

Quarch Technology Ltd

Product Updates

For use with:

All standard Quarch devices



Change History

1.0	May 2017	Initial Release
1.1	August 2-17	Type fixed in FW update instructions

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Introduction

Quarch modules have firmware which can be user-upgraded in order to add new features and fixes.

Updates are supplied as an 'Update Pack' containing these instructions and the required update files for the module.

Update Packs can be downloaded from the Quarch website:
quarch.com/content/downloads.

Quarch applications such as TestMonkey are also able to monitor for updates and download them for you.

There is no requirement to upgrade module firmware. If you do not require the additional fixes or features, then you can continue to run your current version in almost all cases.

We do recommend signing up for our [update emails](#), so we can inform you of important updates.

Before you start – essential information

The update process

To update a Quarch module, you will have to connect the device to a Windows PC and use our updater application.

Most modules use USB for updating and so will require the USB drivers to be installed. A small number of products use LAN or serial for updating and will have slightly different instructions.

Many modules have more than one update file (e.g., a Firmware and an FPGA update). All files in an update pack must be loaded as specified or the module is likely to work incorrectly!

Some modules have different hardware versions which require differing update packs. If update packs care about the hardware version they go on, they will be labeled clearly. For example, the _01_02_03_Update Pack is for -01, -02 and -03 hardware versions, but NOT -04 or above. Check the hardware version of your module on its serial number label, e.g., QTL1234-vv-5670, where -vv is the hardware version.

Required downloads

- Torridon Updater application:

<http://quarch.com/file/torridon-updater>

This is a Windows application and performs the updates. It is required for all modules.

Updater is also included in the Tools menu of newer TestMonkey installations.

- Torridon USB drivers:

http://quarch.com/downloads?field_file_type_tid=113

USB drivers are required for most modules. You may have installed these already if you use other Quarch applications on the update PC.

- Update packs:

http://quarch.com/downloads?field_file_type_tid=115

A full list of update packs available can be found here. [Contact Quarch](#) if you can't find what you need. Ensure you have the right pack for the version of your product.

- Torridon Terminal:

<http://quarch.com/file/torridon-terminal>

The terminal application is a simple way to send commands to a module. For updates, it can be used to perform factory resets, unlock LAN processors for update and set-up manual IP addresses. You will need this app for some updates.

Terminal is also included in the Tools menu of newer TestMonkey installations.

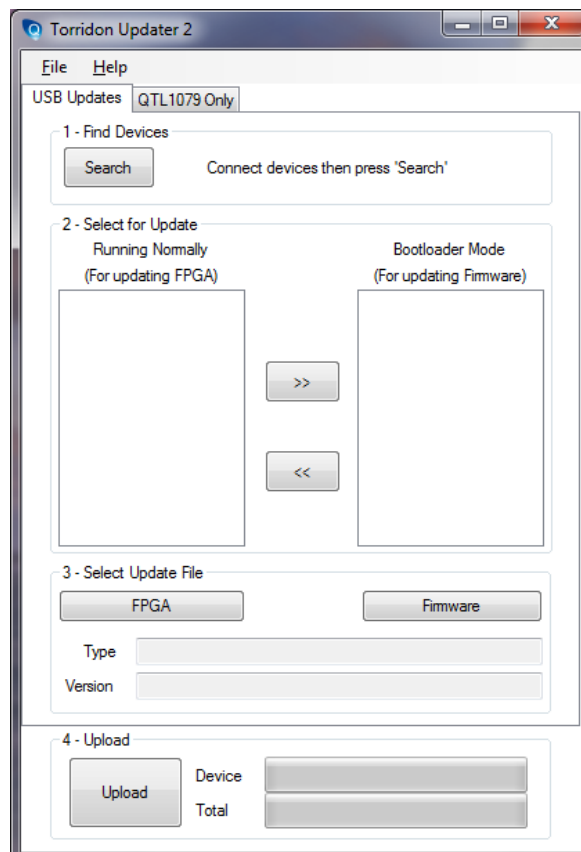
Once you have downloaded the relevant applications, drivers and update packs, follow the instructions below to prepare for your update.

USB update instructions

- Download and install the USB drivers.
- Download and run Torridon Updater. If you have a recent version of TestMonkey, you will find updater in the Tools menu.

