Adding a DeltaQuest Slave to an Existing CRC400 Network

Application:

Where it is necessary to add further doors to an existing CRC400 network, it can be achieved by adding a DeltaQuest controller as a Slave to the RS485 network. to ensure that the DeltaQuest is correctly configured to function as a Slave in the CRC400 network, the following procedure must be followed:

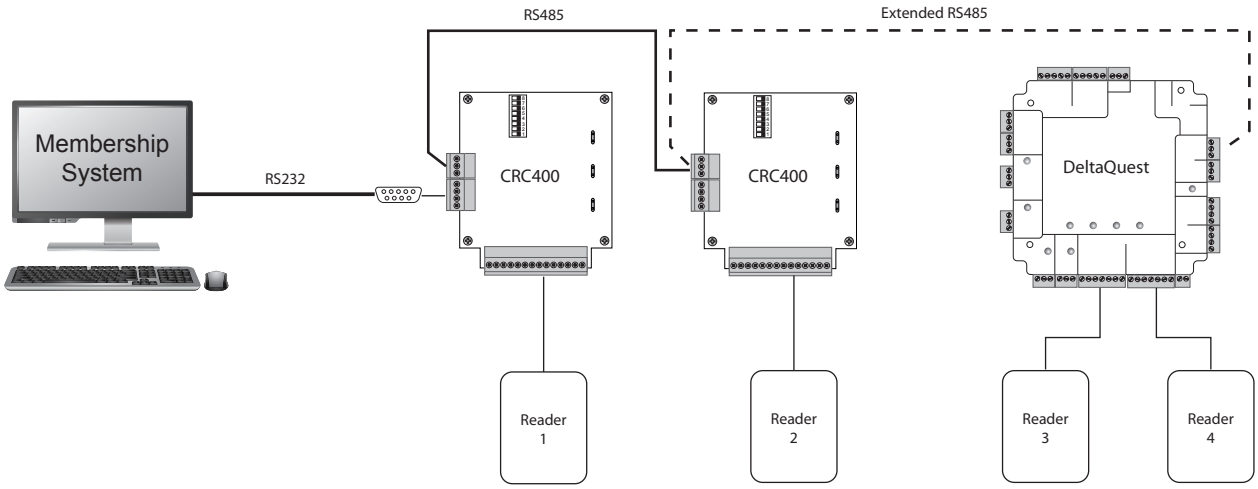
Note 1: This document must be used in conjunction with the DeltaQuest Quick Set-up Guide and the DeltaQuest Configuration and Diagnostic Software online help.

Note 2: A DeltaQuest must never be added as a Master to a CRC400 network due to the different communication protocol used.

Note 3: It is recommended that the DeltaQuest Configuration and Diagnostic Software is installed on the host PC to enable diagnostics and management of the CRC400 network in place of the NRI Utility.

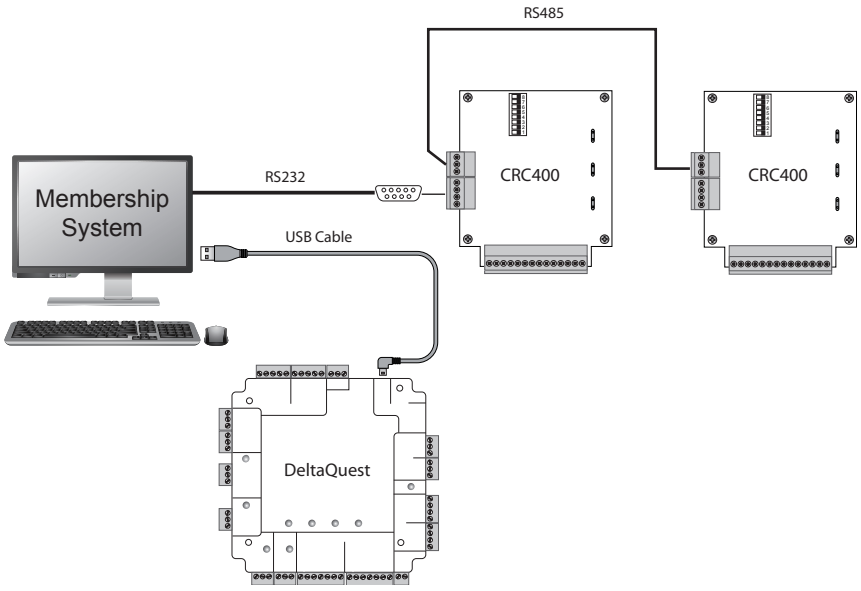
Example Configuration

For explanatory purposes we shall use an example configuration where we wish to add a new DeltaQuest Slave to an existing CRC400 Master controller that has a single Slave CRC400 controller. The new Slave will be added to the end of the RS485 chain (see below):



