

Updating the Firmware

Document Version	2.0	Release Date	26 June 2023
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Application information	for Bootloader versions BT.PT40.008.10 and Above
Vehicle	Not Applicable
Model	Not Applicable
Year of manufacture	Not Applicable

Note:

- Read through all instructions before installation and use.
- Ensure that the bike is switched off and the key is out of the ignition before proceeding with the installation.
- When the installation is complete, ensure to secure the wiring loom away from the movable parts or components that tend to heat up during the normal operation of the vehicle at any chance.
- FuelX is intended for motorsport use on a closed course, please check with your local laws before using this product. Race Dynamics is not liable for consequences arising out of using the product.
- The steps demonstrated in the manual are for one cylinder. For multi-cylinder vehicles, the steps have to be replicated for the other cylinders. Customers can choose Lambda 1 or Lambda 2 connectors for any cylinder unless the connectors are different for different cylinders. (for certain vehicles)

Support:

North & South America : +1 267 214 9292 (Call) +91 9606 044 178 (WhatsApp)

India, Bangladesh, Bhutan, Sri Lanka & Nepal : +91 9916 229 292 (Call & WhatsApp)

Rest of the world : +91 9606 044 177 (Call & WhatsApp)

Email : support@powertronicecu.com

Website : www.powertronicECU.com

REQUIREMENTS:

- 1) Windows PC with Genuine Windows Operating System (10/11) and have R-Tune V4 software installed. (Refer R-Tune V4 installation document)
- 2) Uninterrupted power supply.
- 3) USB Cable (A to B) provided within the kit.

WARNING:

If your bootloader is **BT.PT40.008.10 then refer this document for the procedure.**

- 1) Disconnect the ECU from the vehicle and 24-pin main connector before upgrading firmware.
- 2) The update process after selecting the firmware file is automated. If the ECU is updatable/compatible with the new firmware version file, it will automatically start the process. If the ECU is not compatible with the new firmware version file, it will ask you to check for the correct update version. At this point, you can cancel the process.
- 3) DO NOT touch/move the ECU once the update is started.
- 4) DO NOT click/turn off the computer once the update process is started.
- 5) DO NOT remove the USB cable once the update is started.
- 6) **In case the process is not successfully completed or got stuck at any stage of the update process, please contact the support team, before trying multiple times.**

7) Make sure the Firmware version or date on the website is **newer than the one in the ECU.
If the Firmware on the website and on the ECU is the same
(**USER Powertronic FW PT40_001_001_10 (21 Jun 23)**), and your bootloader version is **BT.PT40.008.10** then no need to update the Firmware. You can abort this process.**

- 8) **Make sure you follow step-by-step as mentioned in this document. The firmware update procedures are different for different Bootloader versions.**
- 9) **If your bootloader version is 00000000000000 or BT.PT40.008.07 or BT.PT40.008.08 then refer to the respective firmware update document.**

Downloading the appropriate firmware file.

1) Connect the R-Tune V4 software to the ECU. Refer to the R-Tune V4 installation and connecting to the ECU document.

2) Once connected, go to the **Device information** Tab in the software.

The screenshot shows the PowerTRONIC software interface. At the top, there is a status bar that says "Device configured successfully" and "Wait. configuring device Device connected." Below this is a table of calibration maps. The table has columns for RPM (500, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 8500) and rows for various maps like Fuel, Spark, Quickshifter Settings, etc. The "Device Information" tab is highlighted with a red box and a red arrow pointing to it.

