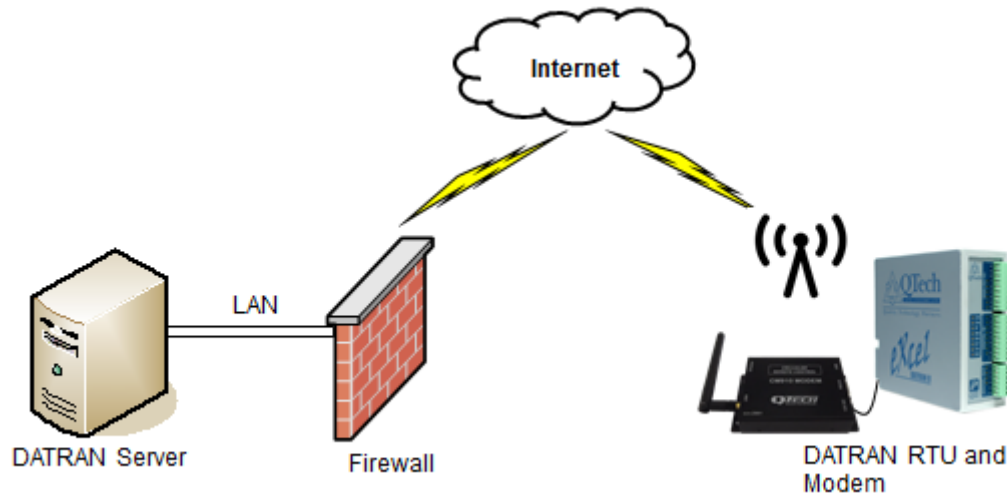


## Application Note DATRAN—Cellular IP Data



Cellular IP communications is an alternative method for DATRAN RTUs to communicate to the SCADA base station. It uses internet based technology offering secure, high speed communications with the potential of significantly lower operational costs compared to traditional cellular “dial up”.

Cellular IP communications is a viable consideration for geographic areas where a reliable cellular network is available. So what is different with Cellular IP compared to traditional “dial up”?

The RTU is constantly connected to the network, not just when dialled.

Costs are based on the amount of data transferred not the duration of the call or retries.

The speed of data transfer is significantly faster.

The DATRAN base station uses an existing internet connection not a dedicated cellular modem.

### Key features include:

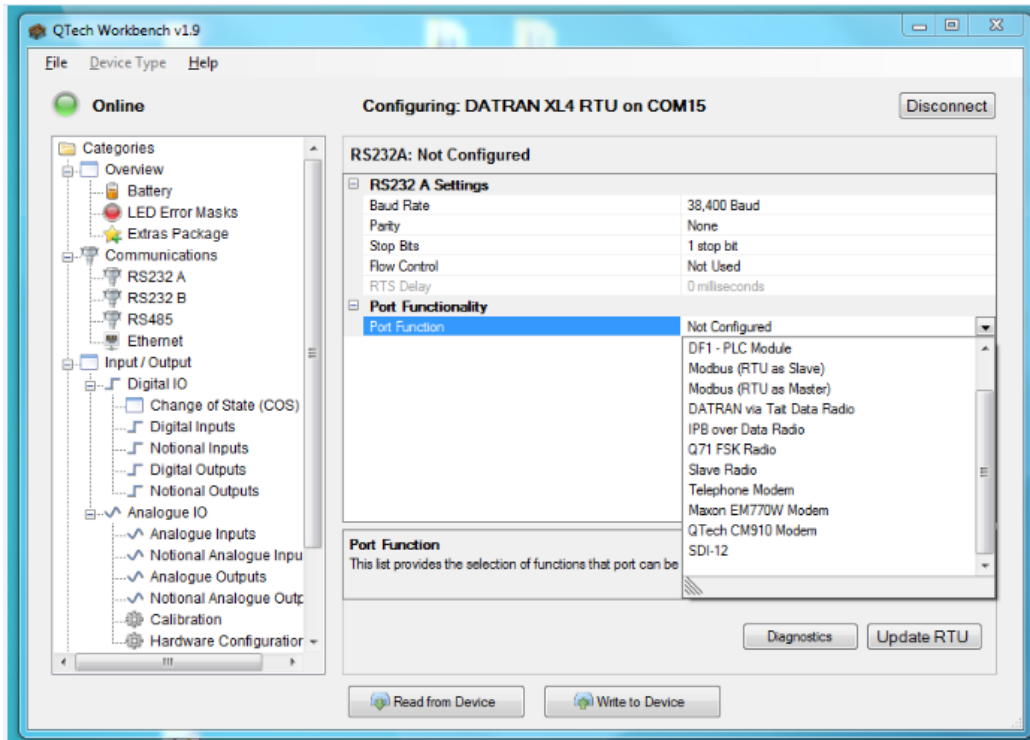
- High speed data transfer - almost instant visibility of alarms and events
- Receive “RTU data logged” compliance data in a fraction of the time of conventional methods
- Internet connection from the RTU to the DATRAN server, or WAN connection for users of Spark or Vodafone PON's
- Send SMS/text message to the Modem for signal strength & modem displays received signal strength
- Simple configuration of the DATRAN Base Station and the RTU, once IT/network tasks complete
- Multiple RTUs can all use the same Base Station channel

