Garmin MFD integration

1. Introduction

This document explains how to connect to Garmin MFDs using an Ethernet connection. The integration technology used is called Garmin OneHelm.

Make sure to also study the Marine MFD Integration by App chapter in the manual.

Note that there is an alternative method to connect, which is NMEA2000. See the NMEA2000 chapter in the main manual.

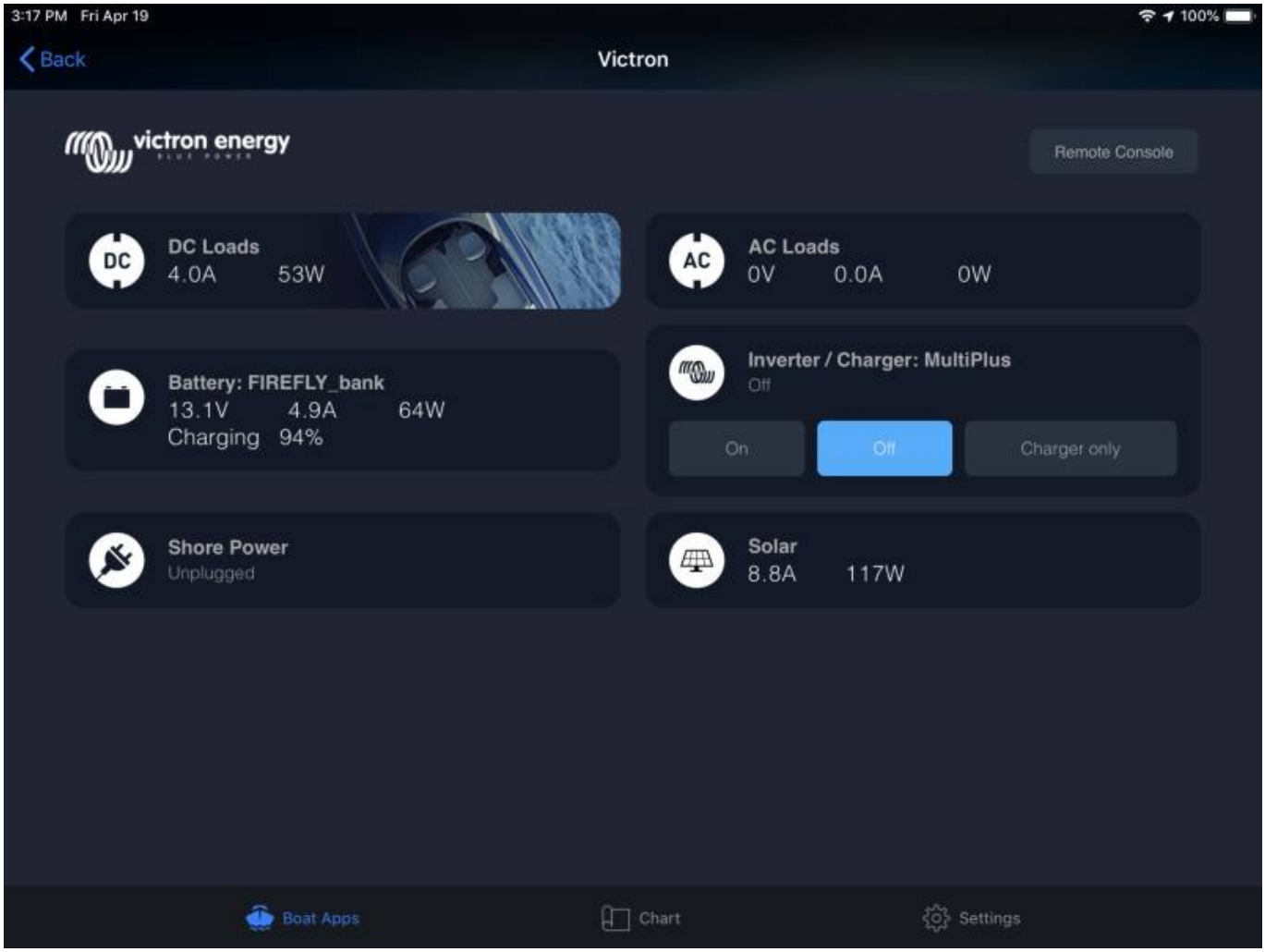
2. Compatibility

OneHelm is currently available for the following models:

- GPSMAP® 8400/8600 MFD series
- GPSMAP® 722/922/1222 Plus MFD series

Also, Active Captain is supported. Below screenshot shows ActiveCaptain, with the Victron App.