Configuring The DeltaQuest

Before connecting the DeltaQuest controller to the network, it must first be configured and, as there are no physical DIP switches or jumpers on the PCB, the configuration must be carried out using a PC. In order to do this, you will need to download the DeltaQuest Configuration and Diagnostic Software from the Partner Portal on nortechcontrol.com and load it onto the host PC. Connect the DeltaQuest controller directly to the PC using the supplied USB cable:

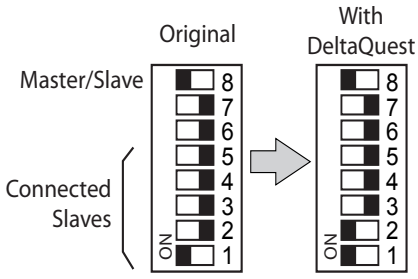


Before proceeding with the configuration, check the current setting in the network and the reader types to be connected.

You will need to know:

- The next available door numbers
- The formats of the connected readers
- If the DeltaQuest is to be inserted in the middle or on the end of the RS485 line
- Whether or not End-of-Line resistors are being used
- The Request-to-Exit relay strike time

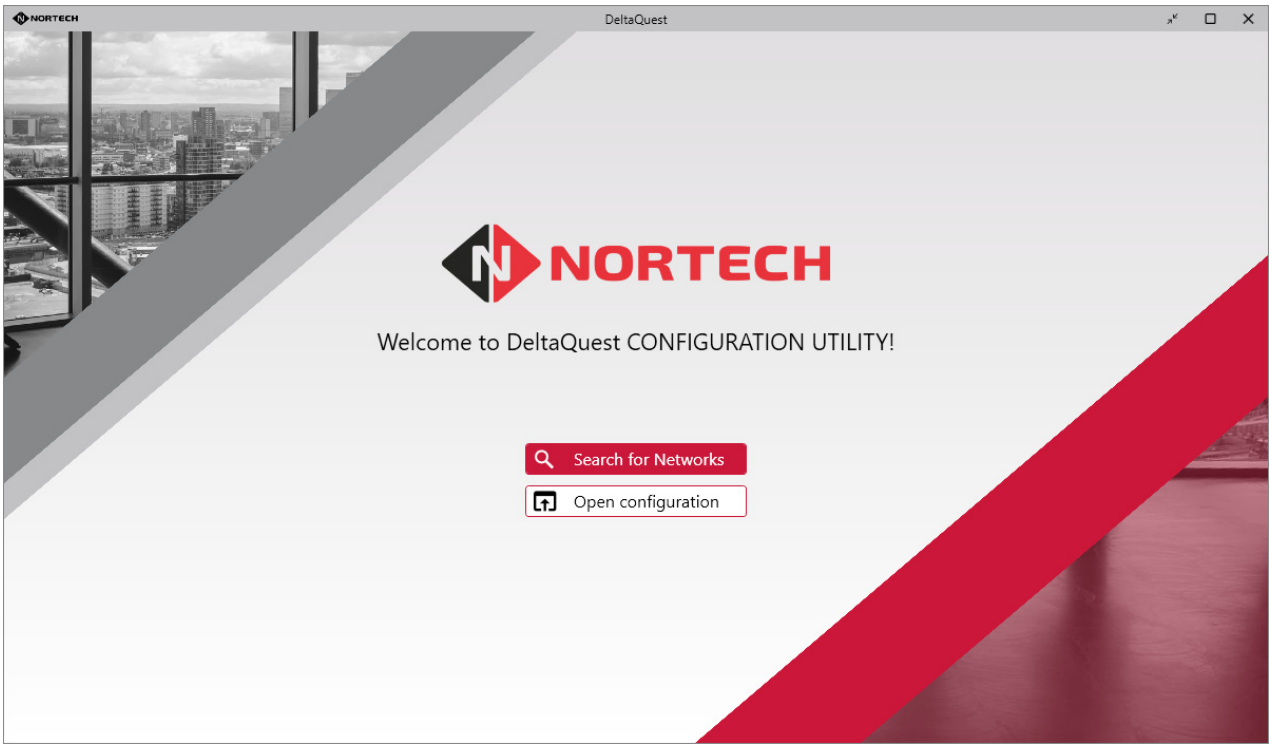
In this example, doors 1 and 2 have been assigned to existing CRC400 controllers, so the DeltaQuest needs to be assigned doors 3 and 4. In other networks, this will depend on the number of Slaves already connected. Check the DIP switch settings on the Master CRC400 to confirm the number of Slaves connected (For more information, refer to DOC0078 CRC400 Installation Manual section 5.2.):



