



Quick Start Guide: Configuring the D101 to Read 8 x Frequency Inputs using a Special Firmware

Purpose: This document describes how to update the firmware version of a D101 module. The default firmware allows for up to 4 x frequency inputs. This special firmware allows a D101 to connect up to 8 x frequency inputs.

Items:

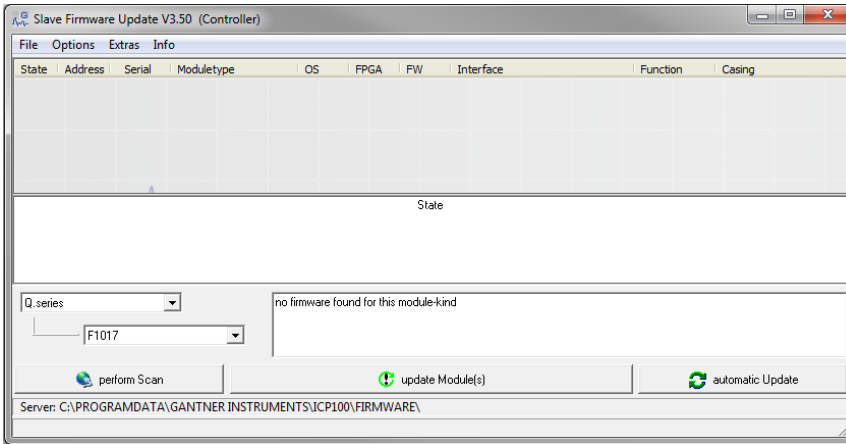
- D101 module (Q.bloxx, Q.brixx, and Q.raxx)
- 8 x Frequency Input Firmware: 8xChronos

Procedure:

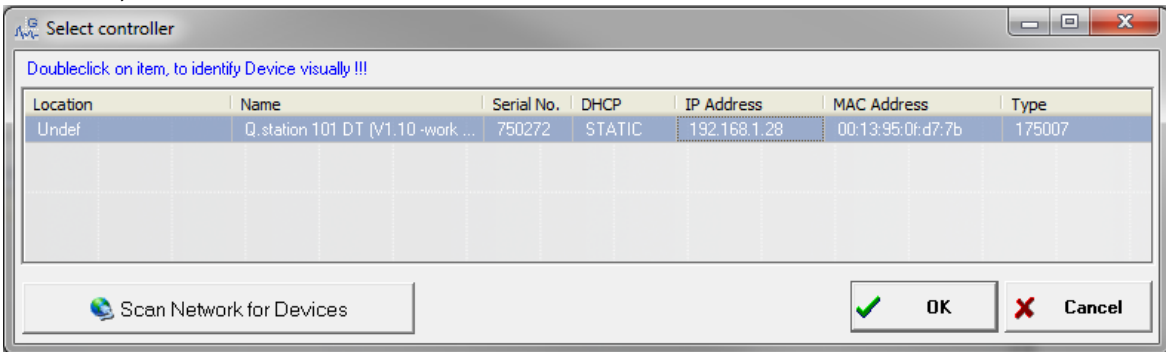
1. The standard firmware version of the D101 module only allows up to 4 x frequency inputs (standard or 2-wire):

Infos	Variable Settings	Module Settings				
	Type	Variable Name	Sensor	Type of	Connection	Terminals
V1	DI	Variable 1		Frequency . Standard		Connector 1 6 (DI1)
V2	DI	Variable 2		Frequency . Standard		Connector 1 8 (DI3)
V3	DI	Variable 3		Frequency . 2 Wire		Connector 2 6 (DI5) 7 (DI6)
V4	DI	Variable 4		Frequency . 2 Wire		Connector 2 8 (DI7) 9 (DI8)
V5	??DI	Variable 5		Frequency . Standard		Terminal??

