Veronte Updater

Release 7/1.0

Embention Sistemas Inteligentes, S.A.

2026-01-16

Contents

Scope of Changes

- Version 1.0
  - Added:
    - First version issued

Quick Start

Veronte Updater updates the software version of almost all Embention devices, being **Veronte Autopilot 1x** most of the time.

Once **Veronte Autopilot 1x** has been detected on Veronte Link, download and install **Veronte Updater**.

Veronte Updater supports **Windows operating system**.

> ⓘ **Note**
>
> **Windows 11** is recommended.

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 up to 4,70 GHz
- RAM: 32 GB
- STO: 1 TB SSD M.2 NVMe PCIe

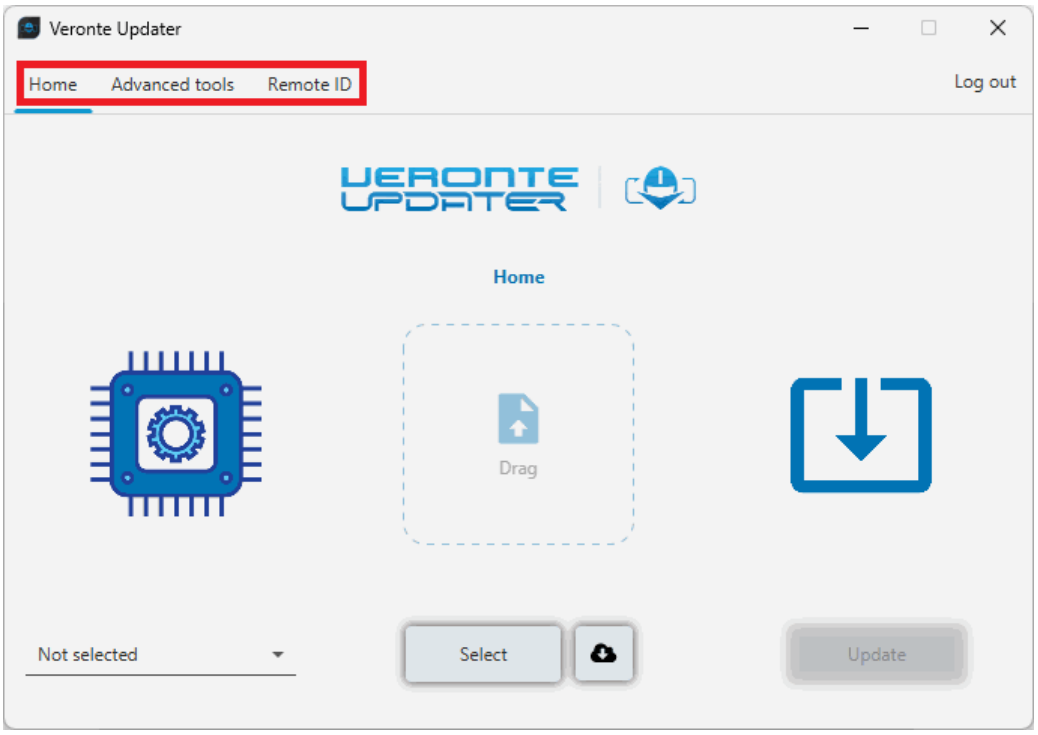
Download and Installation

Veronte Updater software is available in the **Veronte Toolbox** platform. From there, users can download and install the application. For more information, please refer to the Veronte Toolbox user manual.

A **personal account** is required to access **Veronte Toolbox**; create a Ticket in the user's **Joint Collaboration Framework** and the support team will create it for you.

Operation

Once the installation is finished, open **Veronte Updater**. The following main menu will appear:

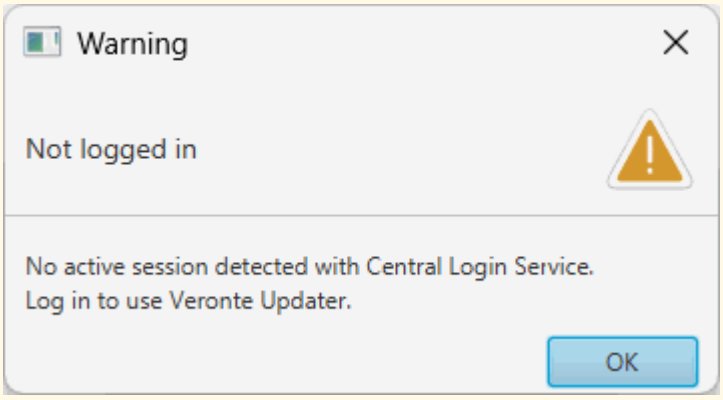


Veronte Updater - Main menu

Users may notice that there are some tabs at the top of the menu:

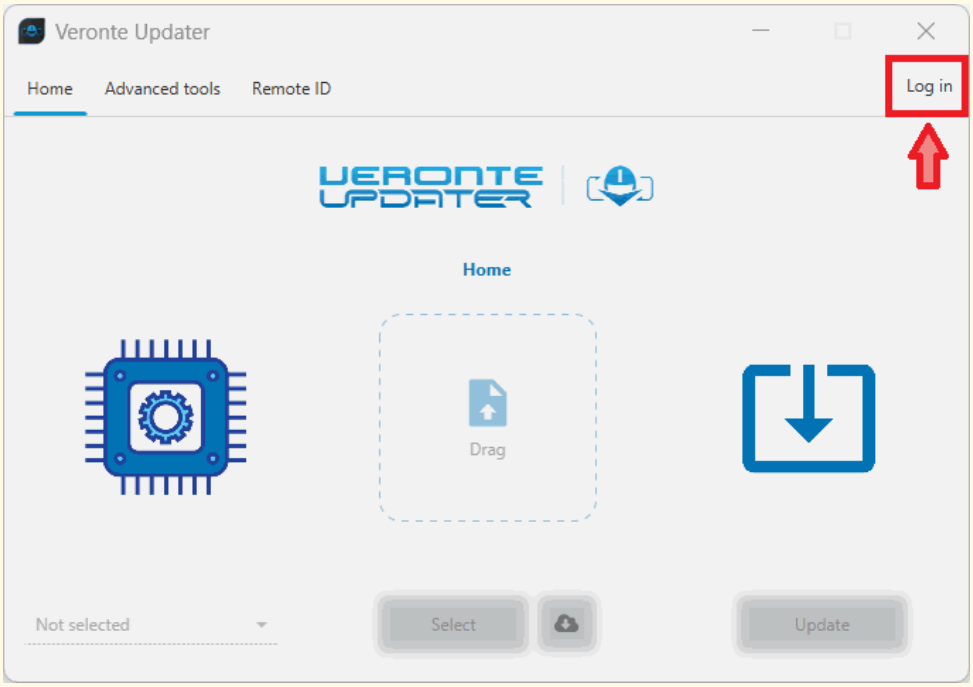
- **Home**: This is the main tab, where the whole update process takes place.
- **Advanced tools**: When clicked, it displays a drop-down menu with several options to carry out on the connected device: File system, Erase firmware, Upload backup, Switch BootStage, Identify SD and Upload partition data. For more information, refer to Advanced tools section.
- **Remote ID**: When clicked, a drop-down menu appears with several options to perform on the connected device related to Remote ID: Configure Remote ID, Flash Remote ID and Migrate Remote ID. For more information, refer to Remote ID section.

> **⚠ Warning**
>
> If users have not yet logged in to Central Login Service (CLS), the following warning message will be displayed when the app is launched. Otherwise, this message will no appear.



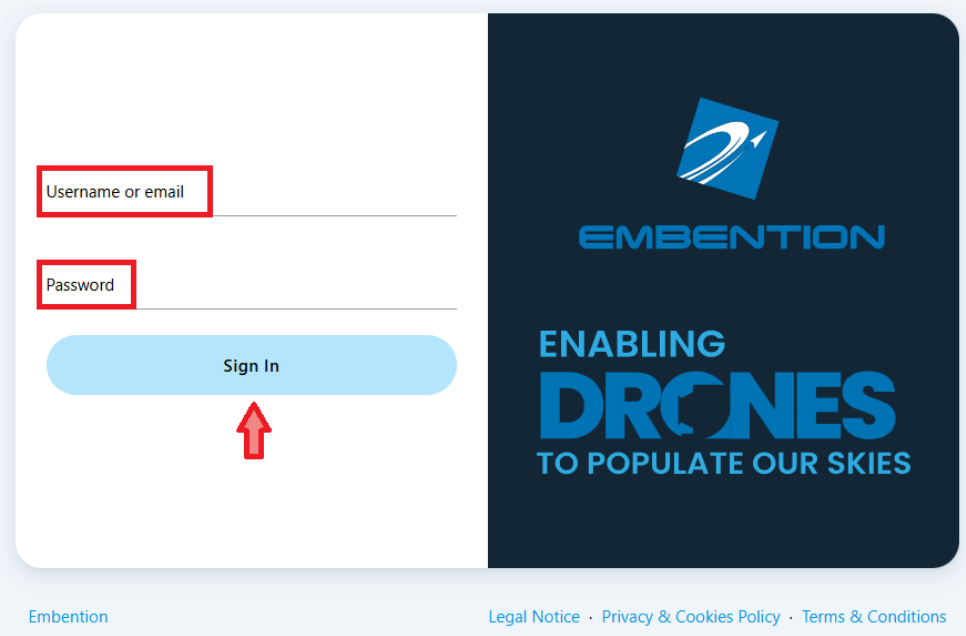
Login warning message

Authentication is required to use Veronte Updater; to do so click **Log in**.



Veronte Updater - Login

After clicking **Log in**, a new window will open for users to enter their credentials. If users do not have credentials, do not know what they are or have any problems logging in with them, please contact the support team via the Joint Collaboration Framework opening a Ticket or contact sales@embention.com.

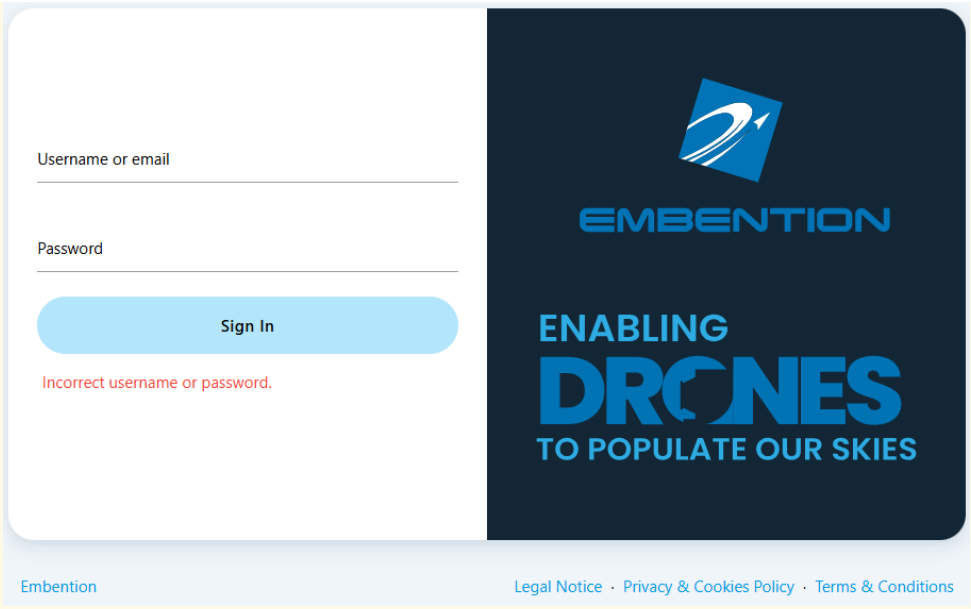


Veronte Updater - Login display

If the login is successful, the screen will change as shown below:

Veronte Updater - Login succesful

If incorrect credentials are entered, the system will display the error message Incorrect username or password.



Veronte Updater - Login failed

Update process

Since the most frequently updated device is **Veronte Autopilot 1x**, this user manual uses this device as an example. However, all other devices require the same procedure.

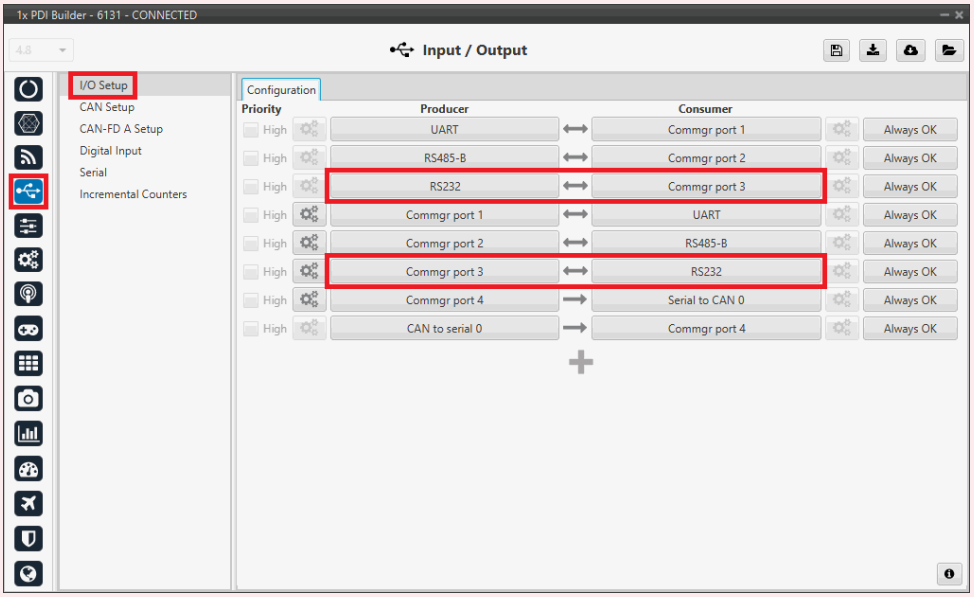
Within the same firmware version

Danger

To update a device within firmware versions **7**, the connection **must not** be via the **USB harness**. For example, configure a connection via RS232 (users can use an RS232-to-USB adapter to connect it to the PC), or it can also be via **Ethernet**.

Since this user manual will use **Autopilot 1x** as an example, to configure it via RS232:

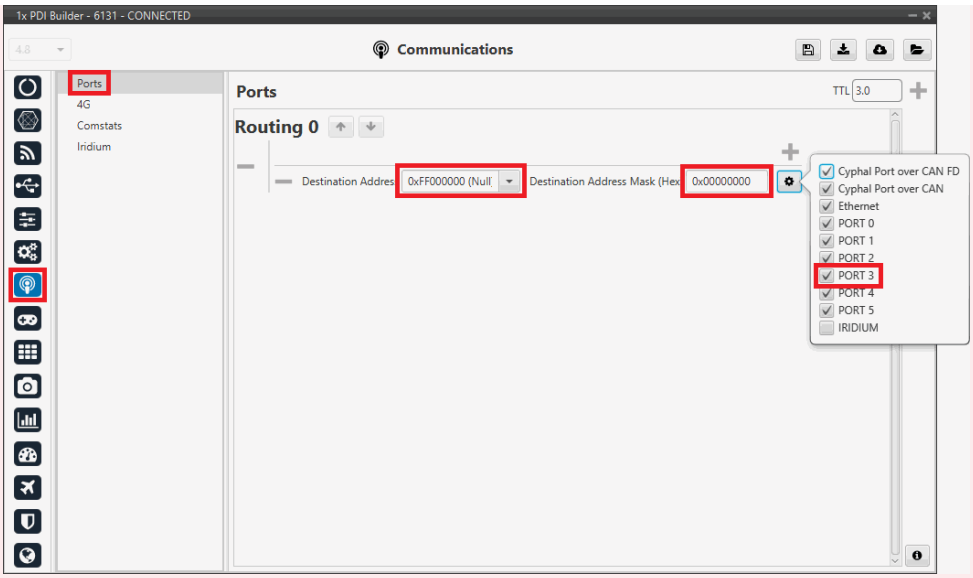
1. Connect the device with **Veronte Link 7** via **USB harness** in **v.4.8 or lower**. For more information on this app, refer to the Veronte Link user manual.
2. Next, open **1x PDI Builder**, select the connected device and open the PDI online.
3. Go to Input/Output menu → **I/O Setup panel**. Set up a bidirectional connection between **RS232** port and a COM Manager port, in this case **Commgr port 3** is used.



1x PDI Builder - I/O Setup configuration

1. Go to Communications menu → **Ports panel**.

   Make sure that the COM Manager port configured in the previous step is enabled, in this case **PORT 3**.



1x PDI Builder - Ports configuration

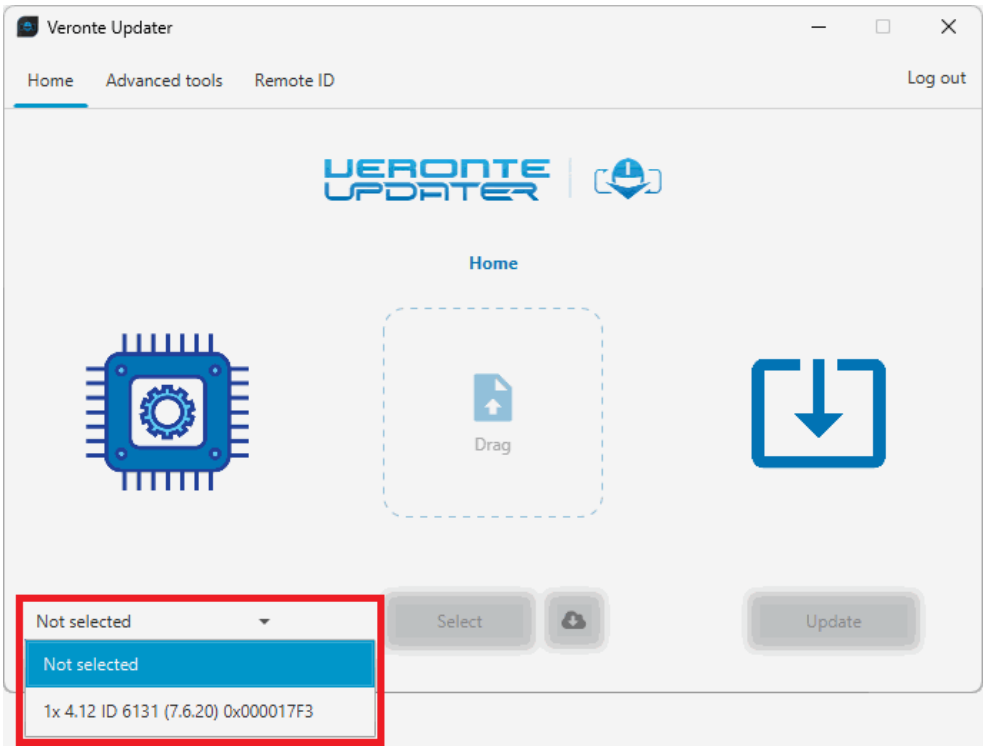
1. Save the configuration by clicking on the  icon.
2. Finally, disconnect **Autopilot 1x** from the USB harness. The devide is ready to be updated with **Veronte Updater 7**.

Follow the steps below to carry out the update process of a **Veronte Autopilot 1x**:

1. Connect the device (to be updated) to a computer with Veronte Link **in another way than USB**.

   > **Danger**
   >
   > Do **NOT** use the **USB harness** to connect the device to **Veronte Link**.

