



How to connect the USB Bridge

Please always take care to connect the black wire of the cable to the GND-pin of the boards:

Visit the WP15WBD-RK [website](#) and download latest version of the *Renesas Electronics I2C Lite* software, script files, and USB drivers from the Renesas Electronics website.

Installation:

1. Do not connect the USB-to-I2C dongle before installing the software.
2. Run the downloaded *USB Drivers Setup* executable file and follow the user prompts to install the USB drivers.
3. After finishing the setup of the USB drivers, connect one of the USB-to-I2C dongles to the USB port. Wait for a few moments to let Windows® map the drivers for the dongle.
4. Open the Device Manager from the Windows control panel and check the devices listed under “Universal Serial Bus controllers” section. “FT4222H Interface A” and “FT4222H Interface B” should appear in this section as shown in Figure 1.

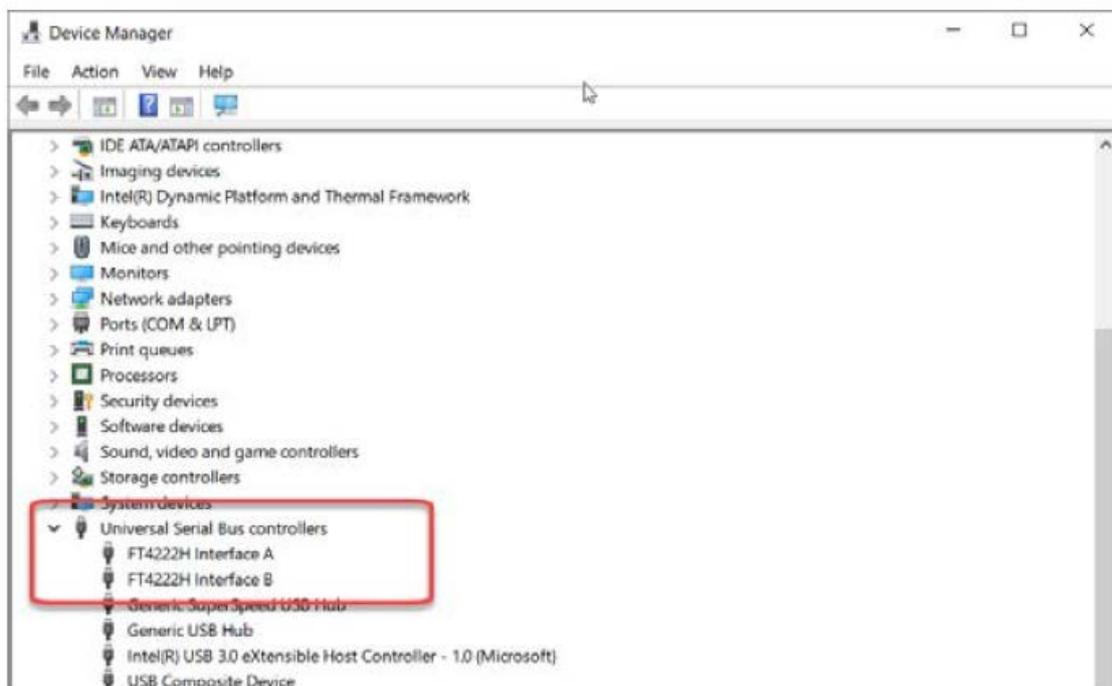


Figure 1

5. Run the *Renesas Electronics I2C Lite Setup* file and follow the user prompts to install the *Renesas Electronics I2C Lite* software.

6. Place the downloaded script files in the *C:\Users\...\AppData\Roaming\Renesas I2C Lite* folder to expedite loading the script files into the *Renesas Electronics I2C Lite* software. These scripts contain a series of I2C commands to send and receive data on the receiver and transmitter.

Hardware Connections:

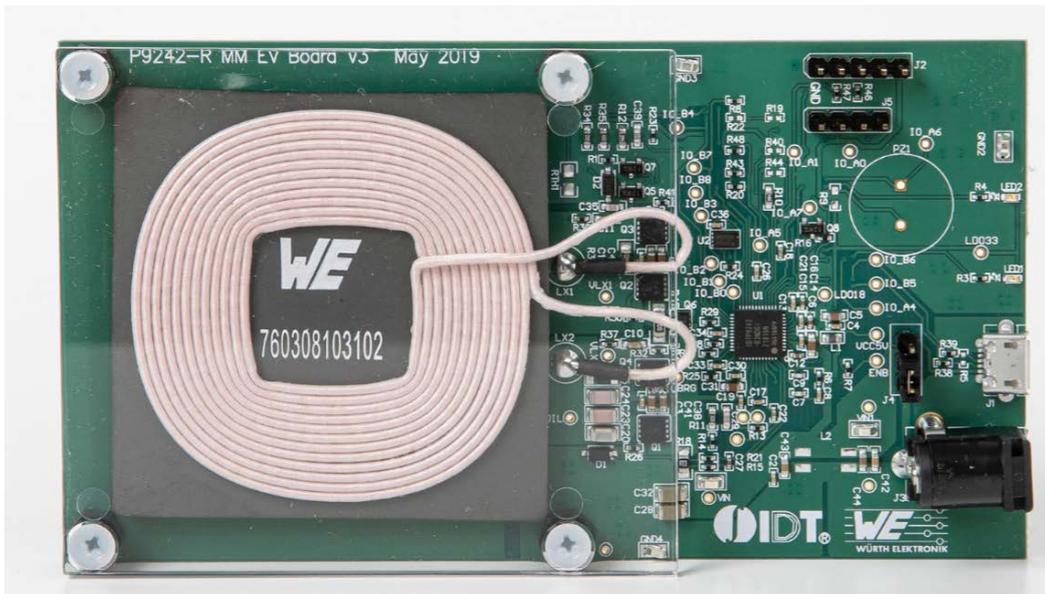
Connect the USB to I²C dongle:

