

Cerbo GX

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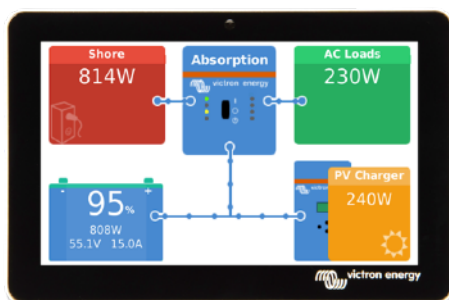
Cerbo GX



Cerbo GX Accessories



DIN35 Adapter Small



GX Touch 50

Perfect monitoring & control

The GX-device lies at the heart of the system - providing monitoring, and operating as the communication-centre of your installation. All the other system-components - such as inverter/chargers, solar chargers, and batteries - are connected to it. Monitoring can be carried out locally and remotely - via the free-to-use Victron Remote Management portal (VRM). The GX-device also provides [Remote firmware updates](#) and allows inverter/charger settings to be [changed remotely](#).

Instantly monitor the battery state of charge, power consumption, power harvest from PV, generator, and mains, or check tank levels and temperature measurements. Easily control the shore power input current limit, (auto)start/stop generator(s) or change any setting to optimise the system. Follow up on alerts, perform diagnostic checks and resolve challenges remotely.

Maximise your system performance

The Cerbo GX maximises the performance of your systems components in real-time and keeps them in perfect tune. With its Dual Core Processor and the addition of an extra CAN-bus port you can now support even bigger systems; closely follow managed (lithium) batteries while the second port can support up to 25 simultaneously connected VE.Can solar chargers. The new NMEA 2000-out support has the GX easily integrated into any boats network. Four tank- and four temperature ports as well as 3 VE.Direct ports, 3 USB ports, 4 digital inputs and 2 relays allow you to expand control to a new level.

Simple mounting and configuration

The Cerbo GX is easily mountable on a DIN-Rail (with DIN35 adapter, sold separately and its separate touchscreen, the GX Touch 50 below can now be bolted on top of a dashboard, eliminating the need to create perfect cut-outs (like with the Color Control GX) and is connected through just one cable, taking away the hassle of having to bring many wires to a dashboard. Its new Bluetooth feature enables a quick connection and configuration via the VictronConnect app.

Expand your view

The GX Touch 50 is the optional display for the Cerbo GX (sold separately). It allows you to have an instant overview of your system and adjust settings in the blink of an eye. Its water proof, thin, and easy to mount. There is a cable coming out on the back with two plugs on it: the HDMI goes into the HDMI port on the Cerbo, and the USB (used to power the display) goes into one of the USB sockets.

The GX Family consists of these models:

Cerbo GX - Our newly released GX product.

Color Control GX - Our first released GX product, the CCGX has a display and buttons.

Venus GX - The Venus GX has more analog and digital IO, no LCD and is more cost effective than the CCGX.








CANvu GX - The CANvu GX is best for harsh environments - when its IP67 rating and touch LCD is a must.

Octo GX - The Octo GX is particularly suited to medium size installations which have many MPPT Solar Chargers, as it has 10 VE.Direct ports.

Maxi GX - Compared to the other GX devices, the Maxi GX has most CPU power and most VE.Direct ports: 25. This is the GX device to use for large systems with many VE.Direct MPPT Solar Chargers.

Lastly, there is a GX device built into our MultiPlus-II GX and EasySolar-II GX Inverter/chargers.

