



HIGH-END NMEA CONNECT PLUS GATEWAY

Ultrasonic Portable Range to NMEA 0183



English version
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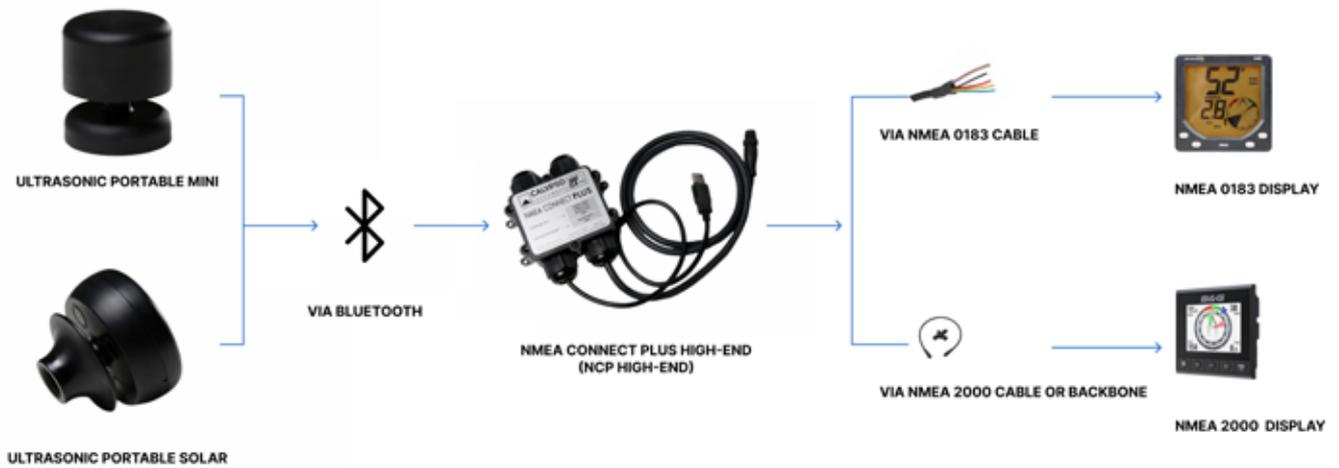
1. Brief description of product and layout

1.1 Brief description

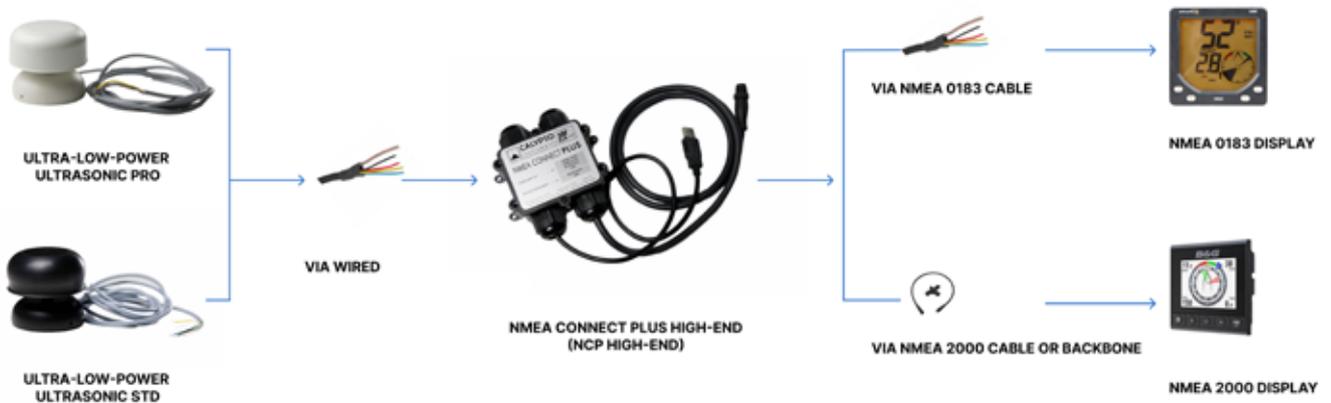
The NMEA Connect Plus High-End (NCP- High End), can be connected to the Calypso Instruments Portable Range via **Bluetooth Low Energy (BLE)** and also to the Calypso Instruments Wired Range. The NCP High-End can also be forward connected to both NMEA 0183 and NMEA 2000 chartplotters, displays or NMEA backbones .