1. Connect the USB cable with the dongle
2. Connect the I²C cable with the dongle. Black cable must be connected to GND pin.



Connect to the receiver board:

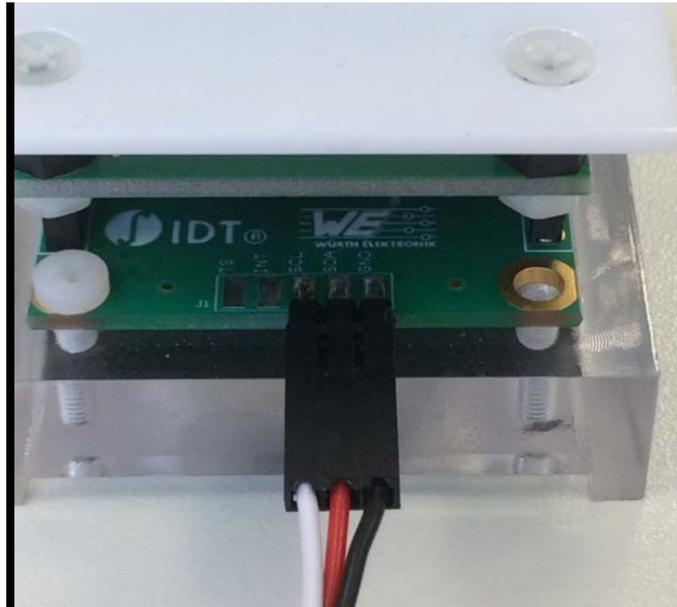
1. Plug the 12V adapter or user's power supply into the J3 barrel connector on the Transmitter (P9242-R MM-EV) Board



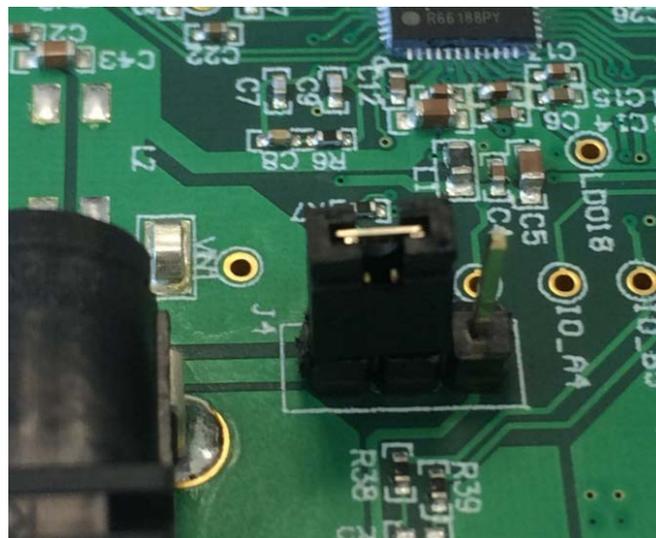
2. Place the Receiver + LED Board on the transmitter (TX) coil 760308102102 with logo on top



