Pericom ReDriver I2C Configuration GUI Utility User Guide

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Introduction

This user guide introduces the procedures for I2C configuration of PI2EQX8804/8864EVB using GY7501A USBtoI2C tool.

Below is the information required before you start.

- GY7501A USB-I2C Adapter
- GY7501A setup driver, File folder name is ***GY7501A_windows driver***.
- Pericom Redriver I2C Configuration GUI software, File folder name is ***Pericom ReDriver I2C Configuration GUI Utility software.*** It includes two items below.
  1, GUI software, Pericom ReDriver I2C Configuration GUI.exe
  2, USB/I2C .dll file, SiUSBXp.dll and VCI_GYI2C.dll
  Note, Item1 and Item2 *MUST* be in same file folder.

GY7501A USB-I2C Tool Setup

Setup Procedures:

1) Connect GY7501A USB-I2C adapter to USB port in computer
2) Go to **Control Panel** and find **Device Manager**. The new device-GY7501A is found as below.

3) Double click its name and follow the instructions to install its driver in the folder-***GY7501A_windows driver***.
4) New device will be shown below. The setup is completed.

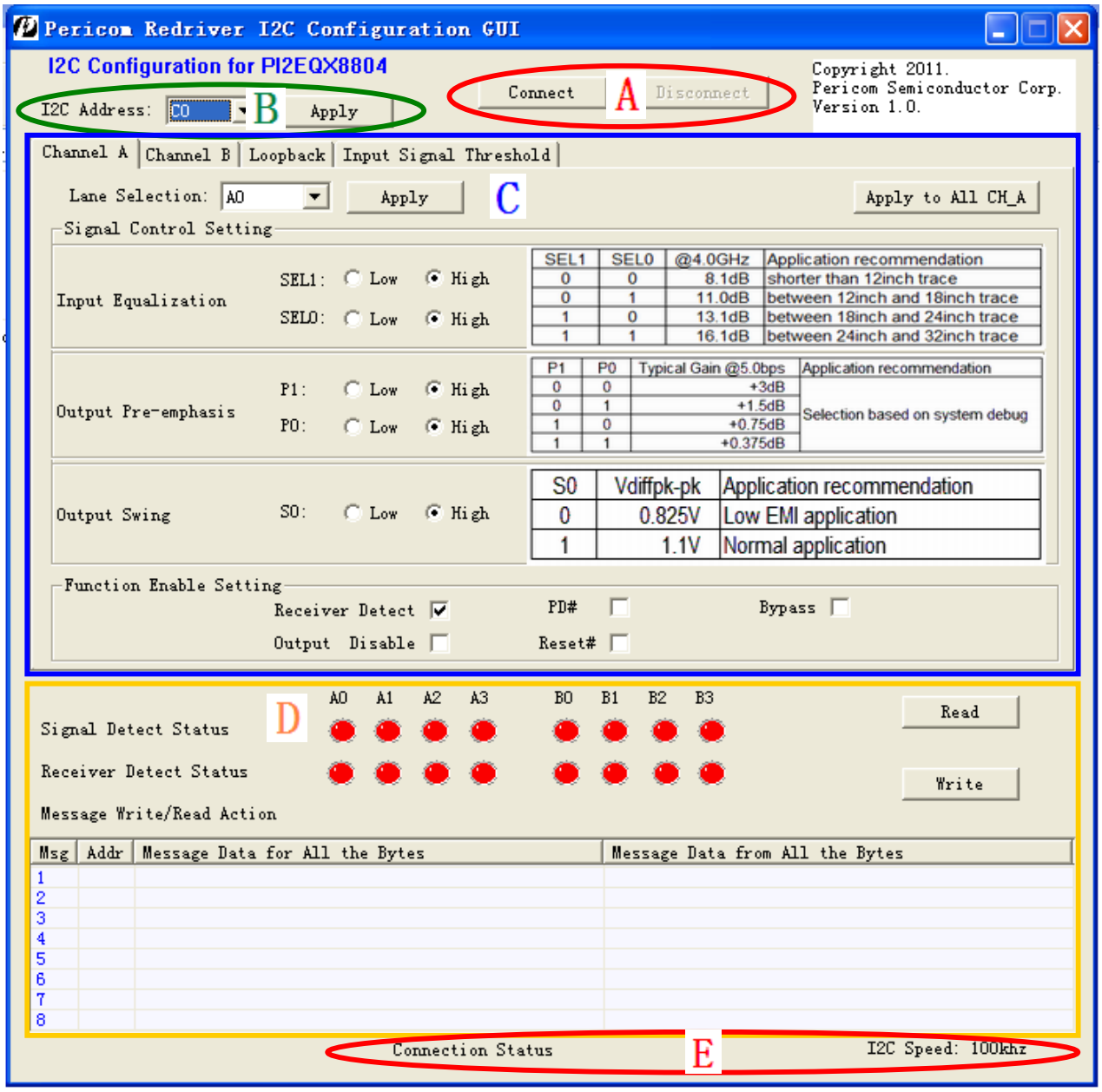
Running *GUI Utility* Software:

