
Veronte Link

Release 6.8.33

Embention

2023-08-04

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Veronte Link interconnects multiple control stations and autopilot units, so they can operate simultaneously.

QUICK START

Veronte Link establishes **communication between a computer and any Veronte product** by creating a **VCP bridge**. It allows to use multiple control stations and autopilots to be interconnected, operating simultaneously.

Veronte Link also includes a **post-flight viewer**, to reproduce all recorded data from previous flights and generate plots and reports.

Veronte Link supports the main Operating Systems (Windows, Linux and MacOS X). Contact Embention and we will provide you with the software that better fits your requirements. Also, you must have updated the latest version of java.

1.1 System Requirements

Before executing this software, users should check the following sections with the minimum and recommended PC hardware requirements.

Minimum requirements

- CPU: Intel Core i5-8365UE
- RAM: 8 GB DDR4
- STO: 256 GB SSD

Recommended requirements

- CPU: 12th Gen Intel(R) Core(TM) i7-12700H 14 cores hasta 4,70 GHz
- RAM: 32,0 GB
- STO: 1TB SSD M.2 NVMe PCIe

1.2 Installation

Once a Veronte device has been purchased, a GitHub release should be created for the customer with the application.

To access to the release and download the software, read the [Releases](#) section of the **Joint Collaboration Framework** manual.

To install Veronte Link on Windows, execute Veronte Link.exe and follow the steps:

