

# VG710 1-Wire Quick Guide

## Introduction

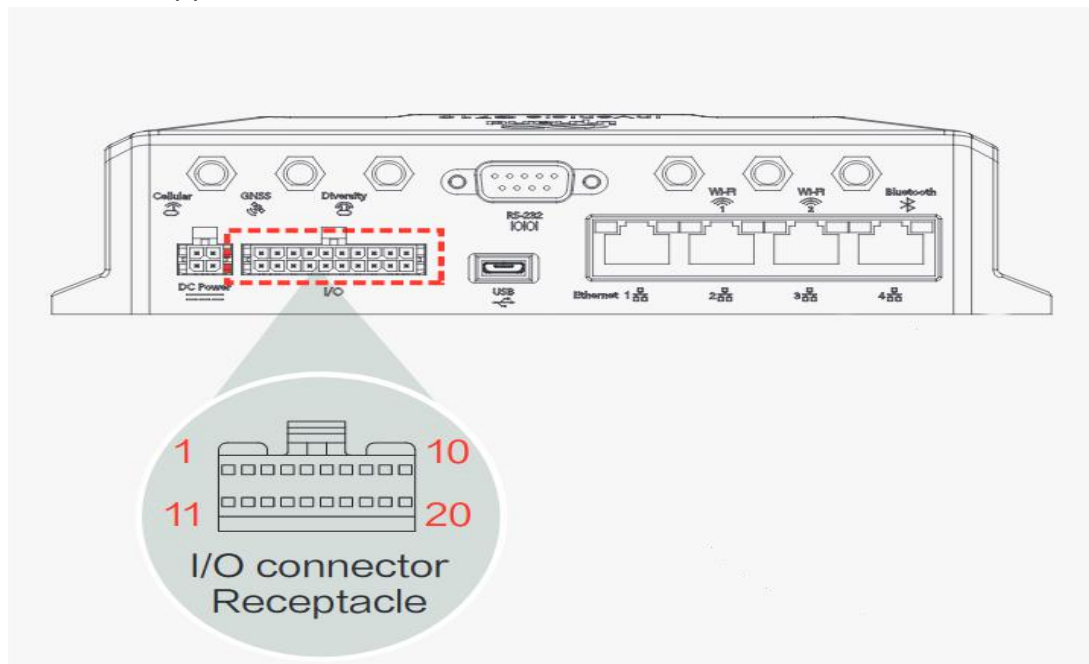
1-Wire is a device communication bus system designed by Dallas Semiconductor Corp. that provides low-speed data, signaling, and power over a single conductor. It is typically used to communicate with small inexpensive devices such as digital thermometers and iButton devices. iButton® devices are small, durably packaged modules with globally unique digital addresses.

With its integrated 1-Wire interface, VG710 acts as bus master could communicate with iButton device or 1-Wire thermometer.

Users should first correctly install their 1-Wire device, and then they can check their 1-Wire device detail via VG710's WebUI.

## Install your 1-Wire device

The following figure shows 20-pin IO connector of VG710, which includes 1-Wire interface support.



The following table details the 20-pin IO connector function assignment, and pin 3 is reserved for 1-Wire application.

PIN	Terminal Name	PIN	Terminal Name	PIN	Terminal Name
1	485-	8	AI4/DI4	15	DO1
2	CANL	9	AI2/DI2	16	GND
3	1-Wire	10	GND	17	AI5/DI5/WHEEL TICK
4	DO4	11	485+	18	AI3/DI3
5	DO2	12	CANH	19	AI1/DI1
6	GND	13	GND	20	GND
7	AI6/DI6/FWD	14	DO3		

When install your 1-Wire device, you should connect its DQ pin to pin 3 of VG710. Also you should connect its VDD and GND pins to GND pin of VG710. Make sure your installation is ready, and all these pin connections are OK.

## Check your 1-Wire device detail

The following figure shows where you can check detail of your 1-Wire device.  
Check WebUI: **Industrial >> 1-Wire**

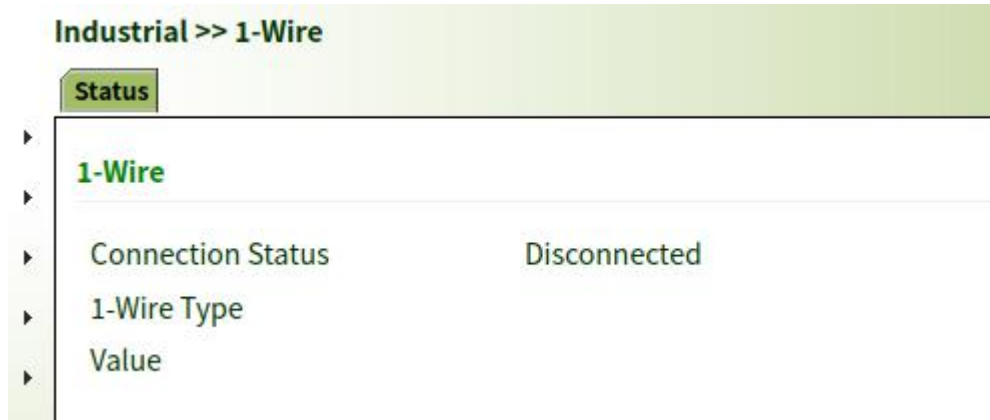
The screenshot shows a web browser window with the URL <https://10.5.16.197>. The page title is "Industrial >> 1-Wire". The main content area shows the following details:

1-Wire	
Connection Status	Connected
1-Wire Type	Temperature
Value	27.19(C)

The left sidebar contains a navigation menu with the following items: Administration, Network, Services, Link Backup, Routing, Firewall, VPN, APP, Industrial, Tools, and Wizards. The "Industrial" menu item is expanded, showing sub-items: DTU, IO, and 1-Wire. The "1-Wire" sub-item is highlighted in green.