FPGA updates

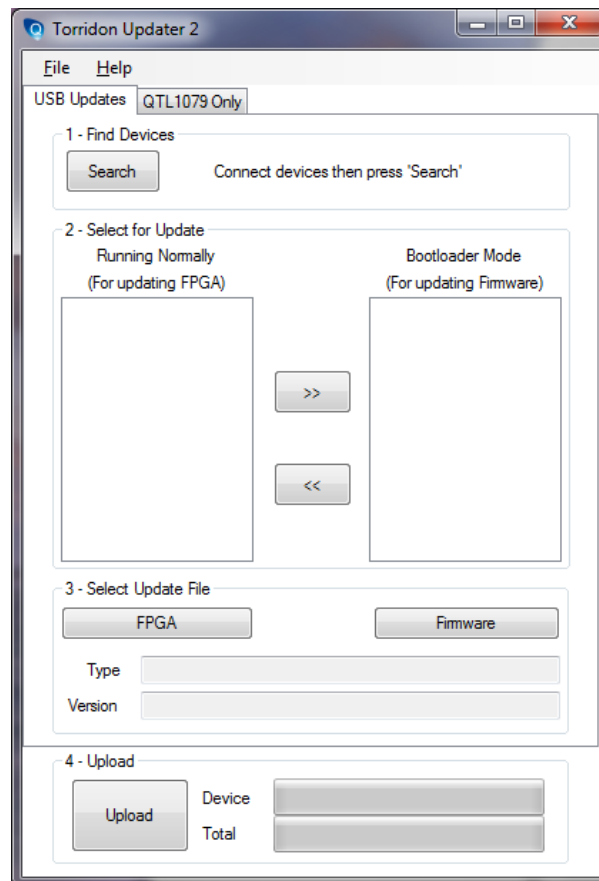
- FPGA updates are done with the module running in normal mode.
- Attach the module over USB and power it up.
 - ☐ You may have to wait a while for the module to be detected and installed by Windows.
- The module will appear in the left-hand list.
- Select it then click **FPGA**.



- Navigate to the correct update pack, select the FPGA update file and click **Upload**. If you have made an FPGA update, you **MUST** power cycle the module before using it (you can continue with other updates before you reset, though).

Firmware updates

- FW updates are done with the module running in bootloader mode.
- Attach the module over USB and power it up.
 - ☐ You may have to wait a while for the module to be detected and installed by Windows.
- The module will appear in the left-hand list. Select it and click >>.
 - ☐ You may have to wait a while for the module to be detected and installed by Windows.
- The module will now appear in the right-hand list. Click **Firmware**, navigate to the correct update pack, select the firmware update file and click **Upload**.



- If your module has more than one Firmware item to update (devices with a separate LAN processor), then follow the instructions to update this device as above.

Module-specific instructions

Find your module below and follow the instructions carefully. Modules are listed by their part number.

The part number can be found on the white label, found on the rear of the unit, or on the orange flex cable of drive modules.



The serial number of this unit is QTL1253-06-004. Therefore the part number is:

QTL1253

And the hardware revision is:

-06A

QTL1461 – 4 Port Array Controller

These modules contain an FPGA and two processors. All three must be updated to the correct level for the module to work. Please make sure you update each part.

1. Download Torridon Updater and USB drivers, if not already done.
2. Connect the module to the PC via USB.
3. Power up the module.
4. Run Torridon Updater.

FPGA update

5. Select your device in the left-hand list and click **FPGA**.
6. Navigate to the FPGA update file and select it.
7. Click **Upload** and wait for the update to complete.

Main firmware update

8. Select your module in the left-hand list and click the >> button. This will start a new USB device. When this has been identified in Windows, an entry for the module will appear in the right-hand list.
9. Navigate to the Main Firmware update file for this module and select it.
10. Click **Upload**. This will take a few seconds to complete.

LAN firmware update

LAN processors are hidden to avoid them showing up on USB unless needed. To update the LAN processor, you must first unlock to make it visible. Two update packs are available, one for -01 to -05 hardware and one for -06 and above.

11. Download Torridon Terminal application:

<http://quarch.com/file/torridon-terminal>

Alternatively run it via the Tools menu of TestMonkey.