   Then, open **Veronte Updater** and select the connected device in the marked area:

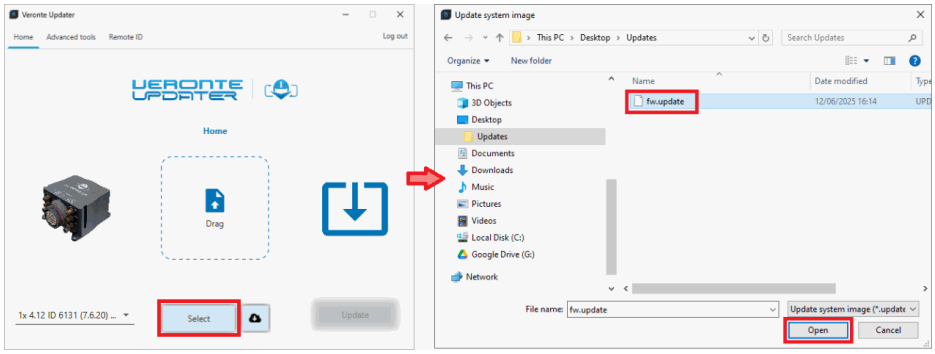


Selecting connected device

2. Load the **.update** file.

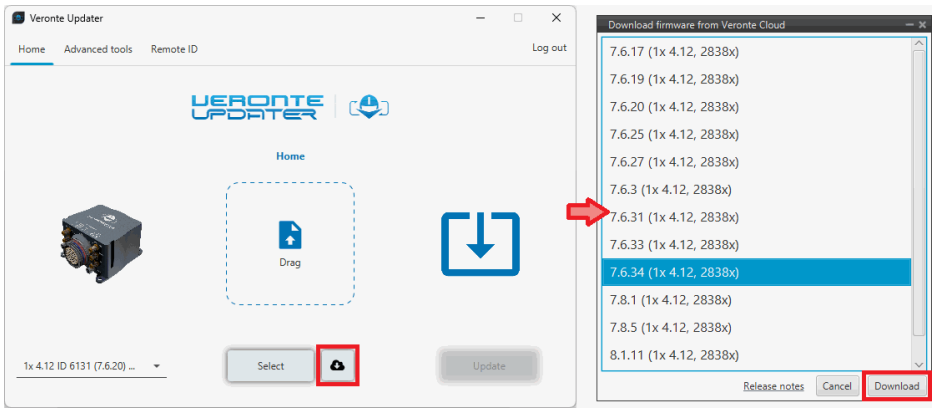
   There are three ways to do this:

   - Dragging the file to the **Drag** area.
   - Using the **Select** button that will open the following browser to select the **fw.update** file stored in the user's local storage:



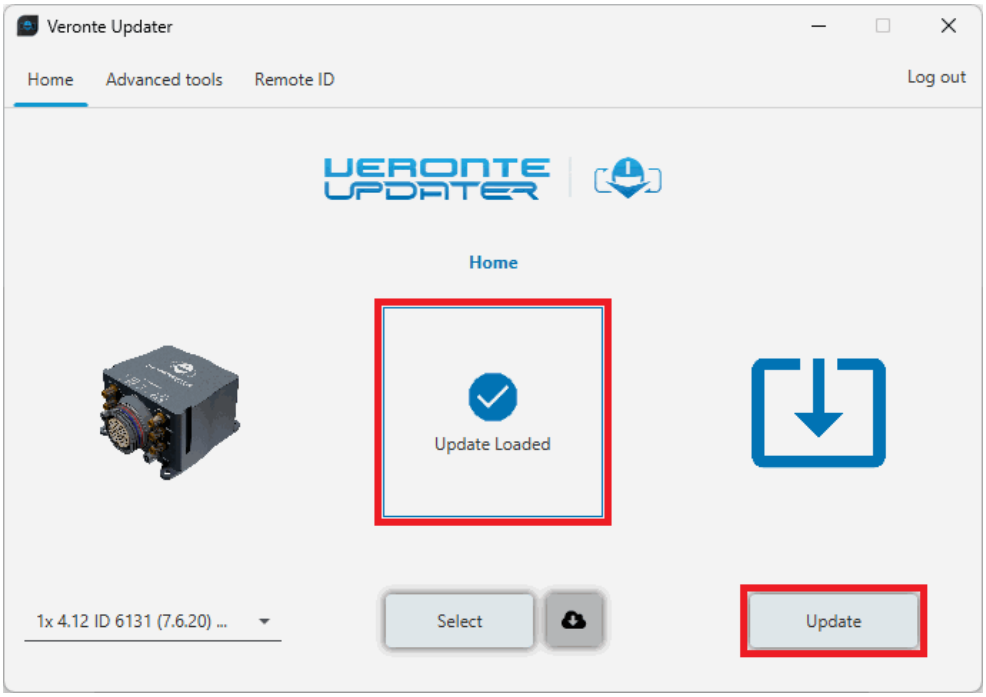
Loading file from local storage

   - Selecting the **cloud** icon  to directly import the desired **firmware version** from **Cloud**:



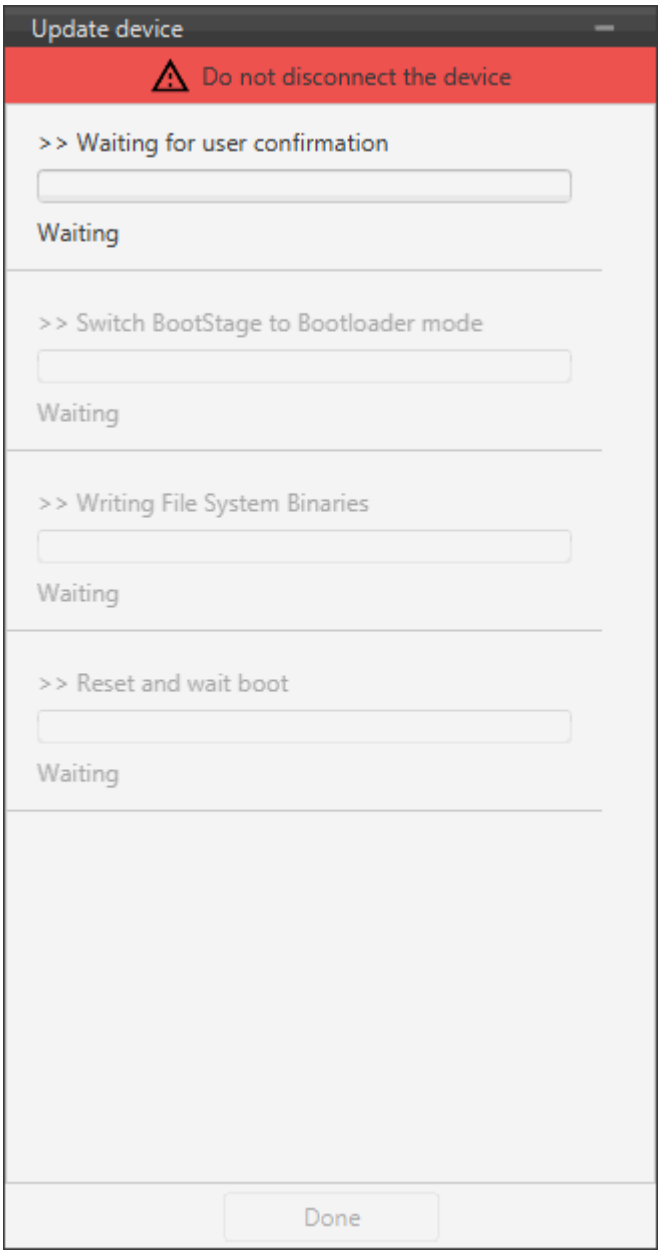
Loading file from Cloud

3. Once the .update file is loaded, click on **Update** to send the configuracion to the device.



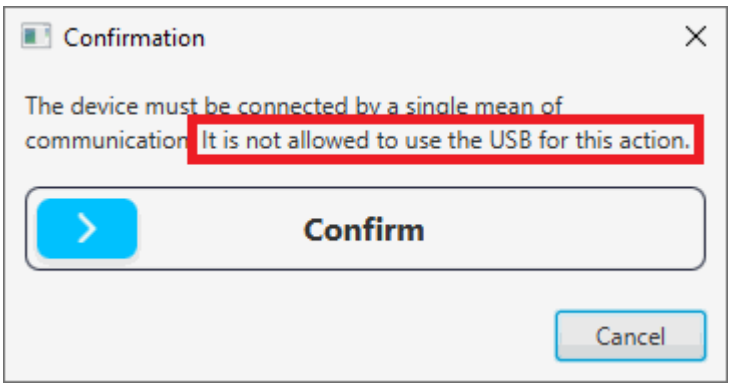
Update loaded

4. The update process will start, the next window will show the progress:



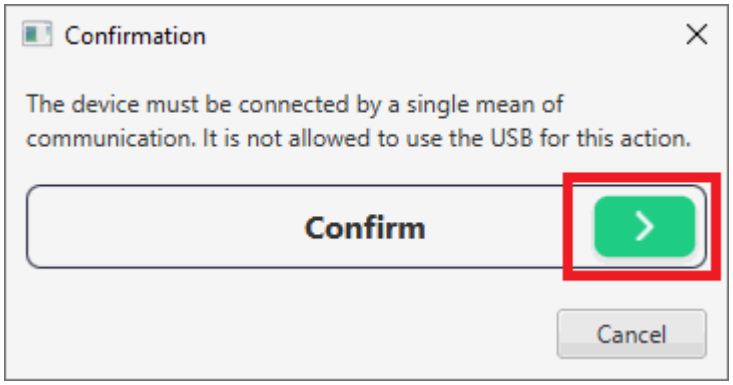
Update device process

5. A confirmation panel will then appear to ensure that the user has **not connected** the device **through the Veronte USB**.

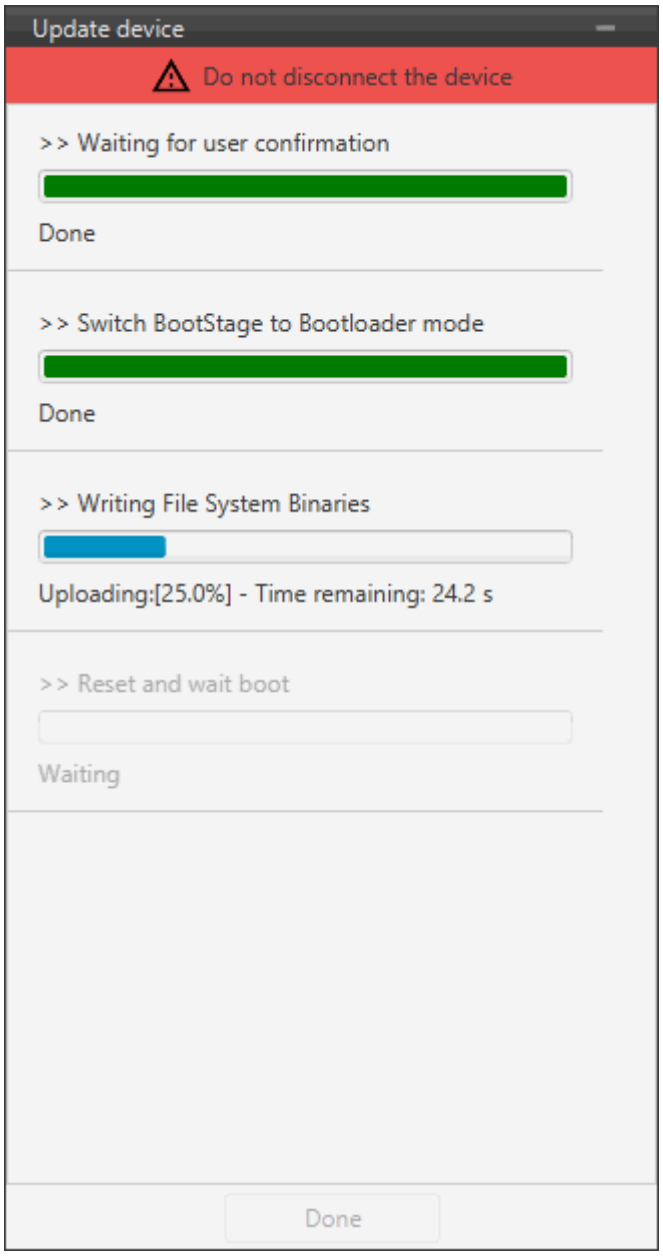


Update device process - Confirmation panel

- If the device is connected in a way other than USB, drag the blue arrow to the right until it turns green to confirm and the update process will continue.



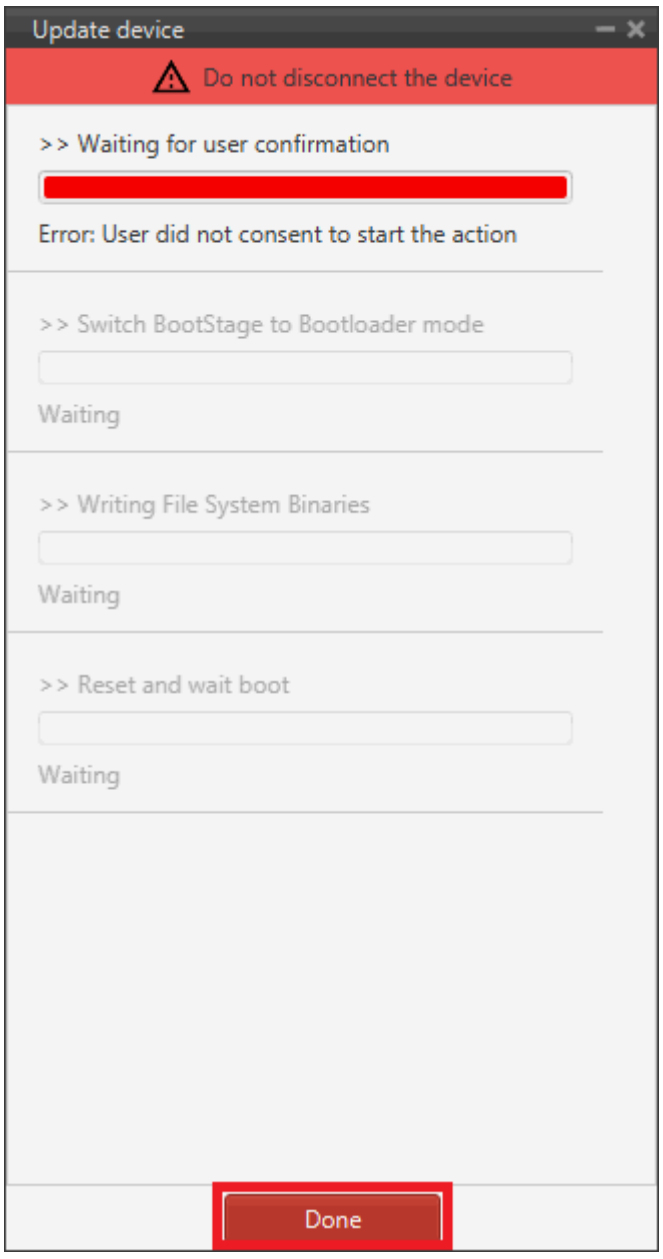
Confirmation panel OK



Update device process - Confirmed

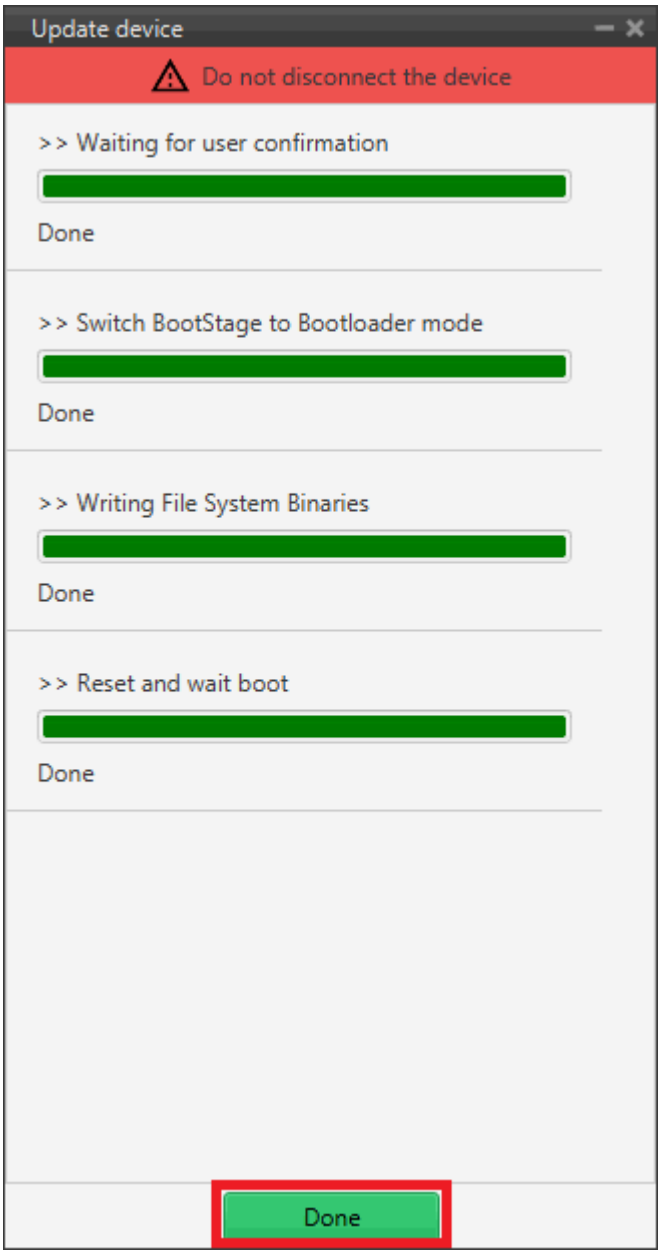
- Otherwise, click **cancel** and the update process will stop:

Confirmation panel CANCEL



Update device process - Cancelled

6. When finished, click on **Done**:



Update device process finished

Upgrade 6.14 to 7

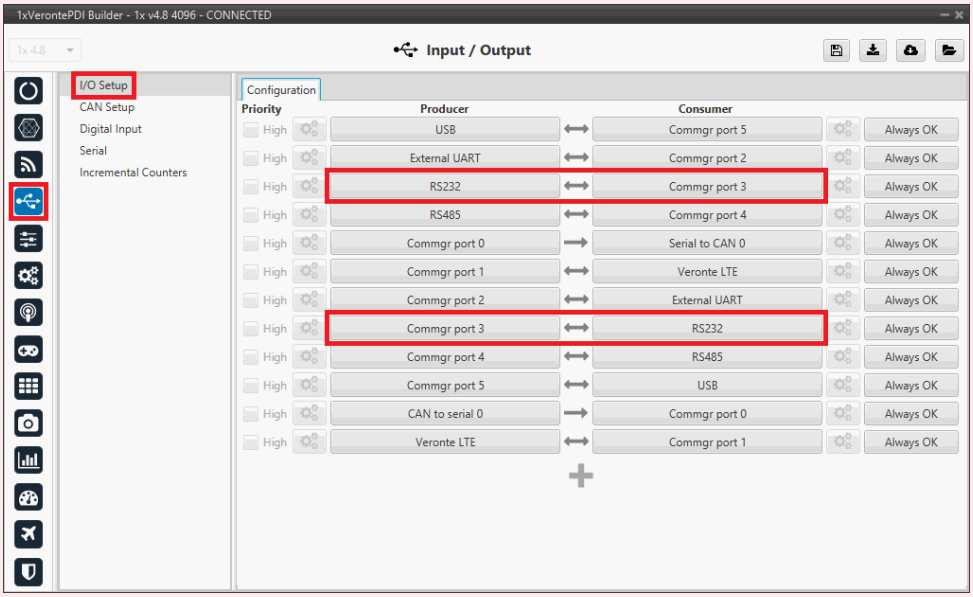
Danger

To update a device to firmware versions **7**, the connection **must not** be via the **USB harness**. For example, configure a connection via RS232 (users can use an RS232-to-USB adapter to connect it to the PC), or it can also be via **Ethernet**

Since this user manual will use **Autopilot 1x** as an example, to configure it via RS232.