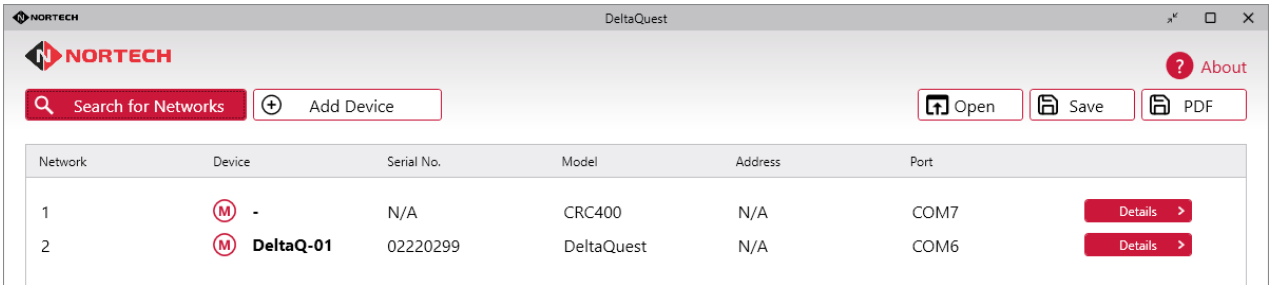
	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1
	1 = Master	Not Used		Number of Connected Slaves				
Standalone Master	1	0	0	0	0	0	0	0
Master + 1 Slave	1	0	0	0	0	0	0	1
Master + 2 Slaves	1	0	0	0	0	0	1	0
Master + 3 Slaves	1	0	0	0	0	0	1	1
Master + 4 Slaves	1	0	0	0	0	1	0	0
Master + 31 Slaves	1	0	0	1	1	1	1	1

The image shows the setting for Master with 1 Slave on the left, as it would appear in this example. The setting for including the DeltaQuest (Master and 3 Slaves) is shown on the right. Remember to add 2 Slaves for each new DeltaQuest that is connected to the network.

With the DeltaQuest connected to the PC via the USB cable, and the DeltaQuest Configuration and Diagnostic Software loaded on the PC, run the software. It will display the welcome screen as follows:



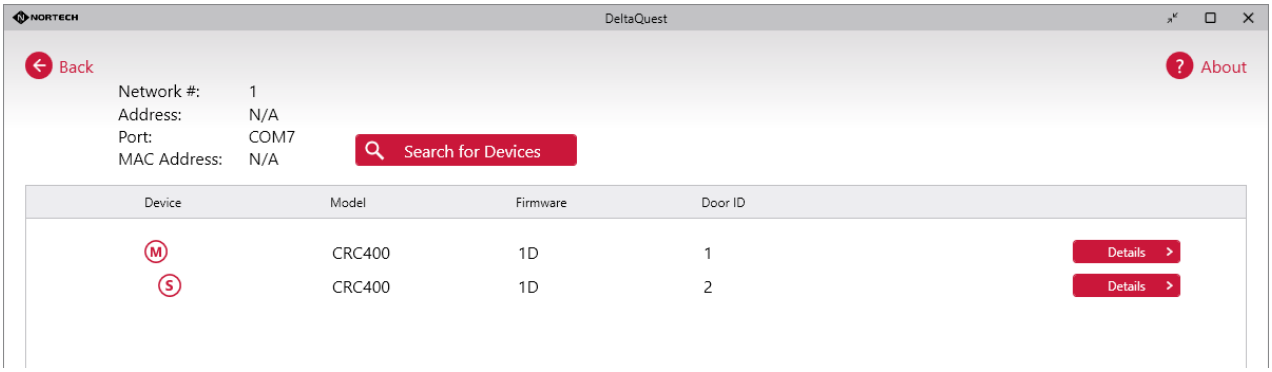
Click on 'Search for Networks'. The program will search for all Master controllers connected to the same TCP/IP network as the PC, and connected to the PC via a USB ports (emulated COM ports).