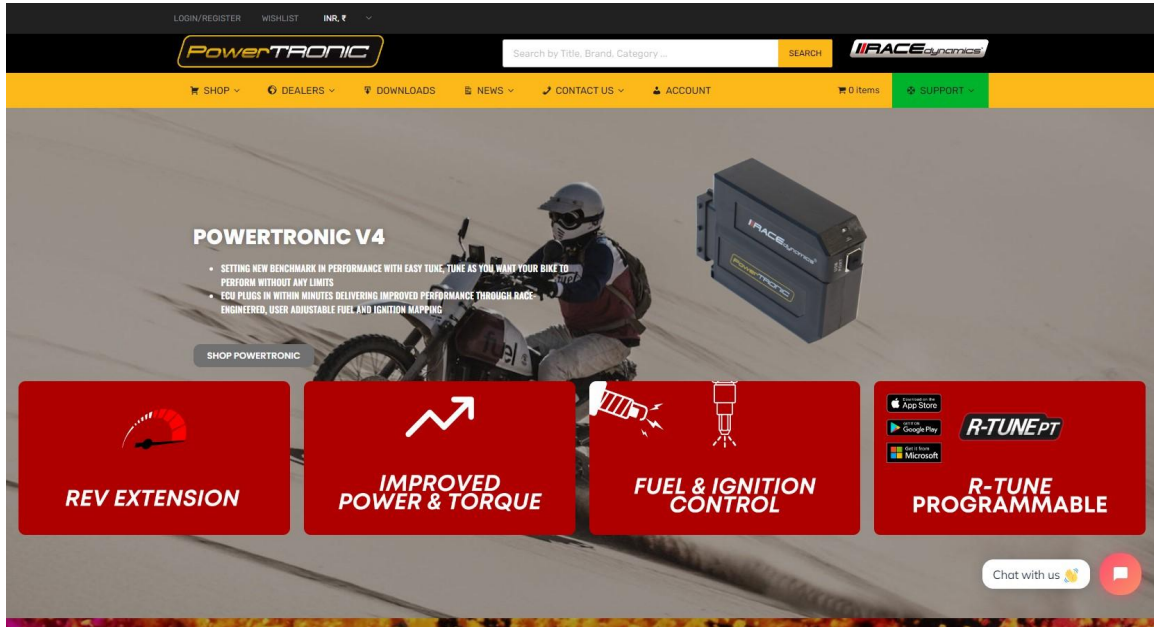
Map-1 : Fuel	Map-1 : Fuel % adjust (Rpm v Load%)										
Map-1 : Spark	500	1000	2000	3000	4000	5000	6000	7000	8000	8500	
Map-2 : Fuel	100	3	3	4	5	6	7	8	7		
Map-2 : Spark	93	3	3	4	5	6	7	8	7		
Quickshifter Settings	86	3	3	4	5	6	7	8	7		
Control Settings											
Factory Settings	80	3	3	4	5	6	7	8	7		
Index Maps	73	3	3	4	5	6	7	8	7		
Dials	66	3	3	4	5	6	7	8	7		
Realtime Graphs											
Device Information	60	2	2	3	4	5	6	7	6		
	53	1	2	3	4	5	6	7	6		
	46	0	2	3	4	5	6	7	6		

3) Observe the Bootloader Version and the Firmware version. **(Make sure the Firmware version on the website is newer than the one in the ECU. If the Firmware on the website and on the ECU is the same, then no need to update the Firmware.)**

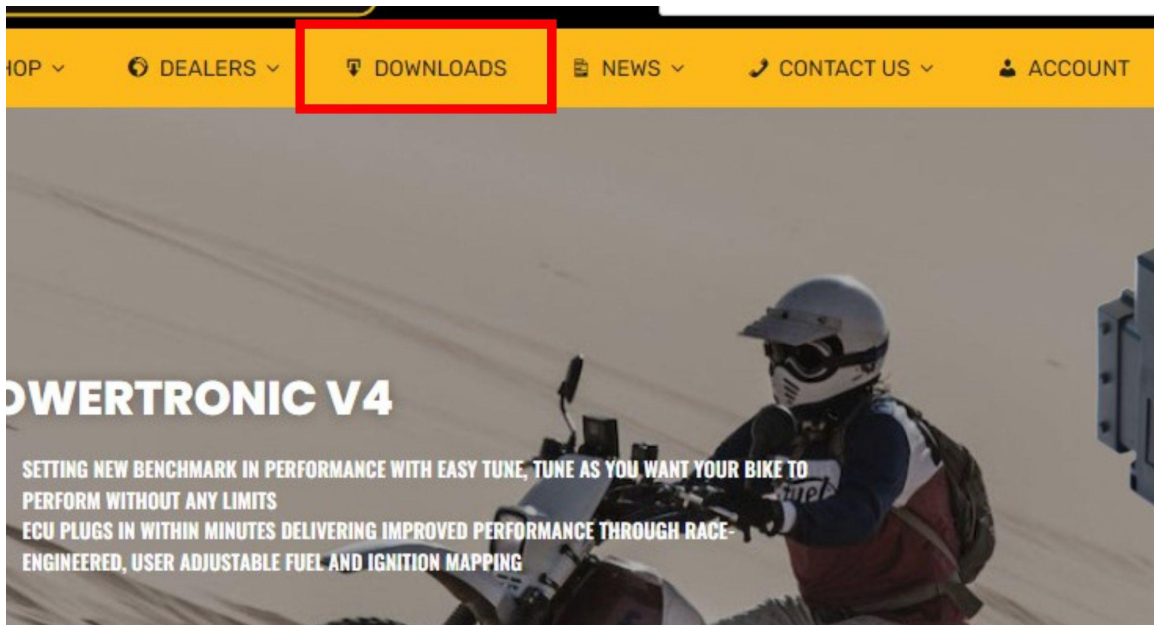
Device Name	PowerTRONIC
Description	Fuel & Ignition controller
Firmware	FW.PT40.001.001.07<27_Jan_2023>
Hardware	HW.PT40.B.034.T.015
Serial	*****
Configuration Version	CF.PT40.000.03
Total Calibration memory used	65
Bootloader Version	BL.PT40.008.10
General Info	Total Calibration memory used

