PowIRCenter Gang Programmer User Guide

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Supported Gang Programmers

- Manhattan PRG3806x
- Rocky
- Acadia

System Requirements

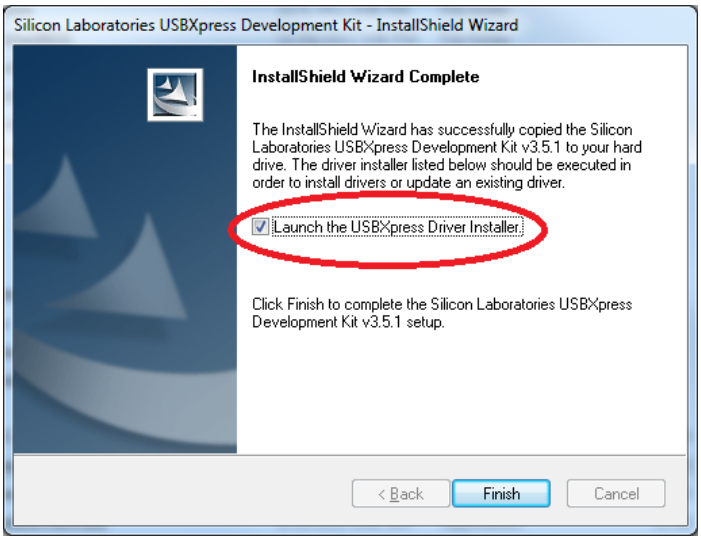
- *Microsoft .NET Framework 4.0* or higher must be installed. This can be downloaded http://www.microsoft.com/en-us/download/details.aspx?id=17718
- Ensure that you are connected to the internet.
- If you're using *Windows 7 or 8*, you may be prompted with a security warning whenever you run a program. For this setup, allow these programs to run.

Download PowIRCenter Gang Programmer

1. Create a folder in C drive as **C:\PowIRCenter Gang Programmer**
2. Copy ftp://irdpdc_ro:mem2011@sftp.irf.com to Windows Explorer address bar and push **Enter** on the keyboard to log into download folder automatically in ftp server.
3. Click the folder labeled **PowIRCenter Gang Programmer** in ftp server.
4. Right click on **PowIRCenter_Gang_Programmer.zip** and select **Copy to folder….** When the dialog box pops up, navigate to **C:\PowIRCenter Gang Programmer.** Click **OK**.
5. Right click on **USBXpress_Setup_v3.5.1.exe** and select **Copy to folder….** When the dialog box pops up, navigate to **C:\PowIRCenter Gang Programmer.** Click **OK**.

Install PowIRCenter Gang Programmer

1. Go to **C:\PowIRCenter Gang Programmer** and right-click the file **PowIRCenter_Gang_Programmer.zip**. Click **Extract All** in the dropdown menu…. When the dialog box pops up, browse to **C:\PowIRCenter Gang Programmer**. Click **Extract**.
2. Run **USBXpress_Setup_v3.5.1.exe** if the driver has not been installed before.
3. Follow the instructions in the installation program. At the end of the setup, there is a checkbox that must be checked to properly install the drivers. Some problems may occur if this box is not checked.



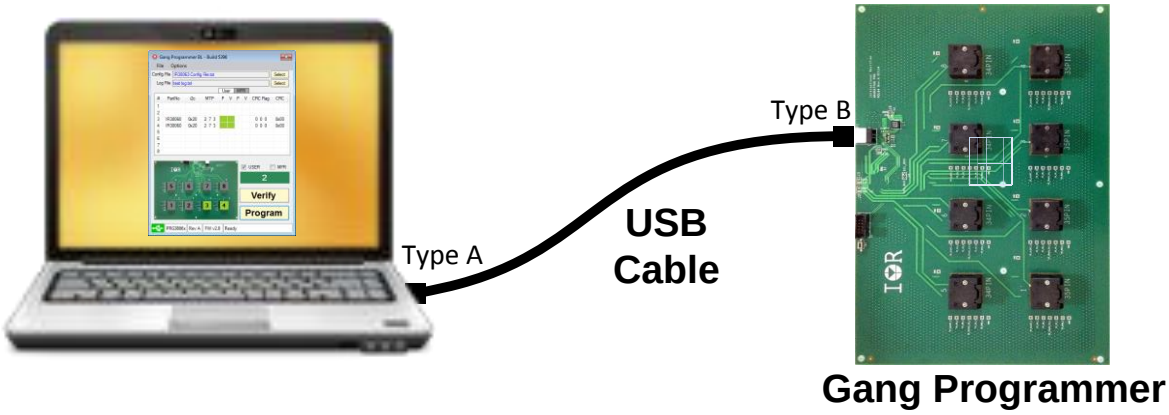
4. Click **Install** on the dialog box that pops up.