### Key benefits include:

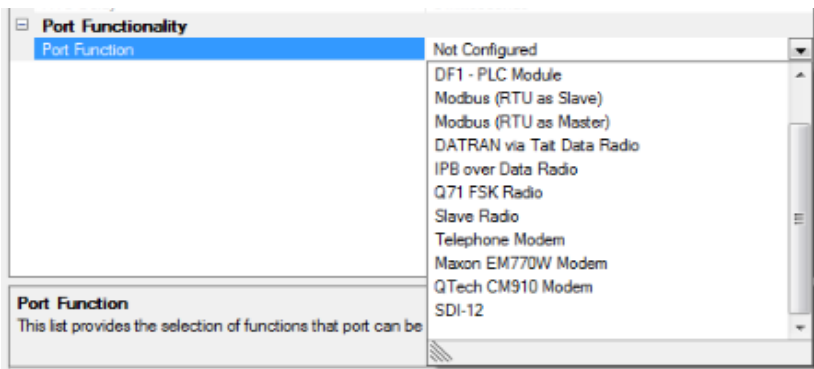
- Low running costs - maximise the benefit of low-cost data plans
- Allows a more diverse comms network design - use the most appropriate technology for the conditions
- Allows RTU integration from anywhere in the country with Telco/internet network coverage
- High security TCP/IP based communications reducing network security concerns
- Transitioning a suitable site from radio to cellular IP could reduce your system radio licensing costs and release capacity in your existing radio network. This is particularly appropriate where licensing is on a “per radio” (Fixed Service) basis and the chosen site has a large amount of data capture over radio.

## How to set up Cellular Communications via CM910 on the XL4

In Workbench go to the Communications Section



Ensure that RS232B port is not configured as a QComms Slave:



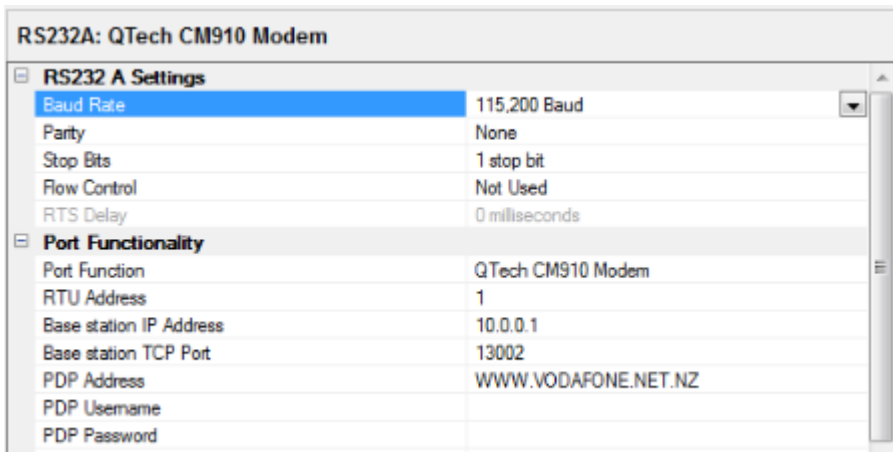
Valid options for RS232B are:

- Not Configured
- DF1 - PLC Module
- MODBUS (RTU as Slave)
- MODBUS (RTU as Master)
- Slave Radio
- SDI-12

Non-Valid options for RS232B are:

- Direct Line
- Radio Telephone
- DATRAN Serial Base Comms
- DATRAN via Tait Data Radio
- Q71 FSK Radio

- Select the RS232A Port Function as "QTech CM910 Modem"



Ensure that the RS232A Settings are:

- Baud Rate is 115,200
- Parity is None
- Stop Bits is 1
- No Flow Control

Configure the external facing IP address and TCP Port.

Optionally specify the PDP Address, Username and Password if you are using a Cellular WAN.

As with all IT based devices, your IT/ICT provider is required to perform some tasks to allow the device and connection into the network. Please discuss this application note with them.

### Compatibility

- DATRAN QRTU and eXcel RTUs with Q03 Firmware v5.20 and later  
(This feature is provided as a free of charge unlock code on an individual basis)
- Q90 v3.26 and later
- DATRAN VI version 6.66 and later, SPI recommended

Please contact QTech for a system implementation proposal.