1. Click on Next:

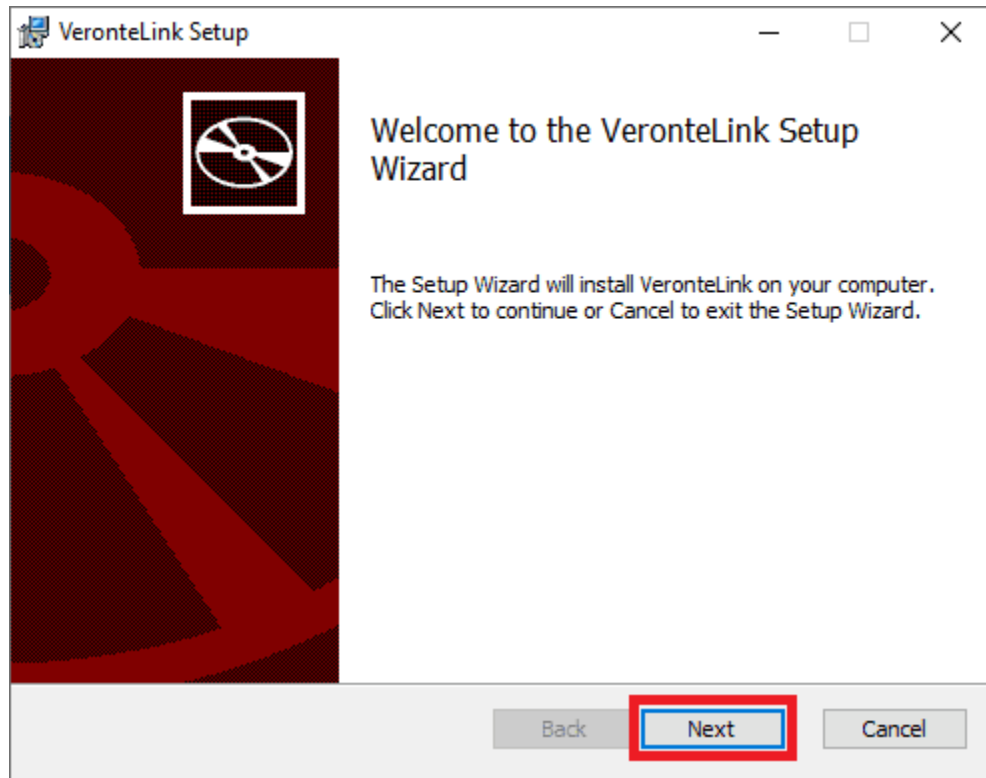


Fig. 1: Windows Installation - Step 1

2. Read and accept the EULA (End-User License Agreement):

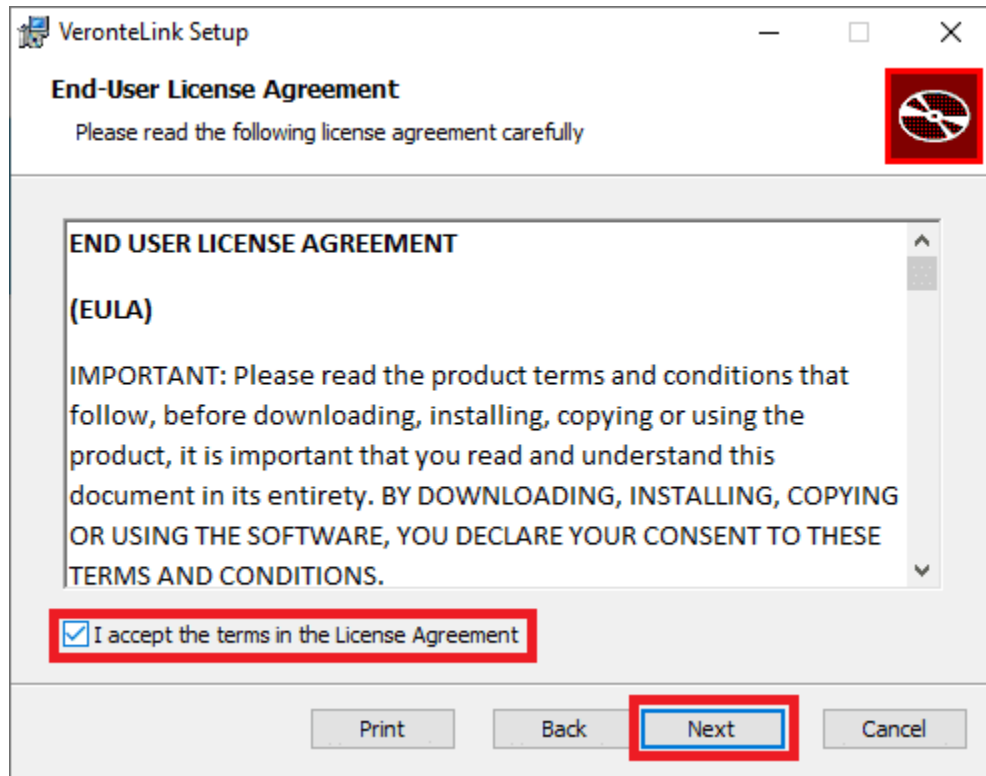


Fig. 2: Windows Installation - Step 2

3. Select the directory where where the software will be installed (with the **Change** button), then click on Next:

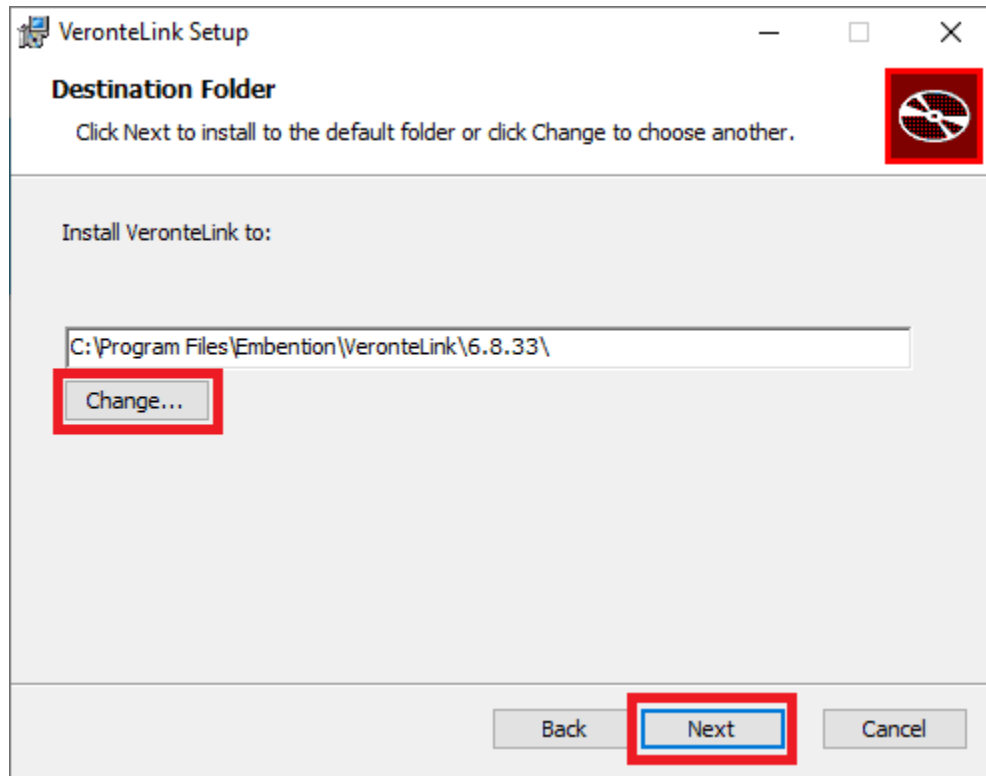


Fig. 3: Windows Installation - Step 3

4. Finally, click on **Install** (administrator rights are needed):

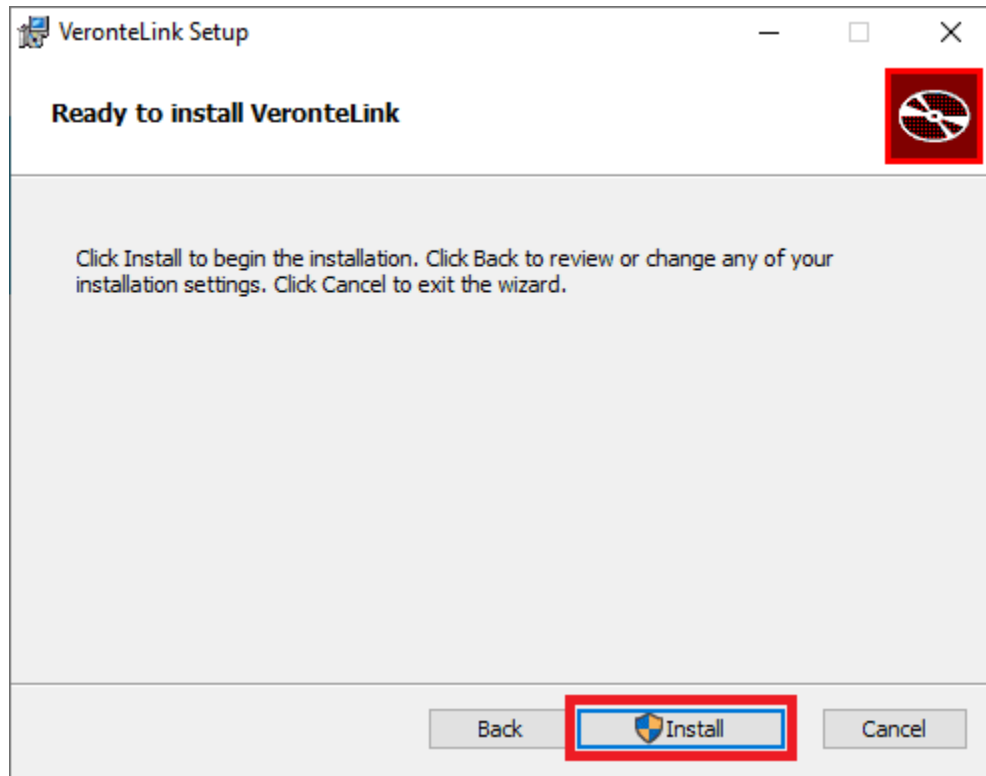


Fig. 4: Windows Installation - Step 4

5. After a few seconds, the following window will appear indicating the process was successful. Click on **Finish**:

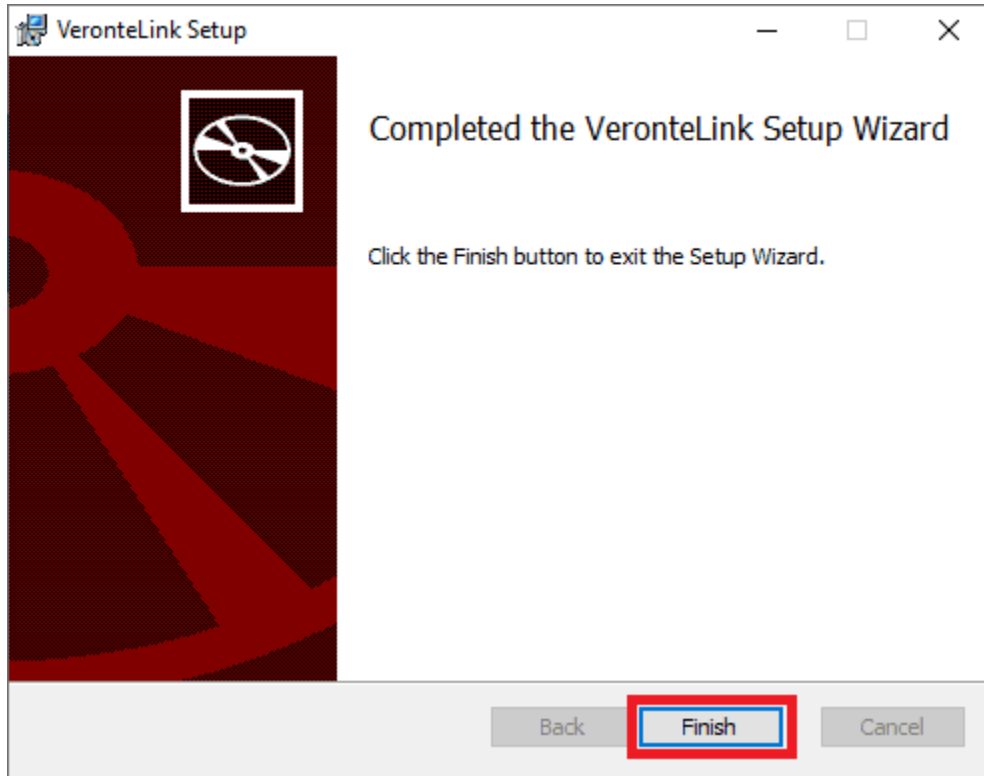
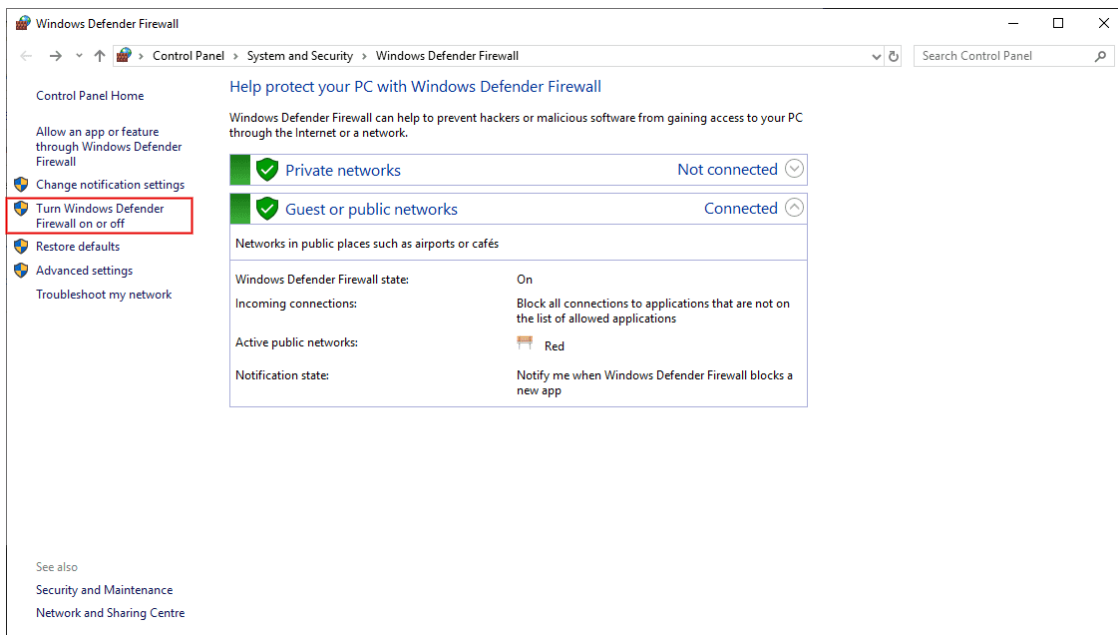
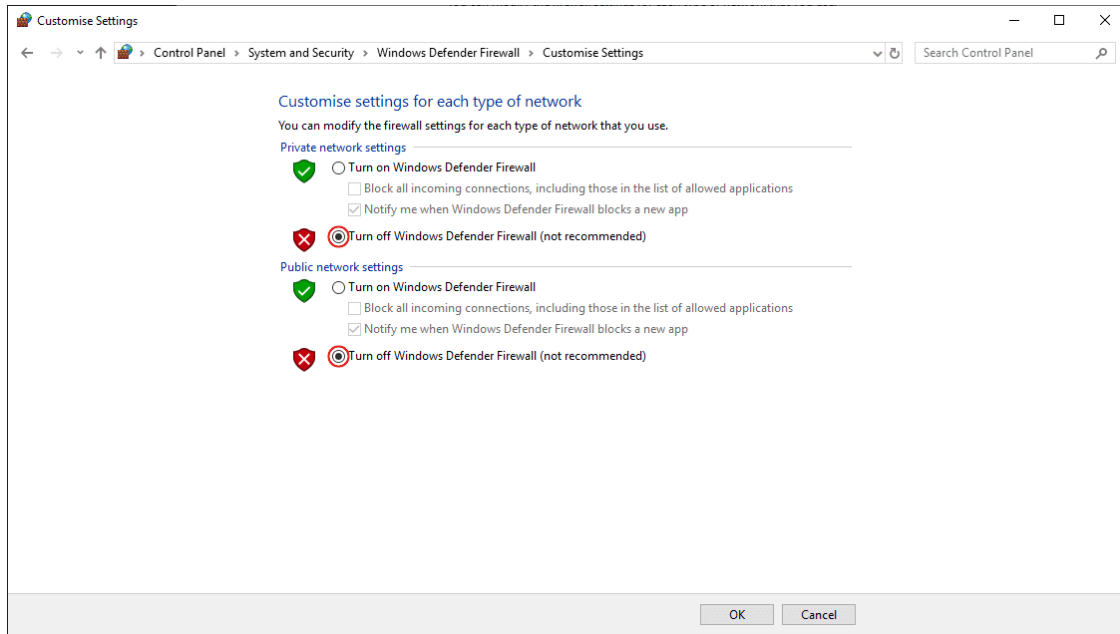


