

Application Note

PL-2303 USB-to-Serial Bridge Controller

General Purpose I/O (GPIO) Pins – LED Indicator Function

Introduction

This application note provides a simple guideline on how to use the GPIO pins of the PL2303 USB to Serial chip to activate an LED connected to the GPIO pin when the device is plug into the USB port.

PL2303 (H, HXA, XA) GPIO Pin Assignment

Pin #	Name	Type	Description
22	GP0	I/O ⁽⁷⁾	General Purpose I/O Pin 0
23	GP1	I/O ⁽⁷⁾	General Purpose I/O Pin 1

PL2303 (HXD) GPIO Pin Assignment

Pin #	Name	Type	Description
13	GP3	I/O ⁽⁶⁾	Auxiliary GPIO Pin 3 (Default output high mode) ⁽⁶⁾
14	GP2	I/O ⁽⁶⁾	Auxiliary GPIO Pin 2 (Default output high mode) ⁽⁶⁾
22	GP0	I/O ⁽⁷⁾	General Purpose I/O Pin 0
23	GP1	I/O ⁽⁷⁾	General Purpose I/O Pin 1

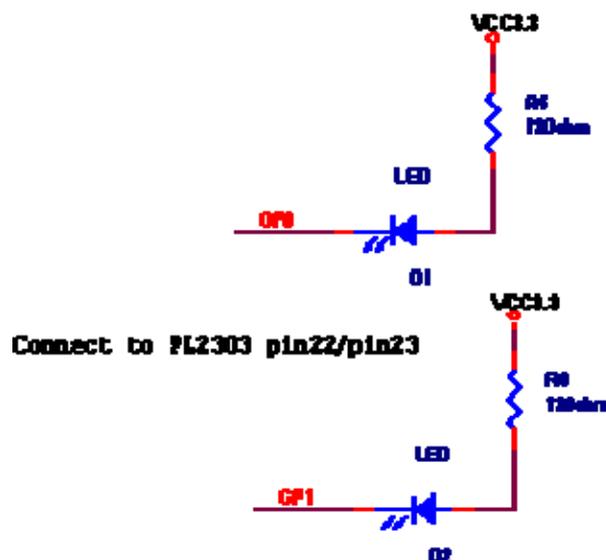
Notes:

(6) – Default output high mode; do not connect to ground.

(7) – SCHMITT In/CMOS Out, 5V Tolerant, Bi-directional Pad, 4mA Output Driving Capability.

GPIO Reference Schematic Diagram

Below is a simple schematic diagram on how to connect an LED to GP0 and GP1 pins (pin 22/23). For this schematic diagram, we need to set the GPIO output pins to “0” (low) in order to activate the LED.