This example shows two networks connected where Network 2 is the DeltaQuest, which appears along with its device name, serial number and model and is connected to COM6.

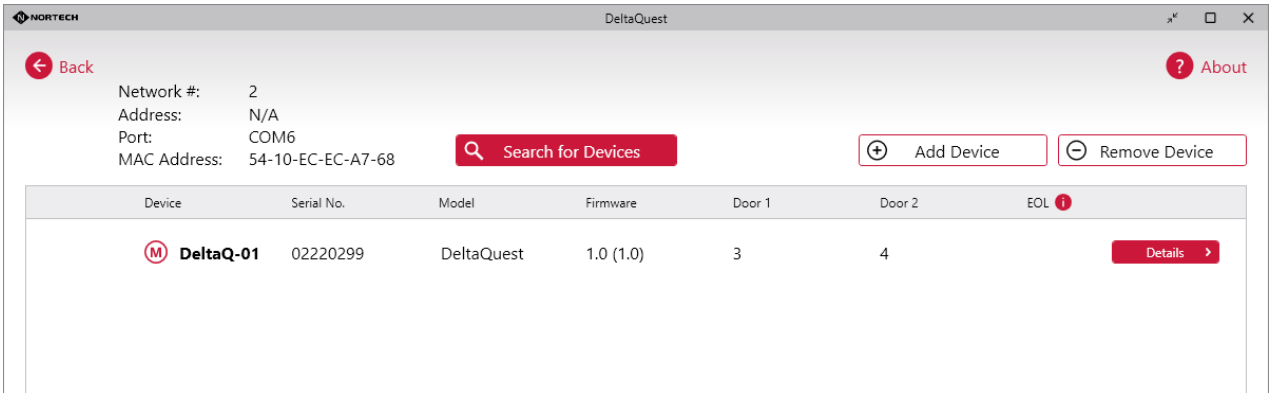
Network 1 is the CRC400 Master connected to COM7 (this would appear as a TCP connection if the CRC400 Master was connected over Ethernet, in which case it's IP address and port number would be displayed instead of the COM port).

Before accessing the DeltaQuest to configure it, check the door assignments of the existing network by clicking 'Details' to the right of Network 1.