## No Connection

The Connection Status shows Disconnected if no 1-Wire device is connected or your 1-Wire device has not been correctly installed.

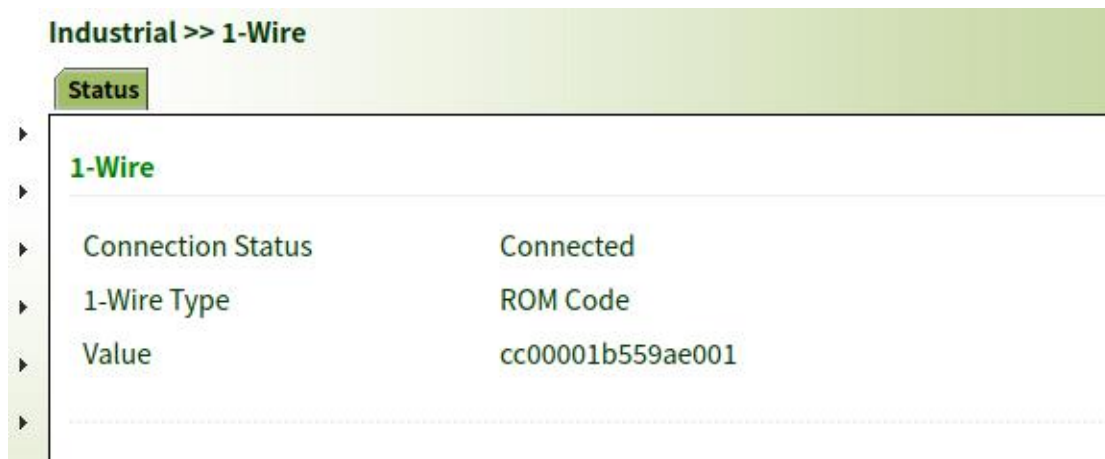


The screenshot shows a web interface for 'Industrial >> 1-Wire'. A 'Status' tab is selected. Underneath, the '1-Wire' section is expanded to show a table with the following data:

1-Wire	
Connection Status	Disconnected
1-Wire Type	
Value	

## iButton device

If your iButton device is correctly installed, it shows as the following.

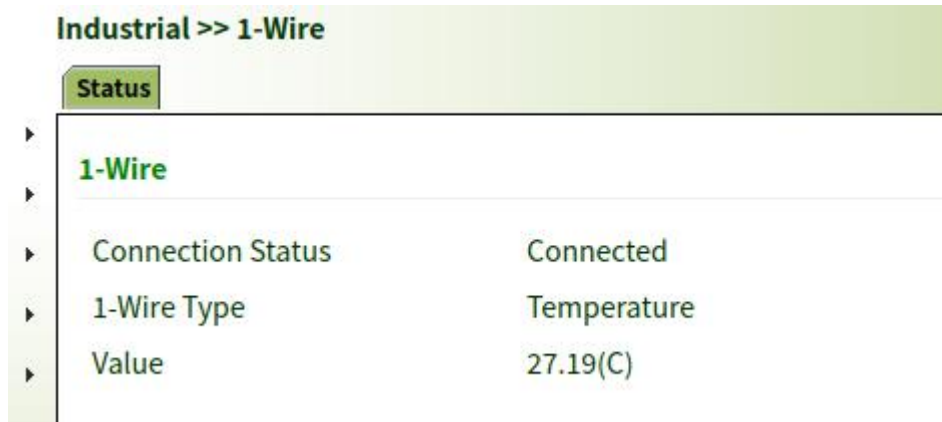


The screenshot shows a web interface for 'Industrial >> 1-Wire'. A 'Status' tab is selected. Underneath, the '1-Wire' section is expanded to show a table with the following data:

1-Wire	
Connection Status	Connected
1-Wire Type	ROM Code
Value	cc00001b559ae001

# 1-Wire thermometer

If your 1-Wire thermometer is correctly installed, it shows as the following.



The screenshot shows a web interface with a green header bar containing the text "Industrial >> 1-Wire". Below the header is a "Status" tab. Underneath, there is a section titled "1-Wire" with a list of properties:

Connection Status	Connected
1-Wire Type	Temperature
Value	27.19(C)

**Note** that it takes a little longer to retrieve the temperature, and you can enable page auto refresh to check the temperature changes.

The following example selects 5 seconds and then click **Refresh** button to enable page auto refresh.



This screenshot shows the same interface as the previous one, but with a "Manual Refresh" dropdown menu open. The menu lists various refresh intervals: 3 s, 4 s, 5 s (highlighted in orange), 10 s, 15 s, 30 s, 1 Minute, 2 Minutes, and 5 Minutes. Below the menu is a "Refresh" button. The temperature value in the main display is now 27.38(C).

Then page auto refresh will work and you will see *the temperature changes*.



This screenshot shows the interface after auto refresh is enabled. The "Manual Refresh" dropdown is now closed, and a "Stop" button has appeared next to the "5 s" interval. The temperature value in the main display has changed to 27.31(C).