end**: Insert a blue Victron RJ45 terminator into the unused VE.CAN port (e.g. if the cable is in VE.CAN1, the terminator goes in the open VE.CAN1 port.
- The **BluEdge battery** is terminated internally — no action needed.

> **⚠ Warning**
> Failing to terminate the CAN bus can cause communication errors, intermittent data, or no data at all.

Part 2 — Cerbo GX Configuration

The configuration steps below are the same whether you are using a **GX Touch screen** or accessing the **Remote Console** via a web browser or the VRM portal. The menu structure and options are identical across all interfaces. Instructions for each access method are provided side by side throughout this section.

2.1 Set the VE.CAN Port to the Correct Profile

The Cerbo GX VE.CAN port must be configured to speak the correct CAN protocol. Amptron BluEdge batteries require the **CAN-bus BMS LV (500 kbit/s)** profile.

> **Note**
> **Cerbo GX MKII:** You will see two separate entries in the Services menu — **VE.CAN1** and **VE.CAN2**. Configure the profile on whichever port you physically connected the cable to. The other port can be left at its default or configured independently for a different CAN device.

Via Remote Console (web browser or VRM):

1. On the GX Touch home screen, select the **menu icon (☰)** in the top-left corner to open the main menu. Or if not using a Touch screen, open the Remote Console in your browser (enter the Cerbo GX's IP address), or navigate via the VRM portal.
2. Navigate to **Settings** → **Services** → **VE.CAN port** (or **VE.CAN1** / **VE.CAN2** on the MKII — select the port in use).
3. Set the profile to **CAN-bus BMS LV (500 kbit/s)**.
4. Confirm and save. The Cerbo GX will restart the CAN interface.

> **Note**
> Do not select the "VE.CAN" 250 kbit/s profile — that is for Victron's own VE.CAN devices. Select the **CAN-bus BMS LV** option specifically.

2.2 Verify Battery Detection

1. From the main menu, go to **Device List**.
2. Within a few seconds to a minute, the battery should appear. Select the entry to confirm it is reporting voltage, current, SoC, and temperature data.

> **Note**
> **Note on device names:** The battery will not necessarily appear as "Amptron" or "BluEdge". Depending on the firmware version, it may show up under a generic name such as **"Li-ion"**, **"XZNY"**, or **"Pylontech"**. This is completely. You can assign a meaningful custom name in the next step.

If the battery does not appear at all, see the **Troubleshooting** section at the end of this manual.

2.3 Set a Custom Battery Name

To make the battery easy to identify in the Device List, VRM portal, and on the GX Touch display, assign it a descriptive custom name.

1. From the **Device List**, select the battery entry (e.g. "Li-ion" or "XZNY").
2. Within the battery's detail page, scroll down and select **Device**.
3. Select **Name**, type a descriptive name (e.g. **"Amptron BluEdge 48V 100Ah"**), and tap the confirm button.

The new name will immediately replace the generic label throughout the Cerbo GX interface, including the Device List, the Overview screen, and the VRM portal.

> **Note**
> **Multiple batteries:** If you have more than one BluEdge battery, name each one individually with a unique label (e.g. "BluEdge Bank 1", "BluEdge Bank 2") so they can be told apart in the Device List.

2.4 Configure the Battery as the System Battery Monitor

To ensure the Cerbo GX uses the BluEdge BMS data as the authoritative battery source for your system:

1. Go to **Settings → System Setup → Battery Monitor**.
2. Select the detected **BluEdge / BMS-CAN battery** from the list (using the custom name you set, if applicable).
3. Save the setting.

This tells the Cerbo GX (and any connected Victron inverter/chargers Bus) to trust the BMS's SoC reading rather than calculating it internally.

2.5 Set DVCC (Distributed Voltage and Current Control)

DVCC allows the Cerbo GX to pass charge parameters from the BMS to connected Victron chargers and inverter/chargers, keeping charging within the battery's safe limits.

When the Cerbo GX detects a managed CAN-bus battery such as the BluEdge, **DVCC is forced on automatically** by Venus OS and the toggle will appear greyed out — this is normal and expected behaviour, not a fault. The battery's BMS is now in control of all charge and discharge limits.