Fig. 5: Windows Installation - Step 5

Note: In case of any issue during installation, please disable Windows Defender and Firewall. To disable Firewall, go to “Control Panel” and “Firewall of windows”, then click on **Turn off**.





OPERATION

In order to establish a connection between a Veronte device and a PC with Veronte Link, follow the steps:

1. Connect the device to a PC via Serial (USB, RS232 or RS485) or UDP (Wifi or Ethernet).



Fig. 1: PC-Veronte device connection

2. Open Veronte Link, then a similar image to the following should be displayed:

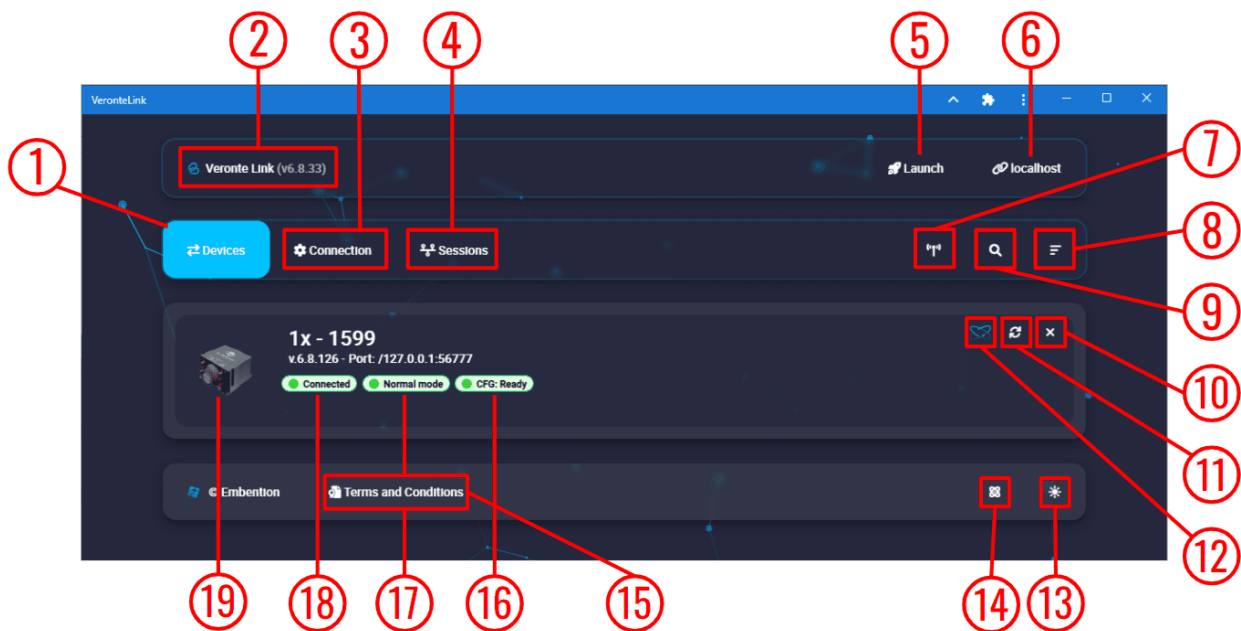


Fig. 2: Veronte Link interface - Devices menu

1. **Devices:** This is the currently displayed menu. It shows the devices connected to the PC.
2. **Veronte Link version:** Informs the user about the version of the software being used.
3. **Connection:** This menu allows the user to configure the connection between the PC and a Veronte device. See [Connection](#) section for more information.
4. **Sessions:** In this menu users can play back recorded logs and flights. See [Sessions](#) section for more information.
5. **Launch:** Users can access Veronte FDR from here.
6. **Host:** Allows connecting to the local IP address or to another desired IP address.
7. **Find all:** Runs a discovery to all devices.
8. **Sort list:** Click on it to sort the list of devices.
9. **Search from ID:** Searches for a specific device by its ID. Entering the ID **999** will search for all devices.
10. **Delete device:** Only works after disconnecting the device.

Note: Only available if a device is connected or has been connected.

11. **Refresh device:** It is recommended to use in case of any connection error.

Note: Only available if a device is connected or has been connected.

12. **Open VeronteOps:** From here users can access Veronte Ops on the same version of the connected device.
13. **Dark/light mode:** Switches to light/dark mode, changing the display mode of the interface.
14. **Switch particles:** Particles can be *on* or *off*, changing the application appearance.
15. **Terms and Conditions:** Users can consult the 'End User License Agreement (EULA)' by simply clicking on this button.
16. **Configuration status:** It can be:
 - *CFG: Waiting to read*
 - *CFG: Reading conf*
 - *CFG: Ready*
 - *CFG: Failed load conf*
 - *CFG: Not Downloaded*
 - *CFG: Not compatible*
17. **Device status:** Can be in *Normal mode*, *Maintenance mode* or *Loaded with errors*.
18. **Connection status:** It can be *Connected* or *Disconnected*.
19. **Veronte device:** Here is displayed an image of the Veronte device that is connected.

Important: Once Veronte Link is executed, an icon will appear in the taskbar and a browser window will open.

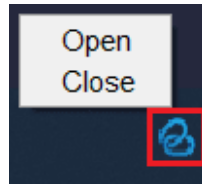


Fig. 3: Veronte Link icon

To **close** the application, it is not enough to close the browser window, it is necessary to **right-click** on the icon and select **Close**.

If the browser window is closed, it can be accessed again by selecting the **Open** button.

2.1 Connection

In this menu users must **configure the connection type** of the Veronte device.