1) Open ***Pericom ReDriver I2C Configuration GUI Utility software*** folder in its directory.

2) Double Click "***Pericom ReDriver I2C Configuration GUI Utility.exe***" button.

3) The window will show below.

4) Click and hit "OK" buttion to run PI2EQX88x4 redriver I2C configuration. There are total 5 blocks in the windows.
   A: for GY7501A USB-I2C Adapter connection
   B: for ReDriver I2C address selection
   C: for Bit function selection of register
   D: for Read/Write function
   E: Tool connection status


Pericom Redriver I2C Configuration GUI
I2C Configuration for PI2EQX8804
I2C Address: C0
B
Apply
Connect
A
Disconnect
Copyright 2011.
Pericom Semiconductor Corp.
Version 1.0.
Channel A
Channel B
Loopback
Input Signal Threshold
Lane Selection: A0
Apply
C
Apply to All CH_A
Signal Control Setting
Input Equalization
SEL1: Low High
SEL0: Low High
SEL1 SEL0 @4.0GHz Application recommendation
0 0 8.1dB shorter than 12inch trace
0 1 11.0dB between 12inch and 18inch trace
1 0 13.1dB between 18inch and 24inch trace
1 1 16.1dB between 24inch and 32inch trace
Output Pre-emphasis
P1: Low High
P0: Low High
P1 P0 Typical Gain @5.0bps Application recommendation
0 0 +3dB
0 1 +1.5dB
1 0 +0.75dB
1 1 +0.375dB
Selection based on system debug
Output Swing
S0: Low High
S0 Vdiffpk-pk Application recommendation
0 0.825V Low EMI application
1 1.1V Normal application
Function Enable Setting
Receiver Detect
PD#
Bypass
Output Disable
Reset#
D
A0 A1 A2 A3 B0 B1 B2 B3
Signal Detect Status
Receiver Detect Status
Read
Write
Message Write/Read Action
Msg Addr Message Data for All the Bytes Message Data from All the Bytes
1
2
3
4
5
6
7
8
Connection Status
E
I2C Speed: 100khz

GUI Utility Configuration Steps:

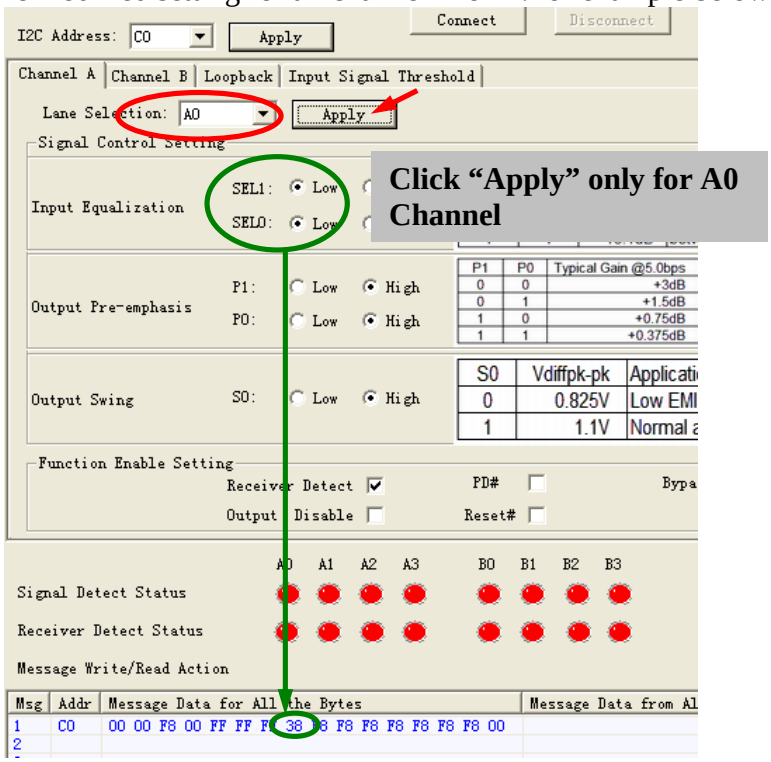
1) Click “Connect” button in **Block A** when GY7501A USB-I2C Adapter is connected. (“Disconnect” button to disable it).

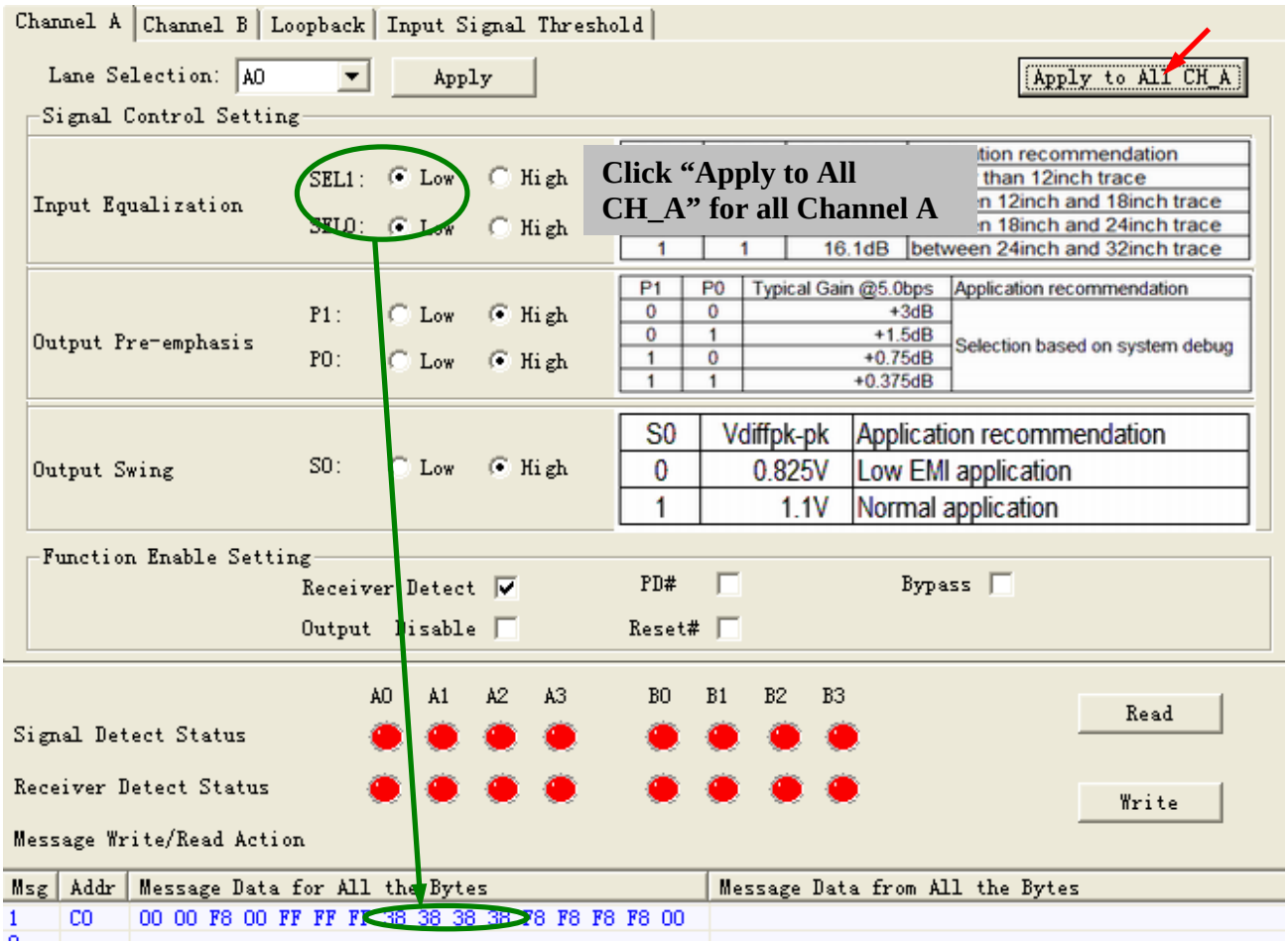
2) Select the I2C address in **Block B** per the application. There are total 8 addresses in pull-down button such as C0/C2/C4/C6 and E0/E2/E4/E6.