for Bootloader versions **BT.PT40.008.10 and Above**

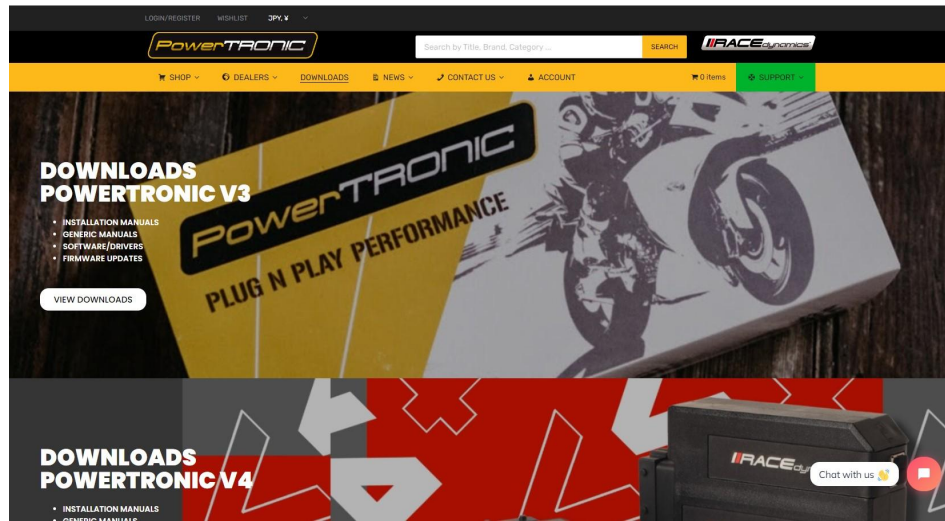
4) Go to <https://powertronicecu.com/>



5) Click on [Downloads](#)



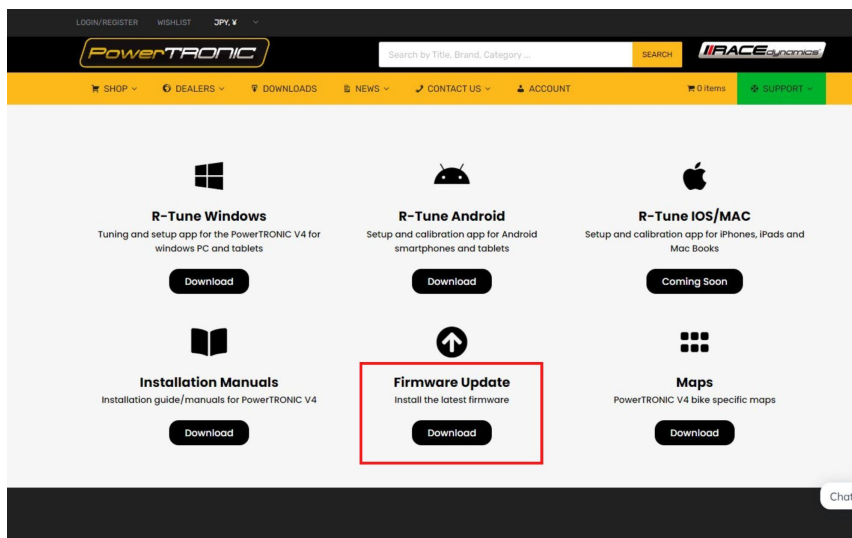
6) You will be directed to the [Downloads](#) section. Scroll Down and go to the PowerTRONIC V4 Downloads section



7) Click on the [View Downloads](#) section.



