

# **DATRAN XL4 *Plus* RTU**

**FIRMWARE Version 7.13**  
**BOOTLOADER Version 3.02**

**December 2019**

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# Introduction

QTech advise that we have released DATRAN XL4 Plus RTU Firmware version 7.13.

While this release adds new functionality, it is primarily a maintenance release.

The previous release was V7.12.

QTech views this as a mandatory upgrade and strongly recommends that all DATRAN XL4 Plus RTUs are upgraded to this firmware version. QTech requests that a list of the Serial Numbers of all RTU's post upgrade to this version of firmware is provided to us to assist us in monitoring its use and efficacy.

The following sections of this document describe the enhancements and the installation prerequisites.

Your feedback on the product and possible future enhancements is always appreciated.

Please contact QTech on +64 3 366 3713, or email to [techsupport@qtech.co.nz](mailto:techsupport@qtech.co.nz).

# Prerequisites for Upgrade

## *Hardware Platform*

The DATRAN XL4 Plus RTU Firmware Upgrade is designed for both the XL4 *Plus* and the previous model XL4 RTUs.

NB To upgrade a DATRAN XL4 RTU to a XL4 *Plus*, please contact the QTech sales team at [sales@qtech.co.nz](mailto:sales@qtech.co.nz) to order the upgrade licence key. You will need to supply the serial number of the RTU to be upgraded.

## *Firmware Options Licencing*

All pre-existing licence options for the RTU to be upgraded shall continue with this firmware upgrade.

## *Firmware Upgrade Process*

### **For an existing XL4 *Plus* RTU:**

To upgrade an RTU which already has XL4 *Plus* firmware, ensure you are using at least version 2.6 of QTech's Workbench (available for free download at [https://www.qtech.co.nz/shop/Telemetry+Hardware/Workbench/x\\_sku/00936.html](https://www.qtech.co.nz/shop/Telemetry+Hardware/Workbench/x_sku/00936.html)).

Then follow the procedure in the current version of the Owner's Manual available to download from [this page of our website](#).

### **XL4 RTU to XL4 *Plus* using this Firmware version:**

For assistance in upgrading an XL4 RTU after you have purchased a new XL4 *Plus* license, please ensure that you follow the [Application Note – “Upgrading QO4 firmware to QO4 \*Plus\* on an XL4 RTU”](#), and have read the [Application Note - “Guide to Porting XL4 to XL4 \*Plus\* V1.2”](#).

# Summary of Changes

This release introduces new features and bug fixes for example:

- Support for SDI-12 transducer and I/O interface protocol. Many measurement sensors use this protocol.
- Ethernet (TCP/IP) master and slave including a client for QComms communications over ethernet permitting end to end TCP/IP connections between DATRAN and an RTU master and downstream slave RTUs.
- Bug fixes in master slave communications, message forwarding and comms failure management and reporting.
- IPB packet diagnostics and additions to diagnostic reports in general.
- Bug fixes to Modbus interface.
- Implementation of comms status flag in the variable status poll response.

From time to time the bootloader is also changed. The primary reason for change in this release is improvements to USB comms handling with mass storage devices.

Note. SDI-12 interface support requires supply of a third party adaptor to consolidate power and signals plus decode protocol communications to drive i/o devices. This version of the firmware was tested with the [Vegetronix SDI-12 to RS232 Translator](#).

QTech ID	Category	Summary
6980	General	Added support for USB CDC.
6384	Communication Protocols	Support for SDI-12 protocol over RS232 interface added.
6978	Communication Protocols	USB host port support for QComms to WDR (XL4 plus store and forward to WRTU) added.
6923	Communication Protocols	Ethernet master/slave comms added.
6348	Communication Protocols	Ethernet QComms client added.
6952	General	If the device name is included in the configuration, then that device name is now included in diagnostics messages about that device.

QTech ID	Category	Summary
6689	Workbench Interface Handlers	Improved detail of QComms slave diagnostics for messages related to other sites.
6688	Workbench Interface Handlers	Added IPB packet diagnostics.
6929	Workbench Interface Handlers	Added diagnostics to print serial port data in hex.

## Summary of Resolved Issues

The following issues have been resolved since the last release of DATRAN XL4 Plus RTU **firmware**.

QTech ID	Severity	Category	Description
6988	minor	Communication Protocols	Implemented comms status flag in the variable status response.
6986	minor	Communication Protocols	Message forwarding from slaves if the master is in comms fail repaired.
6921	minor	Communication Protocols	Slave sites no longer go into comms fail.
6919	minor	Communication Protocols	ExCFail flag no longer reset.
6881	minor	Communication Protocols	COMFAIL flag set when required.
6920	minor	Communication Protocols	Error message re I/O count in the master diagnostics for store / forward slaves fixed.
6928	minor	Communication Protocols	MODBUS data address printing no longer overflows.

The following issues have been resolved since the last release of the DATRAN XL4 Plus RTU **Bootloader**.

QTech ID	Severity	Description
6982	minor	Firmware version information has been optimised out of the compiled binary.
6979	minor	Endless loop in USB device descriptor no longer parsing if a non-MSD is connected.

## Disclaimer

While every endeavour has been made to ensure that the product description is accurate, details are subject to change. QTech Data Systems Ltd reserves the right to alter the product and system specifications if required. It is QTech's firm intention to continue to develop the features of the DATRAN VI product range and add additional modules.

QTech Data Systems Ltd does not warrant the suitability of this product for any particular application as the conditions in which the application is used are beyond QTech's control. This is notwithstanding warranty of merchantability.

Many systems are now connected to the Internet. QTech Data Systems Ltd cannot guarantee these services as being available or functional all of the time as network connections are beyond QTech's control.

## Ongoing Support

QTech Data Systems Ltd encourages clients to configure their systems to allow remote access via a direct connect modem or Internet based VPN. This allows for off-site support from QTech staff.

QTech Data Systems Ltd provides options for support services and maintenance agreements, please talk to your QTech sales representative. Support services outside the scope of any maintenance agreements shall be charged at QTech's standard Engineering Support hourly rate plus disbursements.