1. Connect the device with **Veronte Link 6** via **USB harness** in **v4.8 or lower**. For more information on this app, refer to the Veronte Link user manual.
2. Next, open **1x PDI Builder v6.14**, select the connected device and open the PDI online.
3. Go to Input/Output menu → **I/O Setup panel**.

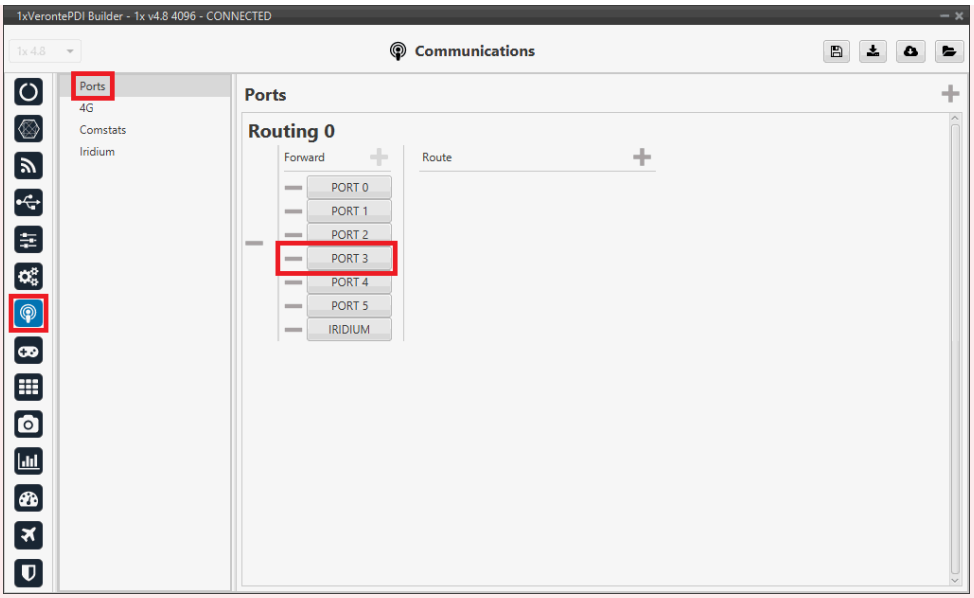
   Set up a bidirectional connection between **RS232** port and a COM Manager port, in this case **Commgr port 3** is used.



1x PDI Builder - I/O Setup configuration

1. Go to Communications menu → **Ports panel**.

   Make sure that the COM Manager port configured in the previous step is set in the **Forward** column, in this case **PORT 3**.



1x PDI Builder - Ports configuration

1. Save the configuration by clicking on the  icon.
2. Finally, disconnect **Autopilot 1x** from the USB harness. The devide is ready to start the process.

Follow the steps below to carry out the update process of a **Veronte Autopilot 1x**:

1. Depending on the **Bootloader firmware version** of the Veronte Autopilot 1x:
   - If the previous firmware version of the **Bootloader** of **Autopilot 1x** is **not version 7**, the update process will not be be able to proceed. Therefore, users must **first update the bootloader to version 7** using the **Veronte Updater** application in its **latest 6.14 version**. Refer to the Update bootloader to version 7 - Advanced Tools section of the **Veronte Updater** user manual in its **latest 6.14 version**.

     Error

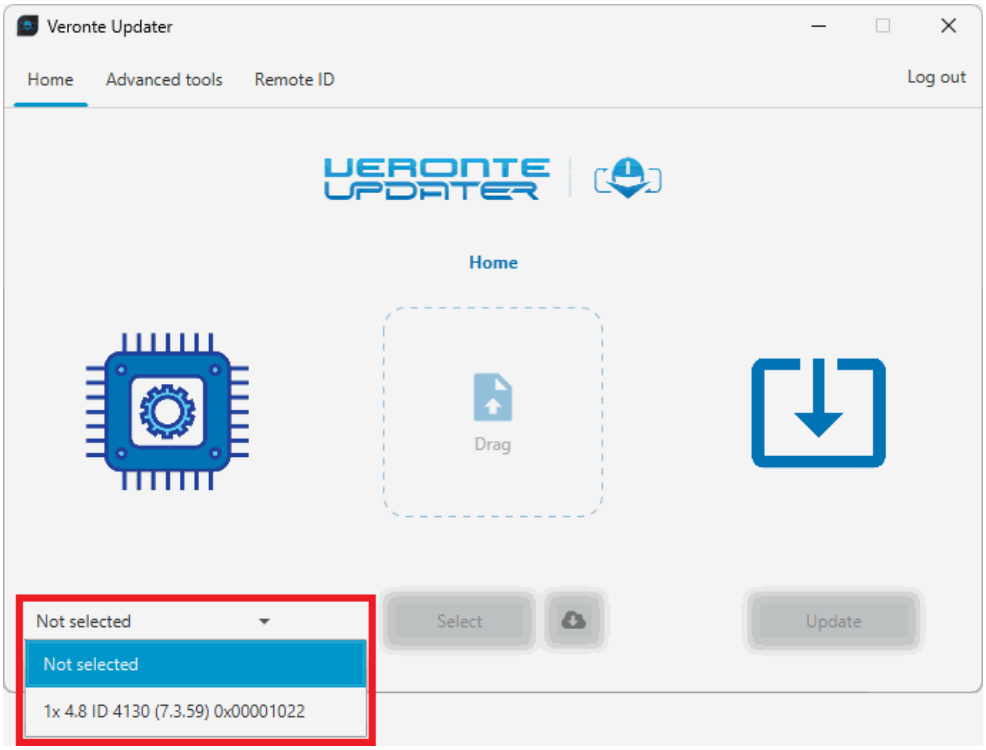
     To update the bootloader to version 7, users must use the **latest 6.14 version** of **Veronte updater** application.

   - If **Autopilot 1x** has the **Bootloader** on **firmware version 7**, the update process can start.

2. Connect the device (to be updated) to a computer with Veronte Link v7 **in a way other than USB**.

> **Danger**
>
> Do **NOT** use the **USB harness** to connect the device to **Veronte Link**.

Then, open **Veronte Updater v7** and select the connected device in the marked area:

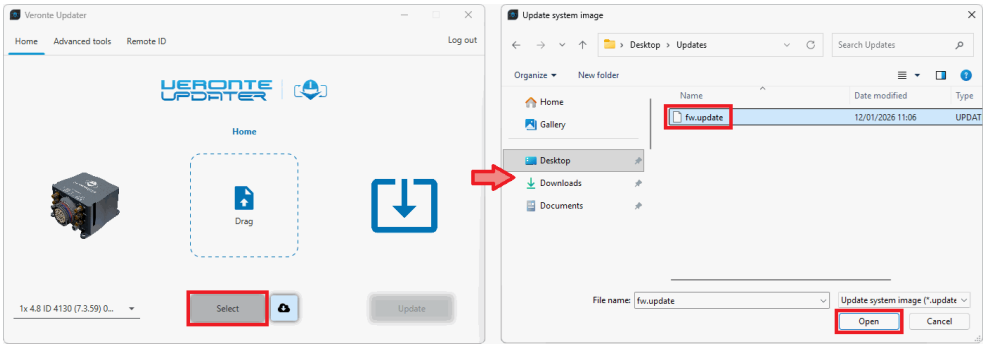


Selecting connected device

3. Load the **.update** file.

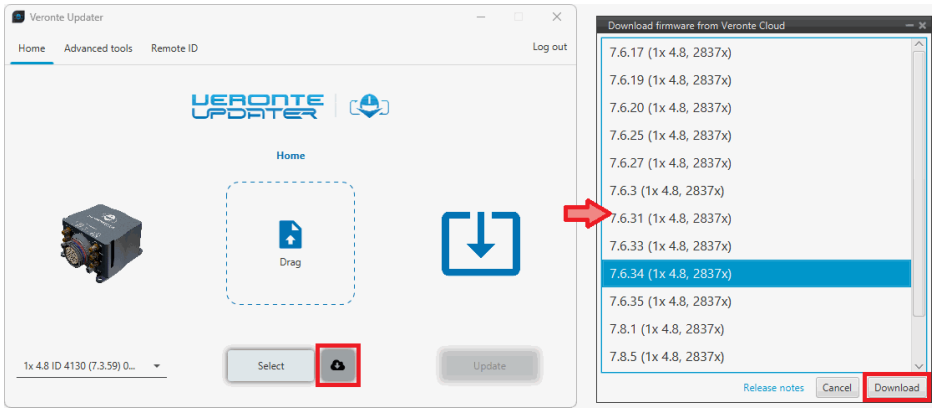
   There are three ways to do this:

   - Dragging the file to the **Drag** area.
   - Using the **Select** button that will open the following browser to select the **fw.update** file stored in the user's local storage:



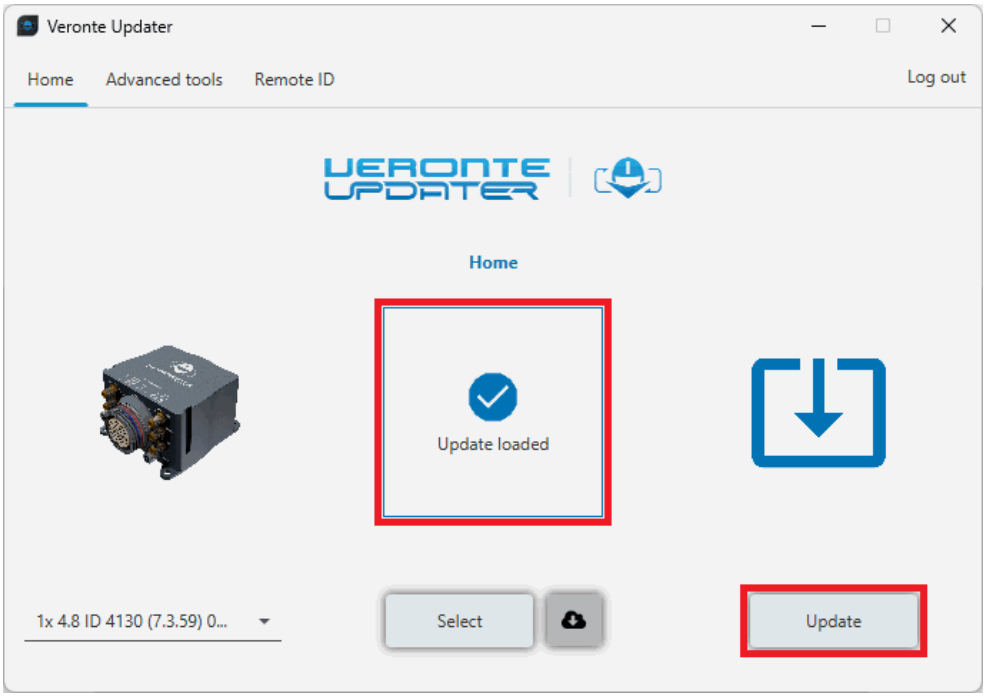
file from local storage

- Selecting the **cloud** icon  to directly import the desired **firmware version** from **Cloud**:



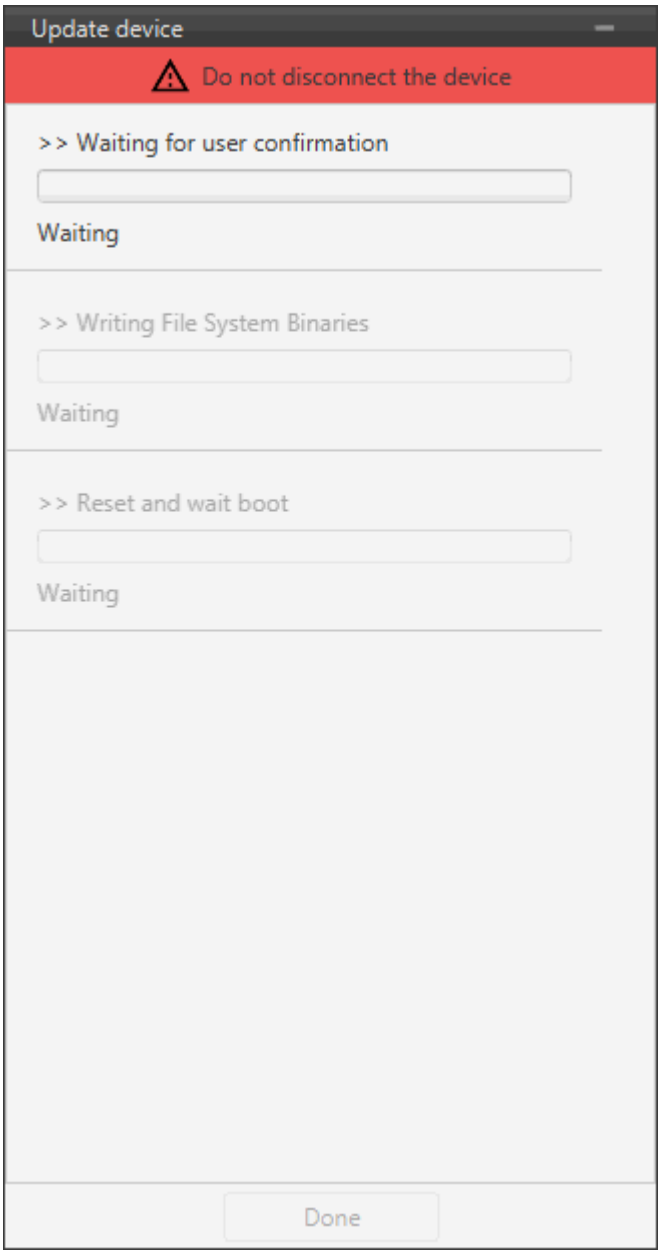
Loading file from Cloud

4. Once the .update file is loaded, click on **Update** to send the configuracion to the device.



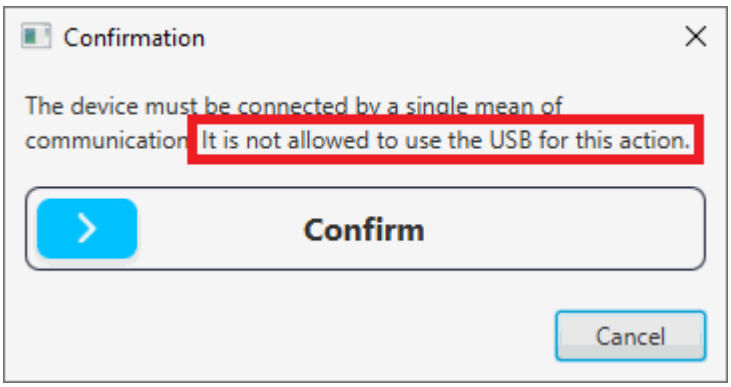
Update loaded

5. The update process will start, the next window will show the progress:



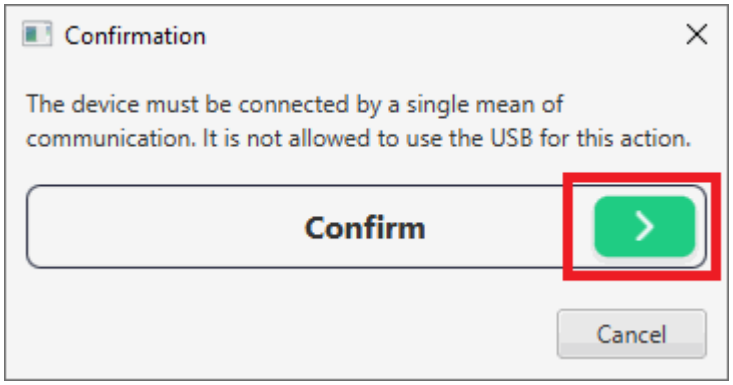
Update device process

6. A confirmation panel will then appear to ensure that the user has **not connected** the device **through the Veronte USB**.

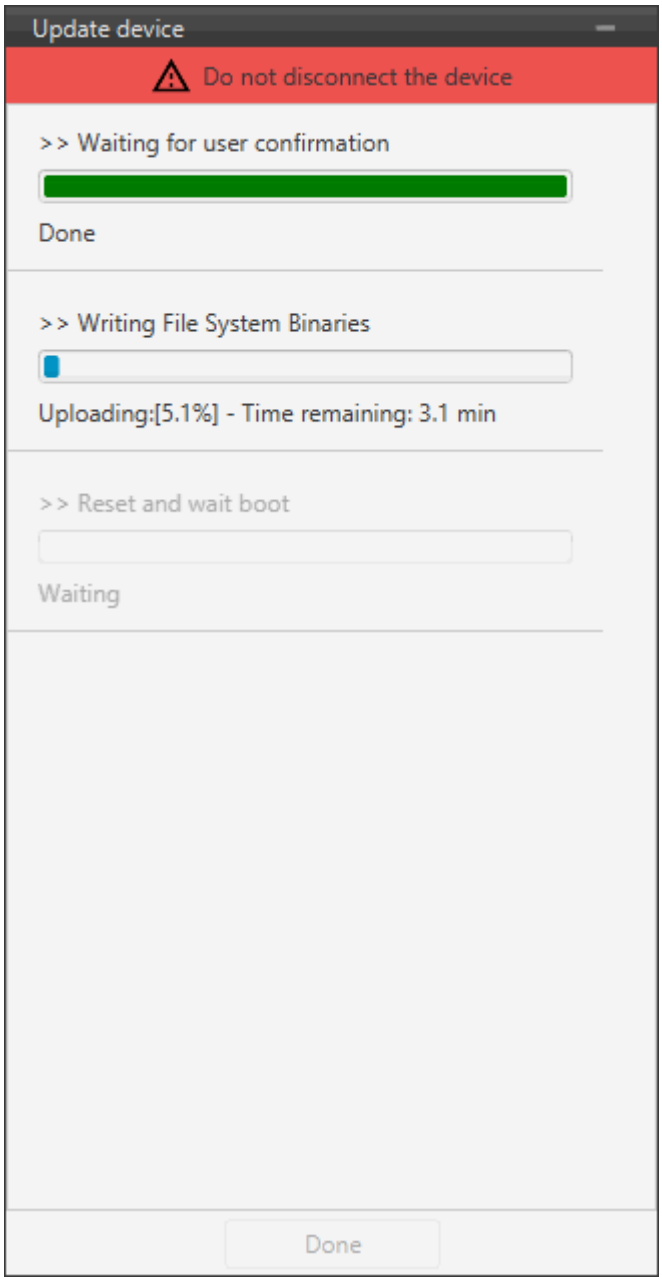


Update device process - Confirmation panel

- If the device is connected in a way other than USB, drag the blue arrow to the right until it turns green to confirm and the update process will continue.