8) From the Menu, Click on the **Download** button below the **Firmware Update** menu.



9) It will redirect to the Firmware file section. Download the firmware file.

If your bootloader is BT.PT40.008.10 then refer this document for the procedure.

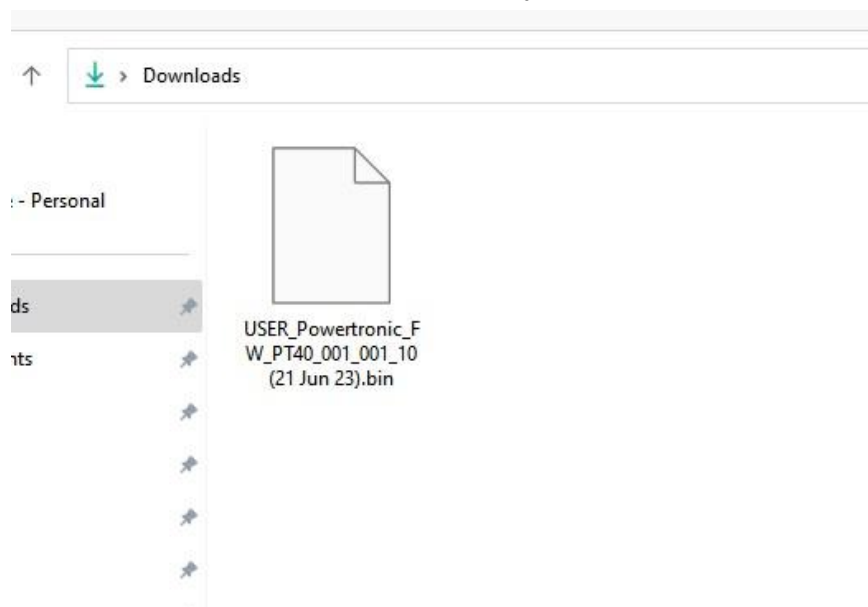
NEW
Latest Release

PTV4 - 40.001.001.10 | 21 June 2023

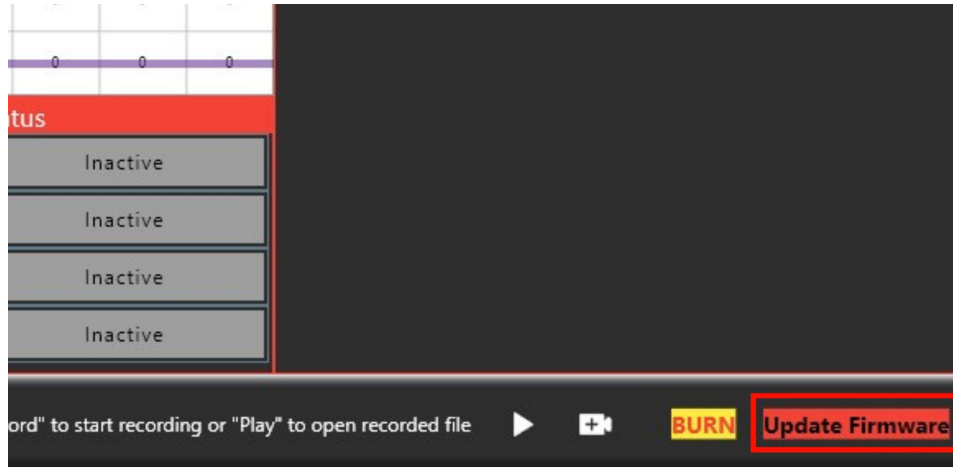
- Routine updates and optimization
- Improvements with Rev Extension
- Bugfix on injector duty cycle display on the app
- Ensure "FACTORY SETTINGS" data tables are populated with latest map provided by manufacturer
- Minor protocol change
- Injection module optimizations
- Noise filter optimizations
- Enhanced security and other updates

Download

10) The files will be Downloaded to the Downloads section of your computer.