From Victron side, all GX devices (Cerbo GX, CCGX, Venus GX, and so forth) can be used and are compatible. For details on detailed product compatibility with regarding to inverter/chargers and other components, see the main Marine MFD App chapter in the GX Manual.



3. Wiring

The Garmin needs to be connected to the GX device using Ethernet. Its not possible to connect over WiFi. For the ethernet connection, a Garmin adapter is required:

- Marine Network Cables - 6ft - PART NUMBER 010-10550-00
- Marine Network Cables - 20ft - PART NUMBER 010-10551-00
- Marine Network Cables - 40ft - PART NUMBER 010-10552-00
- Marine Network Cables - 500ft - PART NUMBER 010-10647-01

4. Configuration

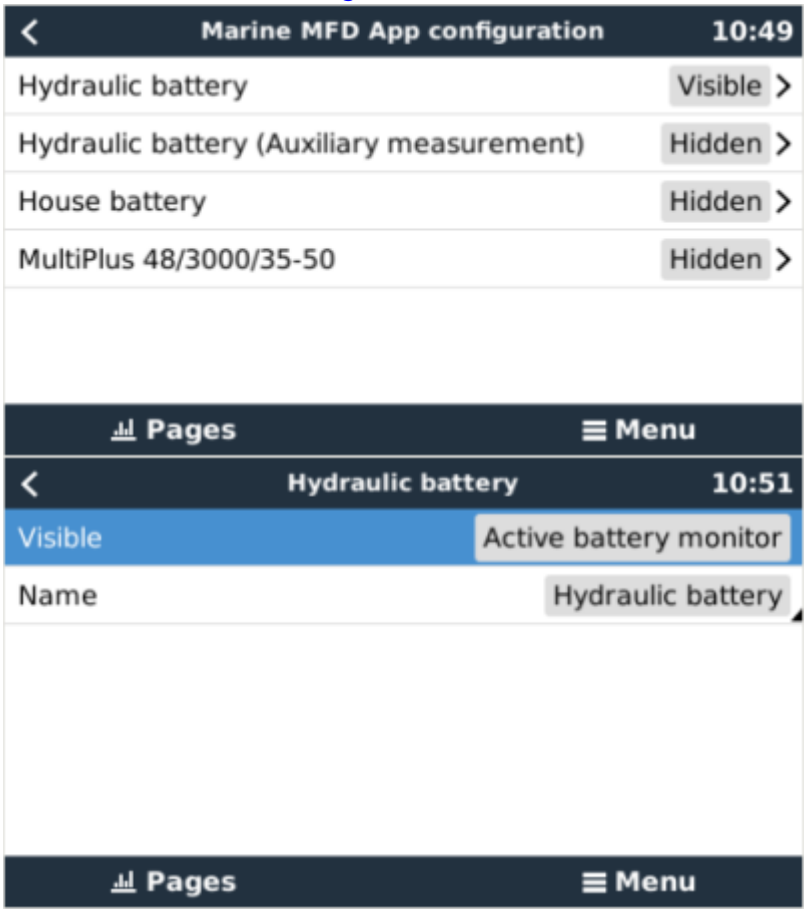
4.1. GX device settings

1. Go to *Settings* → *Services*, and there enable both *MQTT on LAN (SSL)* and *MQTT on LAN*



(Plaintext).

2. Go to Menu → Settings → System Setup → Battery Measurements. And there set up what batteries you want to see on the MFD, and by what name. Make sure to check out this video, which shows how to configure the batteries to be visible on the MFD.