Uninstall PowIRCenter Gang Programmer

Please note the PowIRCenter Gang Programmer is not deployed through setup.exe. Therefore, there is no need to add/remove the PowIRCenter Gang Programmer GUI from **Control Panel** -> **Add Remove Program**. Just delete the **C:\PowIRCenter Gang Programmer** folder or files if the user doesn't want to keep them.

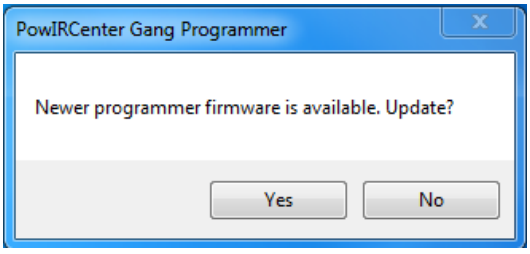
Hardware Setup

Since the programmer is powered through USB port, there is no external power supply required. Just connect a USB cable between your PC and the programmer. Diode D1 on the board will be blinking if the connection is successful.

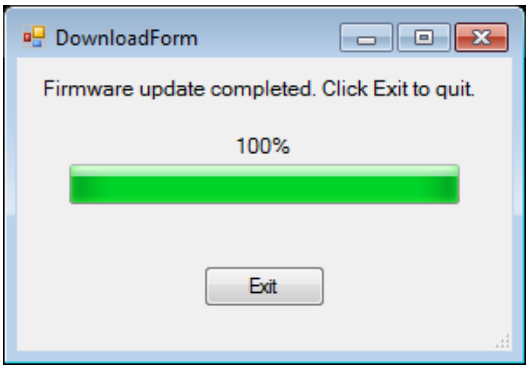


Firmware Update

The USB005 dongle has two layers of firmware, the resident bootloader layer which will not be modified is responsible for updating and flashing the application firmware. The GUI will prompt the user to update the firmware if there is a newer firmware available. The user has the option not to update, but updating is recommended.



Click **Exit** after the update.



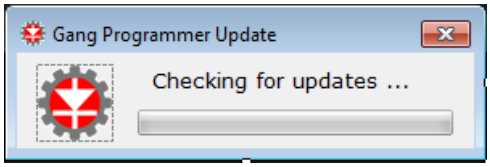
Getting Started

There are two ways to launch the PowIRCenter Gang Programmer GUI.

- **GangProgrammerBL Update.exe** – check and download updates if there are newer files in the server.
- **PowIRCenter Gang Programmer.exe** – Launch the GUI directly without checking for updates.

Automatic Updates for PowIRCenter Gang Programmer

1. Make sure your computer is connected to the Internet, then launch the GUI by double-clicking **C:\PowIRCenter Gang Programmer\ GangProgrammerBL Update.exe**



2. If there are any updates available from the IR Server, this screen will appear. Click **Update Now** to start downloading or click **Update Later** to download later.

3. After download is complete, click the **Exit** button and restart PowIRCenter Gang Programmer.

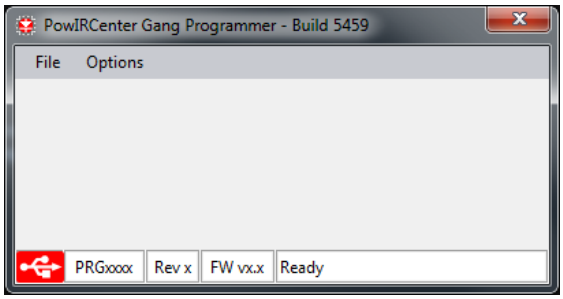
Please note if there are no updates, the PowIRCenter Gang Programmer GUI will start right after the checking.

