iQUBE²® Junction Box/920i

Quick-Start Guide

This document will guide you through a typical iQUBE² to 920i installation with the recommended settings. It assumes an 8-cell truck scale is being used with two iQUBE² CPU boards.

NOTE: Load cells or simulators must be connected before following the instructions listed in this document. RS-422 and RS-485 are used interchangeably. TEDS is not supported.

Configuration using 920i

Establish a Connection

1. Connect the iQUBE² and the 920i using an RS-422 connection.

NOTE: RS-422 is recommended over RS-232 due to the 115,200 baud rate of the iQUBE², RS-232 has a maximum distance of 10 feet and RS-422 has a maximum distance of 1000 feet at this high baud rate.

2. The table below shows connections needed for RS-422 communications between a host 920i and the iQUBE². Two-wire half duplex is available on Port 4 of the 920i.

920i Board J10 Connector (Port 4)		iQUBE² J7 Connector	
RS-422 Signal	Pin	Pin	RS-422 Signal
GND	1	1	GND1
RS-422 A	5	4	RS-485 A
RS-422 B	6	5	RS-485 B

Table 1. 2-Wire RS-422 Connections for 920i Host

3. Ensure S2 dip switches on the iQUBE² CPU board are set to 485 (1,2 both set to OFF). See Figure 1 for S2 dip switch location.

NOTE: If a change is made to switch position, cycle power on the iQUBE² while SW1 is switched to CFG, as the switch position is only read on power-up. Once power has been re-applied, place the SW1 in the OFF position.

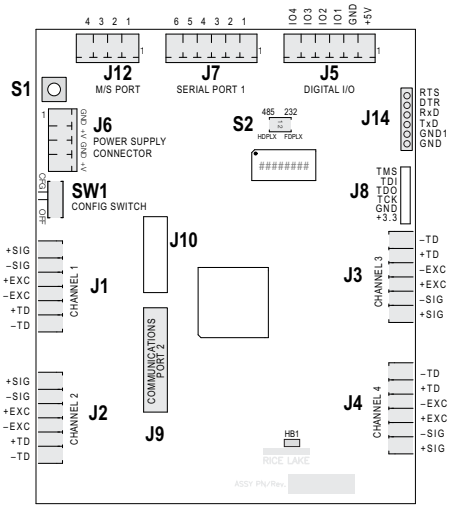

Figure 1. iQUBE² CPU Board

J7 Pin	RS-232 Signal	RS-485 2-Wire Signal	RS-485 4-Wire Signal
1	GND1	GND1	GND1
2	RxD	—	Rx+
3	—	—	Rx-
4	—	A/+	Tx+
5	TxD	B/-	Tx-
6	—	—	—

Table 2. J7 (Port 1) Pin Assignments

J12 Pin	Primary iQUBE^2	Secondary iQUBE^2
1	iQA	iQA
2	iQB	iQB
3	GND2	GND2
4	GND2	GND2

Table 3. J12 (M/S Port) Pin Assignment

	OFF	ON
1	RS-485	RS-232
2	2-Wire	4-Wire

Table 4. S2 Switch Settings

4. Change Port 4 to iQUBE^2 and press **Enter** to save it.
5. Go back to the SERIAL menu and navigate to the CONFIG parameter under the SCALES menu.
6. Press the **Change Type** softkey until *Available A/D's* displays in the left column.

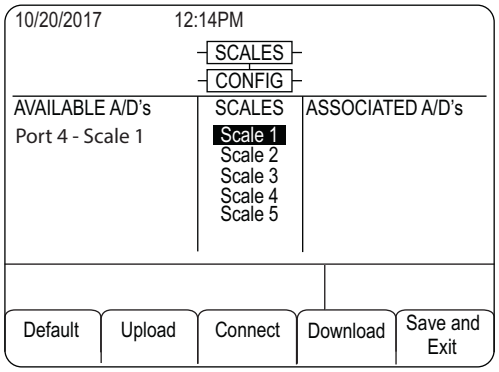

Figure 2. Scale Association Screen

7. Press left arrow key to highlight Port 4 - Scale 1.
8. Press the **ADD** softkey to add it to *Associated A/D's* in the right column.
9. Press the **Done** softkey.
10. Navigate to the SERIAL menu.