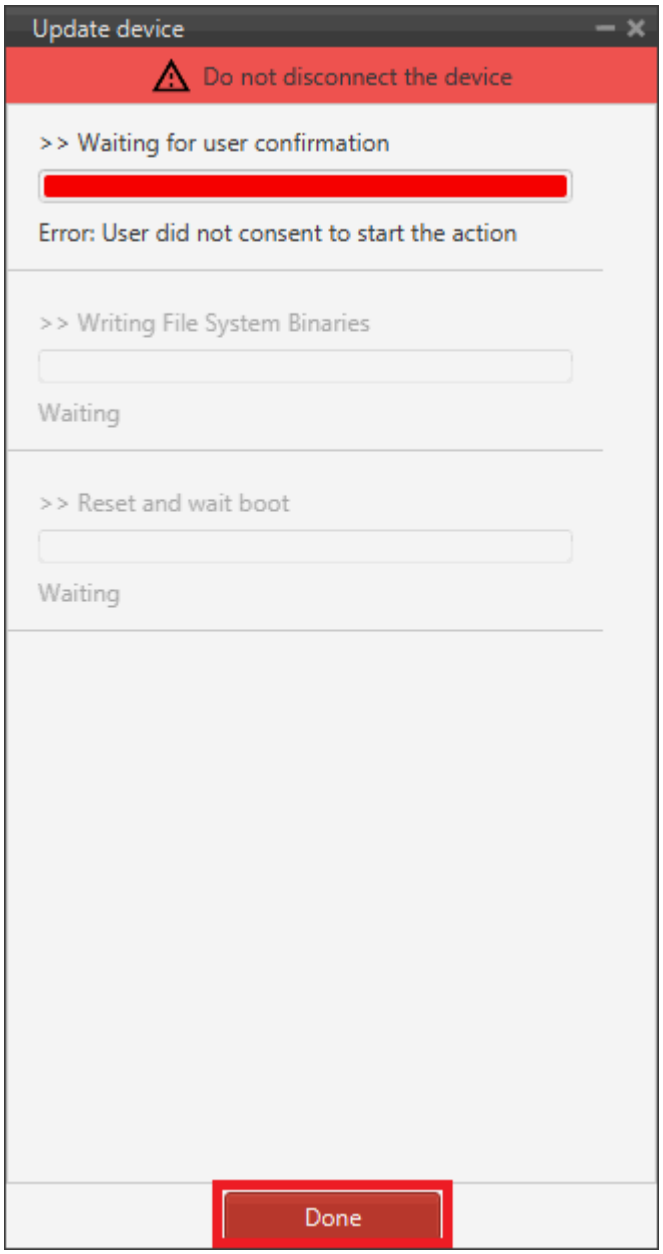
Confirmation panel OK



Update device process - Confirmed

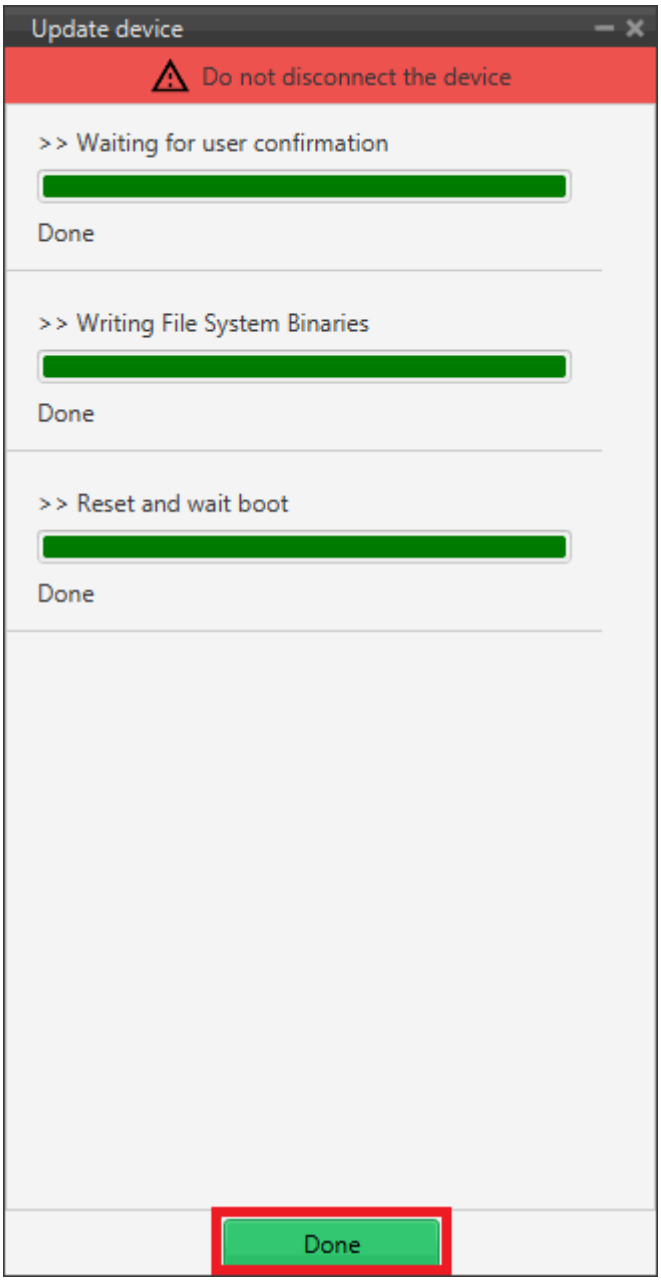
- Otherwise, click **cancel** and the update process will be cancelled:

Confirmation panel CANCEL



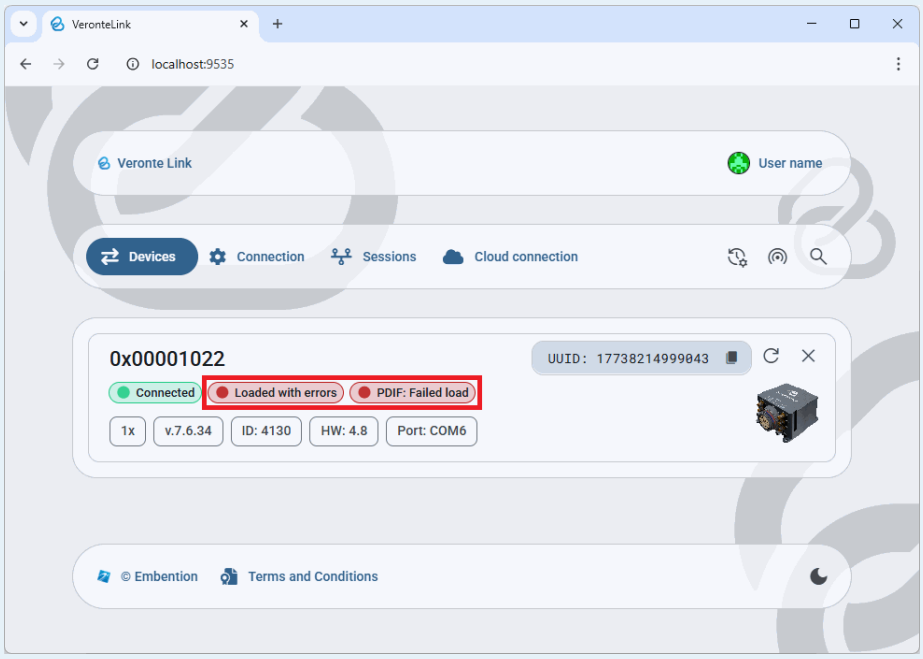
Update device process - Cancelled

7. When finished, click on **Done**:



Update device process finished

> **Note**
>
> During the update the device has been formatted and consequently the Autopilot 1x configuration has been deleted.
>
> Therefore **Veronte Link** will show it as **Maintenance mode (loaded with errors)** and **PDIF: Failed load**.

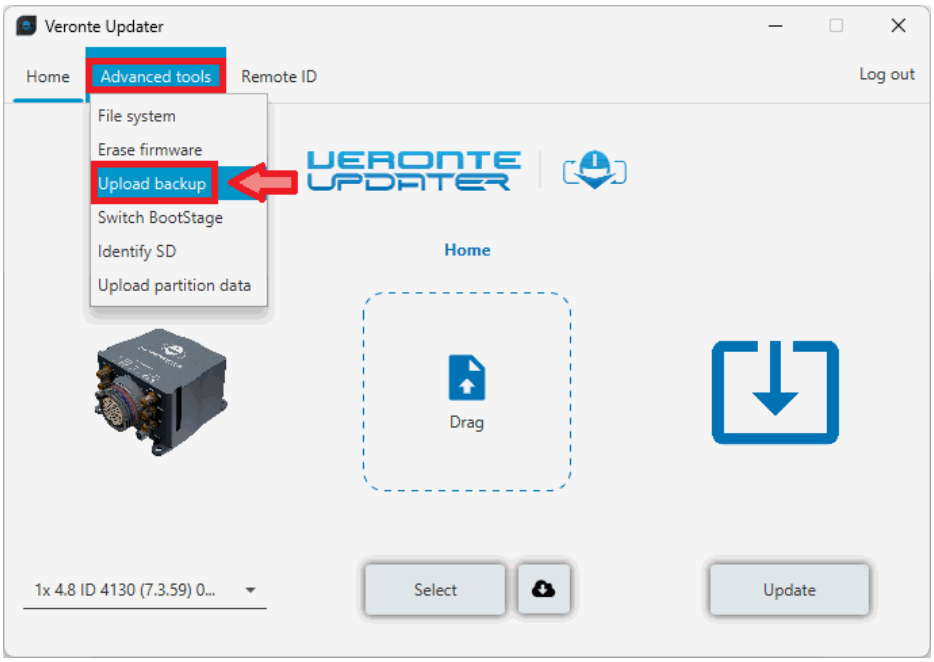


Veronte Link - Failed load

8. Finally, upload the **.backup** file obtained in the Update bootloader to version 7 process.

   Use the Upload backup tool of **Veronte Updater** (v7). For this:

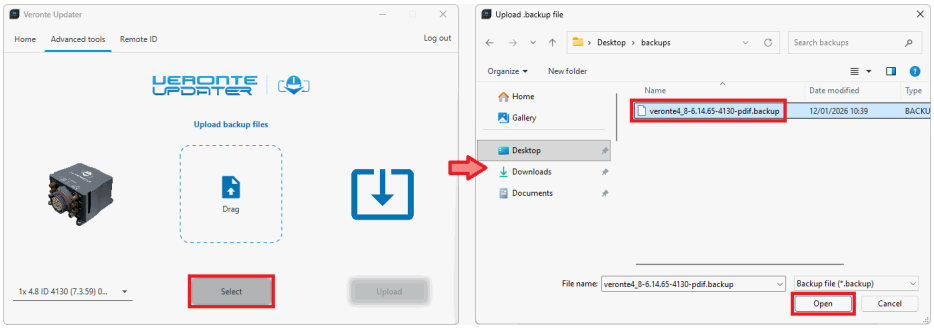
   - Click on Advanced tools → **Upload backup**.



Upload backup

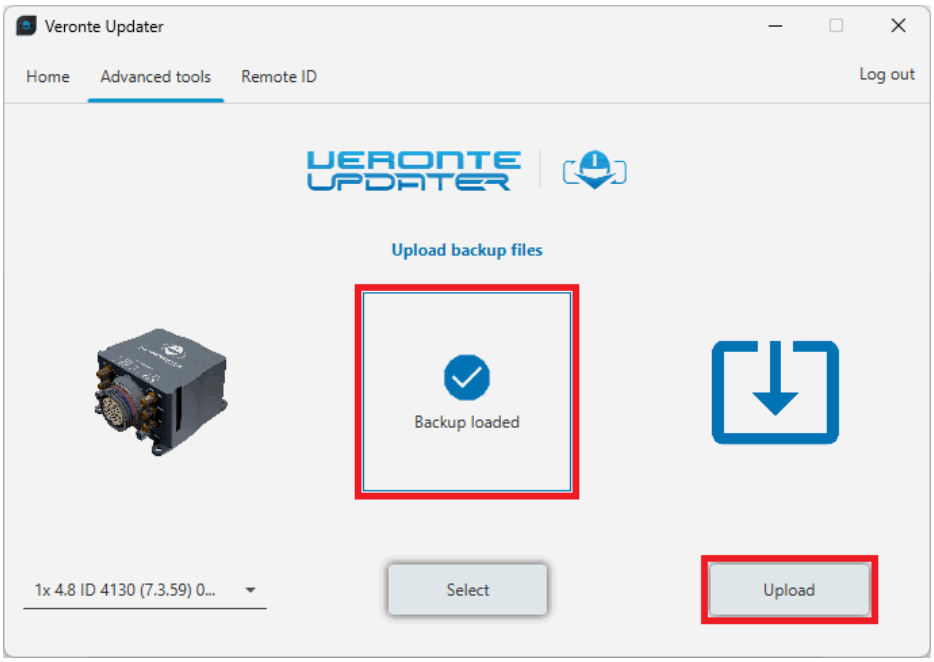
- Load the **.backup** file. There are two ways to do this, dragging the file to the **Drag** area or by using the **Select** button.

  The latter option will open the following browser to select the **.backup** file stored in the user's local storage:



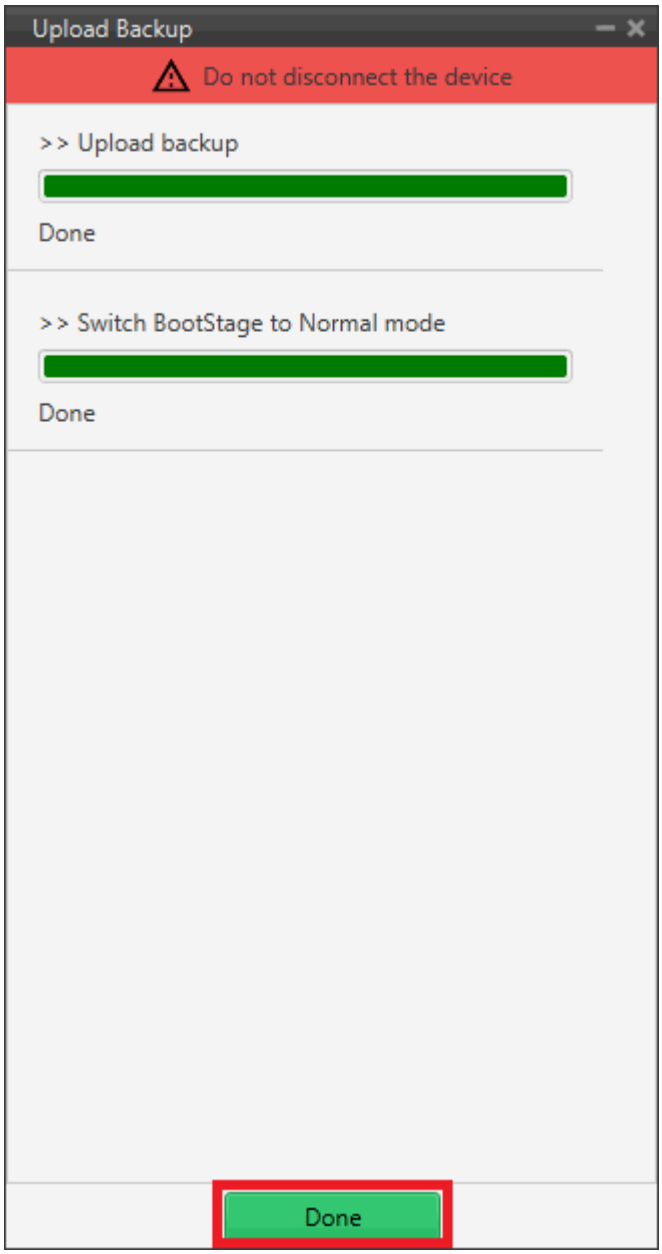
Upload backup - Select .backup file

- Once the .backup file is loaded, click on **Update** to send the configuracion to the device.



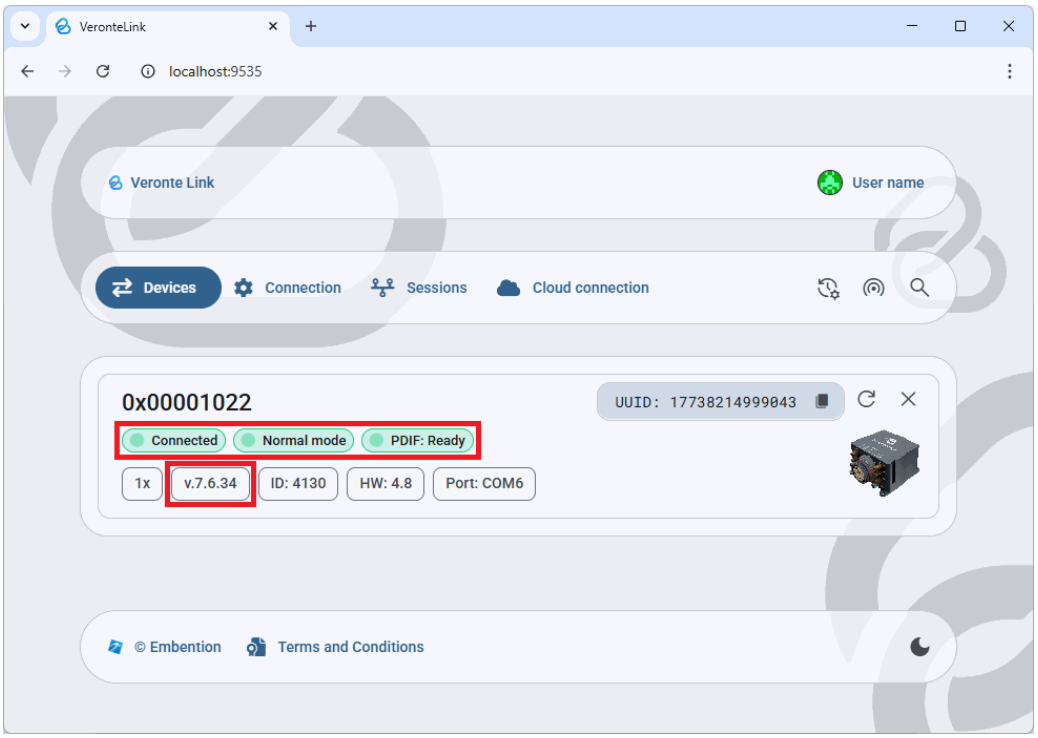
Upload backup - Upload

- Once the process, finish, click on **Done**.



Upload backup - Upload process

Autopilot 1x should now be in **version 7** with the migrated PDI and switch to **Normal mode** and **Ready** status:



Veronte Link - Normal mode and Ready

Autopilot 4x

To update an Autopilot 4x, the 3 Autopilots 1x and the Arbiters, it is necessary to start the process by updating first the Autopilots 1x.

Autopilots 1x within the 4x

When updating an **Autopilot 1x within a 4x** from firmware version **6.14** to **7**, users should carefully follow these additional steps, in addition to those already explained for updating a device from 6.14 to 7 in the previous section.

> **Note**
>
> Each Autopilot 1x has to be updated individually.

1. First, connect **Dev Harness 4x** to Autopilot 4x, power up the 3 Autopilots 1x and connect them to PC via USB.
2. Check that the configuration of RS232 connection of all autopilots is correctly done as detailed in the Upgrade 6.14 to 7 section.
3. Users can now unplug the Autopilots 1x and disconnect all USB from the PC.

4. Now, connect **Veronte Harness Yellow** to Autopilot 4x, power up it and connect it to the PC.
5. Establish connection with **Veronte Link v6**.
6. Next, open **4x PDI Builder v6.12** app, select the connected **Autopilot 4x** and click the **Open 4xVeronte** option to access its configuration.
7. Go to Arbitration menu → **Config panel**. In this panel users must set the Autopilot 1x to be updated as Fixed. The relations between mode and Autopilots 1x are as follows:

Mode	Autopilot 1x
Fixed **0**	Autopilot **1**
Fixed **1**	Autopilot **2**
Fixed **2**	Autopilot **3**

   That is, if we want to update Autopilot **1**, the method Fixed **0** should be set.
8. Save the configuration by clicking on the  .
9. Close **Veronte Link v6**.
10. Connect **Autopilot 4x** to PC via the **RS232** connector of the Dev Harnes 4x.
11. Open **Veronte Link v7**.
12. Now, it is necessary to force Autopilot 4x to maintenance mode. For this:
    1. With Autopilots 1x **unplugged** (that is, with Dev Harnes 4x unplugged), connect the **I2C pins** or press the **mainteance mode button** of Dev Harness 4x (depending on the user harness).
    2. Turn on only **Autopilot 1**. **Don't power up Autopilots 2 and 3** to avoid arbitration initialization.