The diagram below outline the connection pathway:

Calypso Instruments Portable Range.

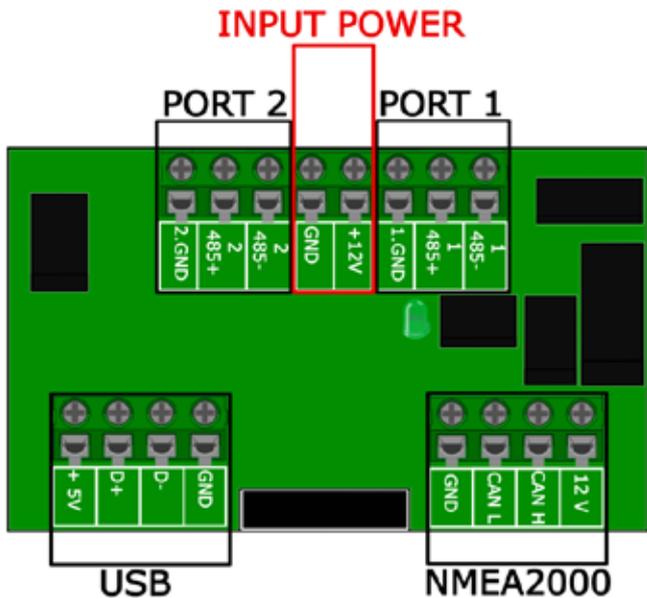


Calypso Instruments Wired Range.



1. Brief description of product and layout

1.1 NCP High-End layout.



Main terminal pins:

- **PORT 2** : 2. GND, 2 485+, 2 485-
- **INPUT POWER** : GND, + 12V
- **PORT 1** : 1.GND ,1 485+,1 485-
- **USB** : +5V, D+, D-, GND
- **NMEA 2000** : GND, CAN L, CAN H, 12V

The NCP High-End is labeled with:

- **MAC**: Unique identifier number
- **SSID** : NCP wifi name
- **PASSWORD** : Password for Wifi connection
- **IP** : IP Address
- **DB ADDRESS** : Bluetooth direction address
- **0183 WIFI SERVER PORT**:0183 Wifi server port as per default
- **MOD**: NMEA Connect Plus High-End model.

```
MODEL: HIGH_END
MAC: B8:F0:09:92:16:B1
SSID: Nmea+B8:F0:09:92:16:B1
PASSWORD: 4fbfa71a08af
IP: 192.168.4.1
BLE: B8:F0:09:92:16:B2
N0183 WIFI PORT: 50000
```

2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 0183 display.

NCP High-End configuration.

First of all, you need to configure your portable wind meter to the NCP High-End.

This configuration will help you guarantee the connection between the portable wind meter and the NCP will run automatically.

You can configure your NCP to your portable wind meter as follows:

- Via Wifi
- Via USB

Configuration via Wifi

Please note you will have to save one by one all the configuration steps.

- Connect the NCP to a power supply (USB or direct wiring to a power source).
- From your computer, click on wi-fi and select the NMEA wifi network (it will always be named as NMEA+ a number) . You can find it on your NCP-High-end label.
- Type the wifi password that you will find on the NCP High-end label.
- Click on connect.
- Open your browser and type the 192.168.4.1. ip address that you will find on the NCP High-End label.
- Press ENTER.

This is what you can expect to find:



We will have a quick tour around the information page, status page and configuration page within the next pages.

2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 0183 display.