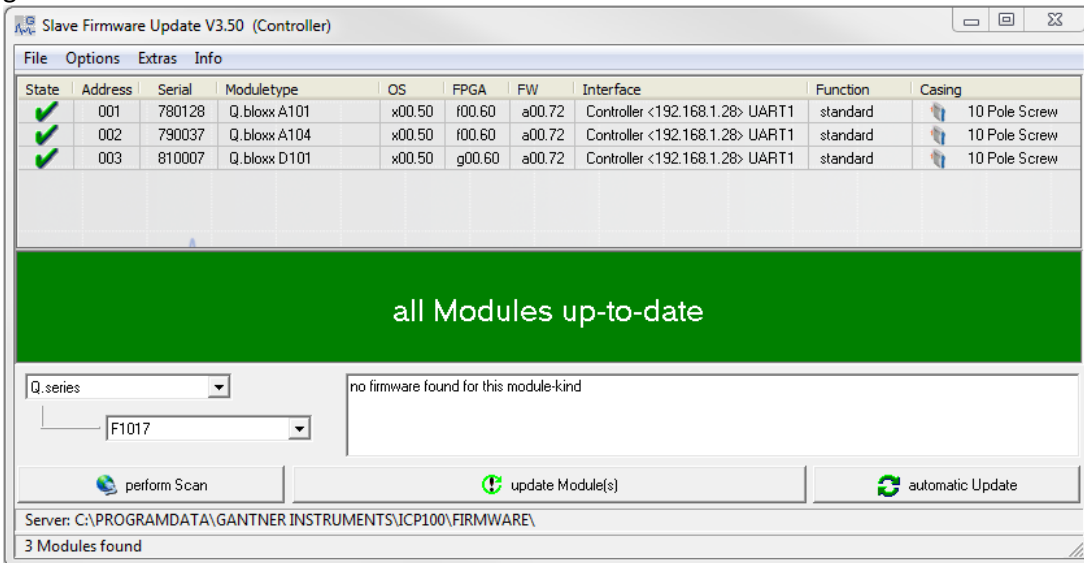
2. The firmware of the D101 can be changed to accept up to 8 x frequency inputs.
3. The firmware update process can be performed using test.commander (via Ethernet) or ICP100 (via Ethernet or Serial).
4. If the update is performed via Ethernet, the D101 must be attached to a controller. If performed via a serial connection, the D101 is connected to the PC via an RS485 to RS232 converter (i.e. ISK101, ISK103).
5. Connect the D101 to a controller.
6. Open test.commander. Utilities > Slave Firmware Update.



- Click on the perform Scan button. The connected controller will be displayed, highlight the controller, click OK.

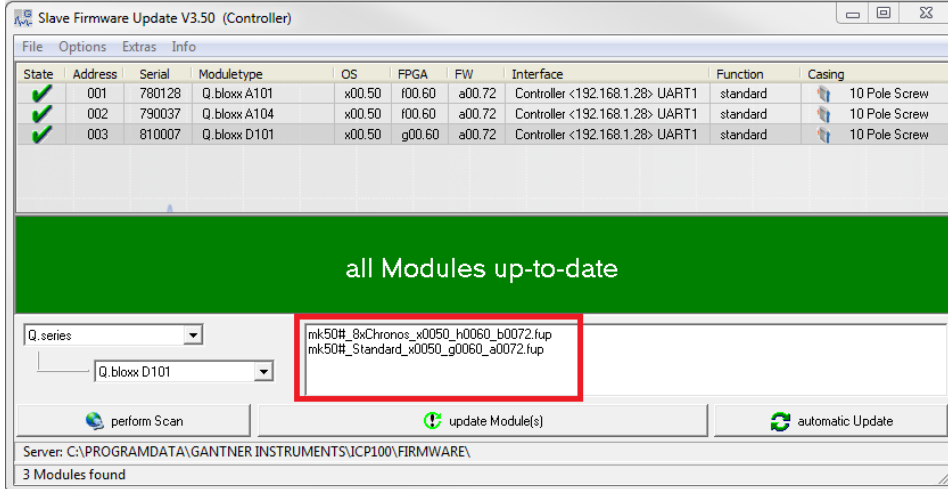


- The software will compare the FW version inside the module vs the FW version available on the PC. If the FW version inside module is older than available on the PC, red X will be shown next to that module. If the FW version inside the module is the same as the one available on the PC, a green check mark will be shown next to that module.

