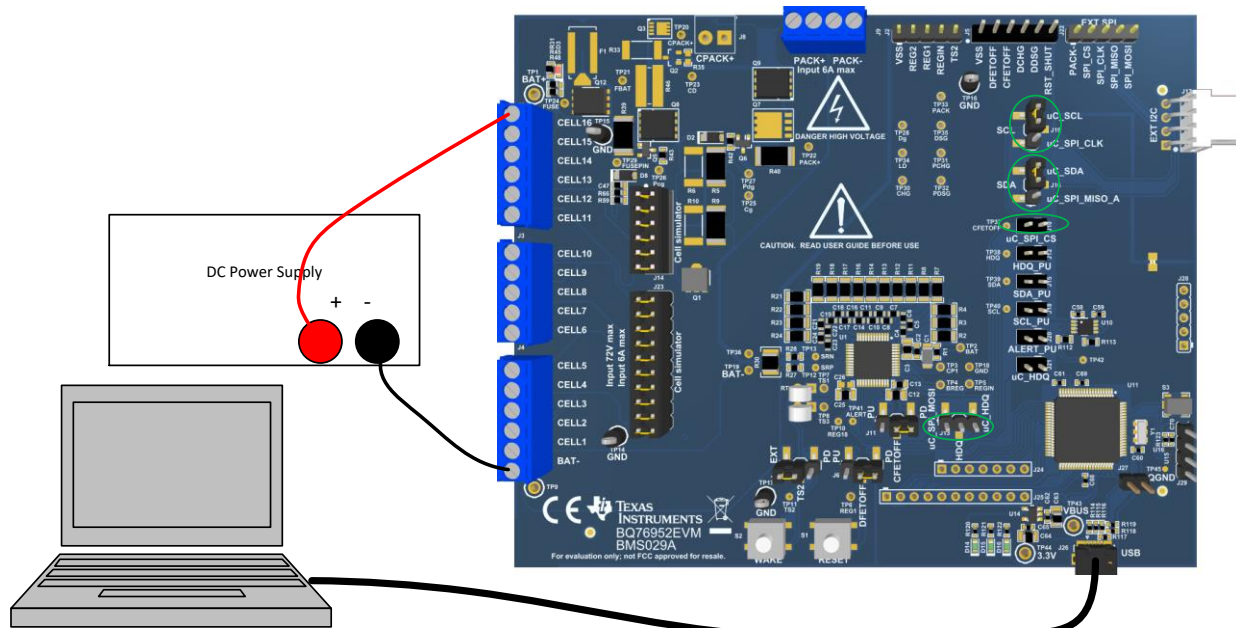


BQ76952003 – How to reconfigure settings

The EVM shipped with all jumpers configured for I2C Communications.

The BQ76952003 devices are configured for SPI communications and the REG1 output is configured to 5V. The instructions below are to change the settings of the device to I2C mode and to reconfigure REG1 as needed.

1. Use the latest version of BQStudio. The bqz file for the BQ76952 A3 device needs to be copied to the C:\ti\BatteryManagementStudio\config\ directory.
2. Connect host to microUSB connector on EVM. The host will setup the driver to use the onboard MSP430 communication adapter.
3. Reposition the jumpers on J19 and J16 for SPI. Place jumpers on J10 and J13. These locations are shown by the green circles in the Figure below.
4. Connect an external supply between 40-71 volts between Cell 16 and BAT-.
5. Start bqStudio application from shortcut on desktop or in menus under Texas Instruments. bqStudio will auto detect device the EVM and startup displaying valid cell voltages and register values on registers screen.



Bq76952 EVM connections

- Open the Data Memory screen in BQStudio. For the Comm Type, select I2C Fast. (This is the default value for the BQ76952 device, but the BQ7695203 has it set to SPI).

The screenshot shows the BQStudio Data Memory screen. On the left, a sidebar contains navigation buttons: Calibration, Settings (highlighted), Power, System Data, Protections, Permanent Fail, and Security. The main area displays a table of configuration parameters. The 'Comm Type' parameter is selected, and a pop-up window titled 'Settings: Configuration: Comm Type' is open. This window contains a table with the following data:

Setting	Description
0x00	Default
0x01	Default
0x03	HDQ (using ALERT pin)
0x04	HDQ (using HDQ pin)
0x07	I ² C (for use up to 100 kHz bus speed)
0x08	I ² C Fast (for use above 100 kHz bus speed)
0x09	I ² C Fast with Timeouts (for use above 100 kHz bus speed)
0x0F	SPI
0x10	SPI with CRC
0x11	I ² C with CRC (for use up to 100 kHz bus speed)
0x12	I ² C Fast with CRC (for use above 100 kHz bus speed)

- Modify the REG1 setting to the desired value. It is off by default for the BQ76952 device, but the BQ7695203 device has it set to 5V.

The screenshot shows the BQStudio Data Memory screen with the 'REG12 Config' parameter selected. A pop-up window titled 'Settings: Configuration: REG12 Config' is open. This window contains a table with the following data:

Setting	Description
0-3	1.8 V
4	2.5 V
5	3 V
6	3.3 V
7	5 V

- To change these values in OTP, follow the steps to program OTP in the EVM User Guide. Once these settings are programmed, they cannot be changed back.
- If the settings have been changed to I2C, reconfigure the EVM jumper settings to I2C. Cycle power on the device and the new settings will take effect.