Integration Note

Manufacturer:	Victron Inverter
Model Number(s):	Victron Inverters with Cerbo GX, Color Control GX, Ekrano GX or other GX devices
Core Module Version:	8.8.
Driver Developer:	Paul Cammidge Computer Consulting cc
Document Revision Date:	25 August 2023

Overview & Supported Features

The ELAN system can effectively communicate with Victron Inverters through the Cerbo GX, Color Control GX, Ekrano GX, or any other GX device with the help of this driver. It has undergone rigorous testing on 5kW and 8kW Victron inverters and is likely to be compatible with all Victron inverters.

This driver is installed under "Sense Inputs" under "Input/Output". The following information is available from the inverter:

- Grid Power
- Battery State-of-Charge (SoC)
- Solar Power
- Generator Power
- Grid Voltage
- Battery Power
- Power Consumption

All readings are obtained from the GX device. Values reflected on the driver should correspond to the values displayed on your touchscreen and VRM.

Any feature not explicitly noted as supported should be assumed to be unsupported.

CONNECTION TO YOUR INVERTER:

Image: Second system Controller

Your ELAN controller will communicate with your Victron inverter via your network.

CONFIGURING YOUR INVERTER

The Victron driver connects to your Color Control GX or Cerbo GX using IP. The IP address of the Victron device will be required. The IP address can be obtained directly from the touch screen.

From the home screen, select "Settings -> Ethernet" or "Settings -> WIFI" to obtain the IP address from your Victron device. An active internet connection is not required for this driver to work.

<	Ethernet	22:51
State		Connected
MAC address		C0:61:9A:B0:81:CC
IP configuration		Automatic
IP address		192.168.114.107
Netmask		255.255.255.0
Gateway		192.168.114.66
<u>ااا.</u> Pages	~	≡ Menu

Modbus TCP must be enabled on your Victron device. This can be done from the touch screen. Modbus TCP must not be allowed on public or insecure networks!

To enable Modbus TCP, select "Settings -> Services" and enable Modbus TCP.

<	Services	23:0	00
Modbus TCP		Enabled	>
MQTT on LAN (SSL)		0	
Console on VE.Direct 1			
VE.Can port			>
BMS-Can port			>
<u></u> Hages	≡м	lenu	

INSTALLATION PROCESS

It is recommended that you follow the below installation process to ensure you are running the latest version of the driver.

- 1. Download the latest version of the driver from Drivercentral.
- 2. Under Input/Output in Configurator, right-click Sense Inputs and select Add New Input Controller.

> La SC10 Input Controller Name > La SC10 Input Controller Device Type > Contput Controller Device Type	Victror
Laboration Add New Input Controller Device Type Coutput Controller Device Type	PCCC Vic
A 📩 Output Confinctions	
▷ ▲ SC10 Device Name Victron Inverter System ID	7231
Serial Color Coding	Enable
The Bisery processing of the second status	😑 Trial expire
Pace victori dx Pace victori dx Pace victori dx Driver Version	1.0.1
IP IR Output 02 Driver Vendor	Paul Cammidg
Install Date	8/24/2023 21:
P Address	192
le in our public de	500
In IROU Male 17	502
Inverter Size (W)	8000
NAC Address	F8-57-2E-00-
In Rou put to	
MIR Rece	
Disable UI Update	

- 3. Select the driver and click OK.
- 4. Update the IP address to reflect the IP address of your inverter. The port should always be 502.

NUMERIC INPUTS

The following table shows the numeric inputs available from the driver, together with their Device ID. The input name may be changed, but the ID must remain the same.

Grid Power	0	System	1
Consumption	1	Climate	
		Lighting 🛑	
Battery State-of-Charge	2	Content	
Solar Power	3	Media Video	
Generator	5	Messaging Irrigation	
Battery Power	6	Pool Control	
Active Input	7		

System	Communication Devices	Sense Input: Batte	ery Power
Security	Input Controllers		
Climate	SC10 Input Controller	Name	Battery Power
Lighting	Victron Inverter Grid Power	Display Name	Battery Power
Content		System ID	7261
Media	Battery SoC	Povice ID	e
Video	📥 Solar Power	Device ID	0
Messaging	💾 Grid Live	State	Off
Irrigation	📥 Generator Power		
Pool Control	d Battery Power		

Most numeric inputs are updated every 2 minutes or when the data changes by more than 50W—state-of-Charge updates when it changes by more than 1%.

The "Active Input" can be used to create a trigger showing which input is active. The value is provided as a numeric input to allow greater flexibility. The value may be:

- 0: AC Input 1 is active
- 1: AC Input 2 is active
- 240: Disconnected

GRID STATE

The grid state can be displayed on an Input Toggle Indicator. The toggle indicator must be linked to "Your inverter: Grid Live".