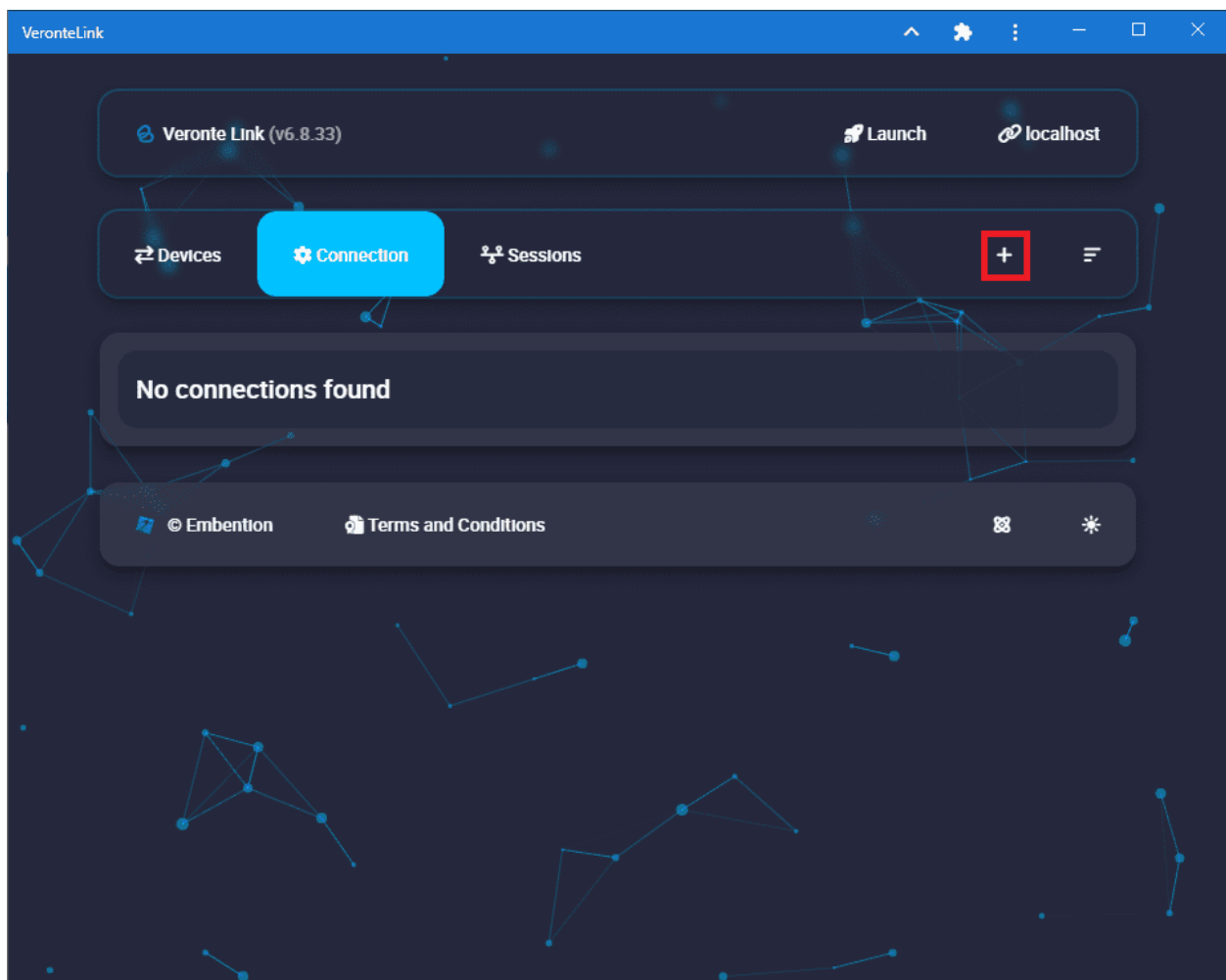


Fig. 4: Connection menu

Clicking on the '+' icon will display the **configuration** panel. The parameters to be configured depend on the type of connection selected:

Warning: Apart from **Type** and **Port** parameters, it is not recommended to modify the default configuration, as the default parameters should work correctly.

- **Serial:** USB, RS232 or RS485 connections.

New connection

Type *
SERIAL

SERIAL configuration

Port

Baudrate
115200

Parity
NONE

Flow control
NONE

Data bits
8

Stop bits
1

Advanced

Reconnect time
10

Disconnect time
1

Cancel Save

- **Port:** Select the port of the computer to which the device is connected. It does not have to be the same as the one in the example image (*Veronte Link interface image*).

More information about the port where the device is connected is explained in *Serial connection - Integration examples section*.

- **Baudrate:** This field specifies how fast data is sent over a serial line.
- **Parity:** Is a method of detecting errors in transmission.

When parity is used with a serial port, an extra data bit is sent with each data character, arranged so that the number of 1 bits in each character, including the parity bit.

The available options are **EVEN, MARK, ODD, SPACE** and **NONE**.

- **Flow Control:** RTS/CTS and XON/XOFF control can be configured if needed.
- **Data Bits:** Defines the number of bits in the message. It can be configured from **5 to 8** bits.
- **Stop bits:** Number of stop bits sent at the end of every character. Can be **1, 1.5** or **2**.
- **Advanced:**

- * **Reconnect time:** The time to consider a device reconnected. Default is set to 10 seconds.

- * **Disconnect time:** Time to consider a device disconnected is defined here. 1 second is configured by default.

- **UDP:** Ethernet, Wifi and Pipecloud connections through 4G.

New connection

Type *
UDP

UDP configuration

Address
239.0.0.1

Port
12345

TTL X

Cancel Save

Fig. 6: UDP connection configuration

- **Address:** IP address, normally set to *239.0.0.1* (for broadcast) or *127.0.0.1* (for local).
- **Port:** IP Port must be set.
- **TTL:** Time To Live, is the maximum amount of time or ‘hops’ that a UDP packet can exist inside a network before being discarded by a router.

A default value should automatically be set.

- **Planet:** Satellital connections, it requires internet connection.

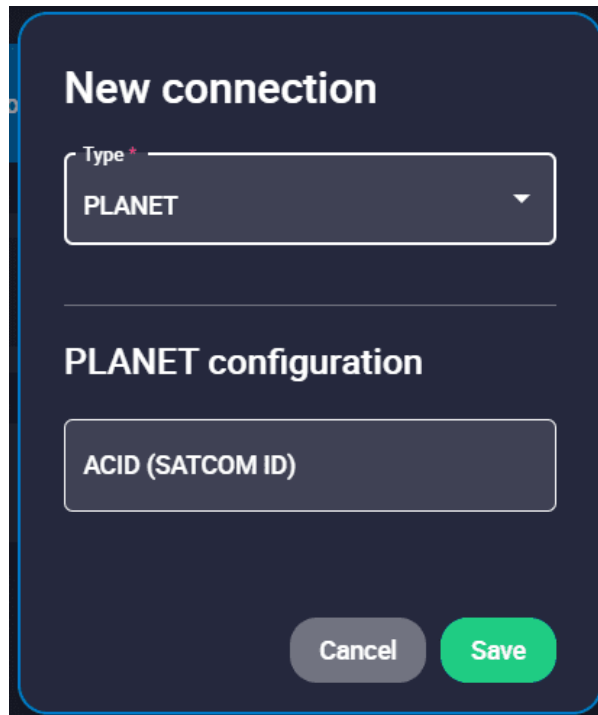


Fig. 7: Planet connection configuration

- Satcom ID must be set.

Finally, click on **Save**.

Note: In case of not getting the device connected, make sure that the PC acquires a *communication port*.

2.2 Sessions

Sessions tab displays all finished device sessions.

Note: Sessions that are currently being recorded will not be displayed.

The following image and list describe each functionality.