12. Run Torridon Terminal, select your module and connect to it.
13. Send the command **CONF:ETHERNET:TERMINAL ON**.
14. Close Terminal and power cycle the module.

15. You should now see an additional device marked QTL1537 in the left-hand list.
 - ☐ It may take Windows a while to locate and install this new device!
16. Select your QTL1537 device in the left-hand list and click the >> button. This will start a new USB device. When this has been identified in Windows, an entry for the module will appear in the right-hand list.
17. Navigate to the LAN Firmware update file for this module and select it.
18. Click **Upload**. This will take a few seconds to complete.

Final steps

19. You **MUST** run **CONFIG:DEFAULT FACTORY** from Torridon Terminal. This will ensure all the new settings are updated to the EEPROM memory.
20. Power cycle the unit and you are done

QTL1079 – 28 Port Array Controller (-01 to -03)

This update instruction is for QTL1079-01 to QTL1079-03 ONLY. Please see below for QTL1079-04 and later.

This module has an FPGA update and one Firmware update. Unlike most Quarch devices, the Firmware **MUST** be loaded using a serial port connection.

1. Download Torridon Updater and USB drivers, if not already done.
2. Connect the module to the PC via USB.
3. Power up the module.
4. Run Torridon Updater.

FPGA update

5. Select your device in the left-hand list and click **FPGA**.
6. Navigate to the FPGA update file and select it.
7. Click **Upload** and wait for the update to complete.

Main firmware update

8. Select your module in the left-hand list and click the **>>** button. This will start a new USB device. When this has been identified in Windows, an entry for the module will appear in the right-hand list.
9. Navigate to the Main Firmware update file for this module and select it.
10. Click **Upload**. This will take a few seconds to complete.

Final steps

11. You **MUST** run the **CONF:DEFAULT FACTORY** command after the update, to refresh the EEPROM settings. This can be done via Torridon Terminal (see [Required downloads](#), at the start of this document).

QTL1079 – 28 Port Array Controller (-04 and up)

This update instruction is for QTL1079-04 and above ONLY.

This module has an FPGA update and one Firmware update. Unlike older versions of QTL1079, all the updates can be done over USB.

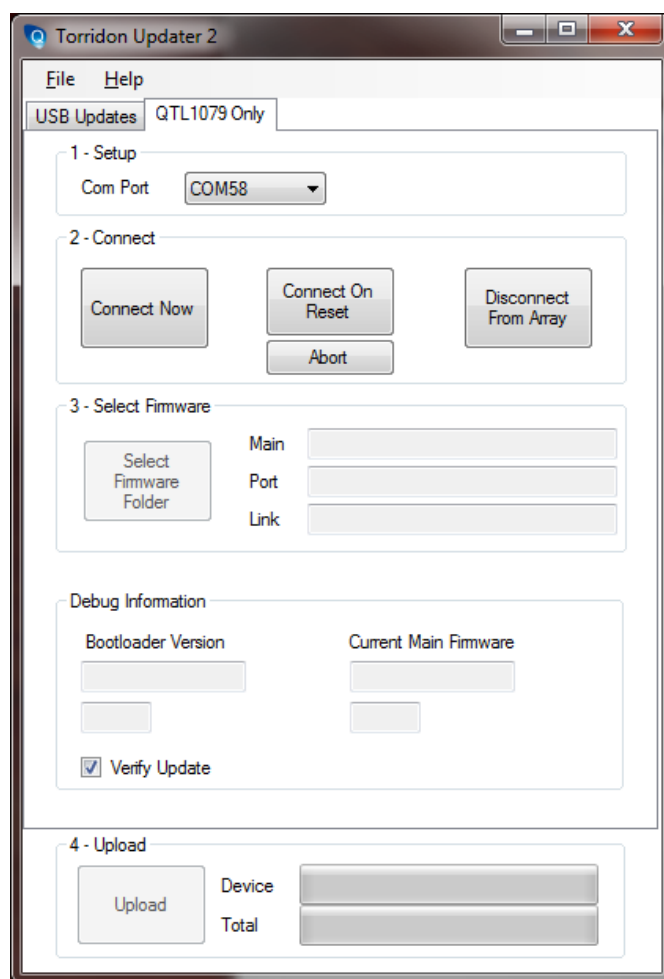
1. Download Torridon Updater and USB drivers, if not already done.
2. Connect the module to the PC via USB.
3. Power up the module.
4. Run Torridon Updater.

