

# GX product range

## Introduction

GX products are Victron's state-of-the-art monitoring solution. The family consists of the different Venus-device models, and their accessories.

The Venus-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. The Venus-device ensures that they all work in harmony. Monitoring can be carried out locally ...or remotely - via our free-to-use Victron Remote Management portal ([VRM](#)). The Venus device also provides [Remote firmware updates](#) and even allows the settings to be [Changed Remotely](#).





The Venus devices are:

- [Color Control GX](#)
- [Venus GX](#)
- [Octo GX](#) - The Octo GX is particularly suited to installations which have many MPPT Solar Chargers, as it has 10 VE.Direct ports
- [The CANvu GX](#) is best for harsh environments - when its IP67 rating is a must.

## Available accessories

- [GX GSM](#) - A cellular modem. It connects to Venus-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 Venus-device.

## Comparison table

| <b>User interface</b> | <b>CCGX</b>   | <b>Venus GX</b>   | <b>Octo GX</b>   | <b>CANvu GX</b>   |
|-----------------------|---|---|--|---|
| Appearance            |  |  |  |  |
| Display               | LCD Display & 7 buttons   | no display  | no display   | 4.3" touch-screen   |
| Remote Console        | yes   |   |  |   |
| Buzzer                | yes   | yes   | no   | yes   |
| <b>Documentation</b>  | <b>CCGX</b>   | <b>Venus GX</b>   | <b>Octo GX</b>   | <b>CANvu GX</b>   |
| Manual                | <a href="#">CCGX manual</a>   | <a href="#">VGX manual</a>  | <a href="#">OGX manual</a>   | <a href="#">CANvu manual</a>  |

| <b>User interface</b>             | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX</b>                    |
|-----------------------------------|--|----------------------------------|--|------------------------------------|
| Product detail page               | <a href="#">CCGX product</a>                                     | <a href="#">VGX product</a>      | <a href="#">OGX product</a>                | <a href="#">CANvu product</a>      |
| <b>Victron comm. ports</b>        | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX<sup>(12)</sup></b>     |
| VE.Direct ports                   | 2 <sup>(1)</sup>   |                                  | 10 <sup>(1)</sup>                          | 3 <sup>(1)</sup>                   |
| VE.Can                            | 2 paralleled RJ45 sockets – isolated                             |                                  |  |                                    |
| VE.Bus                            | 2 paralleled RJ45 sockets – isolated                             |                                  |  |                                    |
| <b>Non Victron-products</b>       | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX</b>                    |
| Canbus-BMS batteries              | Many battery brands. See <a href="#">here</a> for details        |                                  |  |                                    |
| Fronius PV Inverters              | See <a href="#">here</a> for details                             |                                  |  |                                    |
| SMA PV Inverters                  | See <a href="#">here</a> for details                             |                                  |  |                                    |
| <b>Communication</b>              | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX</b>                    |
| USB                               | 2 USB Host ports – not isolated                                  |                                  | 1 USB Host port – not isolated             |                                    |
| Ethernet                          | 10/100 RJ45 socket – isolated except shield                      |                                  |  | 1 port. isolation? <sup>(12)</sup> |
| WiFi                              | optional <sup>(2)</sup>  | built-in, but see <sup>(3)</sup> | built-in, external antenna <sup>(11)</sup> | optional <sup>(2)</sup>            |
| Bluetooth Smart                   | no   |                                  |  |                                    |
| Micro SDcard slot                 | SDHC cards up to max. of 32GB. <sup>(5)</sup>                    |                                  |  | no                                 |
| Second CAN-bus port               | no   | yes – non-isolated               | yes – non-isolated                         | yes – non-isolated                 |
| RS485                             | no   | no                               | yes – non-isolated                         | no                                 |
| <b>IO</b>                         | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX<sup>(12)</sup></b>     |
| Programmable relay <sup>(7)</sup> | 1x NO  | 1x NO / NC <sup>(8)</sup>        | 1x NO / NC                                 |                                    |
| Resistive tank level inputs       | no   | 3 <sup>(9)</sup>                 | no   |                                    |
| Temperature measurements          | no   | 2 <sup>(10)</sup>                | no   |                                    |
| Digital Inputs                    | no   | 5                                | 3  | 1                                  |
| <b>Other</b>                      | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX</b>                    |
| Supply voltage                    | 8 - 70 VDC   |                                  |  | 8 - 32 VDC                         |
| Mounting                          | Panel Integration  | Wall mounting                    | DIN Rail (35mm)                            | Panel                              |
| Outer dimensions ( h x w x d )    | 130 x 120 x 28 mm  | 45 x 143 x 96 mm                 | 61 x 108 x 90 mm                           | ?                                  |
| Operating temperature             | -20 to +50°C   |                                  |  | -20 to +70°C                       |
| Battery backed clock              | yes  |                                  |  | no                                 |
| <b>Standards</b>                  | <b>CCGX</b>  | <b>Venus GX</b>                  | <b>Octo GX</b>                             | <b>CANvu GX</b>                    |
| Safety                            | EN 60950   |                                  | ?  | ?                                  |
| EMC                               | EN 61000-6-3, EN 55014-1, EN 61000-6-2, EN 61000-6-1, EN 55014-2 |                                  |  |                                    |
| Automotive                        | E4-10R-053535  | In progress                      | ?  | ?                                  |

## Notes

1. The maximum number of VE.Direct devices which can be attached to a CCGX is 5 (2 direct, and 3 via USB); on a Venus GX the number is 6 (2 direct and 4 via USB); on an Octo GX it is 10 (all attached directly). VE.Direct ports on a Venus-device are isolated.
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 Venus-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:
  1. Logging data, see [this section in the ccgx manual for details](#).
  2. 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 Venus GX has two temperature terminals which can be used to measure & monitor all kinds of temperature-inputs. Temperature senders are not included. The required sensor is ASS000001000 - 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](#)

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