GX Product Range Comparison Table

User Interface	Cerbo GX	CCGX	Venus GX	Octo GX	CANvu GX	Maxi GX	MultiPlus-II GX & EasySolar-II GX	
Appearance								
Display	GX Touch optional Display ^{*(16)}	LCD Display & 7 Buttons	No Display	No Display	4.3" Touch-Screen	2 X 16 Character Display		
Remote Console	Yes							
Buzzer	Yes	Yes	Yes	No	Yes	No		
Victron comm. ports								
VE.Direct Ports (always isolated)	3 ^{*(1)}	2 ^{*(1)}			10 ^{*(1)}	3 ^{*(1)}	25	1
VE.Bus (always Isolated)	2 Paralled RJ45 Sockets					1 RJ45 Socket	2 Paralleled RJ45 Sockets	
VE.Can	Yes- Non isolated	2 Paralled RJ45 Sockets - Isolated				No ^{*(14)}		
Communication								
USB	3 USB Host Ports	2 USB Host Ports			1 USB Host Port			
Ethernet	10/100 RJ45 socket - Isolated except shield				1 Port Isolation? ^{*(12)}	10/100 RJ45 Socket		
WiFi	Built-in	Optional ^{*(2)}	Built-in but see ^{*(3)}	Built-in external antenna ^{*(11)}	Optional ^{*(2)}	No	Built-in	
Bluetooth Smart	Yes ^{*(17)}	No						
Micro SDcard slot	SDHC Cards up to max. of 32GB. ^{*(5)}				No	Yes	No	
Second CAN-bus port (also features BMS-Can ^{*(18)})	No	No	Yes- Non-isolated	Yes- Non-isolated	No	No	No	
BMS-Can Port ^{*(15)}	Yes	No				Yes ^{*(14)}		
Built-in RS485	No			Yes- Non-isolated	No			

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IO							
Programmable relay *(7)	2 x NO / NC *(8)	1 x NO	1 x NO / NC *(8)	1 x NO / NC	2 x NO / NC *(8)		N/A
Resistive Tank level Inputs	4 *(9)	No	3 *(9)	No			
Temperature sense Inputs	4 *(10)	No	2 *(10)	No			
Digital Inputs	4	No	5	3	1	4	No
Performance							
CPU	Dual Core	Single Core				Quad Core	
RAM	1GB	256MB	512MB	512MB	256MB	512MB	512MB
Max. VE.Direct Devices *(1)	tbd - 15 orso	5	6	10	4	25	25
Other							
Supply Voltage	8 - 70 VDC				8 - 32 VDC	32 - 70 VDC	Powered internally, no external supply
Mounting	Wall or DIN rail (35mm) *(19)	Panel Integration	Wall Mounting	DIN Rail (35mm)	Panel	Wall Mount IP65	Built-in
Outer Dimensions (h x w x d)	78 x 154 x 48 mm	130 x 120 x 28 mm	45 x 143 x 96 mm	61 x 108 x 90 mm	?	600 x 300 x 210 mm	
Operating Temperature	-20 to +50 °C				-20 to +70 °C	-20 to +50 °C	
Battery Back-upped Clock	Yes				No	Yes	Yes
5V Output	No		1 A *(13)	No			
Standards							
Safety	tbd	EN 60950		?			
EMC	tbd	EN 61000-6-3, EN 55014-1, EN 61000-6-2, EN 61000-6-1, EN 55014-2					
Automotive	tbd	E4-10R-053535	In Progress	?		No	

* Notes on following Page

Available accessories:

GX Touch 50 - Touch screen display accessory for the Cerbo GX

GX GSM - A cellular modem. It connects to GX device via USB, and takes a simcard

WiFi USB sticks

Energy Meters - Measures PV Inverter Output where PV Inverters cannot be read-out directly. Also used as a grid meter in an **Energy Storage System (ESS)**.

VE.Can resistive tank sender adapter Allows a standard resistive tank-level sender to be connected to the GX device.