FPGA update

5. Select your device in the left-hand list and click **FPGA**.
6. Navigate to the FPGA update file and select it.
7. Click **Upload** and wait for the update to complete.

Main firmware update

8. Connect the module to the PC via SERIAL.



9. Select the COM port that the array is attached to.
10. Select the **Connect Now** button. If successful, the 'Debug Information' panel on the dialog box should show the details of the connected device.
11. Click **Select Firmware Folder** and navigate to the folder containing the Main Firmware files. Three files should be in this folder. When selected correctly, their details will be filled in under the Main, Port and Link sections.
12. Unless you are having problems, unselect the **Verify Updates** box. You can leave this on, but it will take four times longer to update as every processor is separately verified.
13. Click **Upload**. This will take a few minutes to complete.

Final steps

14. You **MUST** run the **CONF:DEFAULT FACTORY** command after the update, to refresh the EEPROM settings. This can be done via Torridon Terminal (see [Required downloads](#), at the start of this document).

QTL2067 – Quarch SanBlaze two drive riser module

These modules contain an FPGA and a processor. Both must be updated to the correct level for the module to work. Please make sure you update each part.

1. Download Torridon Updater and USB drivers, if not already done.
2. Connect the module to the PC via USB.
3. Power up the module.
4. Run Torridon Updater.

FPGA update

5. Select your device in the left-hand list and click **FPGA**.
6. Navigate to the FPGA update file and select it.
7. Click **Upload** and wait for the update to complete.

Main firmware update

8. Select your module in the left-hand list and click the >> button. This will start a new USB device. When this has been identified in Windows, an entry for the module will appear in the right-hand list.
9. Navigate to the Main Firmware update file for this module and select it.
10. Click **Upload**. This will take a few seconds to complete.

Final steps

11. Power cycle the device before use.

Standard ‘HS’ Drive, cable and slot modules

This includes all our main range of ‘High Speed’ drive, cable and slot modules. All modules update in the same way, though each part number requires a different update pack.

QTL1177, QTL1490, QTL1753, QTL1689, QTL1743, QTL1630, QTL1688, QTL1919
QTL1920, QTL2034, QTL1253, QTL1521, QTL1675, QTL1383, QTL1292, QTL1917
QTL1366, QTL1663, QTL1271, QTL2022, QTL1309, QTL1971

These modules contain an FPGA and a processor. Both must be updated to the correct level for the module to work. Please make sure you update each part.

1. Download Torridon Updater and USB drivers, if not already done.
2. Connect the module to the PC via USB.
3. Power up the module.
4. Run Torridon Updater.

FPGA update

5. Select your device in the left-hand list and click **FPGA**.
6. Navigate to the FPGA update file and select it.
7. Click **Upload** and wait for the update to complete.

Main firmware update

8. Select your module in the left-hand list and click the >> button. This will start a new USB device. When this has been identified in Windows, an entry for the module will appear in the right-hand list.
9. Navigate to the Main Firmware update file for this module and select it.
10. Click **Upload**. This will take a few seconds to complete.

Final steps

11. Power cycle the device before use.

Standard ‘Lite’ and ‘HS Lite’ drive, cable and slot modules

This includes our more basic ranges of modules, which do not contain an FPGA.

[QTL1215](#), [QTL1301](#), [QTL1429](#), [QTL1623](#), [QTL1921](#), [QTL1680](#), [QTL1848](#)

These modules contain a processor only; there is no FPGA device to update.

1. Download Torridon Updater and USB drivers, if not already done.
2. Connect the module to the PC via USB.
3. Power up the module.
4. Run Torridon Updater.

Main firmware update

5. Select your module in the left-hand list and click the >> button. This will start a new USB device. When this has been identified in Windows, an entry for the module will appear in the right-hand list.
6. Navigate to the Main Firmware update file for this module and select it.
7. Click **Upload**. This will take a few seconds to complete.

Final steps

8. Power cycle the device before use.