Launching the GUI

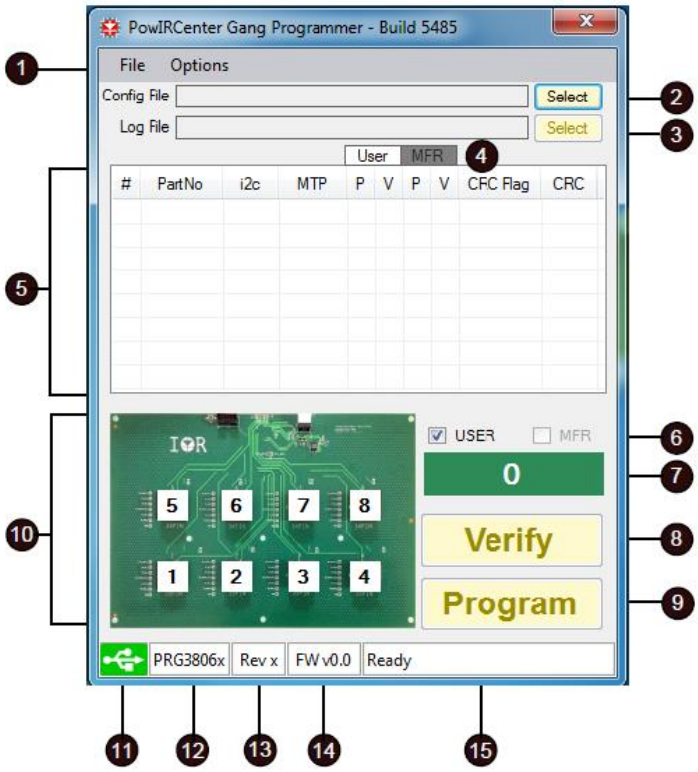
Double-click **PowIRCenter Gang Programmer.exe** from **C:\PowIRCenter Gang Programmer**

Manhattan PRG3806x

After launching the programmer, the start window will show as below. If the board is connected, the GUI will automatically search for it.



If the auto-searching is successful, the GUI will launch.



1. Menu
2. Load configuration file
3. Save log file

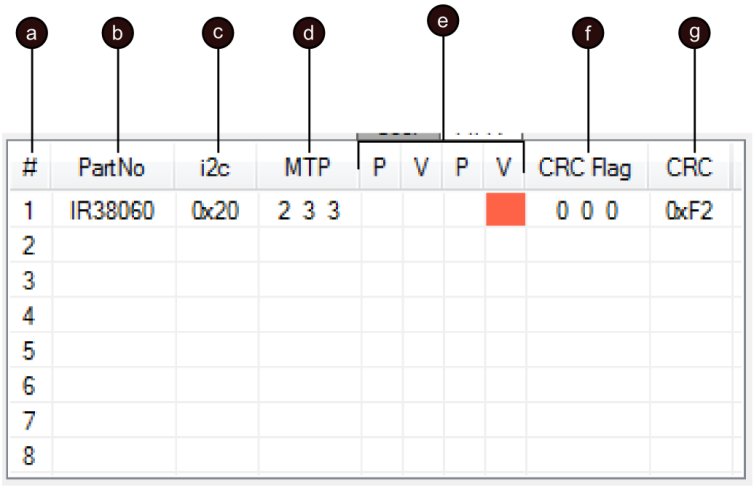
Note 1: The Select button will not be enabled until the configuration file is loaded.

4. Tabs change colors according to the selections of User and/or Manufacturer section.

   User : Selected
   User : Not selected

   Note 2: MFR is not available for customers.

5. Textbox to indicate the status during programming and verification process



   a. Number of Socket
   b. Device Part Number
   c. i2c Address
   d. MTP Left (From left to right: Trim, User, MFR)
   e. Program and Verification results (From left to right: User, MFR)
   : Successful
   : Fail
   f. CRC (From left to right: Trim, User, MFR)
   g. CRC Address

6. Select User and/or Manufacturer section to program or verify
7. Program Counter indicates the number of devices has been programmed in the current session
8. Verify will compare the configuration data with the OTP contents and display in Textbox
9. Program will write configuration data into the OTP then recycle the power and verify the OTP contents.

   Note 3: The Verify and Program button will not be enabled until the log file is created.

10. During the programming or verification process the socket picture 1 through 8 will change colors to indicate different status.

: The socket is empty. No device is detected
: Programming/verification fails
: Programming/verification is successful

Note 4: If both User and MFR are selected for programming/verification, the socket picture will show green only if both processes are successful.