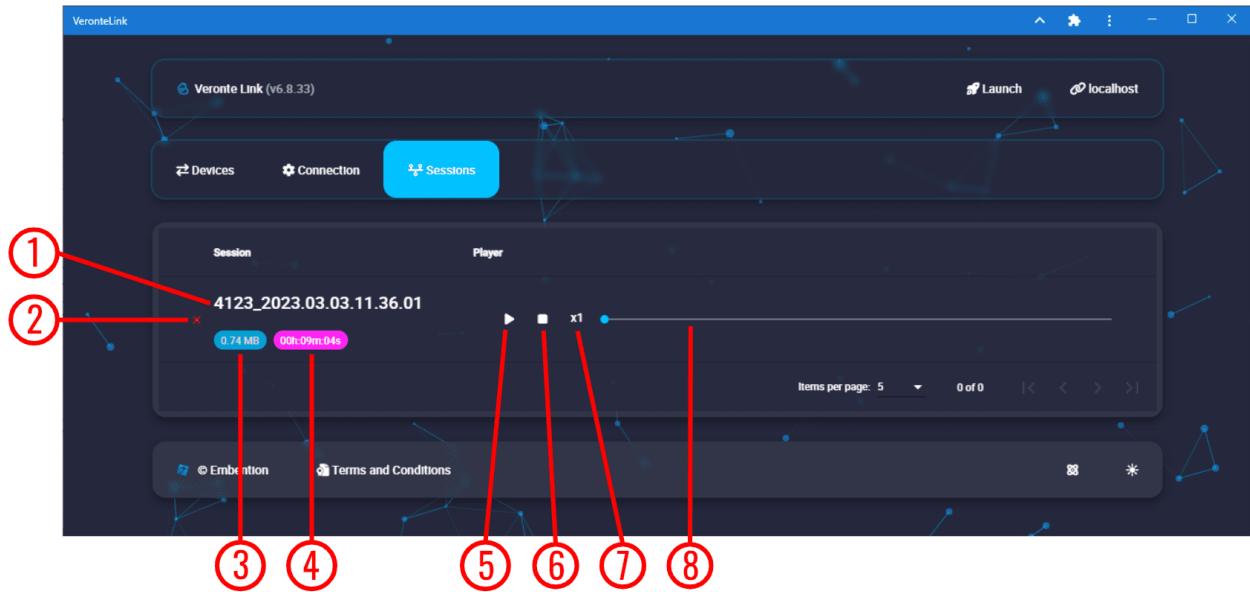


Fig. 8: Sessions menu

1. **Session name:** It is made with recording time (date and hour).
2. **Delete session.** If the user wishes to delete more than 1 session at a time, it is possible to delete them from the **Veronte Link sessions folder** located in the following path:
`C:\Users\USER_NAME\AppData\Roaming\VeronteLink\sessions`
3. **Files weight.**
4. **Duration.**
5. **Play/Pause:** Play button creates a **virtual device** similar to the following figure:

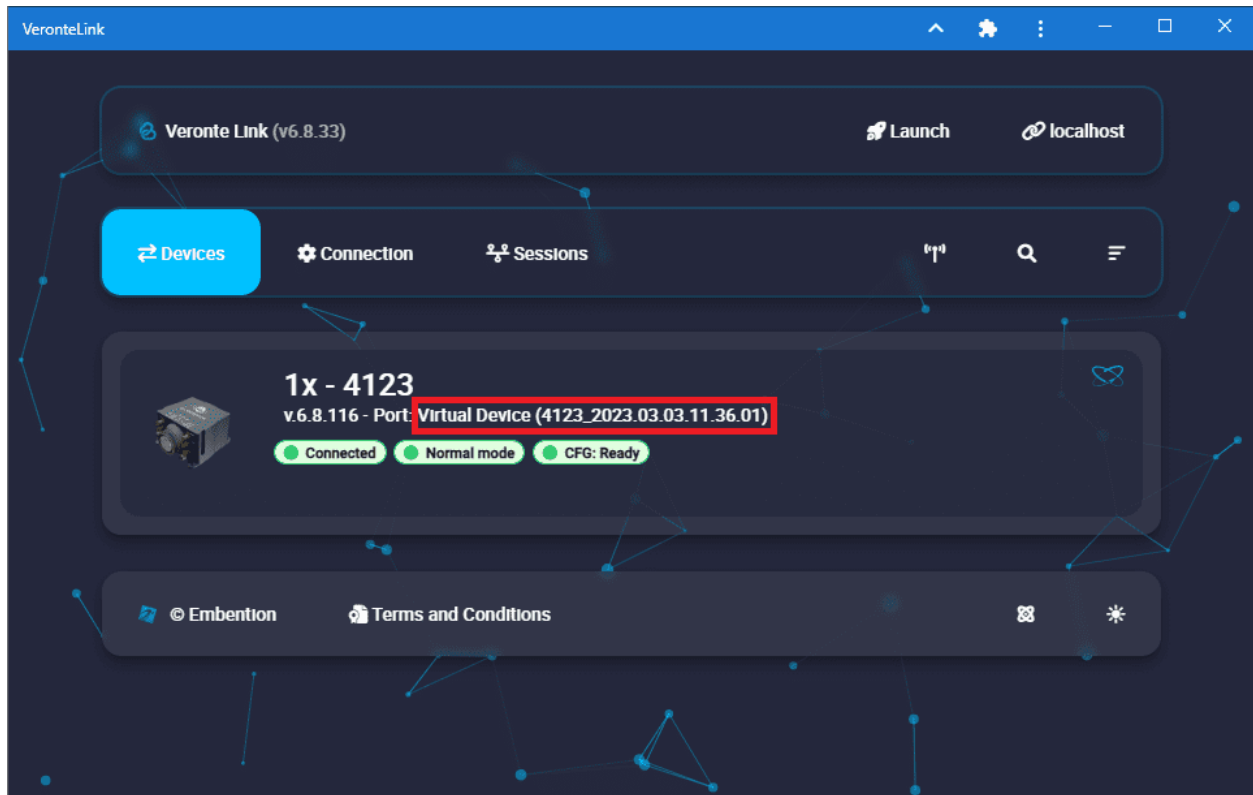


Fig. 9: Virtual device

It starts a simulation replaying everything that happened during the session recording. It will recreate all the occurred events with detail and Veronte Ops will display the corresponding data and trajectories; read the [Veronte Ops user manual](#) for more information.

Note: In addition, when the virtual device is in a **ready** state, users can **open the 1x PDI Builder software and download the configuration (PDI files)**.

6. **Stop:** It stops playing the session. It **does not delete the session**.
7. **Speed:** Playing speed can be selected as x0.5, x1, x2, x4 and x8.
8. **Display bar:** Click and drag to replay any moment.

INTEGRATION EXAMPLES

3.1 Serial connection

As the com port configuration is common to all devices, the following steps are applied to MC24 and MC110 controllers as an example.

1. Once Veronte Link is installed, the first step that must be done is to set the connection that your MC unit is currently using. By default, every MC is capable to communicate through USB, RS232 and RS485 so any of these can be used (properly adapted to USB/serial).

First, click on “+”:

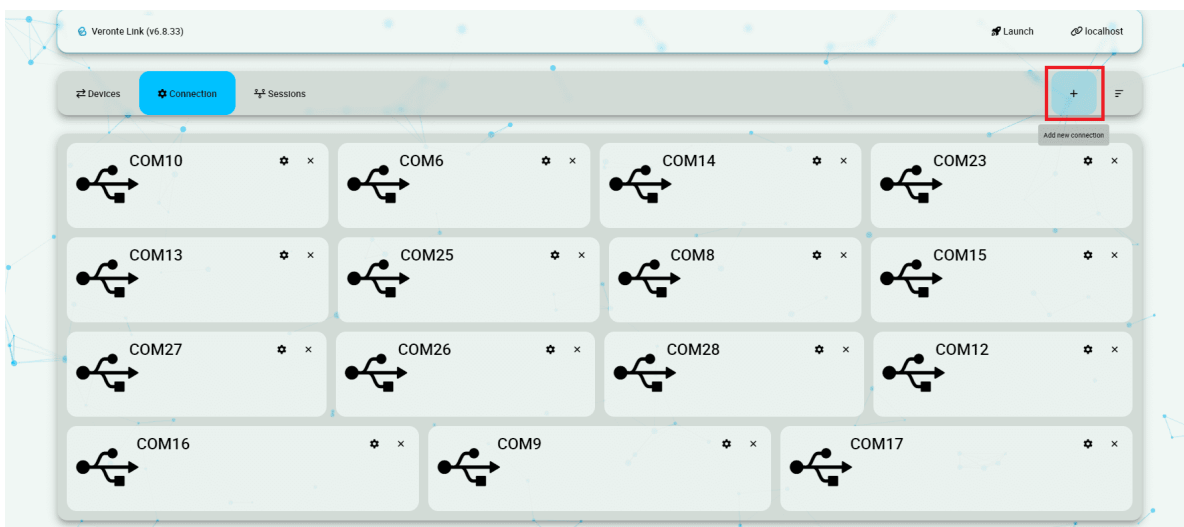


Fig. 1: Add new connection

2. Besides, it is required to find out which port is employing the MC unit. Windows allows to do that with the **Device Manager** from the **Control Panel**.