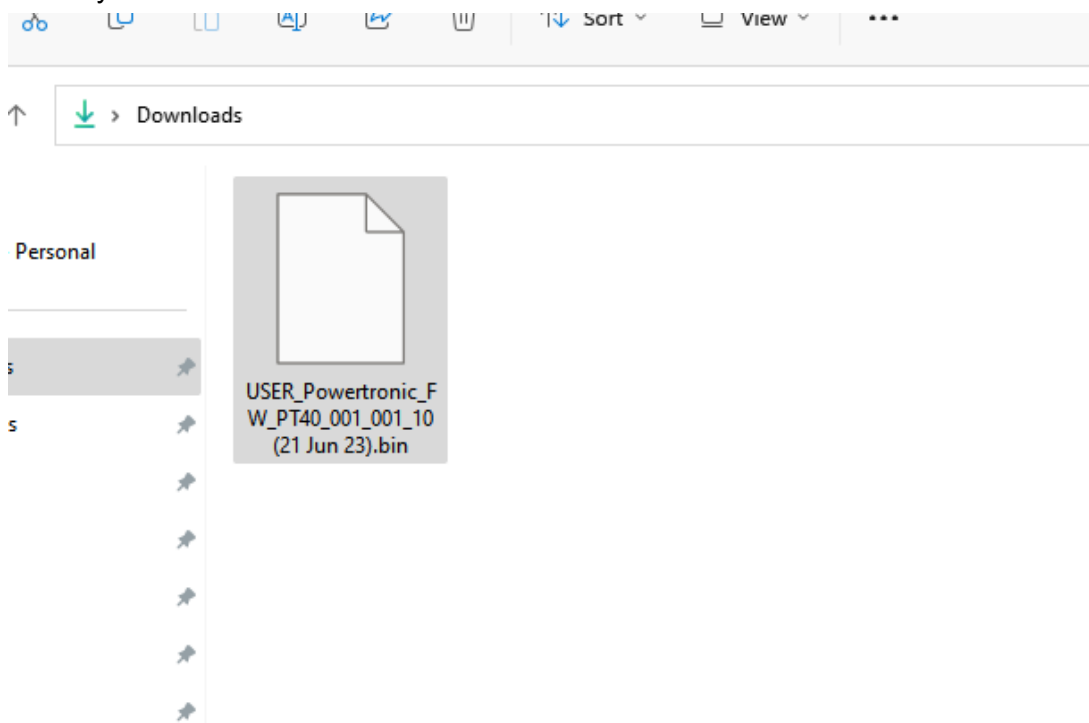
11) Click on the **Update Firmware** button again.



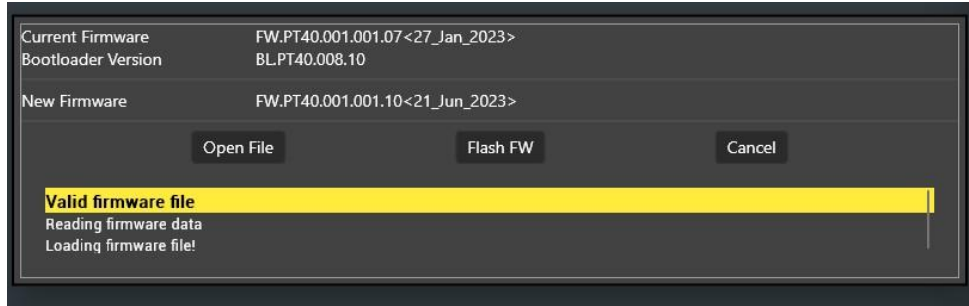
12) It will open a dialogue box for the firmware update. Click on the **Open File** button.



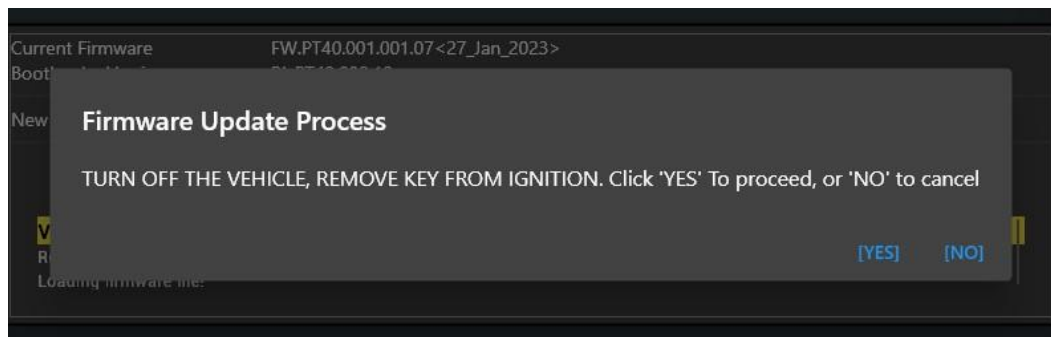
13) It will redirect to you the file folder. Go to the Downloads section and select the firmware file. Click on **Open**