Configuration via wifi (continuation)

Information Page

This page shows information about your NCP High-end such as the NCP model, its MAC code, NCP wifi address , BD address (the MAC id number that will be shown when connecting your device via Bluetooth) and its current firmware version.

```
MODEL: HIGH END
MAC: BB:F0:09:92:16:B1
SSID: NMEA-b8f0099216b1
BD_Address: BB:F0:09:92:16:B2
Firmware Version: 2.00
```

Status Page

This page shows all of the current active connections for your NCP High-End.

TRUE shows the connection is working.

Receiving shows whether the wind meter is sending and the NCP High-end is receiving data.

Ultrasonic connected shows whether the wind meter is connected or not via Bluetooth.

No. Clients connected shows how many devices are currently connected to the NCP High-end.

```
BLE
Active: True
Receiving: Connected (No data received)
Ultrasonic Connected: CB:D9:35:91:DD:C7
No. Centrals Connected: 0

N0183
Active: True
Receiving: UART2 reading

NMEA 2000
Active: True
State: Address claimed, working (STATE 5)
Address: 0

NMEA 0183 wifi server port
Active: True
No. Clients connected: --
Clients connected: --
```

2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 0183 display.

Configuration via wifi (continuation)

Configuration page

The interface will allow you to configure the NCP High-end to your Ultrasonic wind meter.

The screenshot shows a web browser window with the address bar displaying "192.168.4.1/config.py?html". The page title is "CALYPSO instruments NMEA CONNECT PLUS Configuration". The interface is divided into several sections, each with a "SAVE" button:

- WIFI STATION CONFIG:** Fields for "Wifi ESSID:" and "Wifi Pass:". A "SAVE" button is located below.
- IP CONFIGURATION:** Fields for "Manual IP:", "Netmask:", "Gateway:", and "DNS server: 8.8.8.8". A "SAVE" button is located below.
- BLE CONFIGURATION:** Field for "BLE MAC address:". A "SAVE" button is located below.
- NMEA 0183 PORTS CONFIGURATION:** Fields for "NMEA 0183 PORT 1" (Speed: 4800 or 38400, Direction: Input or Output), "NMEA 0183 PORT 2" (Speed: 4800 or 38400, Direction: Input or Output), "NMEA OUTPUT UNITS" (knots, m/s, or km/h), and "NMEA WIFI IP PORT" (50000). A "SAVE" button is located below.
- MODEL KEY:** Field for "Model Key:" with a value of "15a7c398c503596a7e10b". A "SAVE" button is located below.

Follow the next steps to make the configuration via WIFI:

- Click on the configuration page.
- In BLE configuration, type your portable wind meters' MAC number that you will find on the wind meters' box.

2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 2000 display or NMEA 2000 backbone.

Configuration via wifi (continuation)

- Click on "Save".

A feedback message will be shown to confirm changes have been saved.

- Configure PORT 1 and PORT 2 as output and input. By default, you see in this screenshot that PORT 1 is configured as output and PORT 2 as input, but both of them could be alternated. Please make sure you configure your display speed, depending on your display. You can also choose your NMEA units (how your NMEA will send data) between knots, m/s or km/h.

BLE CONFIGURATION
BLE MAC address: FF50BC51BCDE
SAVE

NMEA 0183 PORTS CONFIGURATION

NMEA 0183 PORT 1
Speed 4800 38400
Direction Input Output

NMEA 0183 PORT 2
Speed 4800 38400
Direction Input Output

NMEA OUTPUT UNITS
 knots m/s km/h

NMEA WIFI IP PORT
50000
SAVE

- Save changes.

Please do not change the NMEA wifi IP port and the model key fields as they come automatically configured.

NMEA WIFI IP PORT
50000
SAVE

MODEL KEY
Model Key: 1ca7c300c53351bfa7e10tr
SAVE

Configuration via USB

Please note this connection is only available for Windows users.

- Connect the NCP High-End USB port to your computer.
- Go to <https://calypsoinstruments.com/technical-information> and click on the Get Configurator button from the NMEA Connect Plus section.
- Download and run the configurator.

2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 0183 display.