11. Change the Port 4 PORTTYPE parameter to 422 (see Figure 3).

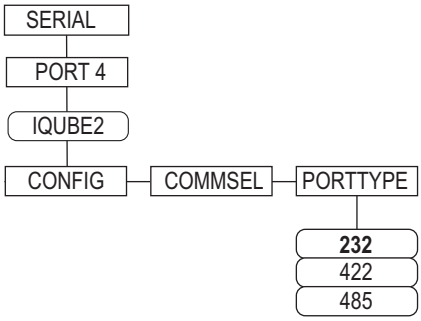

Figure 3. PORTTYPE Parameter

12. Navigate to the CONFIG menu and press the **Connect** softkey (see Figure 4). The serial number will show (i.e., 123XX456*NONE* *NONE* *NONE*). If the serial number does not show, check wiring and dip switches.

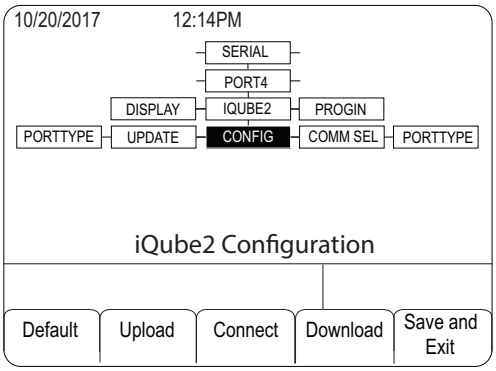

Figure 4. CONFIG Menu

Add Secondary Boards to the System

1. Under CONFIG, navigate to the BOARDS parameter to select how many boards are being used in the system.
2. Press **Enter**.
3. Navigate back to BOARDS parameter and press the **Auto Assign** softkey. Green lights on the iQUBE^2 CPU boards will start blinking on all cells.

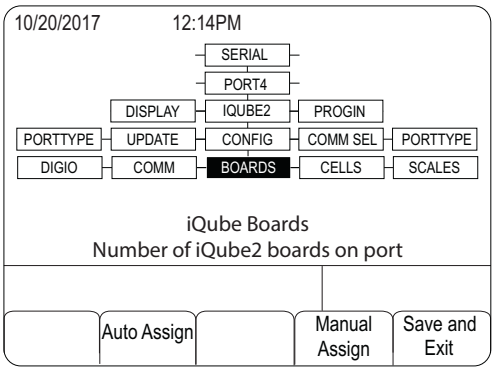

Figure 5. BOARDS Parameter

4. Press and release the setup button (S1) on secondary board #1. This makes cells 5-8 available to the system and registers its serial number with the primary board. The lights on the board will stop blinking.
5. Once the secondary unit has been assigned, press the setup button (S1) on the primary board.
6. You will see a screen showing the primary board serial number and any assigned secondary board serial numbers.

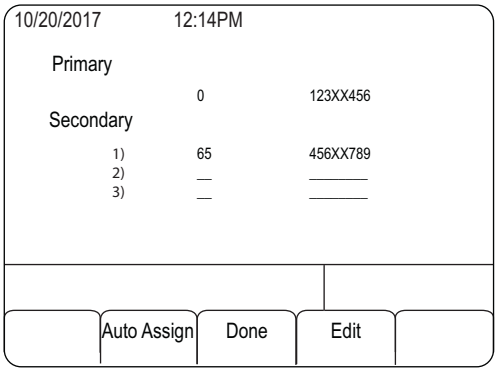

Figure 6. Primary and Secondary Boards Screen

7. Press the **Done** softkey.

Configure and Add Load Cells

1. Under CELLS, set the capacity and confirm the mV/V.
2. Ensure all the AVAILABLE Cells are assigned to the correct scale. See Figure 7 for the correct screen layout.

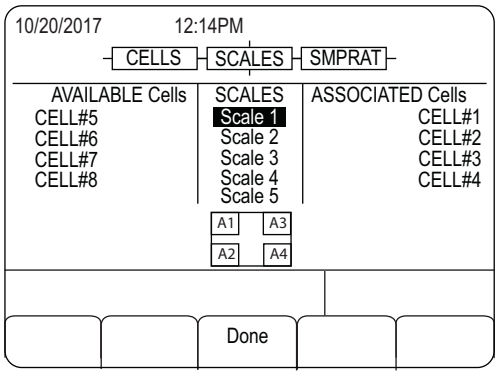

Figure 7. Cells 5-8 Added to Scale 1

NOTE: To turn off the warm up function, set the WARMUP parameter to 0. This allows the unit to skip the warm up period when cycling power.