Once any address is selected, you MUST click “Apply” Button to apply the default setting in **Block D**. For example below, C0/C2/C4/C6 are selected and applied.

Msg	Addr	Message Data for All the Bytes	Message Data from All the Bytes
1	C0	00 00 F8 00 FF FF FF F8 F8 F8 F8 F8 F8 F8 F8 00	
2	C2	00 00 F8 00 FF FF FF F8 F8 F8 F8 F8 F8 F8 F8 00	
3	C4	00 00 F8 00 FF FF FF F8 F8 F8 F8 F8 F8 F8 F8 00	
4	C6	00 00 F8 00 FF FF FF F8 F8 F8 F8 F8 F8 F8 F8 00	
5			
6		**C0/C2/C4/C6 are selected**	
7			
8			

3) Any register setting change can be decided in **Block C**. Once new configuration is selected, you MUST click “Apply” or “Apply to All_A/B” button and the new setting will be shown in **Block D**. **Remark1:** “Apply” means the modified setting only for some channel selected. “Apply to All_A/B” means the modified setting for all channel A or B. for example below.

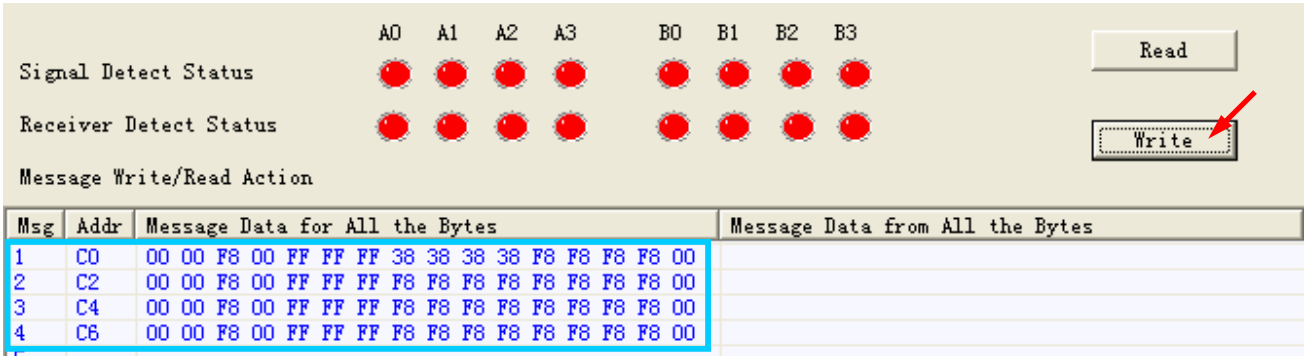




Remark2: Channel B, Loopback and Input Signal Threshold have the same action for the setting change if needed.