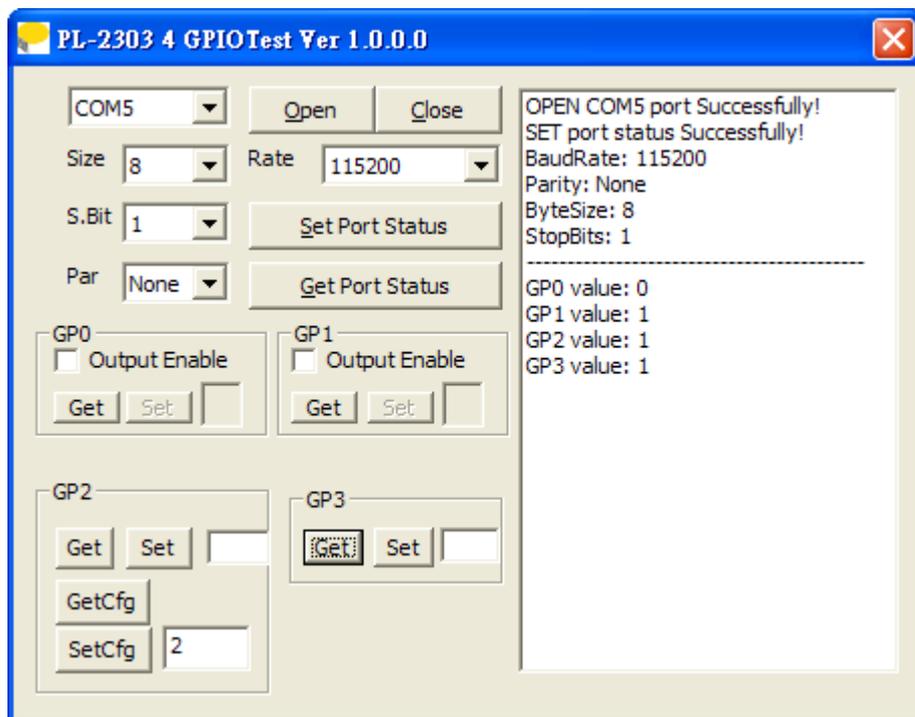


Prolific GPIO Test Tool Program

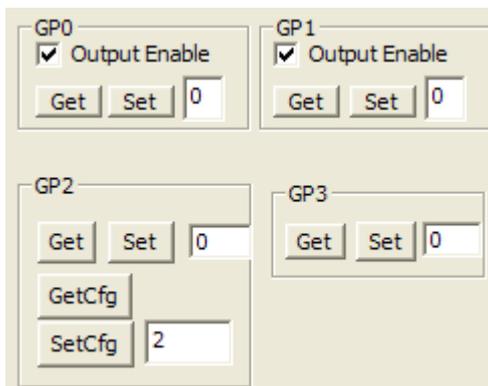
Prolific provides a simple GPIO Test Tool program to set and read each GPIO pins. All of the PL2303 chips aside from PL2303HXD have two dedicated GPIO pins (GP0 and GP1) while PL2303HXD have four GPIO pins (GP0, GP1, GP2, GP3). To run the GPIO Test tool program, follow the steps below:

1. Run the PL2303 Driver Installer program to install the driver and then plug the PL2303 device.
2. Check the Device Manager to see what COM port number is assigned to the PL2303 device.
3. Run the GPIO Test program and set the COM port number assigned to the PL2303 device.

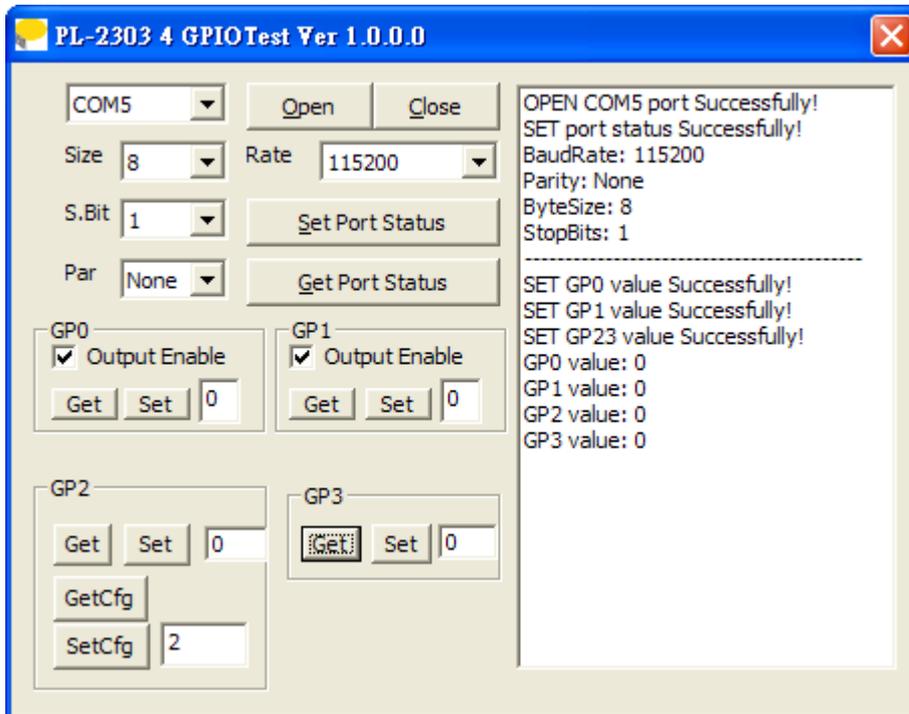
Then click Open button to open COM5 port.



4. The GPIO Test program allows you to set the port status and GPIO pin values. You can also read the values by clicking on the Get buttons.
5. Click on Output Enable to set the GPIO pin as output pins. Then enter the values to "0" for each GPIO pin that you will use. GP2 and GP3 is for PL2303HXD chip use only.



- Then click Set button on each GPIO pin that you want to set. The program will show if the GPIO pin value was set successfully. Click the Get button to make sure the values are set. If you also have already mounted the LED on your device, the LED should also activate immediately. Note that the GPIO output values will reset back to default when the device is unplugged because the driver will reload.



Prolific provides the GPIO Test Tool program source code as SDK to help customers write their own GPIO application program. Please contact Prolific worldwide distributors for questions and support.

Distributors Contact: <http://www.prolific.com.tw/eng/contact-distributors.asp>

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