Configuration via USB (continuation)

This is the configurator interface :



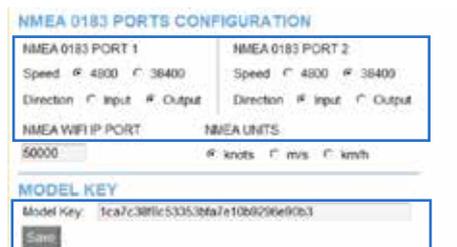
To configure the Portable wind meter to the NCP High-End fill in the following fields:

- Inport COM select, COM+ the number of COM that belongs to your NCP High-End.

If you don't see any port COM number or you don't know what is your port COM number, see Appendix I.

Once you select your port COM , the interface will update some information, such as the NMEA 0183 ports configuration and the Model key sections.

Please do not update the NMEA wifi IP port and the model key fields as they come automatically configured.



- In the BLE CONFIGURATION section , type your wind meters' Mac number. You will find this MAC number on the portable wind meter box.



- Save changes

2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 0183 display.

Configuration via USB (continuation)

A feedback message will be shown to confirm changes have been saved.

NCP Connection

Connection using PORT 2 as input

Set up the cable connections as follows:

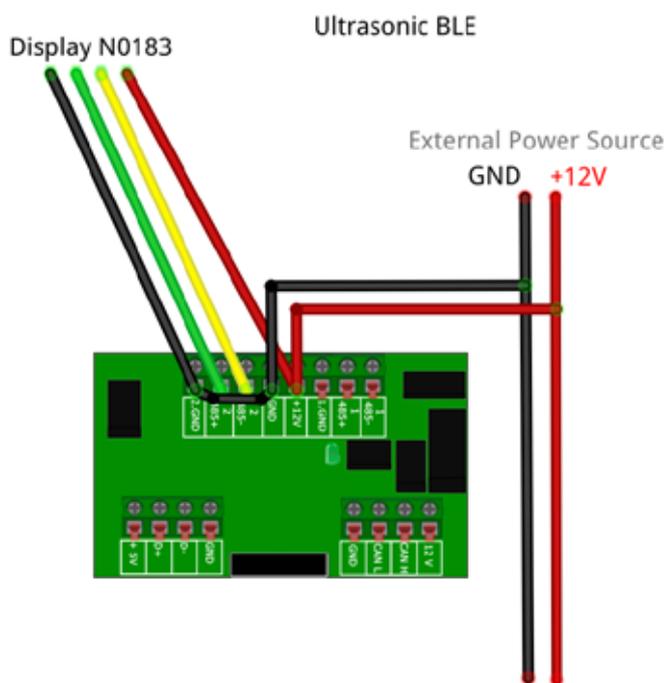
- Display GND to GND to the selected output.
- Display 485+ to 485+ from your output.
- Display 485- to 485- from your output.

You will also need to make a bridge GND power to GND PORT 2 (in our case it is our output).

- Connect the NCP from its POWER source to your power supply.
- Connect your 0183 display to your power supply as follows :
 - Power supply + to +12.
 - Power supply - to GND.

- Star receiving wind data.

If for some reason, you have followed the steps but you don't receive data, please contact us at sales@calypsoinstruments.com.



2. Connection from the Calypso Instruments Portable Range.

2.2 How to connect the Calypso Instruments Portable Range via Bluetooth to the NCP High-End via cable to an NMEA 0183 display.

NCP Connection (continuation)