3. Navigate back to the CONFIG parameter.
4. Click the **Download** button.
5. Select **Configuration Only**.
6. Download to the iQUBE^2.
7. Press the **Save and Exit** softkey to complete the setup for the iQUBE^2. The scale is ready for calibration.

NOTE: Refer to the iQUBE^2 Installation Manual (PN 106113) for calibration instructions.

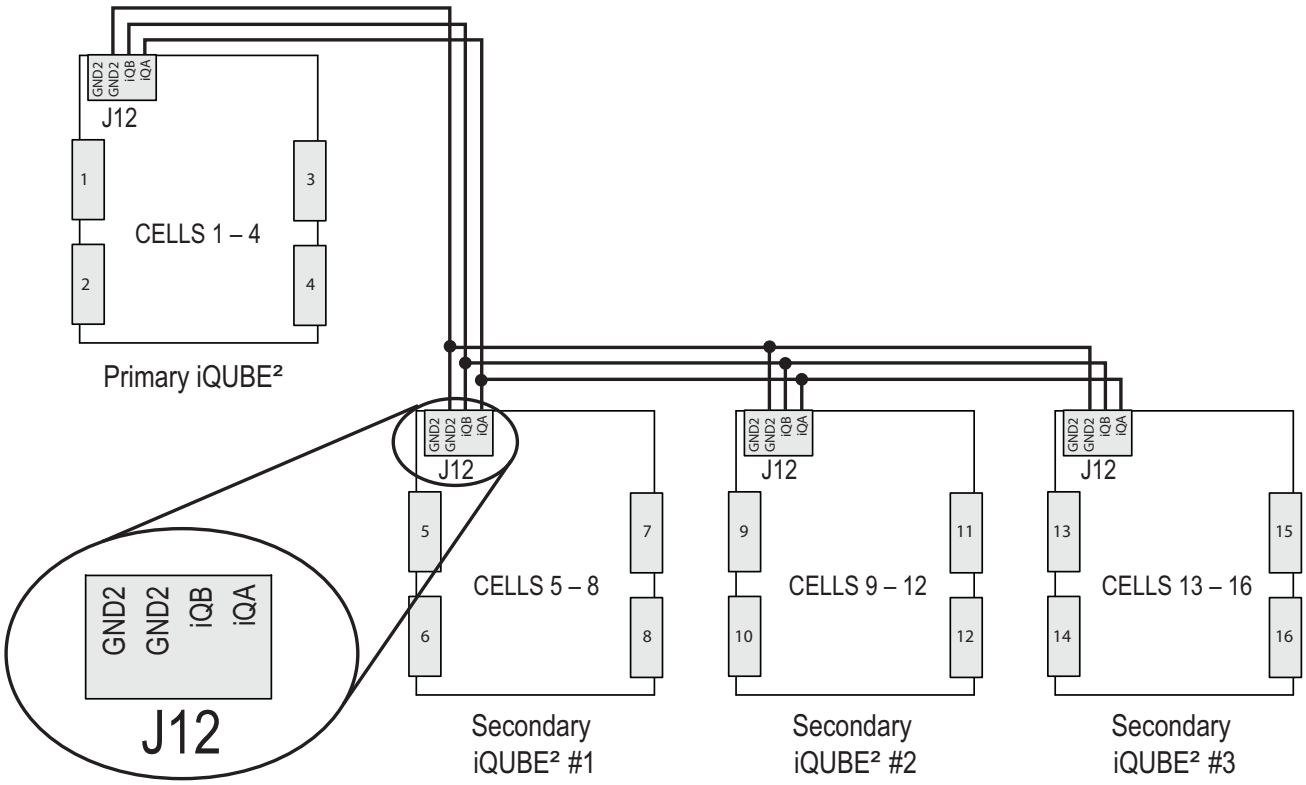

Figure 8. Primary-to-Secondary Communications Wiring

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