> **Note**
> If the Autopilot 1x being updated is Autopilot 2, turn un only Autopilot 2, and the same for Autopilot 3.

3. Finally, disconnect both pins or release the button (depending on the user harness).

13. Only **Autopilot 1** should be recognized by **Veronte Link v7**.
14. Finally, follow the steps detailed in the Upgrade 6.14 to 7 section to update it.

Autopilot 1 should be correctly migrated to 7 firmware version.

Then, to update Autopilots 2 and 3 repeat the process from step 4, in each case configuring the arbiter to the corresponding mode.

For more information on the harnesses, please refer to Harnesses - Hardware Installation of the **4x Harware Manual**.

Arbiters within the 4x

> **Warning**
>
> The **Arbiters** are **not updated** and will remain at version 6.12.

PCS

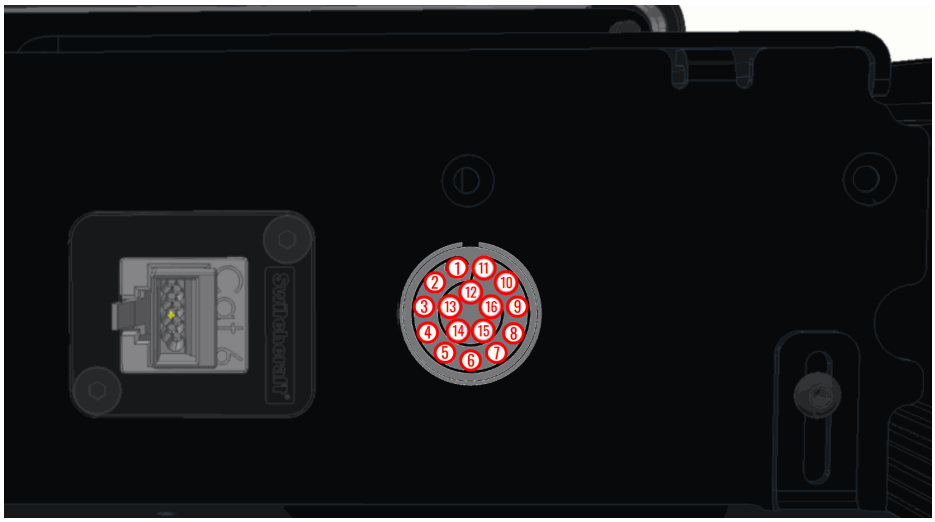
Updating a **PCS** unit follows the same procedure as a standard **Veronte Autopilot 1x**, as it contains a 1x unit inside. However, since the upgrade to firmware 7 cannot be performed using the main USB harness connection, a preliminary hardware step is required to establish a direct RS232 connection with the internal Autopilot 1x.

The following steps detail how to prepare a PCS unit for the update:

1. **Access the Expansion Bay**.
   First, users must access the internal connectors of the PCS. The procedure is detailed in the Expansion Bay Access - Hardware Installation section of

the **PCS Hardware Manual**. Follow the steps provided in that section to remove the side plate and front cover.

2. **Connect the RS232 Adapter to the Expansion Bay Connector**.
   The communication link for the update will be established through the expansion bay:
   - Prepare an **RS232 to USB adapter** cable.
   - Connect the adapter wires to the following pins on the Expansion Bay Connector:



Expansion Bay Connector		RS232-USB Adapter
PIN	**Signal**	**Signal**
14	RS232-TX	RS232 RX
16	RS232-RX	RS232 TX
8	GND	GND

> **Note**
> If any wires are connected to pins 14 and 16, they must be temporarily disconnected before proceeding.

3. **Configure the Communication Port in 1x PDI Builder v6.14**.
   Before using the new adapter, Autopilot 1x must be configured to route communication through the RS232 port. To do this, connect the main PCS harness via USB as usual and follow the preliminary steps detailed at the beginning of the Upgrade 6.14 to 7 section of this manual.
4. **Proceed with the Update**.
   Once the connection configuration is set, the PCS is ready for the update.
   1. Disconnect the harness from the PCS.
   2. Connect the RS232 to USB adapter to your computer. **Veronte Link v6** should now detect the PCS (Autopilot 1x) through this new COM port; for further information on this, refer to the Serial connection - Integration examples section of the **Veronte Link** user manual.
   3. From this point forward, the update process is identical to that of a standard Autopilot 1x. Continue with the steps detailed in the Upgrade 6.14 to 7 section of this manual.

Advanced Tools

Together, the processes listed under the **Advanced Tools** tab, involve the entire update process described above, except for the Identify SD and Upload partition data which are not part of the upgrade process.

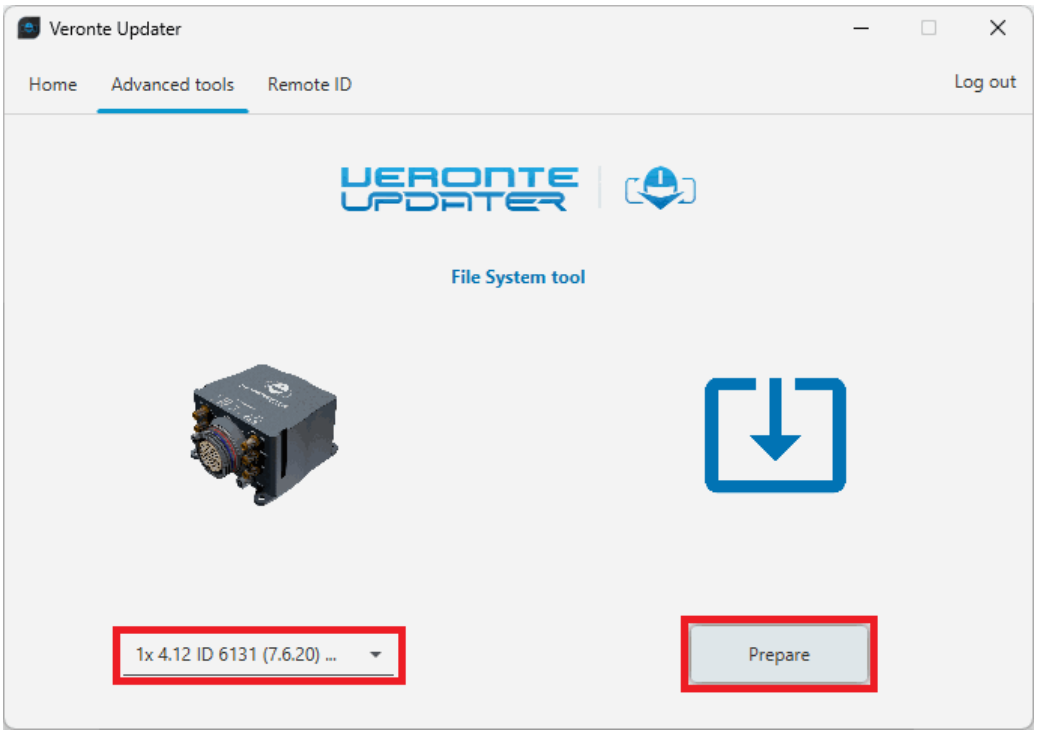
In other words, this allows the user to submit the device to only one of the processes that is carried out during the entire update process.

These are detailed below:

File system

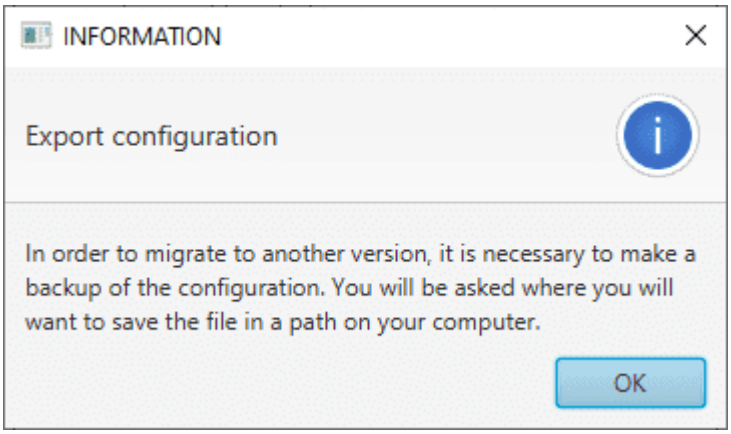
By selecting this option, the file memory of the connected device will be prepared for the update process.

Simply, select the unit to be prepared and click **Prepare**:



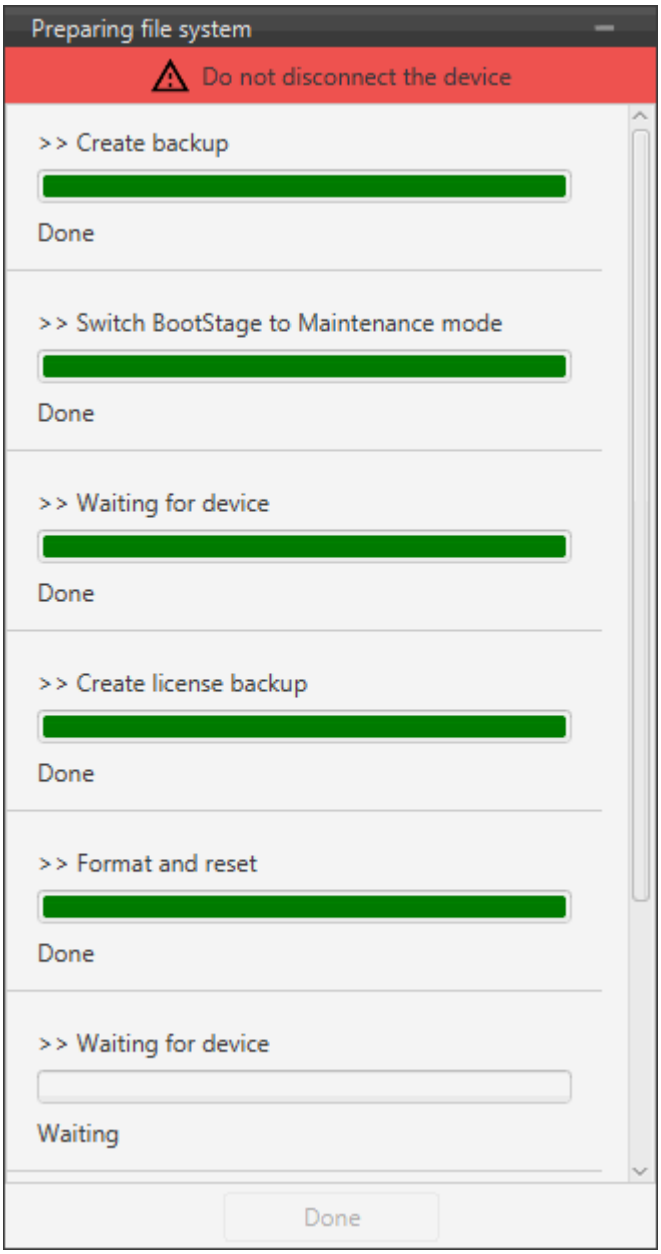
File system

Before the process starts, users must save a back up of the current configuration.



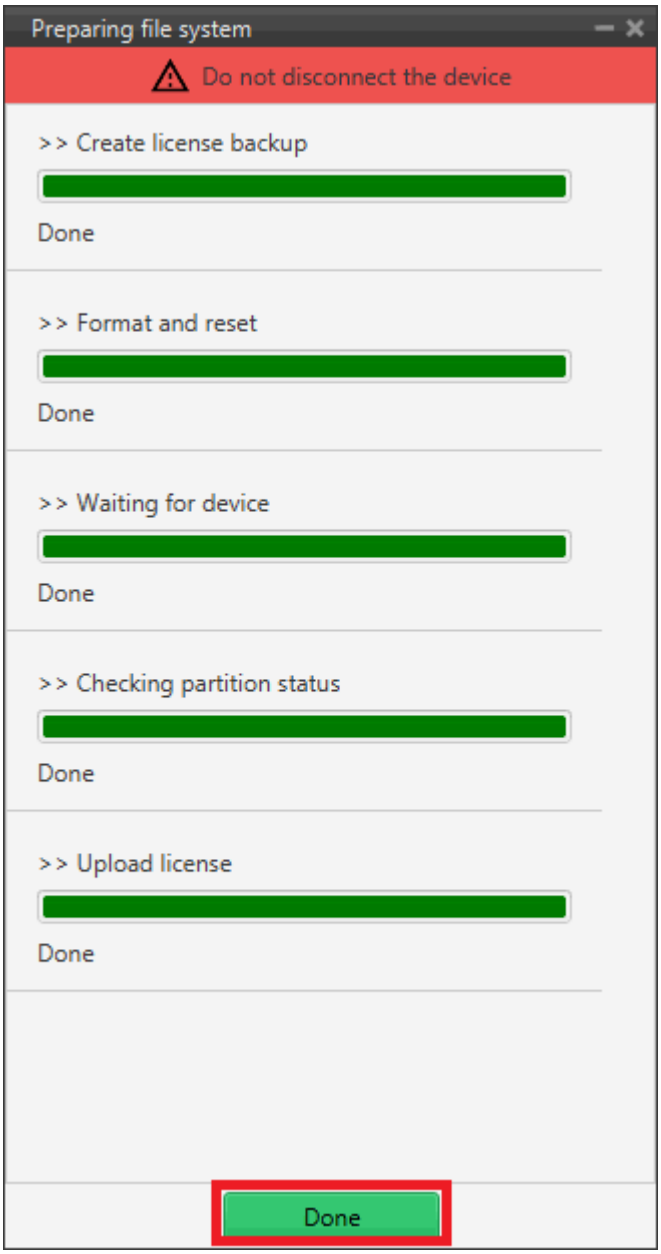
Export configuration message

The preparation process will then start and the following windows will show the progress:



File system process

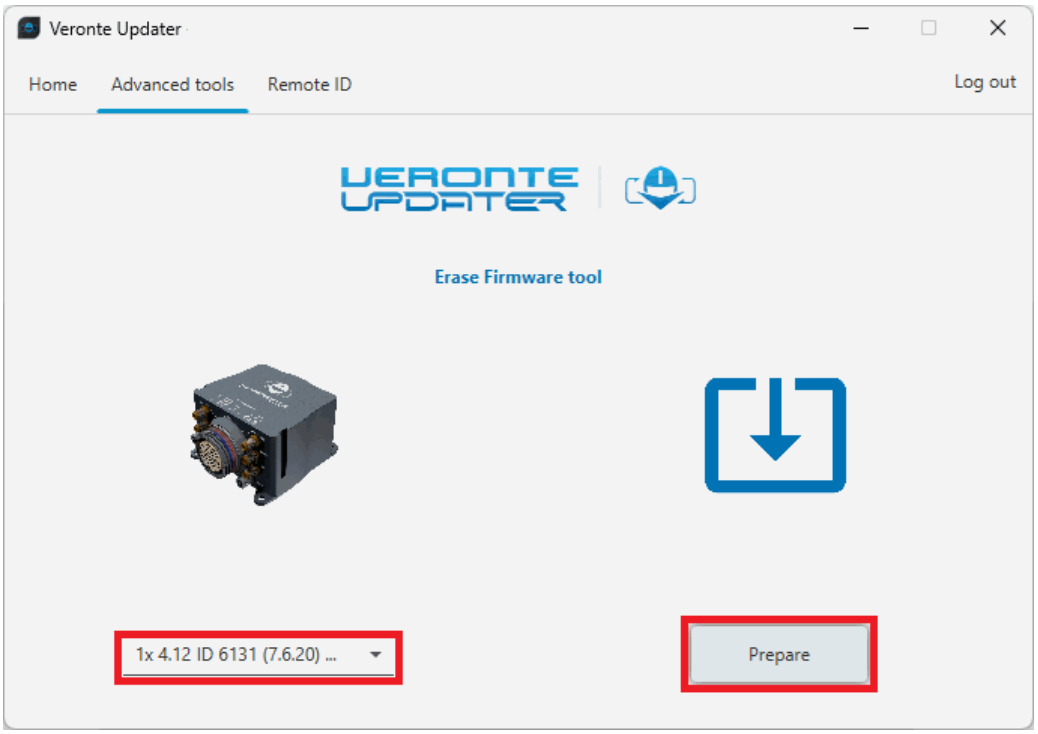
When finished, click on **Done**:



File system process finished

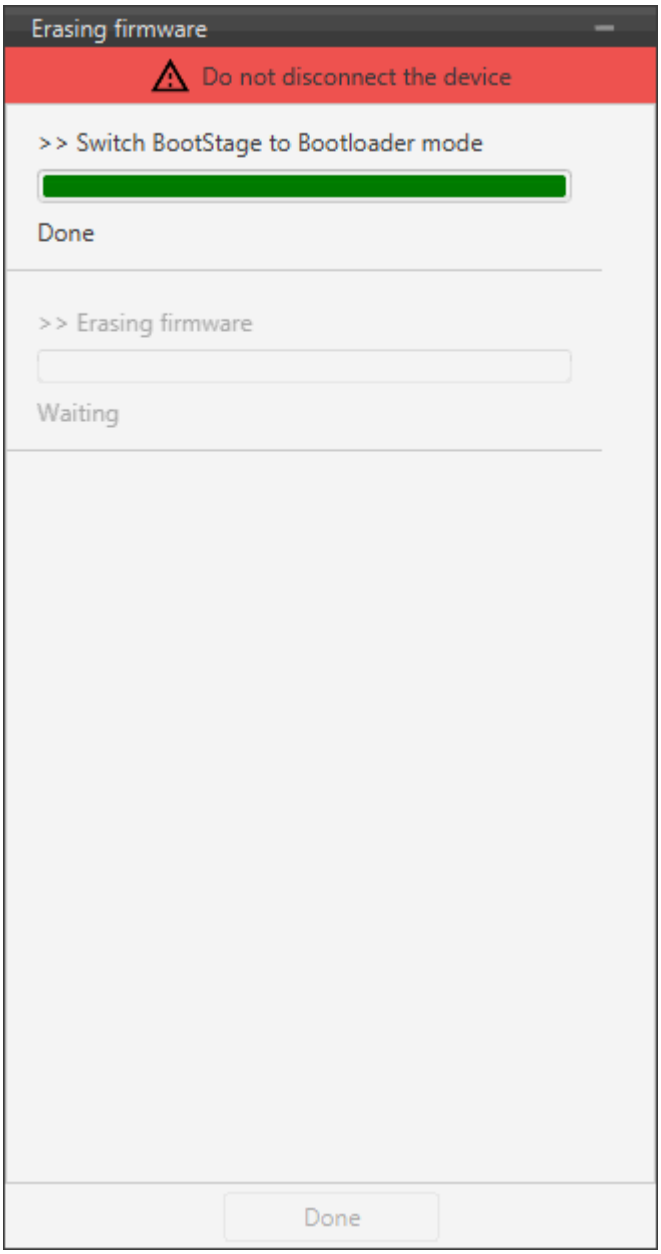
Erase firmware

By selecting this option, it is possible to erase the firmware from the connected device. The unit will remain in bootloader mode without firmware.