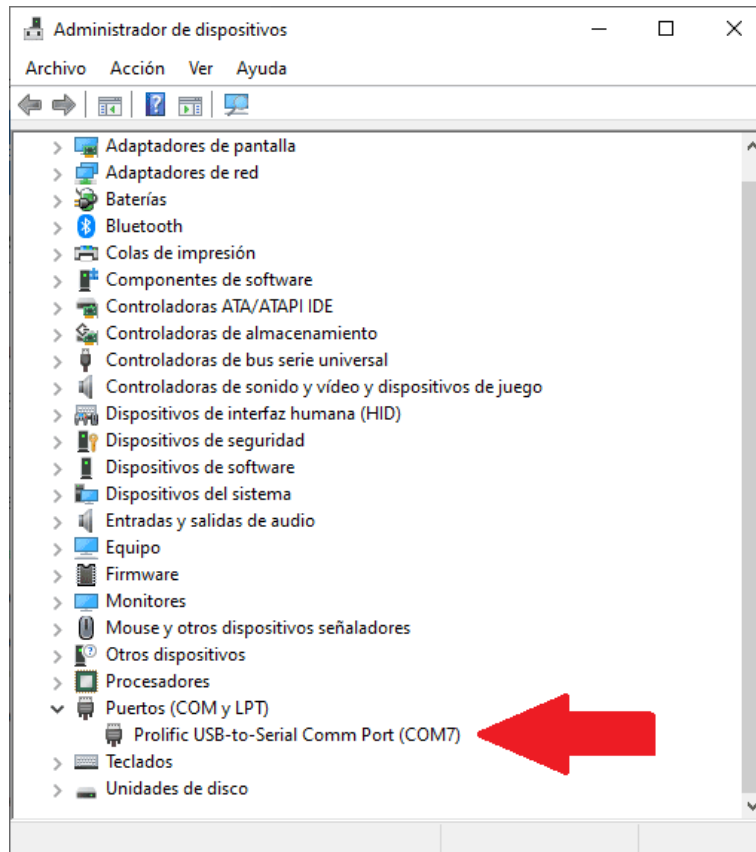


Fig. 2: Windows Device Manager

3. Select your COM settings by entering the comm port previously found. Normally, the other default parameters should not be changed.

New connection

Type *
SERIAL

SERIAL configuration

COM7

Baudrate
115200

Parity
NONE

Flow control
NONE

Data bits
8

Stop bits
1

Cancel Save

Fig. 3: New connection configuration

4. If the selected port is correct and everything went well, a new MC will be displayed in the devices list. However, the *device status* will remain as **CFG: Waiting to read**.

The user is ready now to start configuring the motor controller using **MC PDI Builder**.

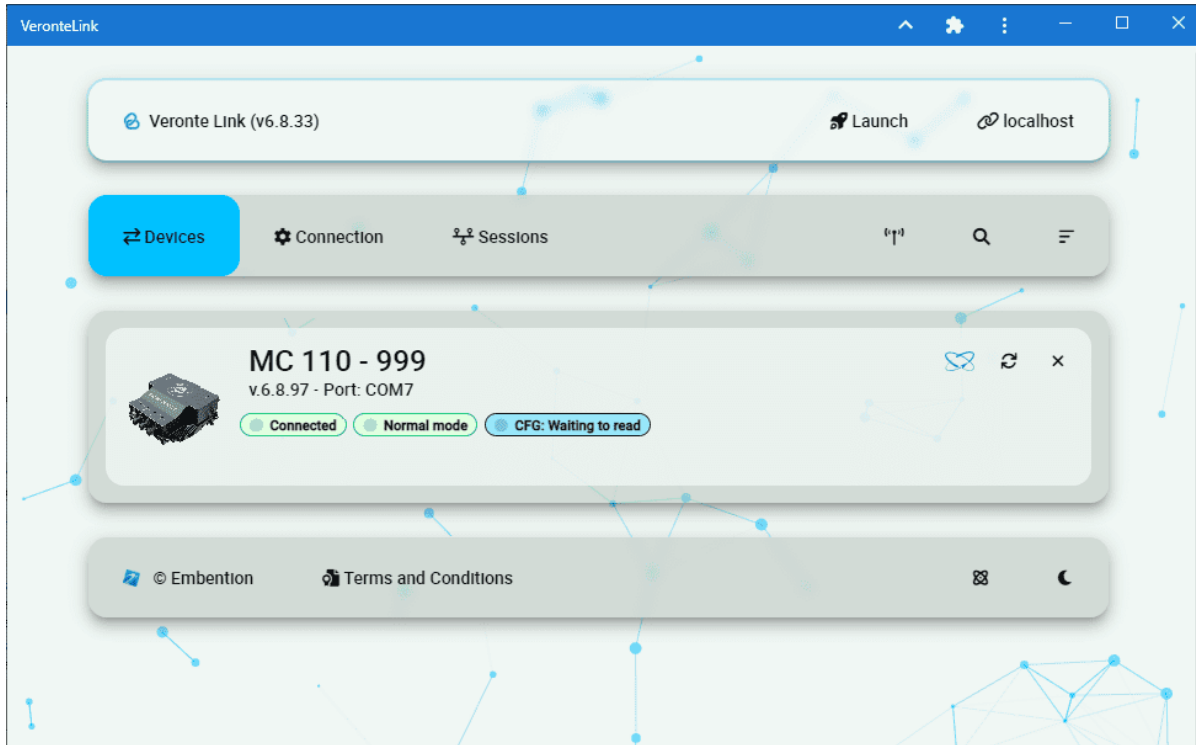


Fig. 4: MC unit correctly connected

More Veronte devices (*MC units, Veronte Autopilots, etc.*) could be added following these instructions.

Note: In case of connecting an Autopilot 1x, after a few seconds, the *device status* should replace **CFG: Waiting to read** by **CFG: Ready**, since **only autopilot 1x is able to change or load configuration in normal mode**.

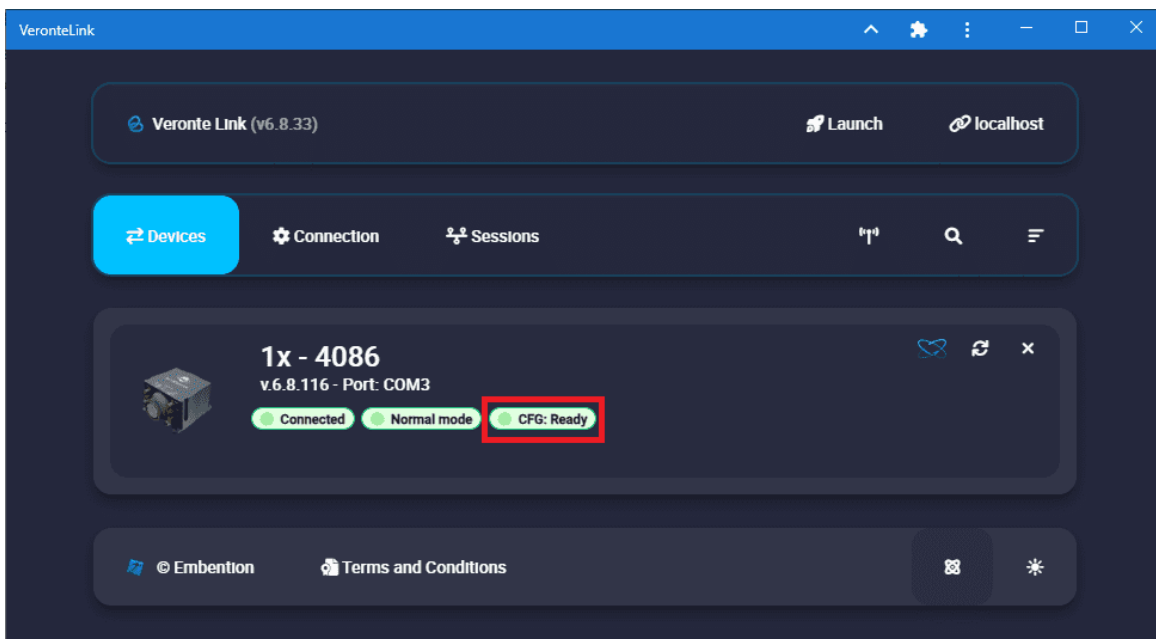


Fig. 5: Veronte Autopilot 1x connected and ready

3.2 UDP connection

Wi-Fi/Ethernet configuration

The following steps are applied to a **PCS** unit as an example.