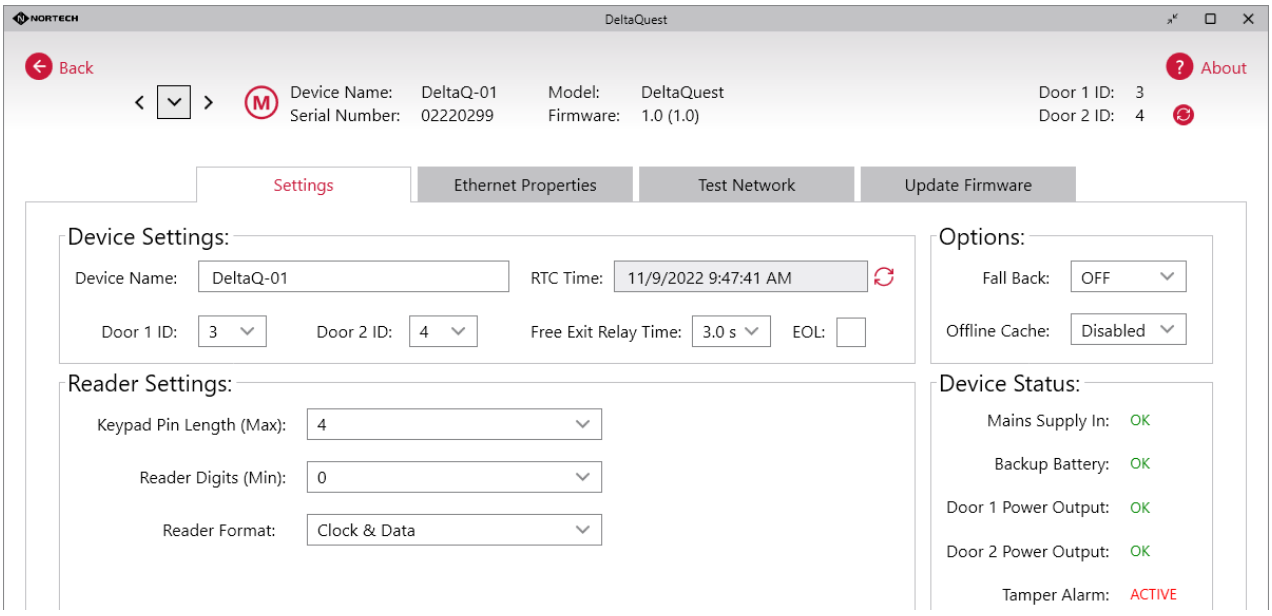


This screen displays the Master and connected Slave(s) in the existing Network. In this example, the Master CRC400 is assigned Door ID '1' and there is one Slave CRC400 that is assigned Door ID '2'. In this case the next two available Door ID's are '3' and '4'.

Once you have identified the Door ID's that you can use, you can click the 'Back' button to return to the network overview screen and then Click 'Details' to the right of the DeltaQuest device entry. You will then be able to view the DeltaQuest details:



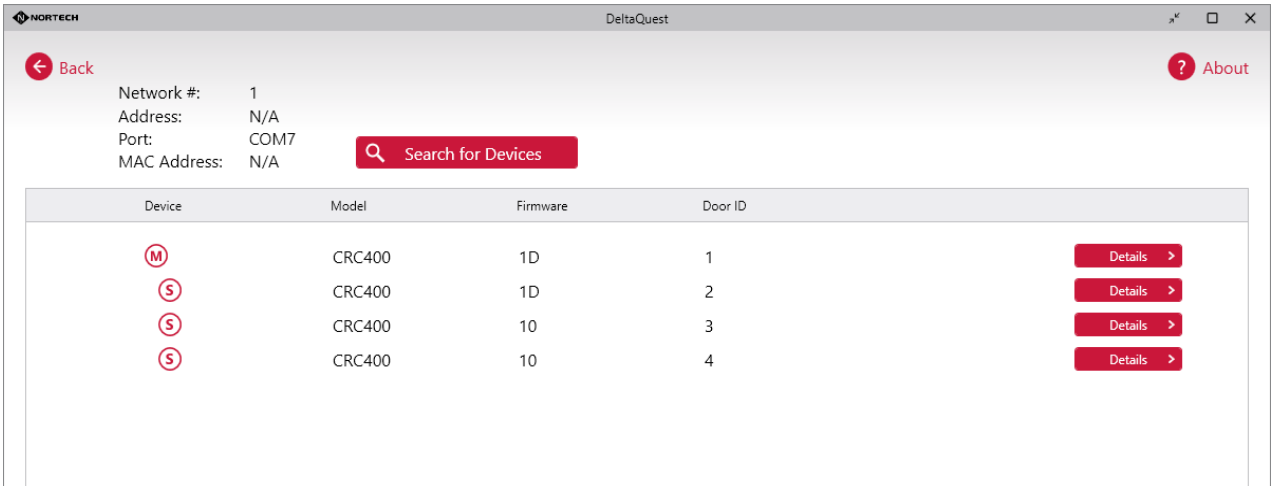
In this example, the default values for Door 1 and Door 2 are '3' and '4' respectively, which coincide with the required settings. In other circumstances these values may need to be altered. To make the adjustments to any of the settings, click 'Details':