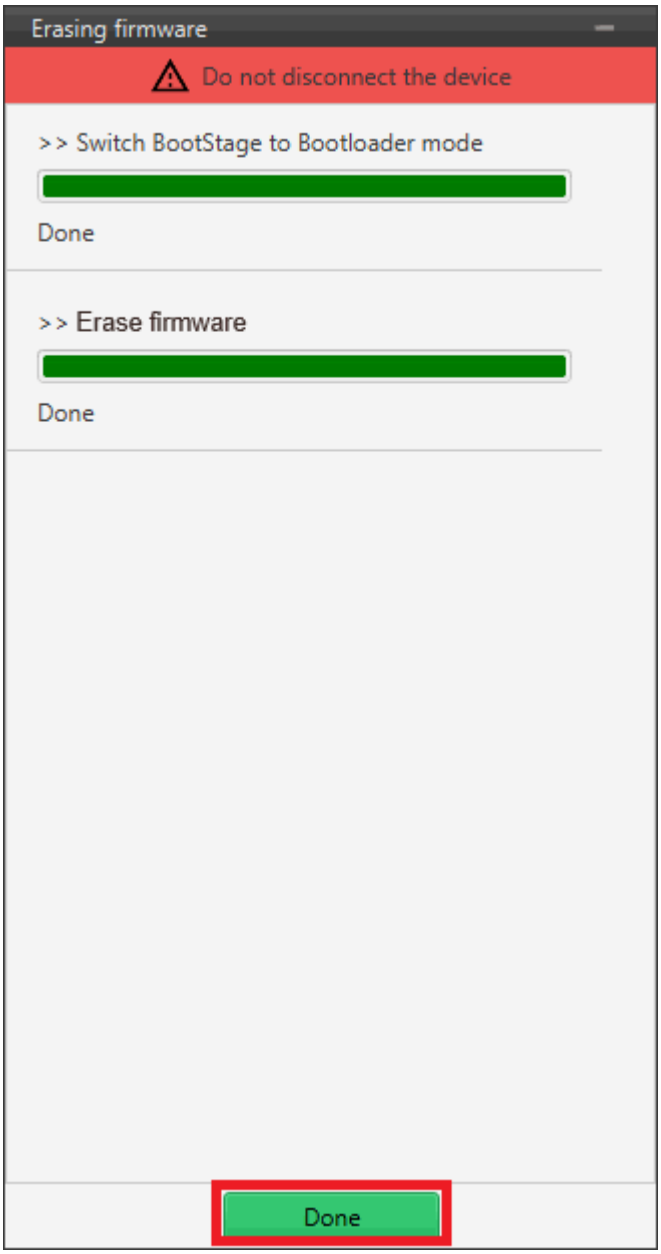
Erase firmware

Click the **Prepare** button, and the process will begin.



Erase firmware process

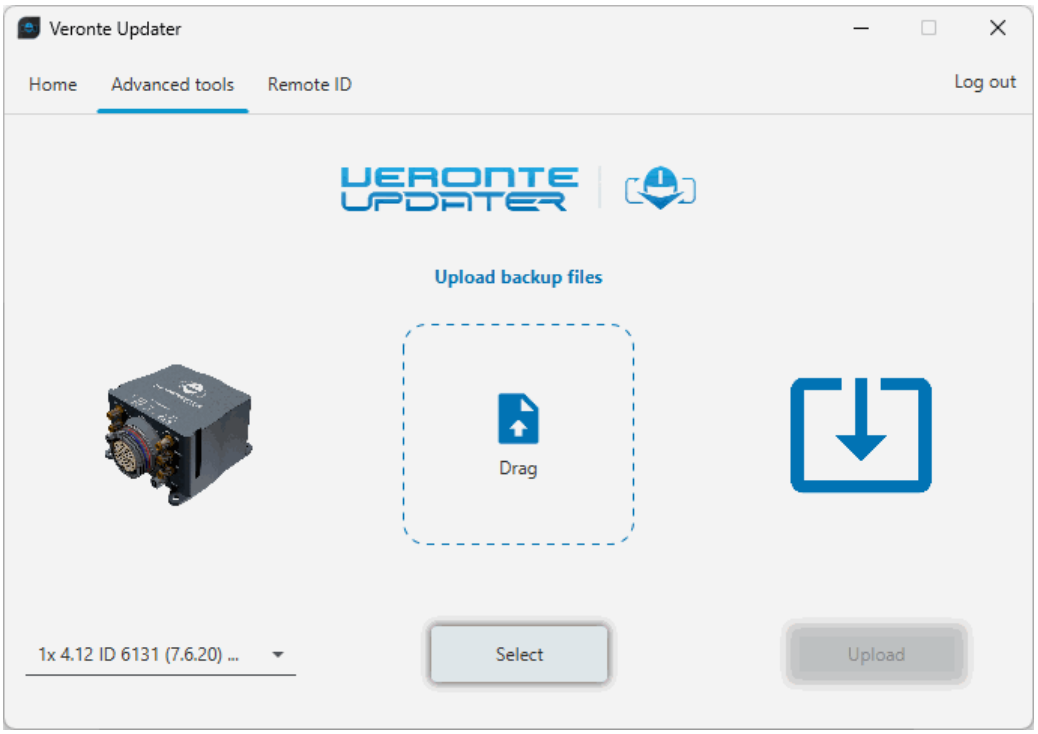
When finished, click on **Done**:



Erase firmware process finished

Upload backup

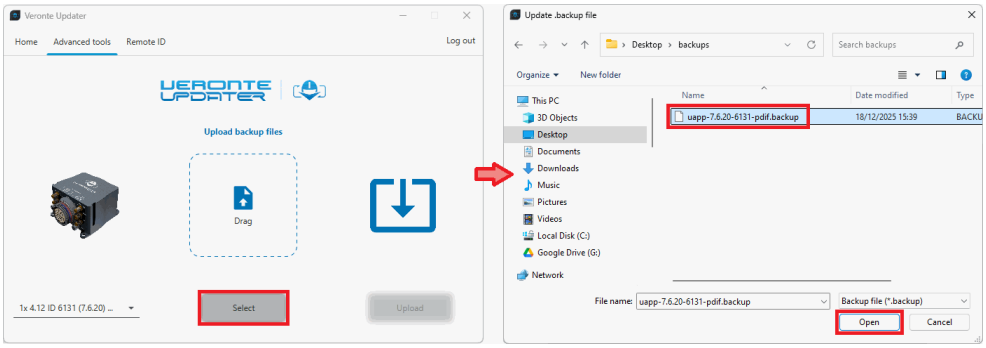
By selecting this option, users can **upload** the **.backup** file to the connected device.



Upload backup

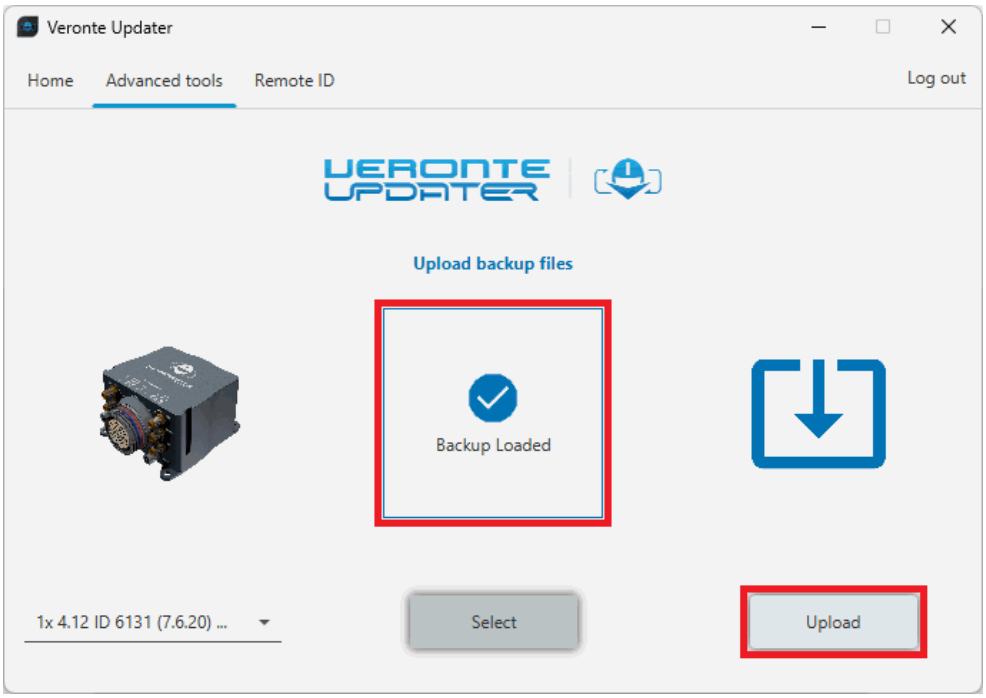
1. Load the **.backup** file. There are two ways to do this, dragging the file to the **Drag** area or by using the **Select** button.

   The latter option will open the following browser to select the **.backup** file stored in the user's local storage:



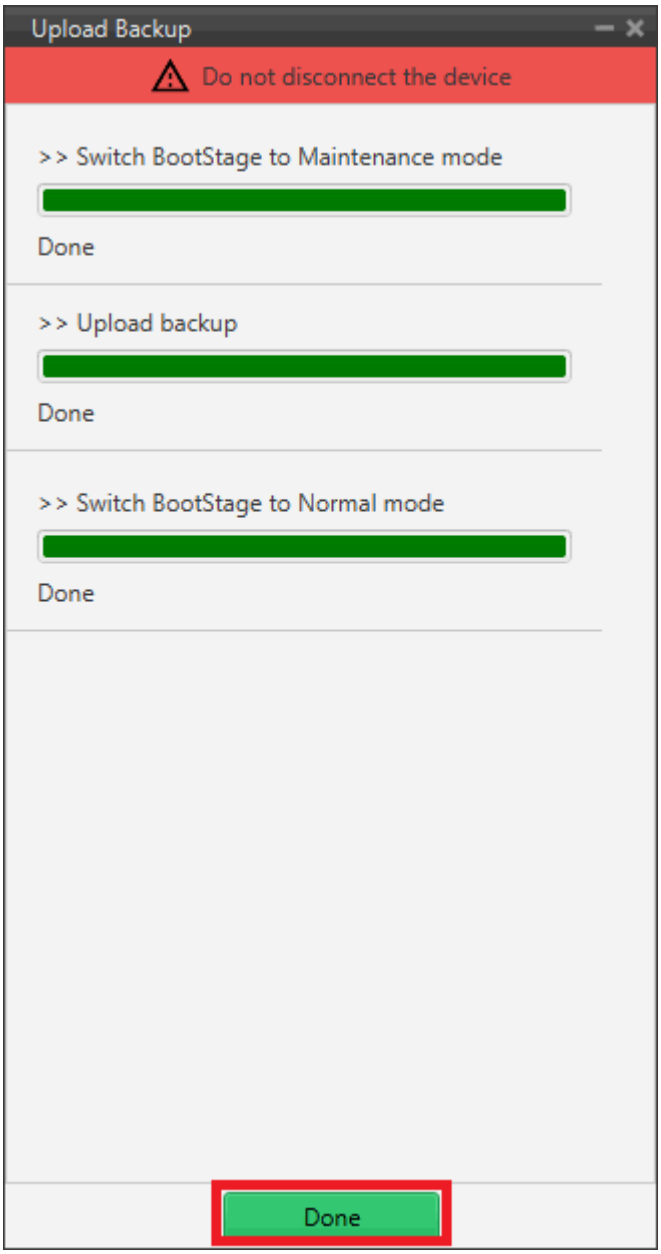
Upload backup - Select .backup file

2. Once the .backup file is loaded, click on **Update** to send the configuracion to the device.



Upload backup - Upload

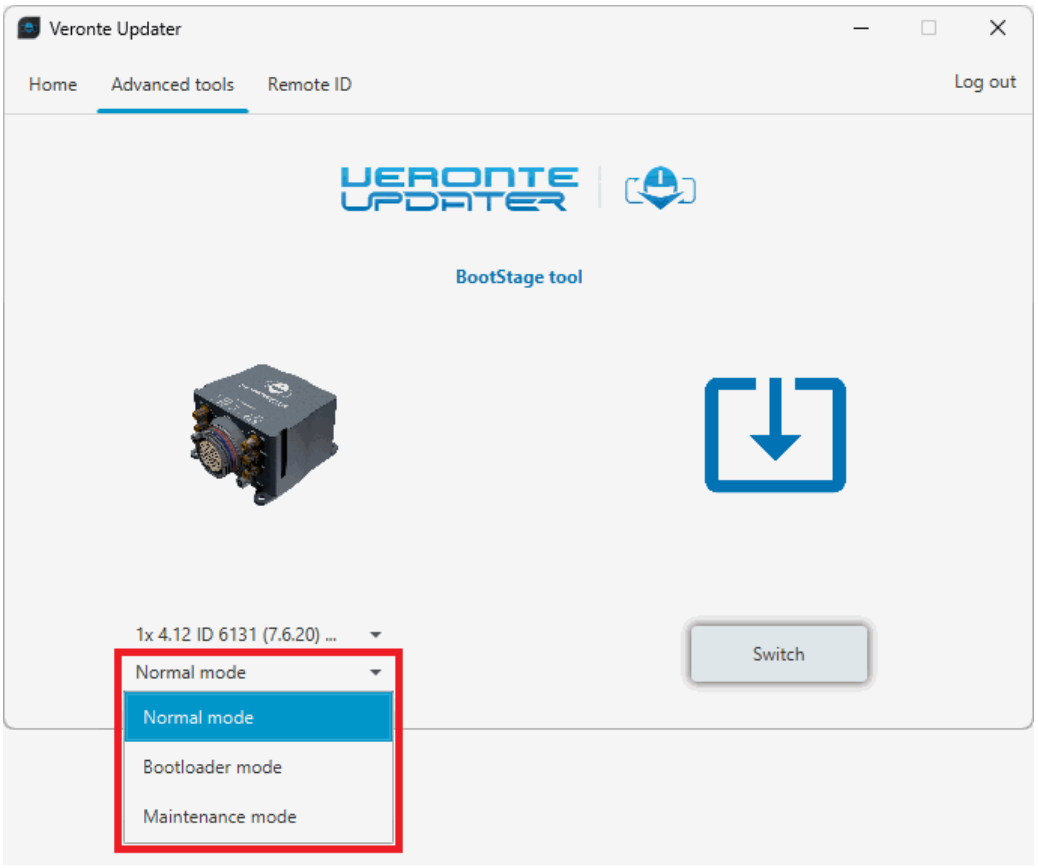
3. Once the process, finish, click on **Done**.



Upload backup process

Switch BootStage

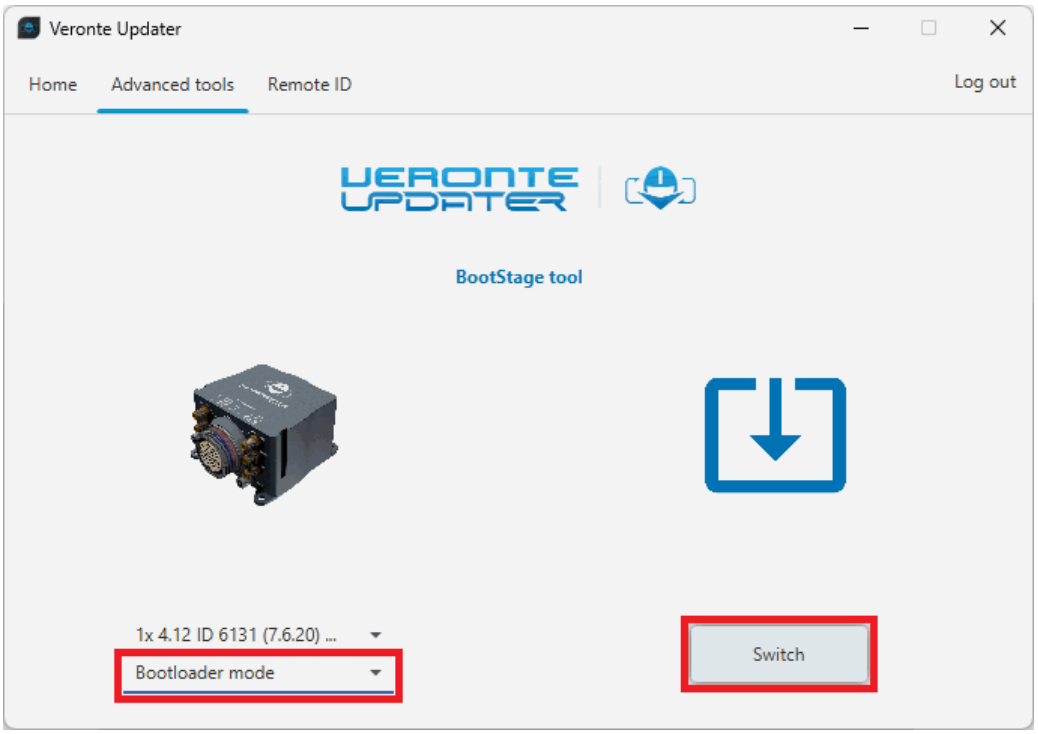
With this option, users can switch between the modes shown in the drop-down menu.



Switch BootStage

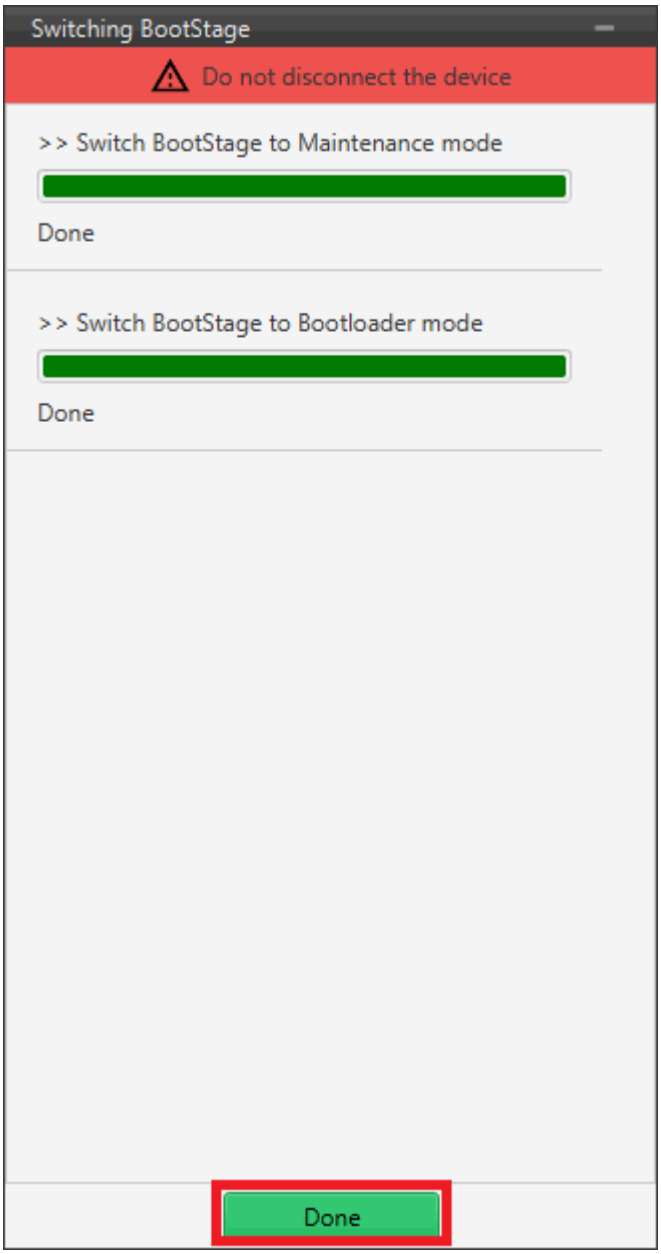
- Normal mode
- Bootloader mode: This is the mode a device must be in to be updated.
- Maintenance mode

Select the desired mode to switch to and click **Switch**:



Switch BootStage - Switch to Bootloader mode

Once the process, finish, click on **Done**.