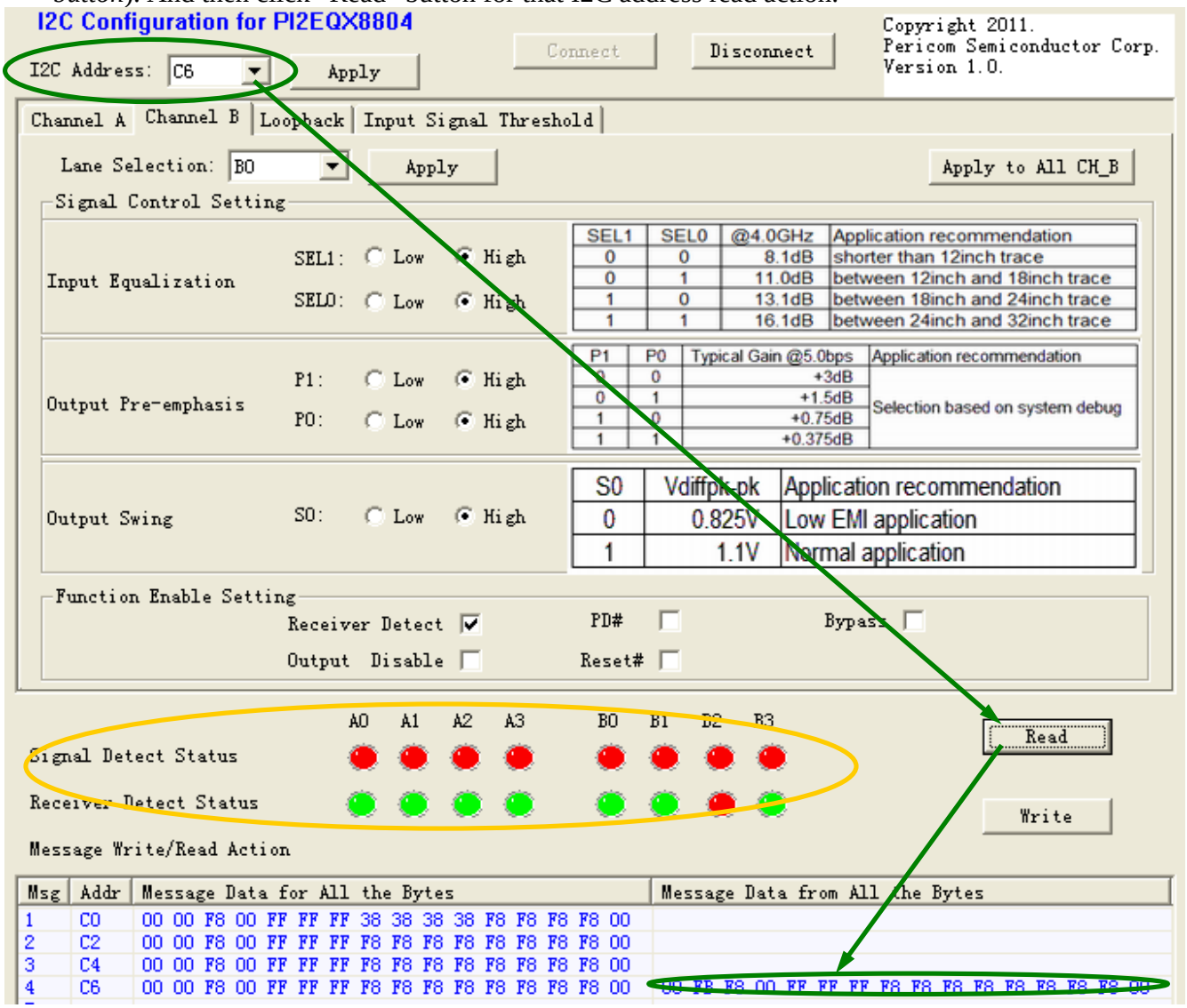
GUI Utility Write/Read Steps:

1) When the configuration is ok. Click "Write" button in **Block D** for all the selected I2C address write action.