11. USB Connection Status

: Connection fails
: Connection is successful

12. Gang Programmer board ID should be PRG3806x
13. Gang Programmer reversion number should be Rev A
14. Firmware Version
15. GUI status During Operation

Programming Procedures

1. Connect a USB cable between computer and PRG3806x
2. Make sure the USB Connection status (11) change from to .
3. Load the configure file by clicking the Select button (2).
4. Save the log file by clicking the Select button (3), saving dialog will pop up, enter the file name and click Save.
5. Select the User and/or Manufacturer sections to be programmed at area (6).
6. Load devices into the sockets.**(See Note 5 below)**
7. Click Program button (9).
8. If the programming is successful, the GUI should look like as shown below in **Figure 1**.
9. Unload the devices just programmed and load new devices.
10. Click the program button again.
11. Repeat the steps 9 and 10 until all blank devices are programmed.

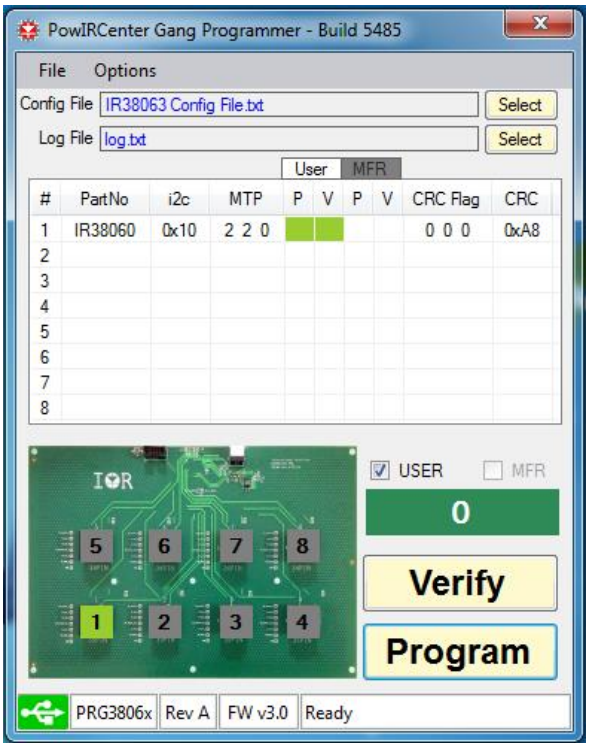


Figure 1: Programming is successful

Verification Only Procedures

1. Connect a USB cable between the computer and the PRG3806x board
2. Make sure the USB Connection status (11) change from to .
3. Load the configure file by clicking the Select button (2).
4. Save the log file by clicking the Select button (3), saving dialog will pop up, enter the file name and click Save.
5. Select the User and/or Manufacturer sections to be programmed at area (6).
6. Load devices into the sockets.**(See Note 5 below)**
7. Click Verify button (8).
8. If the verification is successful, the GUI should look like as shown below in **Figure 2**.

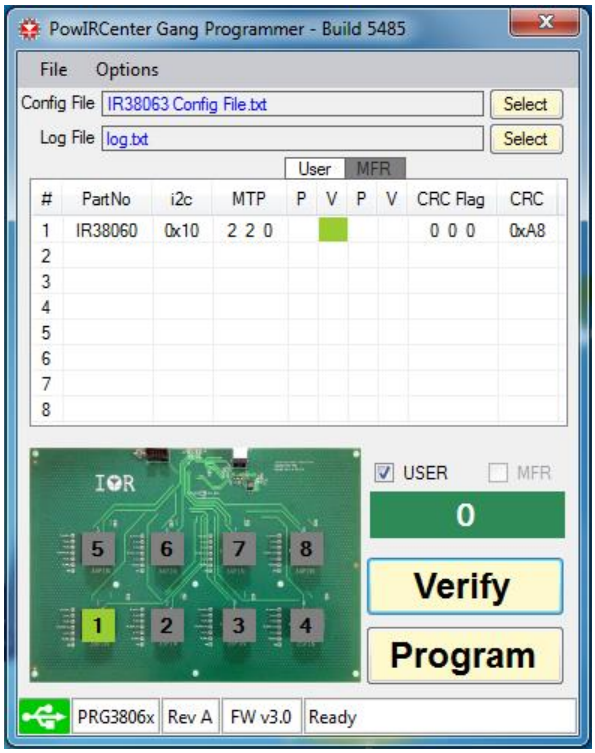
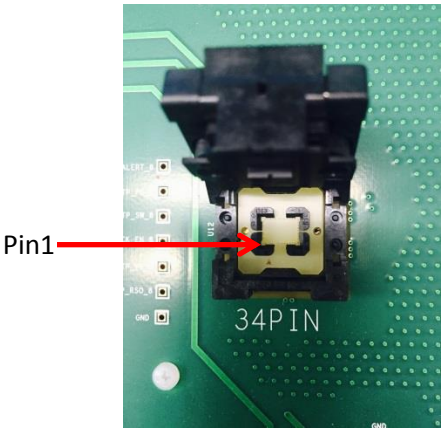