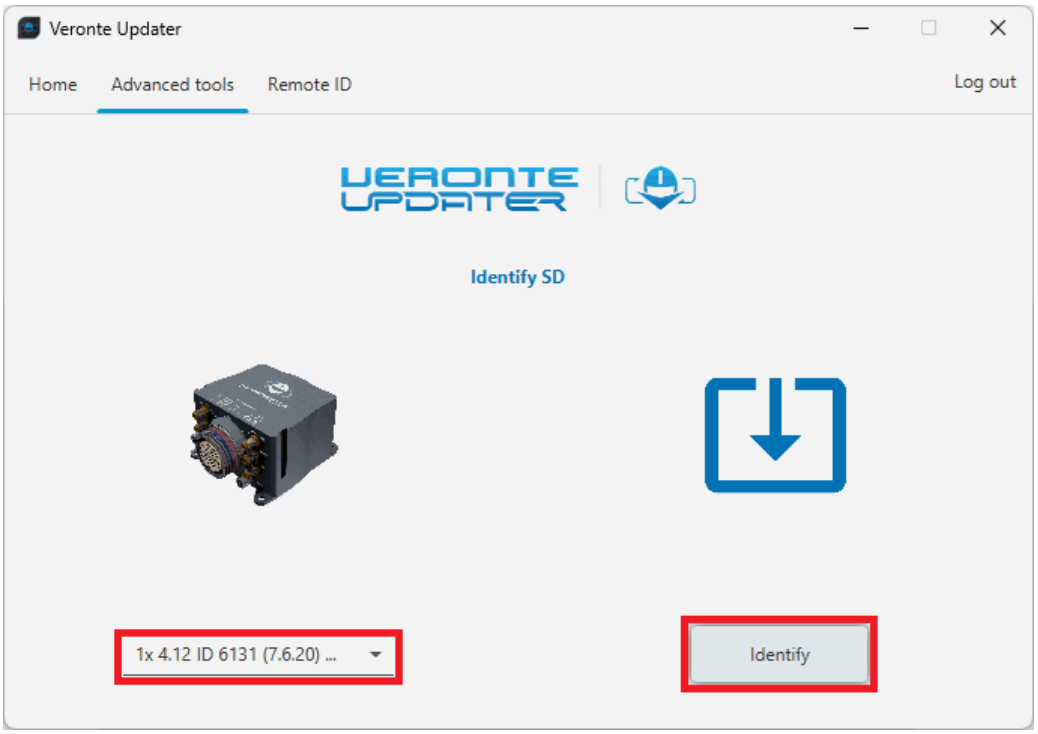


Switch BootStage process

Identify SD

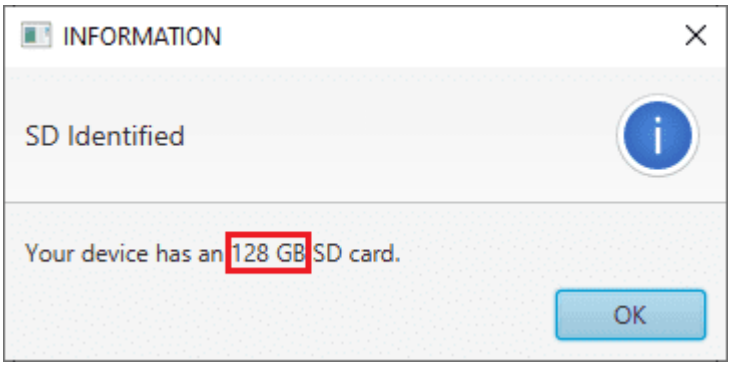
Selecting this option will identify the file memory capacity of the connected device.

Simply select the unit to be indentified and click **Identify**:



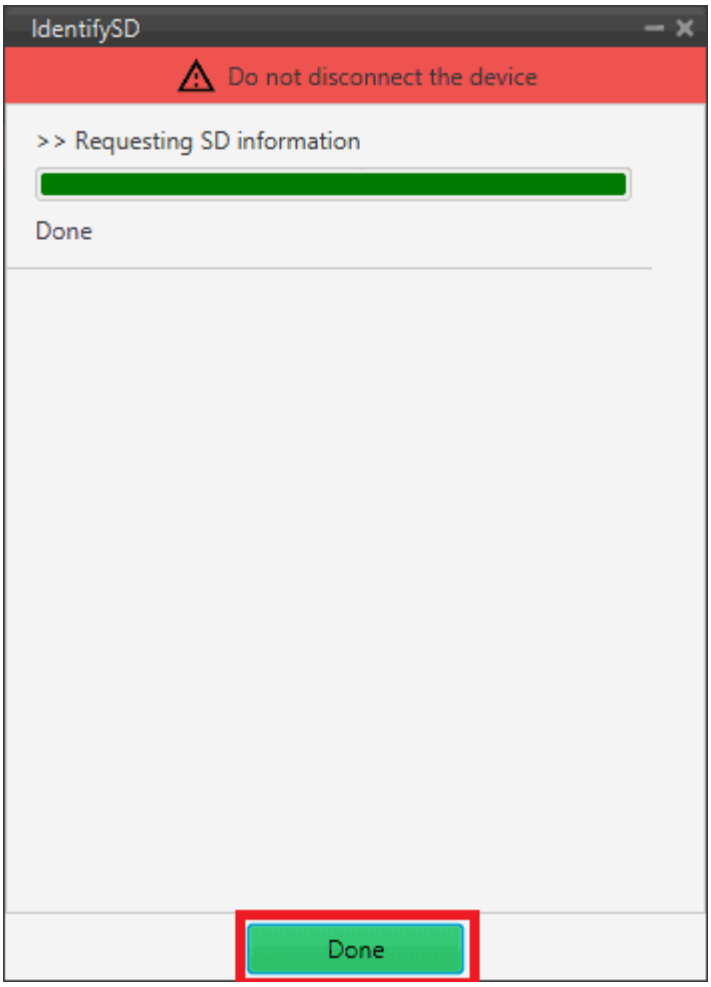
Identify SD

As the identification process is quite fast, a message with the information about the capacity of the SD card will quickly appear:



Identify SD message

Finally click on **Done**:



Identify SD process

Upload partition data

> ⚠ **Warning**
>
> THIS IS **NOT PART OF THE UPGRADE PROCESS**.

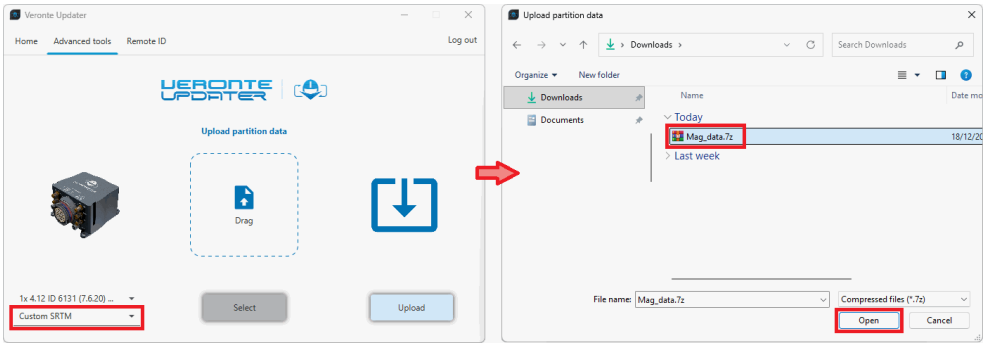
Veronte Updater shall require the user to carry out this action in the event that the device's file memory has **no magnetic field and geoid data**.

Follow the steps below to upload the needed partition data:

1. Simply select the desired unit, choose **Magnetic field**, **Geoid** or **Custom SRTM**.

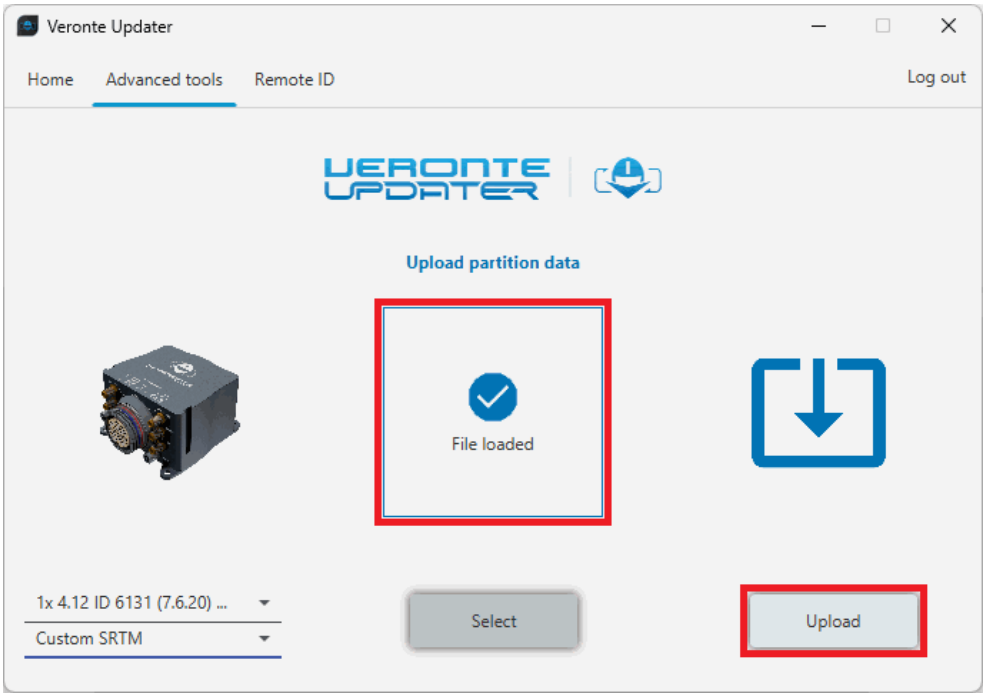
   If **Custom SRTM** option is selected, users must first load a `.7z` file. There are two ways to do this, dragging the file to the **Drag** area or by using the

Select button. The latter option will open the following browser to select the **.7z** file stored in the user's local storage:



Upload partition data - Select .7z file

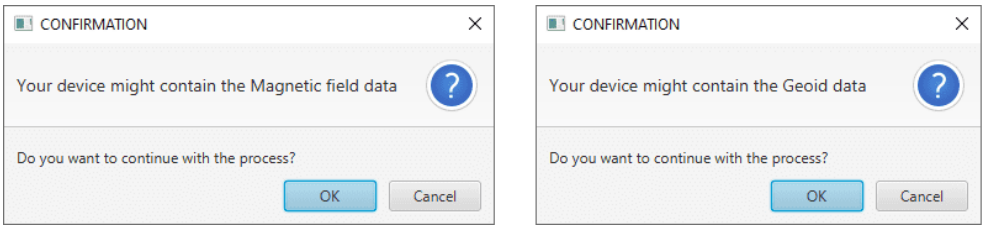
Then, once the `.7z` file has been loaded or the **Magnetic field** or **Geoid** options have been selected, click **Upload**:



Upload partition data - Upload

> **Note**
>
> The process carried out only uploads the chosen data (**Magnetic field**, **Geoid** or **Custom SRTM**). Repeat the process for uploading the remaining data.

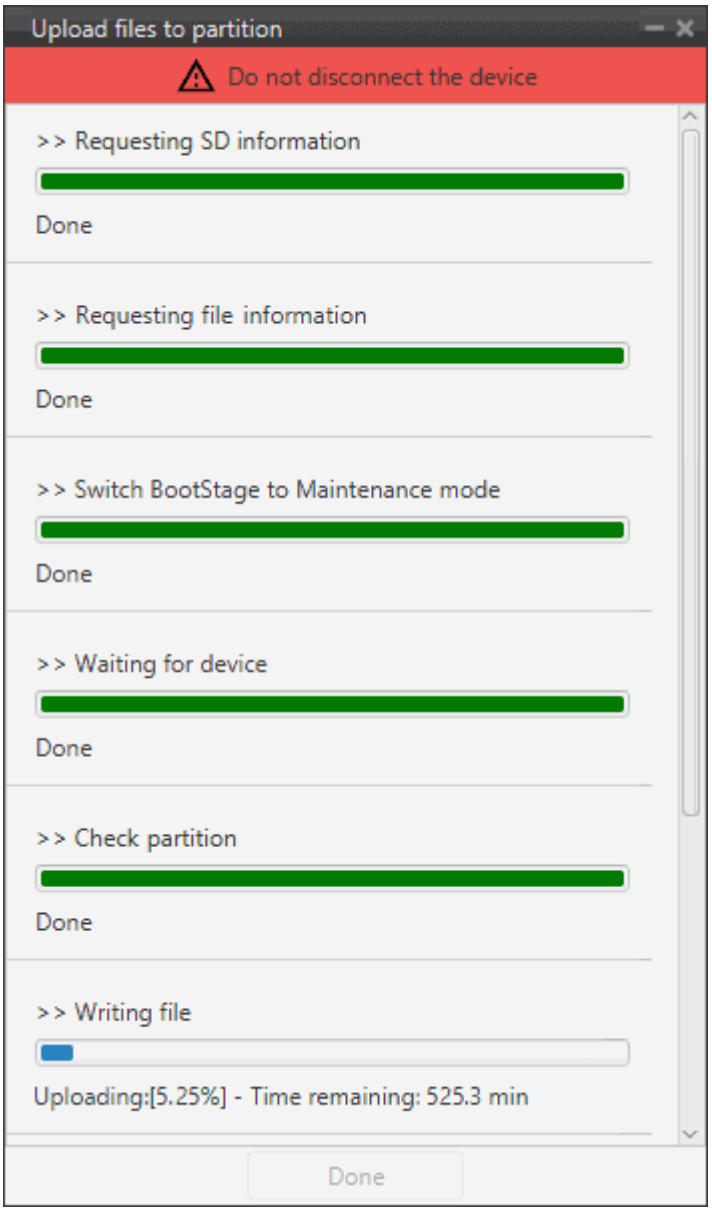
2. If the device already has the data to be uploaded, a window will pop up to confirm continuing with the process.



Upload partition data - Process confirmation

3. Once confirmed, the uploading process will start and the following window will show the progress.

> ⚠ **Warning**
>
> Writting file step is a long and slow process that can take a few hours.



Upload partition data - Uploading process

When finished, click on **Done**.

Remote ID

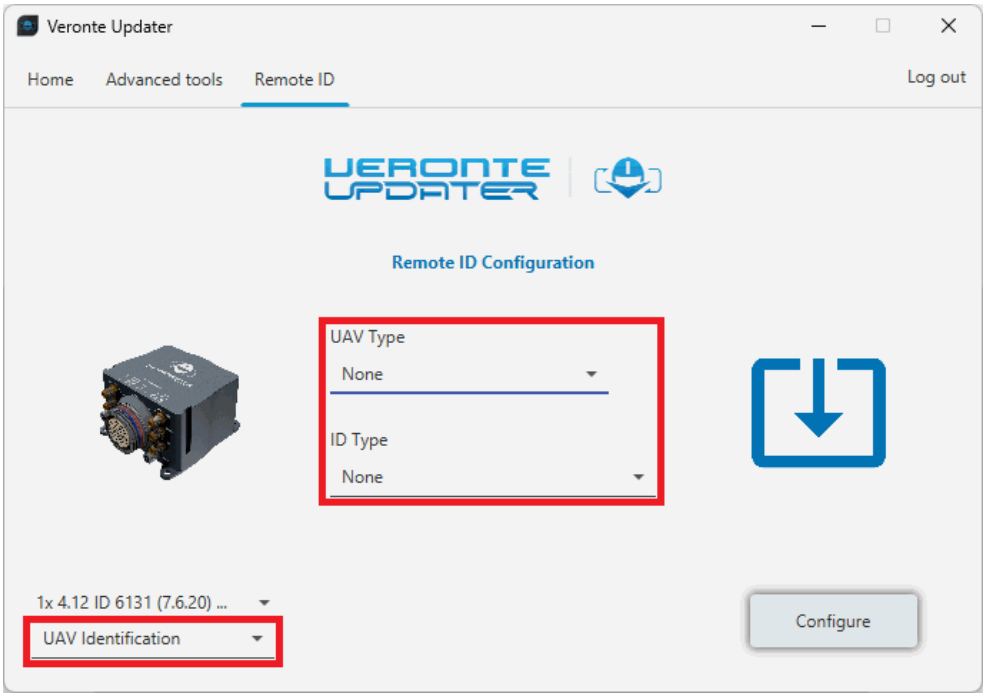
Configure Remote ID

In this panel, the Remote ID of the connected **Autopilot 1x** is configured.

> **Note**
>
> This panel only applies to Veronte Autopilots 1x with **Remote ID**.

There are different settings:

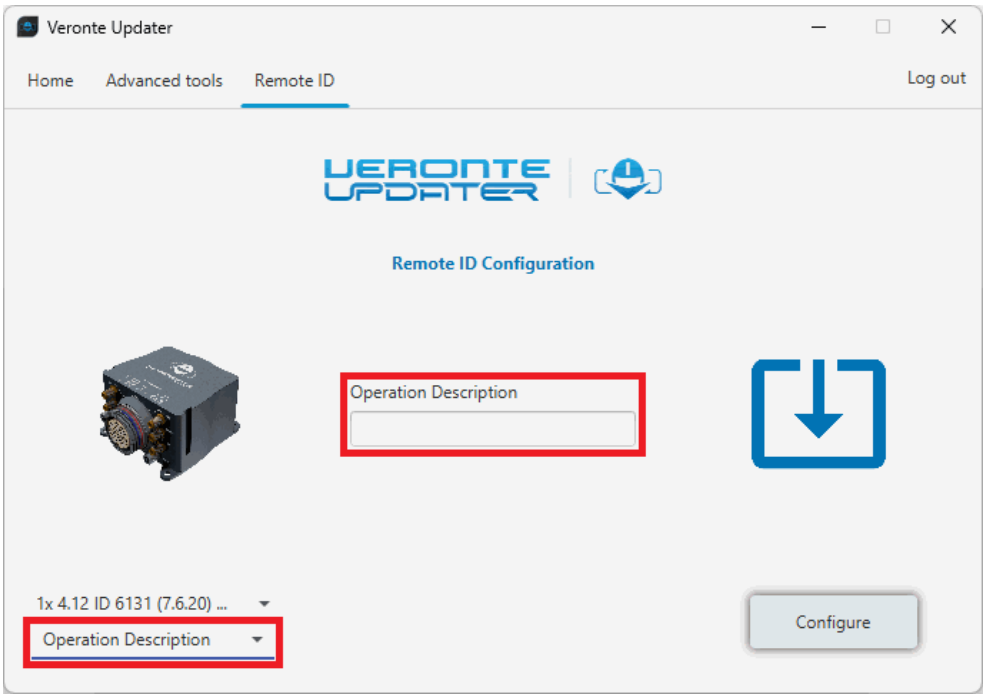
- **UAV Identification**
  - **UAV Type**: Select between the options the **type of the platform**.
  - **ID Type**: Select the type of ID that will appear in external Remote ID applications.



Configure Remote ID - UAV Identification

- **Operation Description**

  Users can write a brief description of the mission. It is optional and its maximum length is 23 bytes.