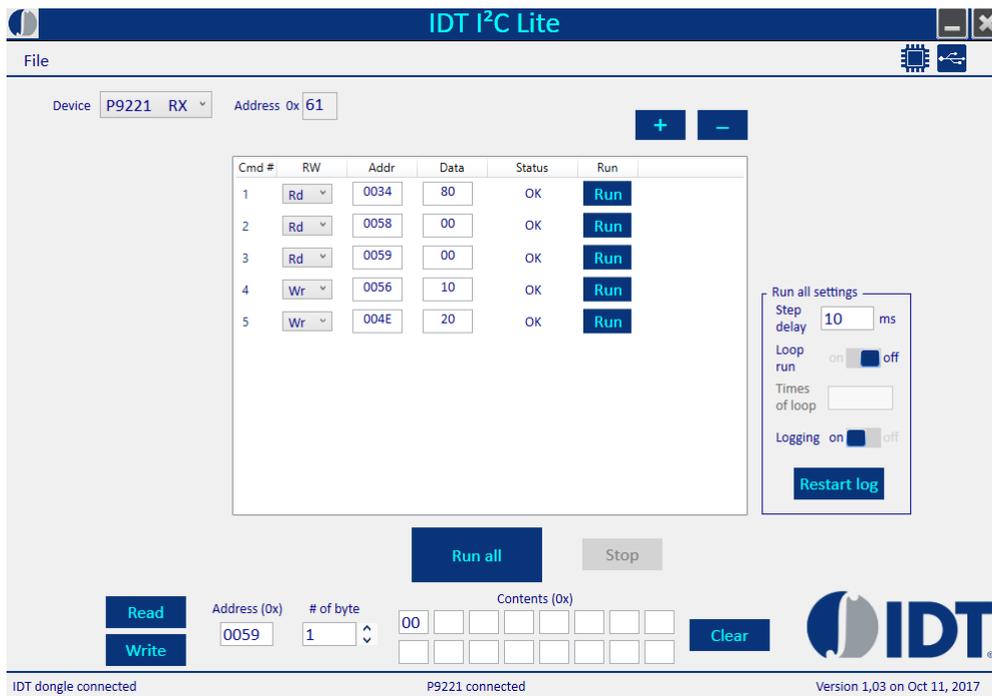
3. Connect the I2C Dongle. Black wire on the right (GND) pin.



4. Jumper J4 at the transmitter board must be in this position



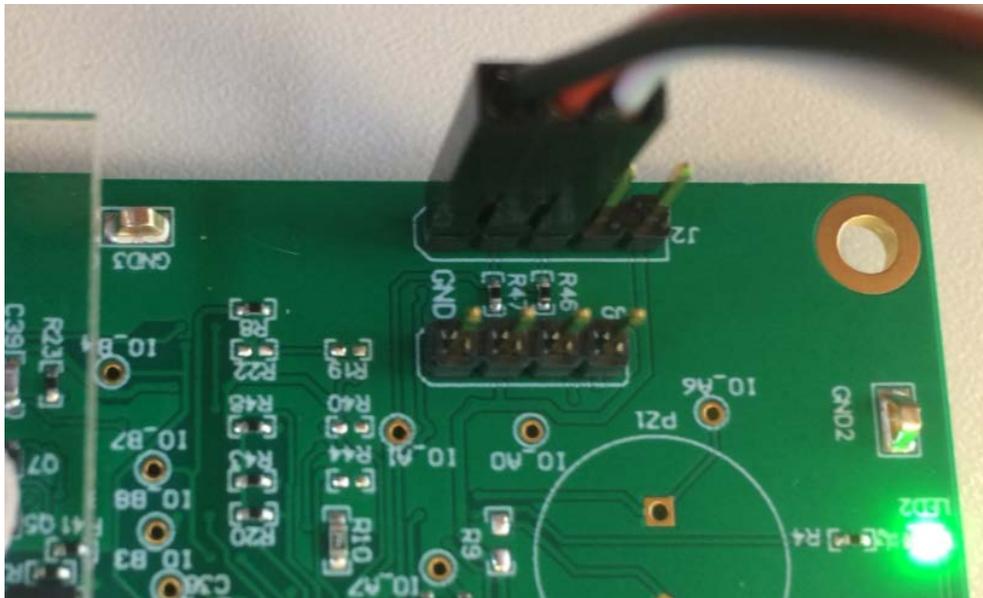
At the GUI you will see the successful connection:



At the software, Renesas Electronics I2C Lite at the Drop-down menu select P9221 RX. „Renesas Electronics dongle connected“ and „P9221 connected“. Check on the bottom of the screen.

Connect to the transmitter board:

1. Connect I2C Dongle at transmitter board. The black cable must be connected to the GND pin. At the software, Renesas Electronics I2C Lite at the Drop-down menu select P9242 TX. „Renesas Electronics dongle connected“ and „P9242 connected“. Check on the bottom of the screen.



The screenshot shows the IDT I2C Lite software interface. The title bar reads "IDT I2C Lite". The interface includes a menu bar with "File", a device selection dropdown set to "P9242 TX", and an address input field set to "0x61". There are "+" and "-" buttons for device selection. A central table displays a list of commands:

Cmd #	RW	Addr	Data	Status	Run
1	Rd	0034	8E	OK	Run
2	Rd	0058	B9	OK	Run
3	Rd	0059	D3	OK	Run
4	Wr	0056	10	OK	Run
5	Wr	004E	20	OK	Run

To the right of the table is a "Run all settings" panel with the following options:

- Step delay: 10 ms
- Loop run: on (checkbox checked)
- Times of loop: [empty]
- Logging: on (checkbox checked)
- Restart log button

At the bottom of the interface, there are "Run all" and "Stop" buttons. Below these are "Read" and "Write" buttons, an address input field set to "0059", a "# of byte" dropdown set to "1", and a "Contents (0x)" display showing "D3". A "Clear" button is also present. The IDT logo is in the bottom right corner. The status bar at the very bottom shows "IDT dongle connected", "P9242 connected", and "Version 1,03 on Oct 11, 2017".