GX Product Range Comparison Table

*Notes

1. The listed maximum on the `Performance` section in above table is the total connected VE.Direct devices such as MPPT Solar Charge controllers. Total means all directly connected devices plus the devices connected over USB. The limit is mostly bound by CPU processing power. Note that there is also a limit to the other type of devices of which often multiple are connected: PV Inverters. Up to three or four three phase inverters can typically be monitored on a CCGX. Higher power CPU devices can monitor more.
2. Though the CCGX has no built-in WiFi that functionality can easily be added by attaching a USB-WiFi dongle. See CCGX Manual, section 1.4.2 for details.
3. The built-in WiFi in the Venus GX has a very low signal strength - unfortunately. It is strong enough to connect to a phone, tablet or laptop in order to access setup and monitoring. But to connect the Venus GX to the internet either use the built-in Ethernet port or add a USB-WiFi dongle. See CCGX Manual, section 1.4.2 for details. Make sure the Venus GX is running v2.06 or later - early shipments of Venus GX units ran v2.05.
4. The hardware of the Venus GX and Octo GX includes a built-in Bluetooth Smart chipset which hasn't proved satisfactory. Bluetooth Smart for GX devices is coming soon but will not use built-in chipsets.
5. Larger SD memory cards (SDXC) are not supported. SD cards can be used for two purposes:
 - a. Logging data, see [this section in the ccgx manual for details](#).
 - b. Updating firmware, see [this section in the ccgx manual for details](#).
6. The second CANbus port is accessible via the GND, CAN-H and CAN-L terminals. Note that the port is not Isolated. See Settings → Services for configuring that port.
7. The programmable relay can be set to act as an alarm relay, automatic genset start stop, or an on/off switch, and is controlled via the GUI and/or ModbusTCP.
8. In the Venus GX hardware there are two relays - at present only one of them is available for use.
9. The tank level inputs are resistive and should be connected to a resistive tank sender. Victron does not supply tank senders. The tank level ports can each be configured to work with either European (0 - 180 Ohm); or US tank senders (240 - 30 Ohm).
10. The Cerbo GX has four temperature terminals, and the Venus GX has two. They can be used to measure & monitor all kinds of temperature-inputs. Temperature senders are not included. The required sensor is ASS00001000 - Temperature Sensor QUA/PMP/Venus GX. (Note that this is **not** the same as the BMV temperature accessory.)
11. Octo GX comes with a small Wifi antenna. You may remove and replace it with any other Wifi antenna having an RP-SMA connector.
12. Requires the [CANvu GX IO Extender and wiring kit](#)
13. The 5V output on the Venus GX can be used to power, for example, a USB hub. Note that its output is not current limited or otherwise protected, and it shares the internal power supply in the Venus GX: overdrawing from it will result in shutdown(s) of the Venus GX. It is recommended to install a fuse for prevention.
14. Though the Maxi GX, MultiPlus-II GX and EasySolar-II GX all have a dual set of RJ-45 sockets labelled VE.Can, this port is actually a dedicated BMS-Can port. It can only be used to connected to managed batteries like Freedomwon, BYD, Pylontech and others, at 500kbps. The hardware does not meet the requirements for a VE.Can port; and thus it is not possible to use to port to connect Victron products such as the SmartSolar VE.Can MPPT product range. Note that current version of Venus OS firmware still allows to select the VE.Can function and other baudrates. The result will be unreliable, and future firmware versions will lock the feature to BMS-Can only and 500kbps.
15. A BMS-Can port is a port dedicated to be used for connecting managed batteries, like BYD, Pylontech, Freedomwon and others, only. It is not possible to connect Victron VE.Can products to that port. To connect such managed battery, use our special cables, and see documentation here. Connect the side labelled 'VE.Can' into the BMS-Can/VE.Can port on the GX Device. And connect the other side to the battery. The baudrate of a BMS-Can port is fixed to 500kbps.
16. The GX Touch 50 connects to the Cerbo GX using a single cable; fixed permanently to the GX Touch 50, which on the other end splits into a USB and a connector for the video signal. Both need to be inserted into the Cerbo GX, taking one of the three USB ports. The USB part of the cable is used to power the GX Touch 50. The cable is 2 meters in length; and cannot be extended in length.
17. The Bluetooth feature of the Cerbo GX allows to configure its WiFi and Ethernet settings from within VictronConnect.
18. The secondary CAN port, available on some GX devices as per table above, can be configured to be used as a BMS-Can port, as well as other profiles. For details, see manual.
19. DIN rail mounting requires additional accessory - DIN35 Adapter.