Plugable TBT4-UDZ firmware update procedure

The following procedure describes how to update the Realtek DisplayPort MST hub firmware within a Plugable TBT4-UDZ docking station using a Windows host PC

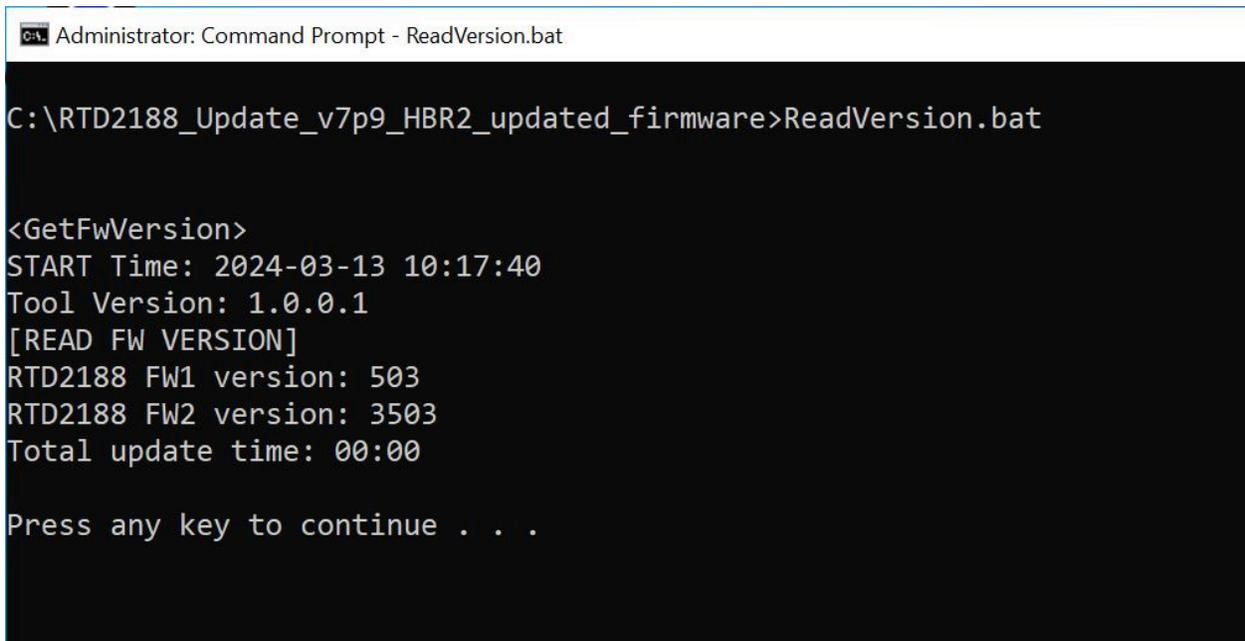***** Please be sure to follow all of the steps within this procedure precisely. *****
*** The firmware update process cannot be performed using a Mac ***

1. Disconnect any devices other than the Plugable TBT4-UDZ docking station from the host computer, and keep them disconnected until this process is complete.

2. Disconnect all of the external devices from the TBT4-UDZ docking station. This includes all USB devices, video cables, etc. The only connections that should remain connected are the docking station's power adapter and the Thunderbolt 4 cable.

3. Ensure that the TBT4-UDZ docking station is connected to a Thunderbolt 3 or Thunderbolt 4 port within a host computer running Windows 10 or Windows 11. The update process cannot be completed using a Mac.

4. Download the firmware update .ZIP file →
https://media.plugable.com/downloads/drivers/products/tbt4-udz/tbt4-udz_rtd2188_updated_firmware.zip to your computer and extract the contents (the contents must be extracted for the process to work)

5. From within the extracted folders, right-click on the file named, 'ReadVersion.bat' and select 'Run as administrator' from the context menu that appears.

*** This batch file will establish communication with the docking station, and determine whether the current firmware versions can be read. This process must be successfully completed in order to complete the firmware update. ***

6. Click 'Yes' to any prompts from Windows User Account Control that may appear in order to allow the process to continue.

7. The 'ReadVersion.bat' file will detect the presence of the TBT4-UDZ dock, and if detected will report success in reading the internal firmware versions, similar to the example below:

8. If the 'ReadVersion' process does NOT work or does NOT report 'Success', please stop here and consult your Plugable support representative for assistance.