Connection using PORT 1 as input

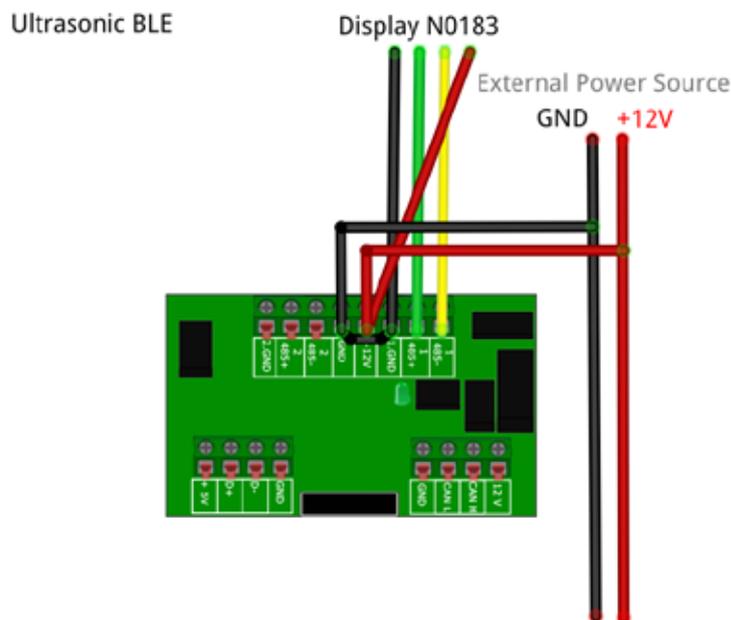
Set up the cable connections as follows:

- Display GND to GND to the selected output.
- Display 485+ to 485+ from your output.
- Display 485- to 485- from your output.

You will also need to make an electrical bridge from GND power to GND PORT 1 (in this case it is our output).

- Connect the NCP from its POWER source to your power supply.
- Connect your 0183 display to your power supply as follows :
 - Power supply + to +12.
 - Power supply - to GND.
- Star receiving wind data.

If for some reason, you have followed the steps but you don't receive data, please contact us at sales@calypsoinstruments.com.



I don't see any port COM number or I don't know what my port COM number is.

I don't see any port COM number.

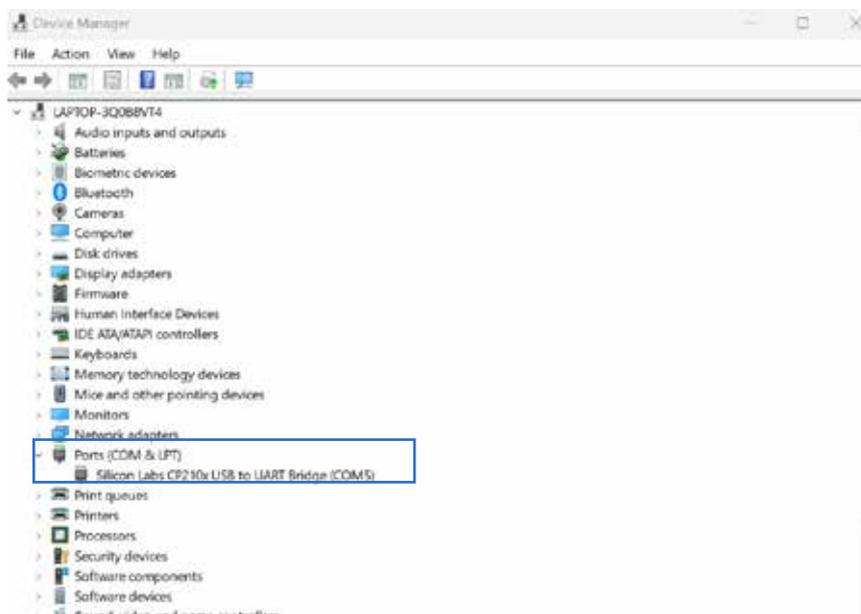
If you don't see any port COM number, it means that you need to download some port COM drivers first.

You can download them at [https://calypsoinstruments.com/technical-information NMEA Connect Plus section](https://calypsoinstruments.com/technical-information/NMEA-Connect-Plus-section).

- Download the drivers for your software. Choose between Windows, Mac, Linux or Wind.
- The drivers will be downloaded in a Zip. Unzip the information and get access to the driver.
- Open the file and go to the installing section.
In this example, we are downloading the CP210x Universal Windows Driver.
- Follow the installing section instructions for downloading the drivers.

I don't know what my port COM number is.

- On your computer, go to **Device manager**.
- In PORTS (COM & LPT) you should see something similar to this:
"Silicom labs CP210x USB to UART converter bridge (COM5)".
In this case, our comPORT is number 5.





NMEA CONNECT PLUS HIGH-END

User manual English version 1.0

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