3. For boats; and other applications with DC loads such as lighting and a Battery Monitor installed, make sure to enable the “Has DC system setting”. For more information about it; see the GX Manual.

4.2. Networking

No special networking settings are necessary. Not on the Garmin; and not on the Victron GX Device.

The Garmin MFDs run a DHCP server; and the GX device are by default configured to use DHCP. After plugging in the cable, the Victron icon will show up after 10 to 30 seconds.

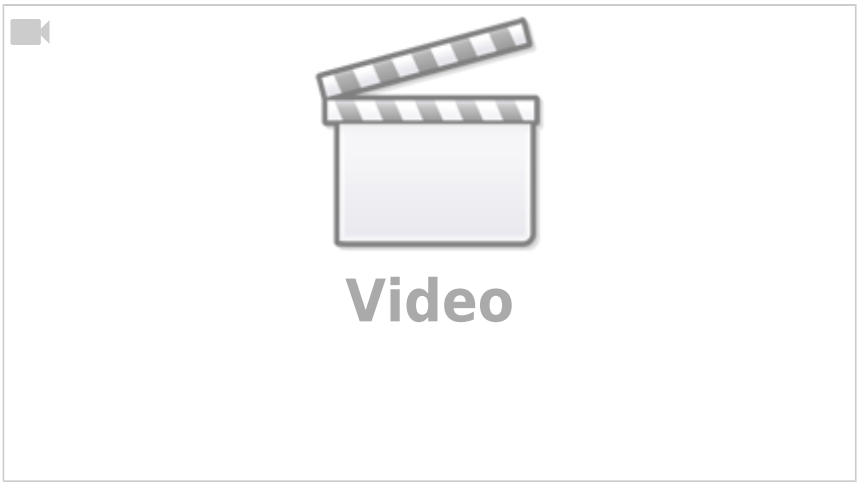
To connect the GX Device to the internet and the VRM Portal, while its Ethernet port is already in use

to connect to the Garmin, use WiFi. more information.

Connecting a Garmin MFD to a network router over Ethernet leads to IP address conflicts, due to the integrated DHCP server.

It is not possible to use a GX GSM, due to the integrated DHCP server of the Garmin MFD.

