GX product family

Introduction

A Venus-device is the communication-centre of your installation. It connects the components together and ensures they are working in harmony. Monitoring of live data, and changing settings is performed via our free-to-use Victron Remote Management Portal (VRM).

The GX product family consists of the different Venus-devices; each suitable for their own best type of system. Besides that there are accessories which can be used to extend the functionality.

The Venus devices are:

- Color Control GX
- Venus GX
- Octo GX - The Octo GX is the best fit for installations that have many MPPT Solar Chargers, as it has 10 VE.Direct ports
- CANvu GX - The CANvu GX is best used when IP67 rating is a must.

Available accessories

- GX GSM - A cellular modem, connects to Venus-device via USB and takes a simcard
- WiFi USB sticks
- Energy Meters - Measures PV Inverter Output for types of PV Inverters that cannot be read-out directly. And used as a grid meter in an Energy Storage System (ESS).
- VE.Can resistive tank sender adapter The VE.Can resistive tank sender adapter allows a standard resistive tank level sender to connect to the Venus-device.

Comparison table

User interface	CCGX	Venus GX	Octo GX	CANvu GX
Display	LCD Display & 7 buttons	no display	no display	4.3" touch
Remote Console	yes			
Buzzer	yes	yes	no	?
Documentation	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
Manual	CCGX manual	VGX manual	OGX manual	CANvu manual
Product detail page				
Victron comm. ports	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
VE.Direct ports	2 [(1)]		10 [(1)]	3 [(1)]
VE.Can	2 paralleled RJ45 sockets – isolated			
VE.Bus	2 paralleled RJ45 sockets – isolated			
Non Victron-products	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
Canbus-BMS batteries	Many battery brands. See here for details			
Fronius PV Inverters	See here for details			

User interface	CCGX	Venus GX	Octo GX	CANvu GX
SMA PV Inverters	See here for details			
Communication	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
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 [2]	built-in, but see [3]	built-in, external antenna [11]	optional [2]
Bluetooth Smart	no			
Micro SDcard slot	SDHC cards up to max. of 32GB. [5]			no
Second CAN-bus port	no	yes - non-isolated	yes - non-isolated	yes - non-isolated
RS485	no	no	yes - non-isolated	no
IO	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
Programmable relay [7]	1x NO	1x NO / NC [8]	1x NO / NC	
Resistive tank level inputs	no	3 [9]	no	
Temperature measurements	no	2 [10]	no	
Digital Inputs	no	5	3	1
Accessories	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
Compatibility	Compatible with GX Product Family Accessories			
Other	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
Mounting	Panel Integration	Hangers for screws	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			?
Standards	**CCGX**	**Venus GX**	**Octo GX**	**CANvu GX**
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: on a CCGX is 5 (2 normal and 3 via USB). On a Venus GX is 6 (2 normal and 4 via USB). On a Octo GX is 10 (10 normal, no USB). VE.Direct ports on a Venus-device are isolated.
2. Though the CCGX has no built-in WiFi it 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. The strength is sufficient for connecting 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 - the first shipment of Venus GX units ran v2.05.
4. Though the hardware of the Venus GX and Octo GX have a Bluetooth Smart chipset inside; it doesn't work properly and they are unfixable. Bluetooth Smart for Venus-devices is coming but not using those 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 detials.

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 <u>not</u> the same as the BMV temperature accessory.)

11. Octo GX comes with a small Wifi antenna. It is possible to replace it by any other Wifi antenna having a RP-SMA connector.

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