SVS and STS are not manually configured in this setup. Venus OS automatically forces **SVS (Shared Voltage Sense)** and **STS (Shared Temperature Sense)** off for most managed CAN-bus batteries. This is because the BMS already transmits voltage and temperature data directly to the Cerbo GX over the CAN bus — a separate shared sense source is redundant and could conflict with BMS-supplied values. You do not need to enable SVS or STS manually.

The BluEdge BMS will broadcast the following values automatically over CAN, and the Cerbo GX will relay them to all connected Victron chargers and inverter/chargers:

- **CVL** — Charge Voltage Limit
- **CCL** — Charge Current Limit
- **DCL** — Discharge Current Limit

> **Tip**
> With DVCC forced on and the BMS in control, connected Victron devices will disable their own internal charging algorithms and operate strictly within the limits set by the BluEdge BMS — no manual charge voltage or current setpoints are required.

Part 3 — Amptron BluEdge Battery Settings

The BluEdge battery's CAN output is enabled by default from the factory. However, confirm the following on the battery if you have access to its configuration app or front-panel display:

- **CAN protocol:** Victron
- **Battery address:** Set to **0** for the master battery (subsequent batteries in a parallel bank increment by 1, but this is usually automatically assigned by the BMS)

Consult Amptron's BluEdge documentation for your specific model if these settings need adjustment.

Part 4 — Verification Checklist

Work through this checklist to confirm the system is operating correctly:

- ☐ RJ45 cable connects Cerbo GX VE.CAN port (VE.CAN1 or VE.CAN2 on MKII) to BluEdge CAN port
- ☐ Blue Victron RJ45 terminator plug inserted into unused VE.CAN port on Cerbo GX
- ☐ Selected VE.CAN port profile set to **CAN-bus BMS LV (500 kbit/s)**
- ☐ BluEdge battery appears in the Cerbo GX **Device List** (may show as "Li-ion", "XZNY", or "Pylontech" — this is normal)
- ☐ Voltage, current, SoC, and temperature data visible in Device List
- ☐ Custom name set via Device List → Device → Custom name
- ☐ Battery Monitor set to the BluEdge BMS in **Settings** → **System Setup**
- ☐ DVCC enabled; charge limits being received from BMS
- ☐ No BMS alarm or pre-alarm flags active on the battery entry

Troubleshooting

Battery not appearing in Device List

- Check that the RJ45 cable is plugged into the correct ports on both devices:
  - VE.CAN on Cerbo GX — not VE.Bus or the ethernet port. Confirm the cable is in the port (**VE.CAN1** or **VE.CAN2**) whose profile you configured.
  - CAN socket if using an adapter cable on a BluEdge battery — not the RS485 port.
- Confirm the selected VE.CAN port profile is set to **CAN-bus BMS LV (500 kbit/s)**, not another profile.
- Try a different RJ45 cable — damaged or crossover cables will not work.
- Ensure the termination resistor is in place at the far end of the bus.
- Restart the Cerbo GX: via **Settings** → **General** → **Reboot** (Remote Console) or ☰ → **Settings** → **General** → **Reboot** (GX Touch).

Data appears but SoC reads incorrectly

- Confirm **Battery Monitor** under System Setup is set to the BMS device, not to a shunt or internal estimator.
- Allow the battery to complete a full charge cycle — The BMS calibrate SoC only after a full charge.

BMS alarm flag shown on Cerbo GX

- Note the alarm type (over-temperature, cell imbalance, over-current, etc.) and address it physically at the battery if possible.
  - *Please note, when the battery is new, you may see a cell overvoltage alarm when the batter is nearing a full charge. This is normal when the battery is new since the*

cells require some additional top-end cell balancing after manufacturing. This should even out after a few charge cycles and the alarm would disappear.

  - Contact Amptron support if the issue cannot be resolved.
- Check that DVCC charge limits from the BMS are being respected by the Victron charger/inverter.

Multiple batteries not all visible

- Turn all the batteries off with the On/Off switches. Then turn the battery furthest down the chain on first and wait 10 seconds, then turn the next battery in the chain on and so on. Turn the master/host battery that is connected to the Cerbo on last, and check again if all batteries are visible.
- Check all daisy-chain RJ45 connections between batteries.

Further Resources

- Victron Energy — Cerbo GX Manual
- Victron Energy — DVCC Documentation
- Amptron Australia — BluEdge Support
- Victron Remote Management (VRM) Portal

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