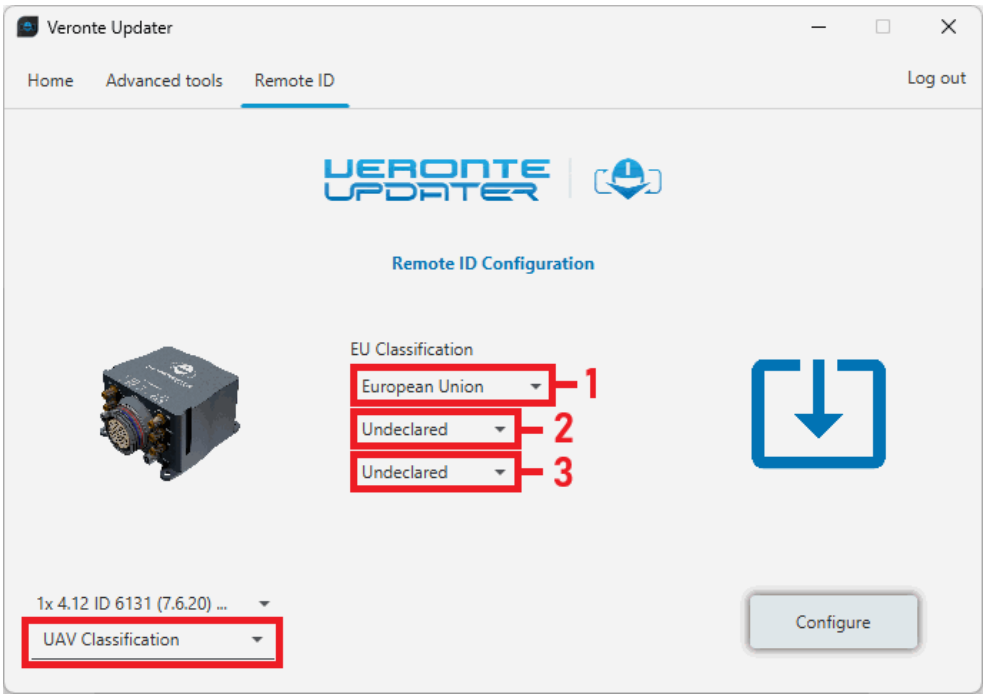


Configure Remote ID - Operation Description

- **UAV Classification**

  Define the three classifications of the aircraft:

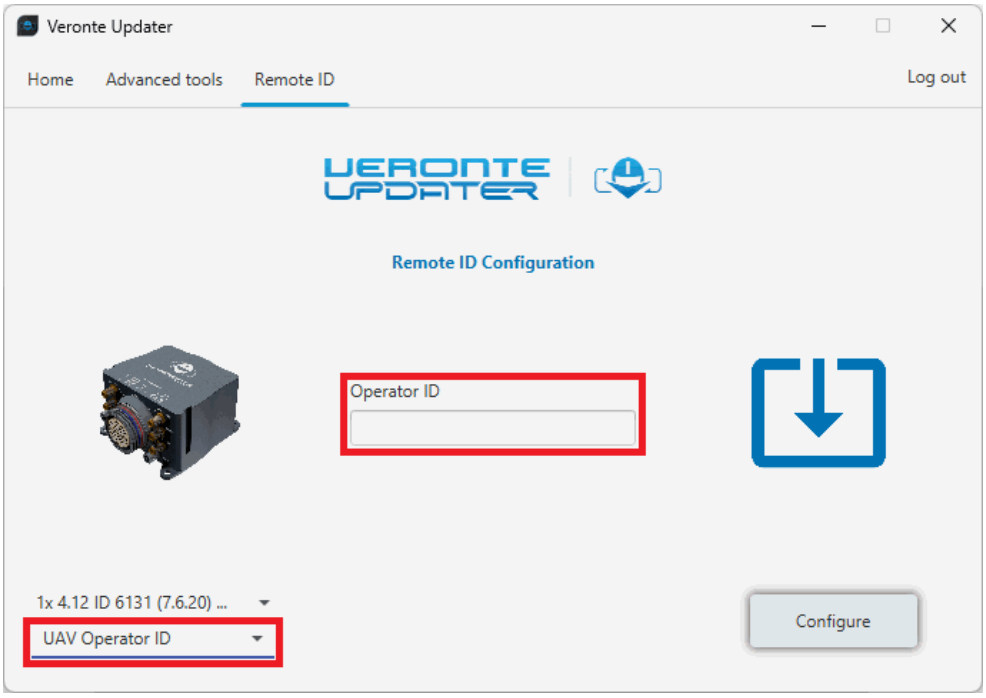
  1. Region where the aircraft will fly.
  2. Risk classification according to EASA:
     - Open: Low risk. LOS with an operator is required, it must be at safe distances from airports and flights over crowds are not allowed.
     - Specific: Increased risk. Approval is required by the National Aviation Authority, which is based on the Specific Operations Risk Assessment.
     - Certified: High risk. Regulations similar to manned aviation, with approval for all the systems employed.
  3. Open category defined by EASA.



Configure Remote ID - UAV Classification

- **UAV Operator ID**

  Enter the Operator ID of the user.



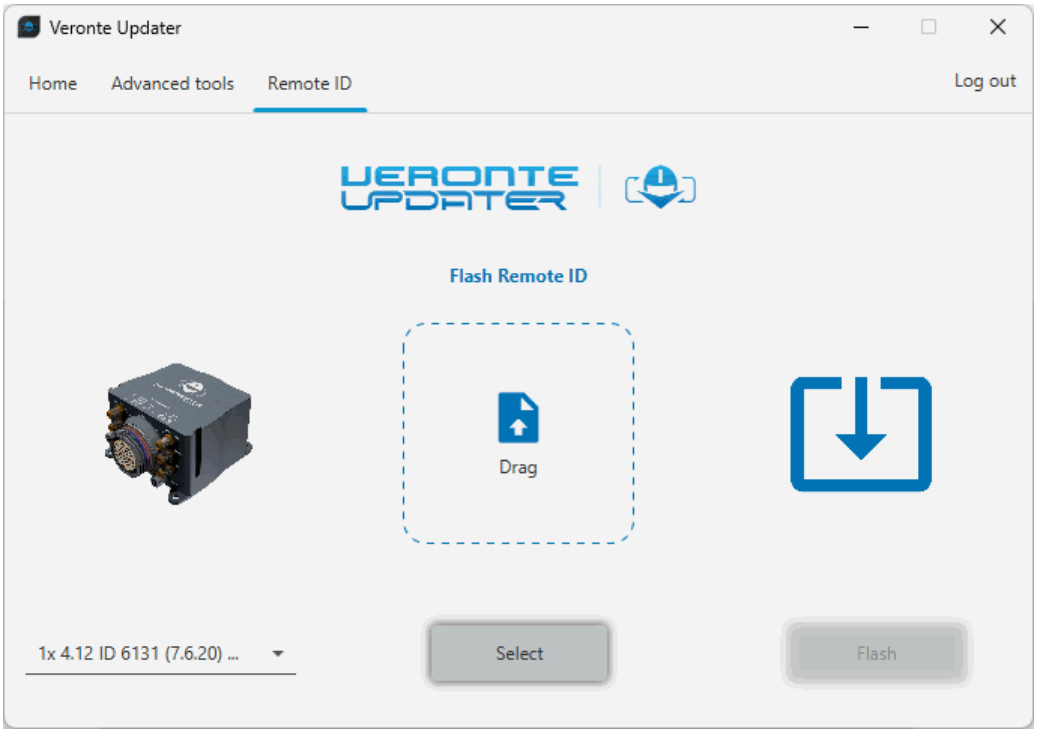
Configure Remote ID - UAV Operator ID

- Once the configuration has been finished, click on **Configure** to upload the configuration to **1x**.

For more information about this product, please contact sales@embention.com.

Flash Remote ID

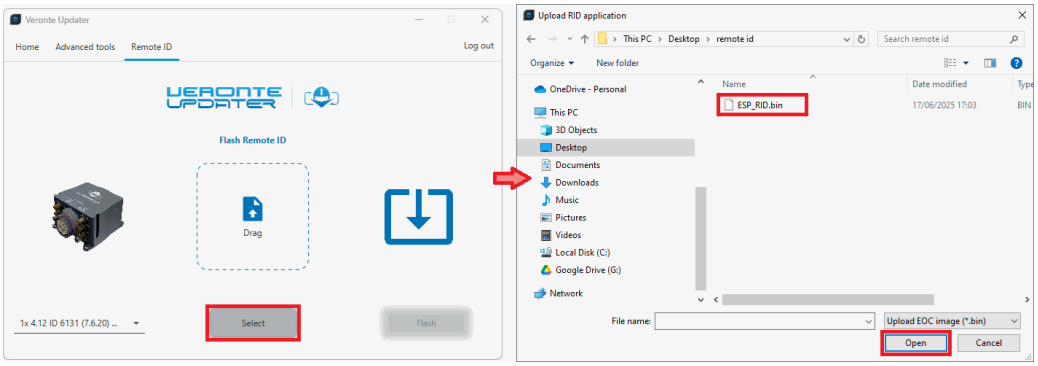
With this option, users can update the Remote ID product.



Flash Remote ID

Load the **.bin** file. There are two ways to do this, dragging the file to the **Drag** area or by using the **Select** button.

The latter option will open the following browser to select the **.bin** file stored in the user's local storage:



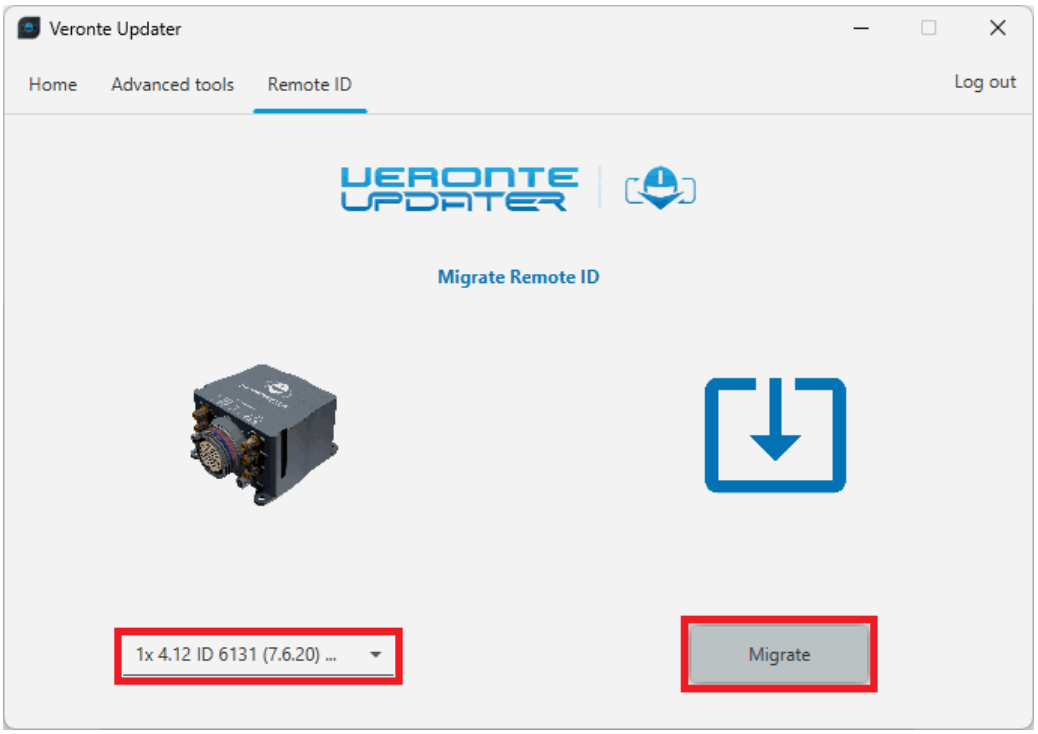
Flash Remote ID - Select .bin file

Once the .bin file is loaded, click on **Flash** to start the process.

For more information about this product, please contact sales@embention.com.

Migrate Remote ID

This panel provides support for migrating the internal Remote ID module from the old version to the new one.



Migrate Remote ID

Click on **Migrate** to start the process.

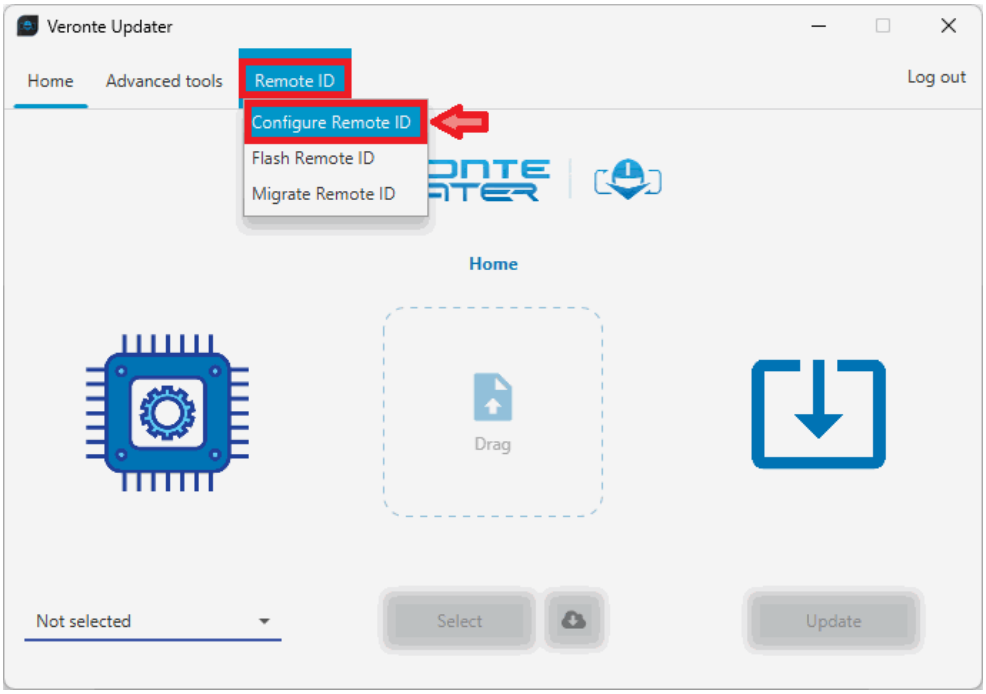
Integration examples

Remote ID

First of all, the internal Remote ID of the **Veronte Autopilot 1x** has to be configured. This section details how to do it:

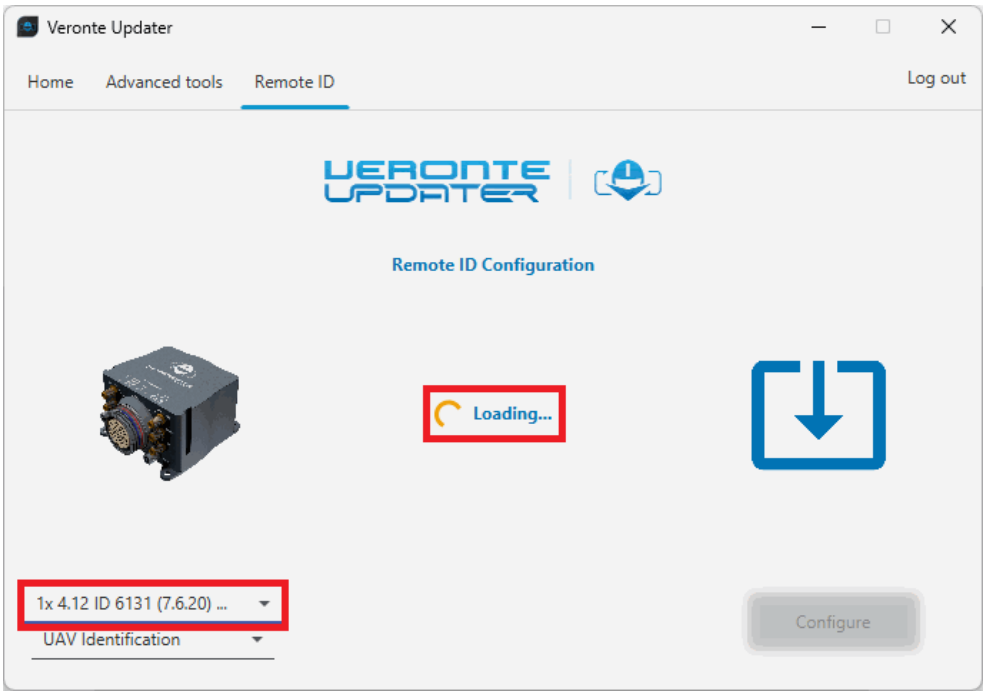
1. Open **Veronte Updater** → go to **Remote ID** tab → select **Configure Remote ID** option:

> **Note**
>
> First, it is necessary to log in to the CLS.



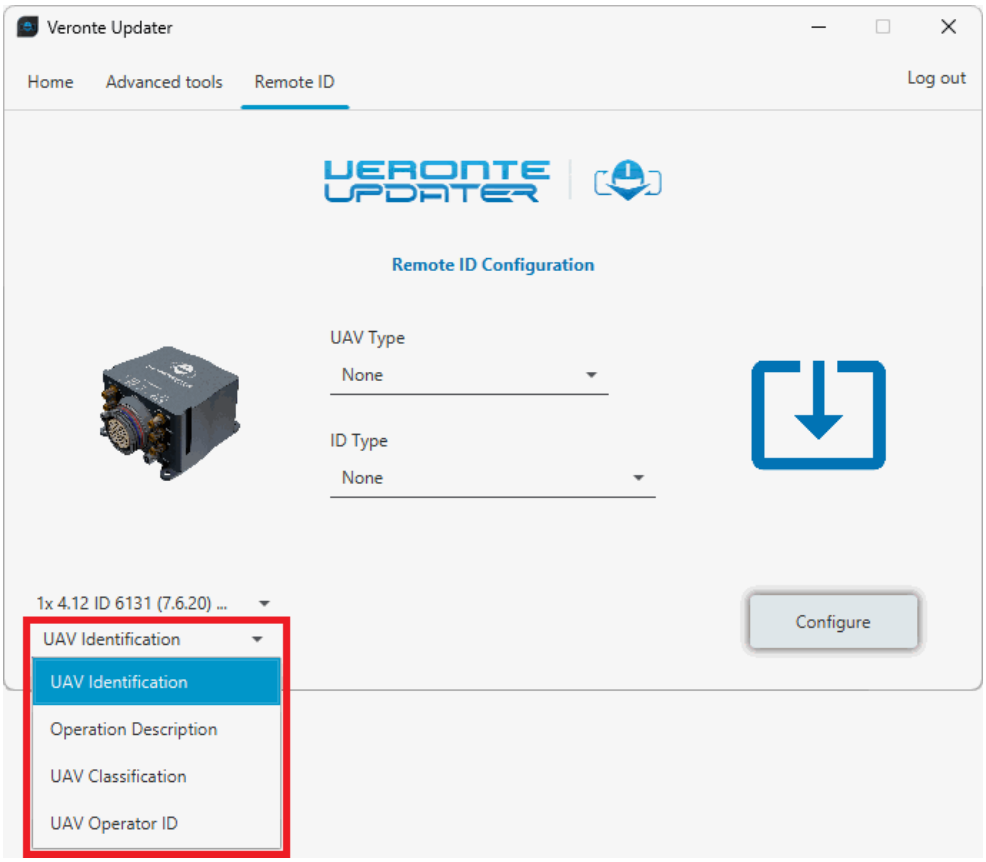
Remote ID - Configure Remote ID

2. Select the unit and **Veronte Updater** will load the internal Remote ID information from the connected device:



Remote ID - Remote ID information loading

3. Once the information has been loaded, users must configure the 4 different settings:
    - UAV Identification
    - UAV Description
    - UAV Classification
    - UAV Operator ID



Remote ID - Remote ID settings

For detailed information on these settings, please refer to the Configure Remote ID - Operation section of this manual.

4. Once the configuration is complete, click **Configure** to start the process.

Troubleshooting

Software Changelog

This section presents the changes between the previous software version (**v. 6.14.34**) and the current (**v.7.8**).

Added

- Authentication to Veronte Updater (Central Login Service)
- Device names now include the product name and version
- Feature to download firmware updates from Cloud directly from Veronte Updater
- Device is set to maintenance mode before initiating Upload of partition data
- Compressed file for Magnetic field, Geoid or Custom SRTM can be selected in the Upload partition data option

Removed

- Upload files, Flash Tool and Update bootloader to version 7 Advanced tools

Improved

- Erase firmware option behavior
- Flash Remote ID upload file button showing error after selecting valid file