Important: If connecting through **Ethernet**, **step 1** does not apply.

1. The first step is to look under *available networks* for the PCS unit and connect to it.
2. Once the connection is made, enter Veronte Link and configure the UDP connection in the **Connection menu**.

First, click on “+”:

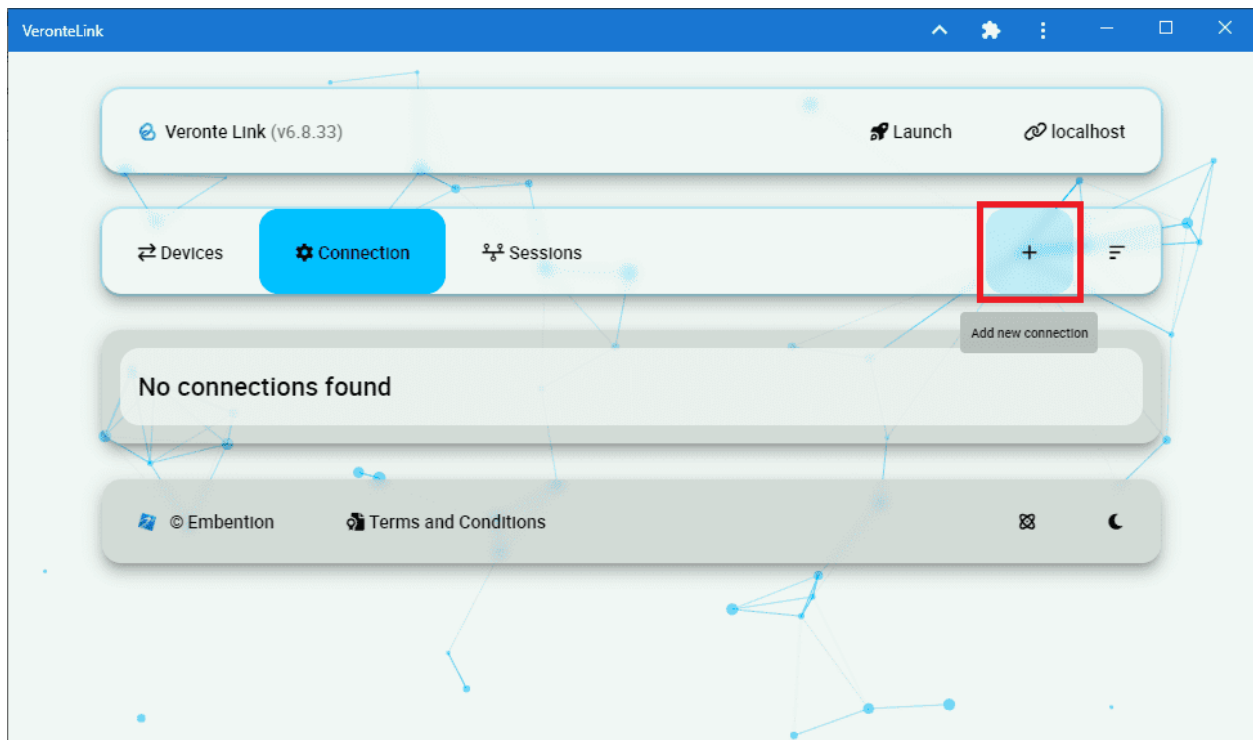


Fig. 6: Add new connection

3. Then, the configurable parameters must be entered.

New connection

Type *
UDP

UDP configuration

Address
239.0.0.1

Port
12345

TTL X

Cancel Save

Fig. 7: New UDP connection configuration

Important: This address and port are configured for this PCS unit, they do not have to be the same for another device.

4. If the configured connection is correct and all went well, a new PCS will appear in the device list and the *device status* will change to **CFG: Ready**.

The user is ready now to start configuring the PCS using **1x PDI Builder**.

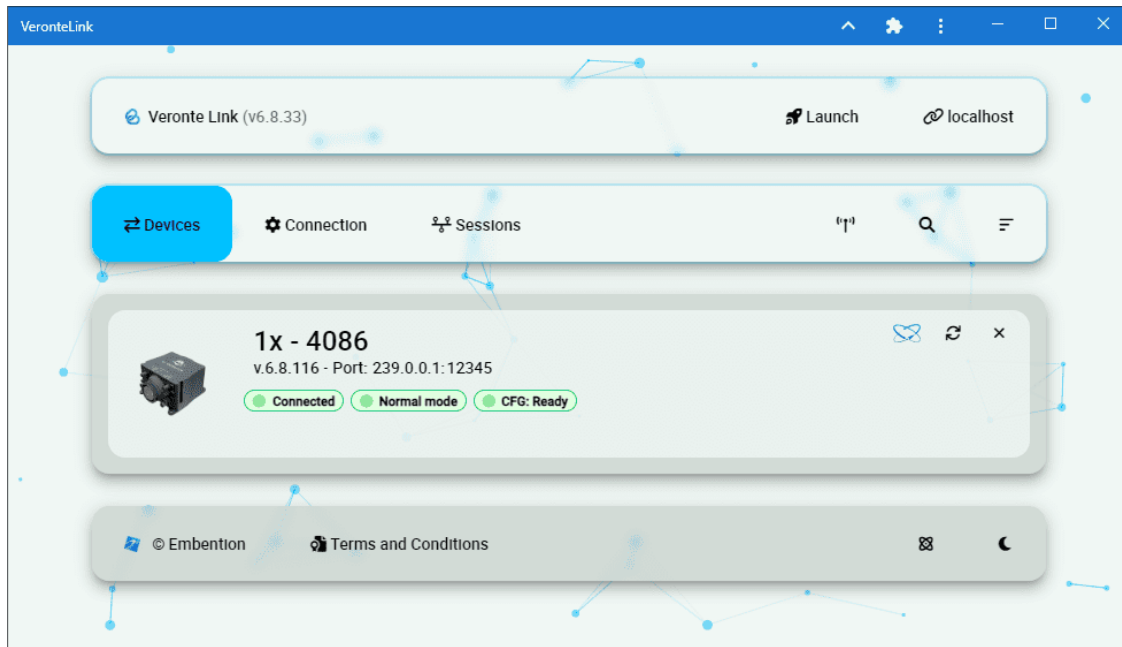


Fig. 8: PCS unit correctly connected

Note: The image of a Veronte Autopilot 1x is displayed and not a PCS as the device that is actually connected is the Autopilot 1x inside the PCS.

TROUBLESHOOTING

In case of any software error, it is possible to extract and analyze files from session folder.

Warning: Do not modify or delete manually any Veronte Link file. Copy them to a different path to send or analyze.