9. If the 'ReadVersion' process is successful, press any key to end the detection process.

10. From within the extracted folder, right-click on the file named, 'Update.bat' and select 'Run as administrator' from the context menu that appears.

*** This batch file will actually perform the firmware update ***

11. Click 'Yes' to any prompts from Windows User Account Control that appear in order to allow the process to continue.

12. The 'Update.bat' file will start the firmware update process, similar to the example below:

```
Administrator: Command Prompt - Update.bat

RTD2188 FW2 version: 3503
Total update time: 00:00


<Input FW1 image: QSI_Gulliver_RTD2188_U153_v07p09_20240205.bin>
<Ver> 709
<Input FW2 image: QSI_Gulliver_RTD2188_U154_v37p09_20240205.bin>
<Ver> 3709
START Time: 2024-03-13 10:18:41
Tool Version: 1.0.0.1

[UPDATE FW1] image: QSI_Gulliver_RTD2188_U153_v07p09_20240205.bin
<INFO> Image load:QSI_Gulliver_RTD2188_U153_v07p09_20240205.bin.
<INFO> Image load is done.
<INFO> Opened device, start progress.
<INFO> enter ISP mode.
<INFO> config default.
<INFO> config default is done.
<INFO> detect flash
<INFO> detect flash is done
<INFO> Flash MID=85, TypeID=60, CapacityID=14, DeviceID=13 .
<INFO> config GPIO.
<INFO> config GPIO is done.
<INFO> SW-WP config:True.
<INFO> SW-WP config is done.
<INFO> Erase Bank0 .
<INFO> Erase Bank8-80000.
<INFO> Program Bank8 -Start:80000,WriteBytes:61F2.
<INFO> Erase Bank7-70000.
```

13. The firmware update process will take approximately **four minutes** to complete.

*** IMPORTANT NOTE - There are two stages to the firmware update process. It is important that this process NOT be interrupted until both stages have been completed ***

Once the process has completed, you should see a 'Success' result, similar to the example below:

```
CM. Administrator: Command Prompt - Update.bat

<INFO> SW-WP config:True.
<INFO> SW-WP config is done.
<INFO> Erase Bank0 .
<INFO> Erase Bank9-90000.
<INFO> Program Bank9 -Start:90000,WriteBytes:B522.
<INFO> Erase Bank8-80000.
<INFO> Program Bank8 -Start:80000,WriteBytes:F9A5.
<INFO> Erase Bank7-70000.
<INFO> Program Bank7 -Start:70000,WriteBytes:FD05.
<INFO> Erase Bank6-60000.
<INFO> Program Bank6 -Start:60000,WriteBytes:FA4C.
<INFO> Erase Bank5-50000.
<INFO> Program Bank5 -Start:50000,WriteBytes:FEFD.
<INFO> Erase Bank4-40000.
<INFO> Program Bank4 -Start:40000,WriteBytes:FEFA.
<INFO> Erase Bank3-30000.
<INFO> Program Bank3 -Start:30000,WriteBytes:FEE5.
<INFO> Erase Bank2-20000.
<INFO> Program Bank2 -Start:20000,WriteBytes:FEFB.
<INFO> Erase Bank1-10000.
<INFO> Program Bank1 -Start:10000,WriteBytes:FEFE.
<INFO> Program Bank0 -Start:00000,WriteBytes:FE9B.
 0x7000 Data:
 55  AA  6C  7A  62  37  09  24  02  FF  02  F2  E4  90  9F  3E
<INFO> SW-WP config:False.
<INFO> SW-WP config is done.
<INFO> reset device
[UPDATE FW2] Completed
Total update time: 03:47
Press any key to continue . . .
```

14. Press any key to close the update window.

15. Once the firmware update is complete, please disconnect the docking station from the host computer and disconnect the docking station's power adapter so that the unit turns off completely.

16. Wait 30 seconds, and then reconnect the power to the docking station..

17. Reconnect all of the external devices to the docking station (USB devices, video cables) that were disconnected in step #2.

18. Reconnect the docking station to the host computer.

*** Once all of the steps above have been completed, then the firmware update process is complete ***

*** ADDITIONAL NOTE - If for any reason the original firmware version needs to be restored, the original firmware is available to download from here → https://media.plugable.com/downloads/drivers/products/tbt4-udz/tbt4-udz_rtd2188_original_firmware.zip **and can be applied using the same procedure described above *****