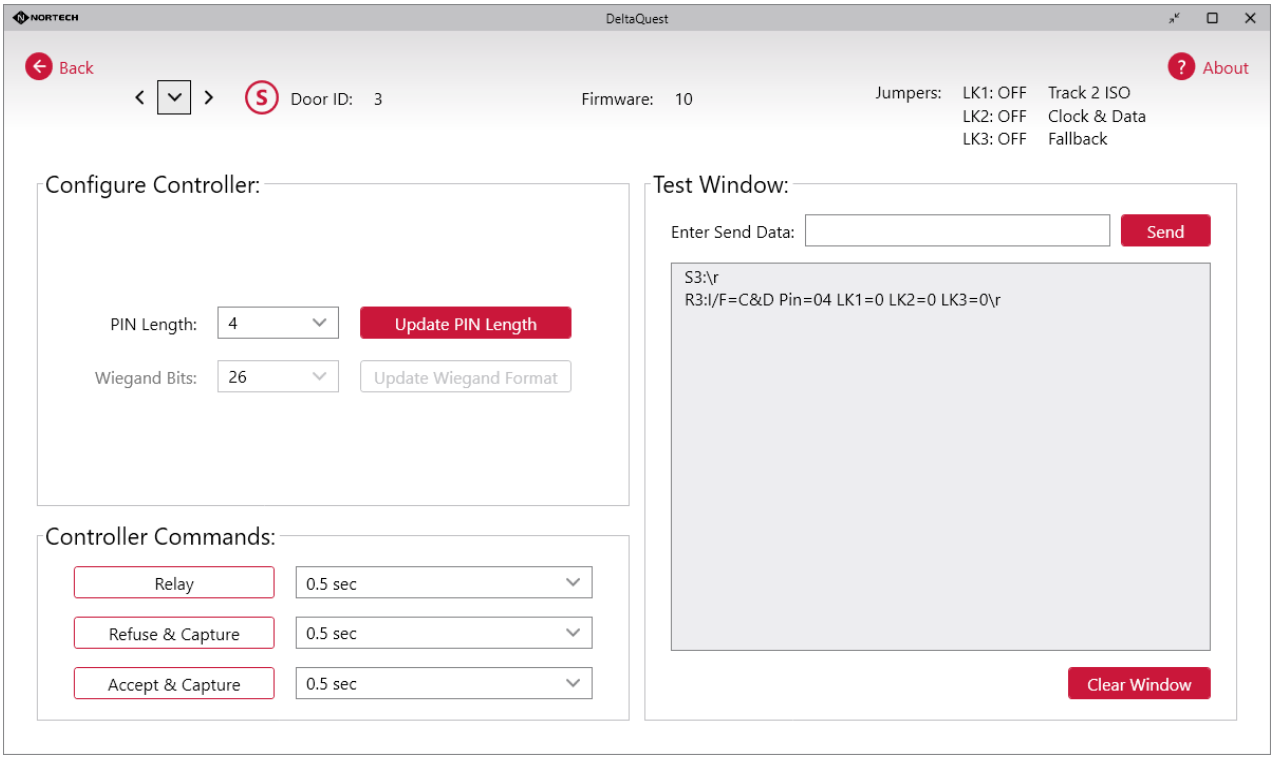
The settings can now be changed. In addition to the Door values, set the Reader Format, Free Exit Relay Time, and EOL termination settings as required. In the case of the EOL termination, if the DeltaQuest is being added to the end of the RS485 chain, and the previous end controller in the chain was fitted with an EOL terminating resister, check the EOL box here. Otherwise ensure that it is left unchecked. Remember to remove the EOL terminating resister from the previous end controller when you add the DeltaQuest.

Once the settings have been made, the USB cable can be disconnected and the DeltaQuest can be connected to the RS485 network, and the connections to the readers and door/turnstile control device can be made.

Use the DeltaQuest Configuration and Diagnostic Software to test the controller via the Master CRC400 and RS485 network. Navigate to the network details screen as before. The DeltaQuest will appear as two CRC400 devices for Door 3 and Door 4.



Test each door control in turn by clicking 'Details' to the right of the door entry.



To test the controller, click the 'Relay' button under 'Controller Commands' and check that the correct relay fires (associated door lock/turnstile/barrier operates). Present test cards to the reader and check the message data in the activity window.

For more information, refer to DOC0078 CRC400 Installation Manual section 3.2.