Veronte Link files are placed on the following paths:

- C:\Users\USER NAME\AppData\Roaming\VeronteLink\configurables Device configurations.
- C:\Users\USER NAME\AppData\Roaming\VeronteLink\sessions Session files, it includes flights information.
- C:\Users\USER NAME\AppData\Roaming\VeronteLink\tracelogs Event logs, it includes flights information.
- C:\Users\USER NAME\AppData\Roaming\VeronteLink ⇒ cfg.son Veronte Link connections configuration file. **If deleted, the configuration will be lost.**
- C:\Users\USER NAME\AppData\Roaming\VeronteLink ⇒ vlink.lock Internal file that only appears if any instance of Veronte Link is open. **If deleted, there will be instability in the system.**

4.1 Comm Port error in Windows Device Manager

If the following Windows Comm Port error occurs:

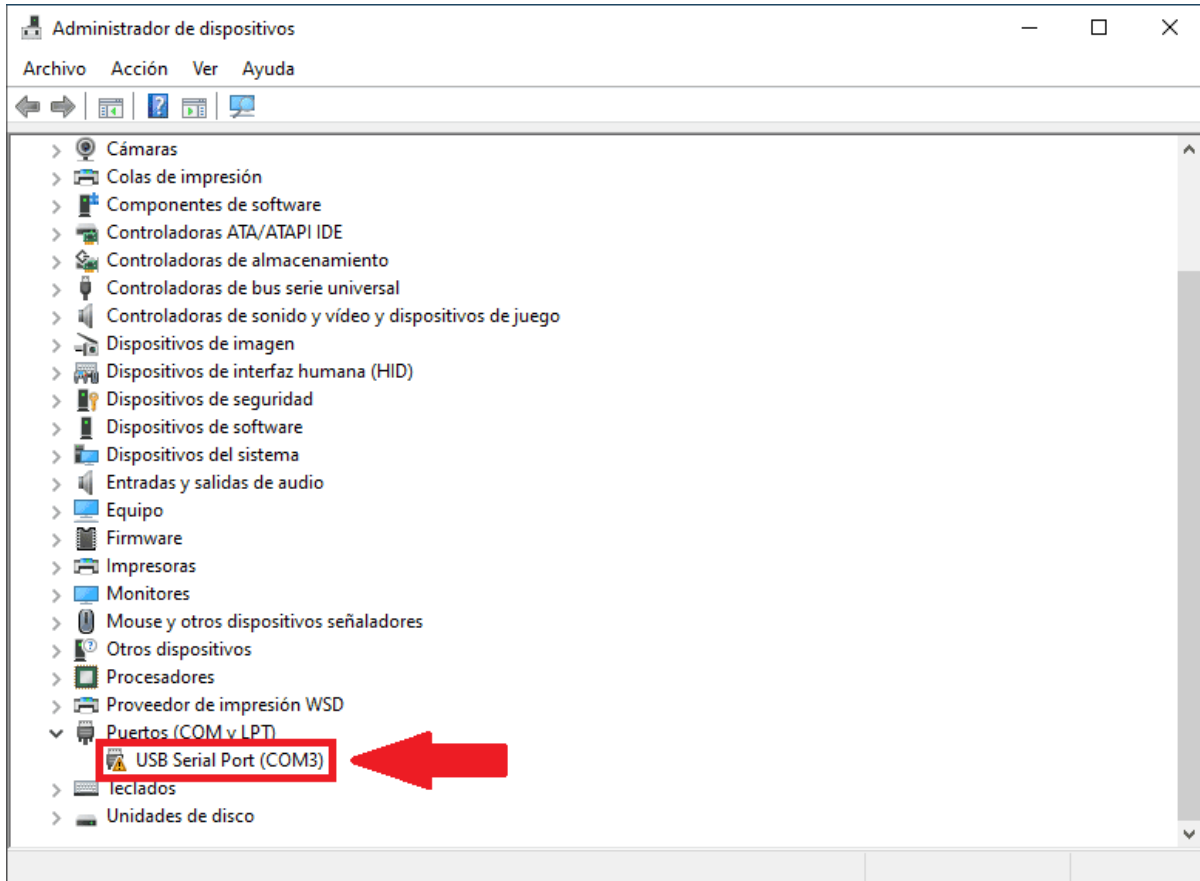



Fig. 1: Windows Device Manager - Comm Port error

Users must extend the disconnection time to 5 seconds to fix it. To do this:

1. Go to the **Connection** menu → click on the  icon to open the COM configuration.
2. Open the **Advanced** parameters drop down menu → modify the **Disconnect time** to **5 seconds**.

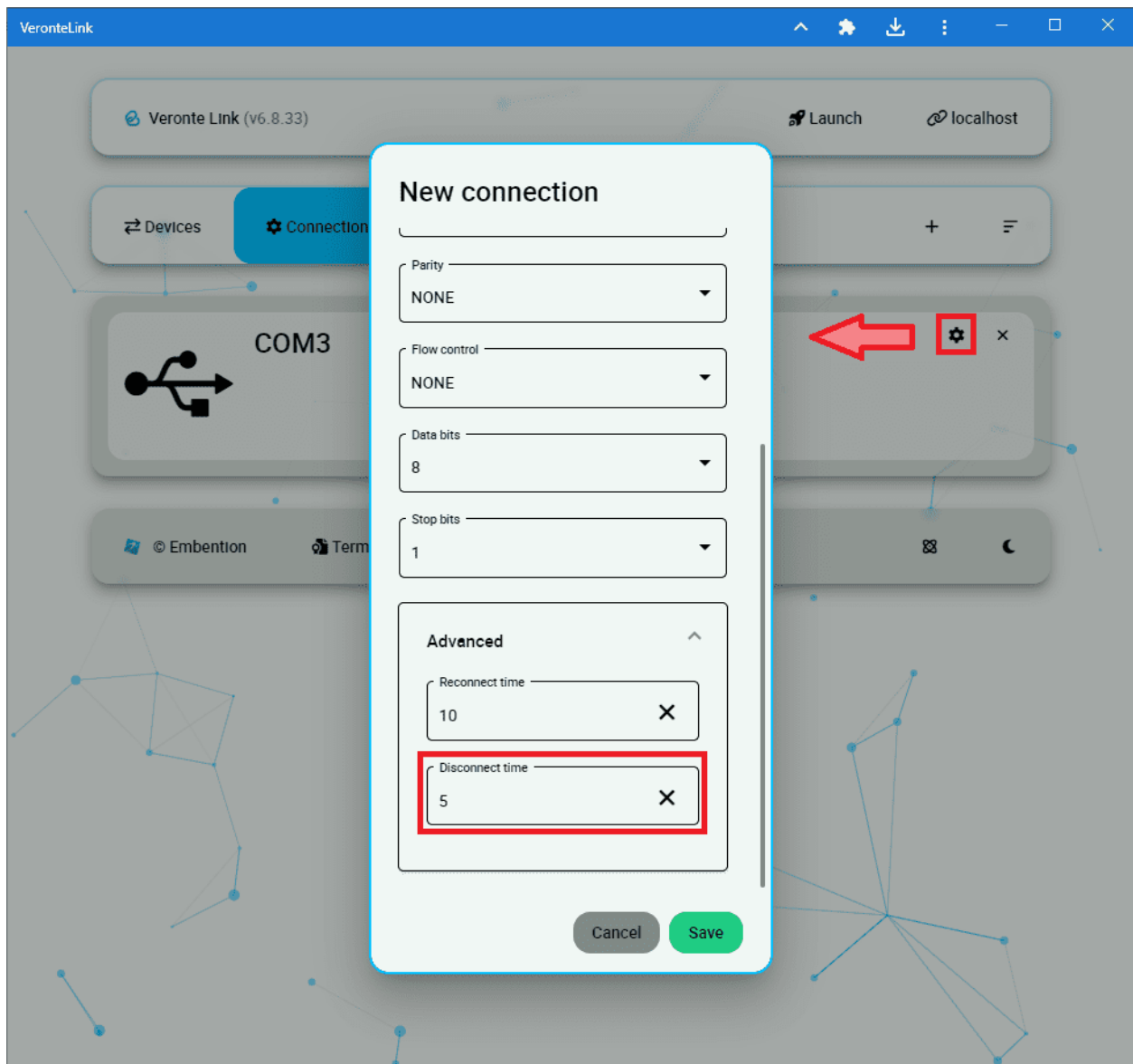


Fig. 2: Connection configuration - Disconnect time

If the user is still having problems with this, please contact the support team by creating a ticket in the customer's **Joint Collaboration Framework**; for more information, see [Tickets](#) section of the JCF manual.