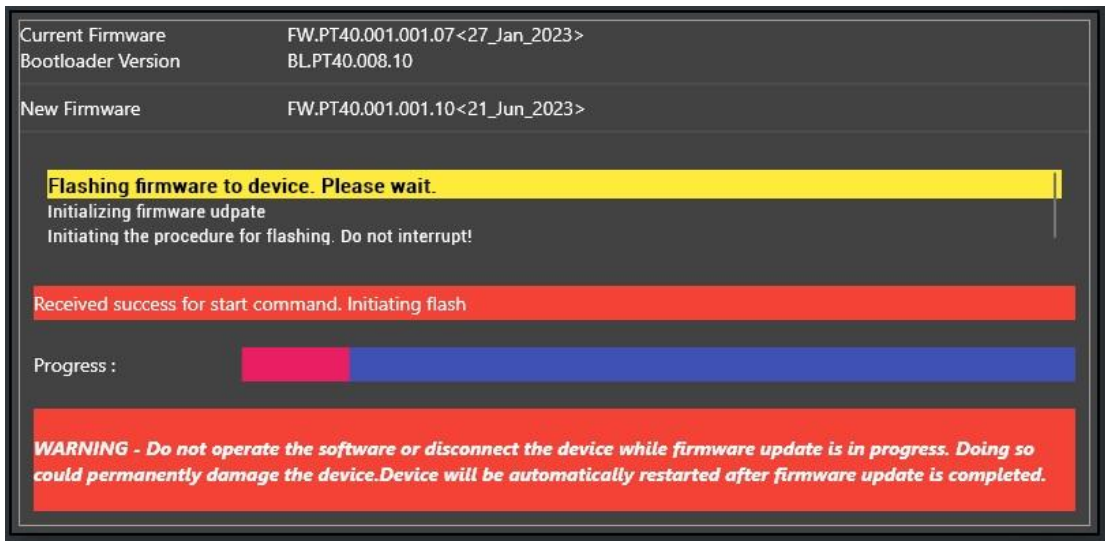
14) Once the firmware file is selected, Click on **Flash FW** Button.



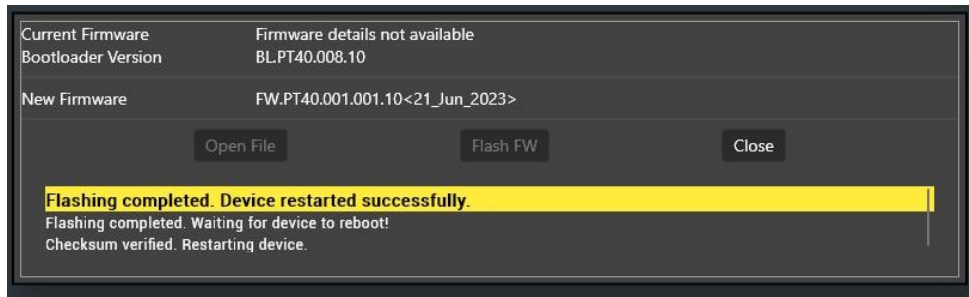
15) Once the Flash FW button is clicked, a pop-up will ask you Turn off the vehicle and remove the key from the ignition. If the ECU is connected to the vehicle, make sure to turn off the vehicle and disconnect the ECU from the vehicle. Once it is disconnected, Click on **YES** to proceed.



16) The Firmware update process will start now. You can see a progress bar for the percentage of processes completed.



17) Once the process is completed, it will notify that the flashing is completed. Click on **Close**. The R-Tune will be restarted now.



18) The user can refer to the completed Device information below.

Device Name	PowerTRONIC
Description	Fuel & Ignition controller
Firmware	FW.PT40.001.001.10<21_Jun_2023>
Hardware	HW.PT40.B.034.T.015
Serial	*****
Configuration Version	CF.PT40.000.03
Total Calibration memory used	65
Bootloader Version	BL.PT40.008.10
General Info	Total Calibration memory used