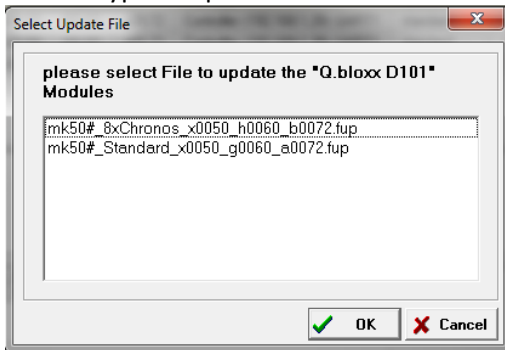




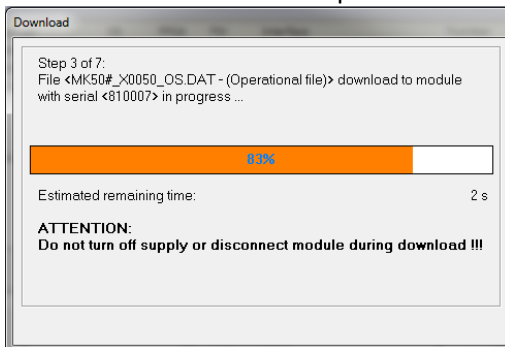
- Select the individual module to determine the different firmware available for that specific module. Selecting the D101, the FW types are shown.



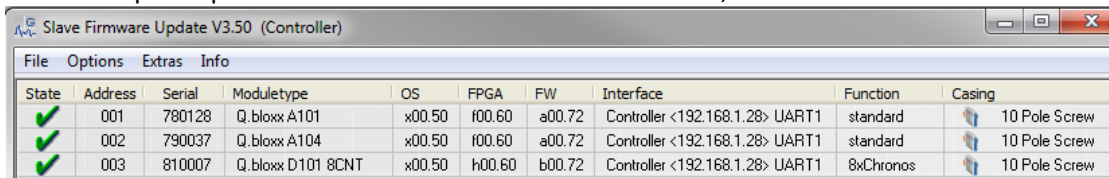
- With the module selected, click on the update Module(s) button. The software will ask to select the FW type to update. Select the 8xChronos file for the 8 x frequency input, click OK.



- The selected FW will now update to the module:



- After the update process is finished and the module restarts, the new FW is shown:





13. Make sure to re-read the controller in order to update the configuration inside the controller.
14. After updating the new configuration type of the D101 will be displayed in the project window as a Q.bloxx D101 8CNT. With the new FW it is still only possible to have a maximum of 4 x 2-wire frequency inputs. But it is now possible to have up to 8 x standard frequency inputs.

Type	Variable Name	Sensor	Type of	Connection	Terminals
V1	DI	Variable 1	Frequency . 2 Wire		Connector 1 6 (DI1) 7 (DI2)
V2	DI	Variable 2	Frequency . 2 Wire		Connector 1 8 (DI3) 9 (DI4)
V3	DI	Variable 3	Frequency . 2 Wire		Connector 2 6 (DI5) 7 (DI6)
V4	DI	Variable 4	Frequency . 2 Wire		Connector 2 8 (DI7) 9 (DI8)
V5	DI	Variable 5	Frequency . 2 Wire		Terminal?? Terminal??
V6	DI	Variable 6	Frequency . 2 Wire		Terminal?? Terminal??
V7	DI	Variable 7	Frequency . 2 Wire		Terminal?? Terminal??
V8	DI	Variable 8	Frequency . 2 Wire		Terminal?? Terminal??

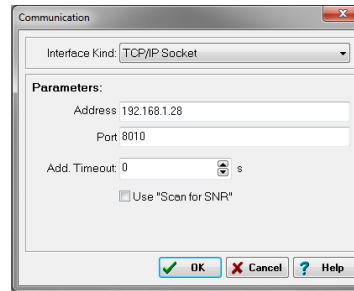
With either the 4 x 2-wire or 8 x standard frequency inputs, it is also possible to have up to 8 x digital outputs that can be configured as state, PWM, frequency, or process out.