5. Configuring Multiple Battery Monitors



6. Step by Step

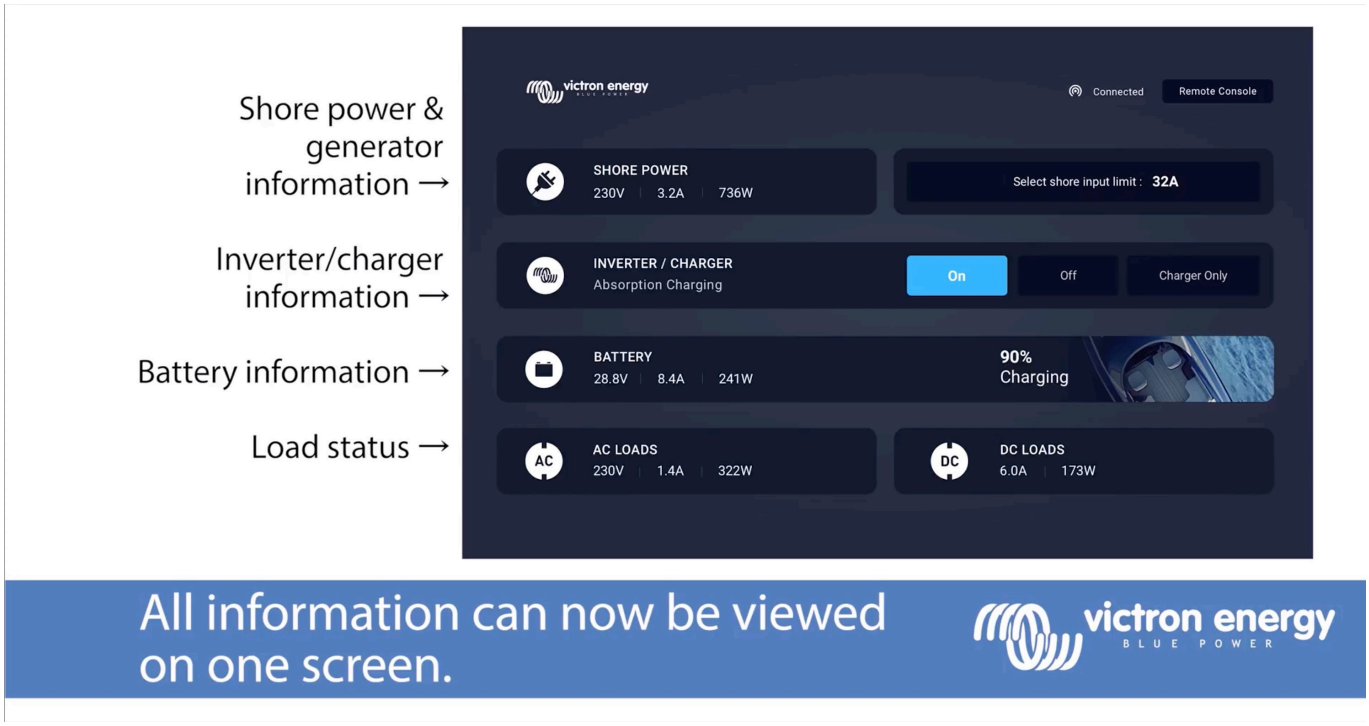



POWER
Made in Taiwan
Step 1: Connect UTP into display
victron energy
BLUE POWER


Home - OneHelm and Gauges
YAMAHA
ActiveCaptain
Engines
Fuel
Wind
Vessel
Power
Media
Video
VIRB®
Autopilot
Favorites
SmartMode™
Combos
Charts
Sonar
Radar
OneHelm™ A/V, Gauges
Waypoints
Info
Settings
Menu
Mark
SOS
GARMIN
Venus GX
Step 2: connect UTP cable into Victron Venus GX, Color Control GX or Octo GX
victron energy
BLUE POWER


Engines
Fuel
Wind
Vessel
Power
Media
SmartMode™
Combos
Video
VIRB®
Autopilot
Venus
Charts
Sonar
Radar
OneHelm™
A/V, Gauges
88.8
Waypoints
Info
Settings
Menu
Mark
SOS
GARMIN
After a few seconds the Victron Energy icon appears
victron energy
BLUE POWER


victron energy
Connected
Remote Console
SHORE POWER
230V 3.2A 736W
Select shore input limit: 32A
INVERTER / CHARGER
Absorption Charging
On
Off
Charger Only
BATTERY
28.8V 8.4A 241W
90%
Charging
AC LOADS
230V 1.4A 322W
DC LOADS
6.0A 173W
App Wnd Ang
6°
App Wnd Spd
15.0
GPS Hdg (COG)
012°
GPS Speed
0.00
Depth
85.3
GPS Position
N 25°45.563'
W080°10.426'
85.3
Waypoints
Info
Home
Menu
Mark
SOS
GARMIN
Venus GX
All information can now be viewed on one screen.
victron energy
BLUE POWER



7. NMEA 2000

The MFD can also be connected to the Victron system using NMEA 2000, see the Marine Integration Guide.

The MFD can be configured easily to display the data from the GX device. There is no need to change any instance.
To setup NMEA 2000 on the MFD, go to *Settings > Communications > NMEA 2000 Setup > Device List*. Here you can view information about the connected products and change their names. Note that the names are stored on the MFD and not on the NMEA 2000 device.

The following Victron related PGNs are supported:

- 127505 - Fluid level (tanks)
- 127506 - DC Detailed Status; State-of-charge, Time-to-go
- 127508 - Battery Status; Voltage, current

The supported PGNs may vary per model. Please consult the manual of the MFD for a list of supported PGNs.

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