

# GX product family of Venus-devices

## Introduction

GX products are Victron's state-of-the-art monitoring solution. The family consists of a number of 'Venus' devices each especially suited to a particular type of installation. Accessories are available for these devices which extend their functionality even further.

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
- [CANvu GX](#) - 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

User interface	CCGX	Venus GX	Octo GX	CANvu GX
Appearance				
Display	LCD Display & 7 buttons	no display	no display	4.3" touch-screen
Remote Console	yes			
Buzzer	yes	yes	no	yes
Documentation	CCGX	Venus GX	Octo GX	CANvu GX

<b>User interface</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>
Product detail page	<a href="#">CCGX product</a>	<a href="#">VGX product</a>	<a href="#">OGX product</a>	<a href="#">CANvu product</a>
<b><u>Victron comm. ports</u></b>	<b>CCGX</b>	<b>Venus GX</b>	<b>Octo GX</b>	<b>CANvu GX</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><u>Non Victron-products</u></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><u>Communication</u></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?
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><u>IO</u></b>	<b>CCGX</b>	<b>Venus GX</b>	<b>Octo GX</b>	<b>CANvu GX</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><u>Other</u></b>	<b>CCGX</b>	<b>Venus GX</b>	<b>Octo GX</b>	<b>CANvu GX</b>
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			?
Battery backedup clock	yes			no
<b><u>Standards</u></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.

From:

<https://www.victronenergy.com/live/> - **Victron Energy**

Permanent link:

<https://www.victronenergy.com/live/venus-os:start?rev=1551622256>

Last update: **2019-03-03 15:10**