Remark: Once the write is ok, the status in Block E will show "write ok" information below. Or else the error window below will pop up.

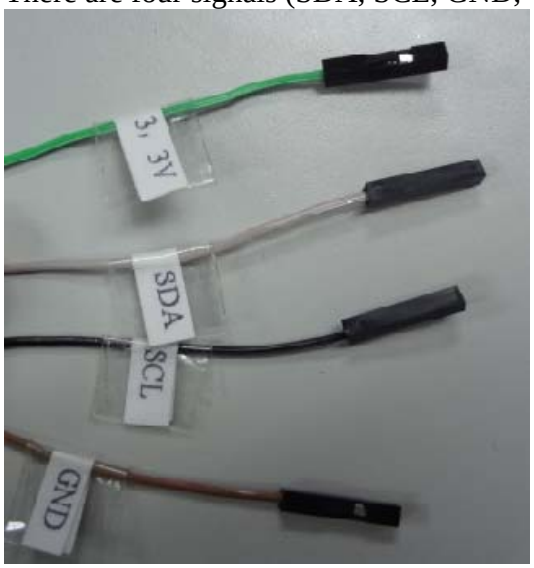
2) Before Read action, the I2C address in **Block B** must be selected (*Don't need to click "Apply" button*). And then click "Read" button for that I2C address read action.

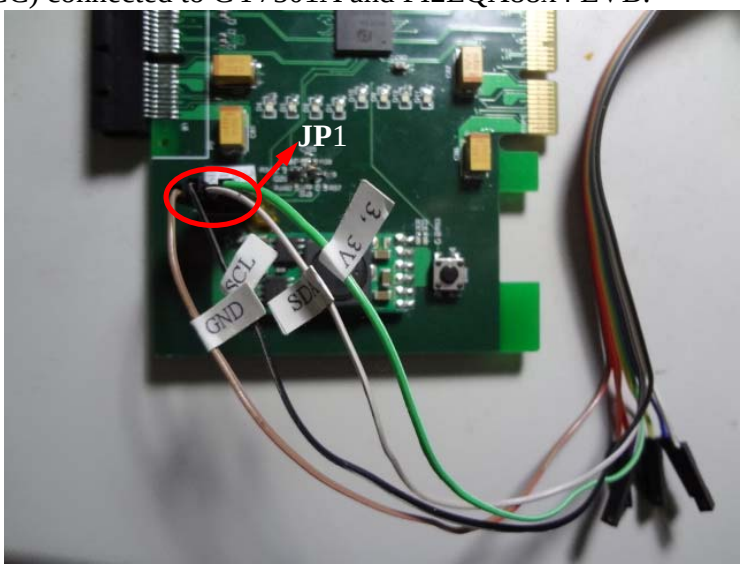


In **Block D**, there are LED lights to show the values in Byte0 and Byte1 of redriver.

Hooking up GY7501A USB-I2C Adapter

There are four signals (SDA, SCL, GND, VCC) connected to GY7501A and PI2EQX88x4 EVB.





The signals should be connected as below:
SDA → SDA of JP1 on PI2EQX88x4 EVB
SCL → SCL of JP1 on PI2EQX88x4 EVB
GND → Ground of JP1 on PI2EQX88x4 EVB
3.3V → VCC of JP1 on PI2EQX88x4 EVB

The following graph shows the tool connection.