Type	Variable Name	Sensor	Type of	Connection	Terminals
V1	DI	Variable 1	Frequency . Standard		Connector 1 f 6 (DI1)
V2	DI	Variable 2	Frequency . Standard		Connector 1 f 7 (DI2)
V3	DI	Variable 3	Frequency . Standard		Connector 1 f 8 (DI3)
V4	DI	Variable 4	Frequency . Standard		Connector 1 f 9 (DI4)
V5	DI	Variable 5	Frequency . Standard		Connector 2 f 6 (DI5)
V6	DI	Variable 6	Frequency . Standard		Connector 2 f 7 (DI6)
V7	DI	Variable 7	Frequency . Standard		Connector 2 f 8 (DI7)
V8	DI	Variable 8	Frequency . Standard		Connector 2 f 9 (DI8)
V9	DO	Variable 9	Frequency		Connector 1 f 2 (DO1)
V10	DO	Variable 10	Frequency		Connector 1 f 3 (DO2)
V11	DO	Variable 11	Frequency		Connector 1 f 4 (DO3)
V12	DO	Variable 12	Frequency		Connector 1 f 5 (DO4)
V13	DO	Variable 13	Frequency		Connector 2 f 2 (DO5)
V14	DO	Variable 14	Frequency		Connector 2 f 3 (DO6)
V15	DO	Variable 15	Frequency		Connector 2 f 4 (DO7)
V16	DO	Variable 16	Frequency		Connector 2 f 5 (DO8)

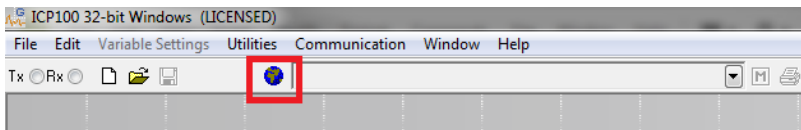


15. Make sure to save the settings and update the project to the controller to apply all the changes.
16. It is possible to perform the FW update using ICP100 only. Open ICP100, select Communication > Parameters. The Communication window appears. If the D101 is connected to the PC using a RS485 to RS232 converter, choose RS232 Direct for the interface kind. If the D101 is connected via a controller, select TCP/IP Socket.
17. Enter the static IP address of the controller and the port number, click OK.

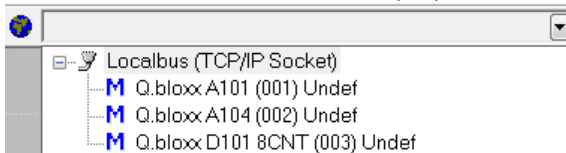
UART #	Port #
1	8010
2	8011
3	8012
4	8013



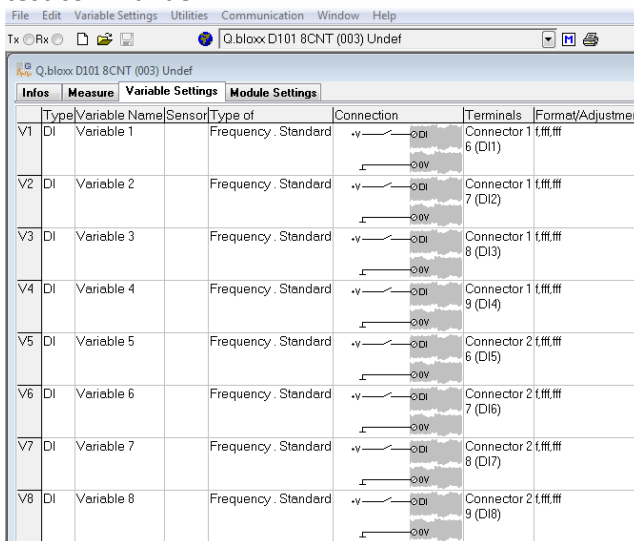
18. Click on the Scan bus button in the toolbar of ICP100:



The attached modules will be displayed:



19. The module can be selected in ICP100 and configured in the same manner as done in test.commander.



Contact us today if you have any further questions!