Control Properties		×
Туре	Input Toggle Indicator	
Name	Grid	
Text		
Tx.Size		
Text Align	Center	▼
Control		
Radius		
Raise		
Sink		
Connect To	Victron Inverter : Grid Live	▼
	Delete Control	

CREATING BAR GAUGES

Bar Gauges can be created on any home page. When making a bar gauge, there are two different values that can be linked to each reading. Select the parameter preceded by the inverter name.

Control Properties		×	Battery SoC
Туре	Bar Gauge		
Name	SoC		100%
Text			Grid
Tx.Size			-2880W
Text Align	Center	T	Consumption
Style	Horizontal	▼	104W
Connect To	Victron Inverter: Battery SoC	•	Solar
	Delete Control		3073W

Notes:

- Bar Gauge data updates every 10 seconds.
- Vertical bar gauges will not display the values. The value may be added as feedback text above the gauge.
- The scale on the bar gauge is determined by the inverter size specified in the Configurator. You may change this value in the Configurator without affecting anything besides the bar gauges.

HISTORICAL GRAPHS

Historical data can be displayed on graphs.

To create a graph, select "Graph Objects" on the "Input/Output" tab. Right-click and select "Add New Graph Object".



Add the inputs by clicking on the "+ Numeric Inputs" and selecting the inputs required.

States can be displayed below the graph. One example might be to indicate the state of the Grid. To create a state, create a "Numeric Trigger" in the "Input/Output" tab. Right-click and "Add New Graph Object".



TRIGGERING EVENTS

Events can be triggered based on your inverter data. Some examples would be:

- Switch off your geyser when the Battery state-of-charge drops below 35%.
 - Switch off your lights when the generator is running.

Triggering an event consists of 2 steps:

Events	Add New Event	
System Family Input Controller Interface Devices Ughting Device Controllers Output Controller System Timers Variables Weather	Object SC10 Input Controller: Sense Input 2 SC10 Input Controller: Sense Input 3 SC10 Input Controller: Sense Input 4 SoC 4 35% SoC Low Trigger Victron Inverter: Battery Power Victron Inverter: Battery SoC Event Numeric Trigger	Fan
	Cancel Ok	Far

1. Right-click "Numeric Triggers" in the "Input/Output" tab. Select "Add New Numeric Trigger". Give the trigger a meaningful name. Select the value and the level at which to trigger.

System	Communication Devices	Numeric Trigger: So	C < 35%	System	Global Options	Event Map: Battery	State Low			
Security	Serial Port			Security Climate	Battery State Low	System ID	2938			
Climate	Generic Serial	Name	SoC < 35%	Lighting B	Load Limit Off	Name	Battery State Low			
Lighting 🛑	Etlenne	System ID	2935	Media	test1	Enable				
Content	Input Controllers	-		Video	TestBoolean	Events		e	a	
Media	S C10 Input Controller	Туре	Trigger if Less Than	Messaging Irrigation	Variables	Sub-System	Туре	Family	Sys #	Add
Video	Victron Inverter	Trigger when less than	35.000000	Pool Control	Run-Once Timers	SoC < 35%	Numeric Trigger	Input Con	2936	Remove
Messaging	Serial Devices	Numeric Input	Battery SoC	Utilities	O New Timer					
Irrigation	HTTP Devices			Input/Output	0 30-second Timer					
Pool Control	IR Senders			Event Mapper	Imed Events New Timed Event	Conditions Sub-System	Type	Family	Svs# State	Add
Utilities	- IR Receivers			Layout			.,,,-	,		Remove
Interface	- IR Devices									
Input/Output	🔺 🚩 Numeric Triggers									
Event Mapper	🏲 SoC Low Trigger					Commands				
Layout	Power Fallure					Sub-System	Туре	Family	Sys#	Add
	P SoC < 35%									
	🏲 New Numeric Trigger									
	Kumeric Inputs									Move Down
	🕅 State Inputs									
	Final Strength Str					Apply	Test Commands			

- Create an event map on the "Event Mapper" tab. Right-click on "Event Maps" and "Add New Event Map". Give the event map a meaningful name. In the "Events" section, add your trigger from the "Inputs" section. Select "Numeric Trigger" and "Ok".
- 3. Select the action to take in the "Commands" section.

Triggers can also be added as states on historical graphs.

COMMON PROBLEMS

1. Graphs do not render correctly prior to version 8.8. This is a known problem that has been fixed in 8.8.

NICE/ELAN DEVELOPER PARTNER INFORMATION

This driver was written and supported by: Paul Cammidge Computer Consulting cc (PCCC).

Disclaimer

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Paul Cammidge Computer Consulting cc advises that dealers take advantage of our free show room driver to thoroughly test and familiarize themselves with our drivers and their capabilities before installing them on a customer site.

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