Figure 2: Verification is successful

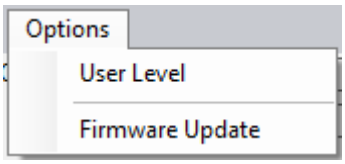
Note 5:

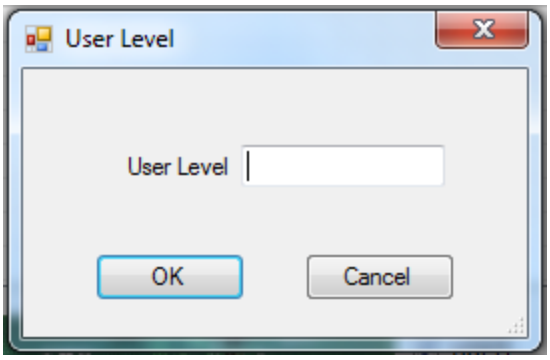
1. **For Manhattan board, sockets #1 to #4 are for 5x6 parts (e.g. IR38060), and sockets #5 to #8 are for 5x7 parts (e.g. IR38062, IR38063, IR38064).**
2. **Pin 1 is the bottom left corner as showed below,**



User Level

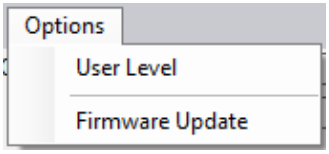
For future use.



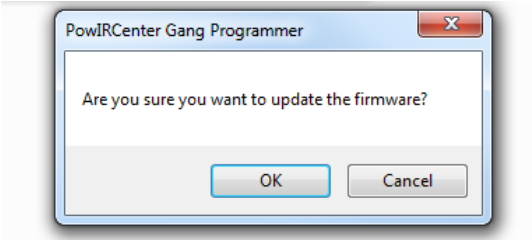


Manually Update Firmware

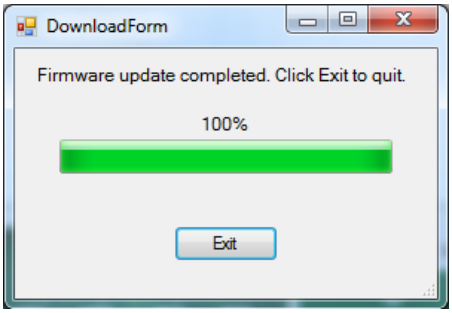
The firmware can be updated manually. Click Options in the Menu. From the dropdown menu, click Firmware Update.



The message box will pop up. Click OK to update the firmware.



The progress bar will show the status of updating the firmware, click on Exit when it is finished.



Programmer Usage Considerations

Gang Programmer use and care:

The gang programmers that IR sells for programming IC's are designed for light production use and do need to be periodically cleaned when programming devices. The socket manufacturer recommends periodic cleaning of the socket contacts with Isopropyl Alcohol and a soft bristle brush to remove debris and residue. To clean the sockets use a soft, but stiff brush and alcohol or other cleaner to remove debris and any residue from the socket pins. As a general maintenance this should be done after every 500 to 1000 parts programmed or when programming problems arise.

Gang Programmer life:

The gang programmers that IR sells for programming IC's are specified as having a life of 10,000 mechanical insertions.

Gang Programmer Temperature Range:

The gang programmers sold by IR are designed to be used over a temperature range of 20 to 30C.

ESD Considerations:

The Digital IC's IR3806x are considered static sensitive. Proper handling and grounding techniques must be used while programming IC's. Static ratings for the Digital controllers can be found in the product data sheets.

Data and specifications subject to change without notice.

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IR WORLD HEADQUARTERS: 233 Kansas St., El Segundo, California 90245, USA Tel: (310) 252-7105
TAC Fax: (310) 252-7903
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