PL2303RA USB-to-Serial Bridge Controller
OTPROM Writer User Manual
(for PL2303RA Chip Version Only)

The PL2303RA default configuration descriptors are stored in the chip internally which are loaded during power-on reset or USB bus reset. Several of these USB descriptors could be modified and stored to the PL2303RA OTPROM instead and loaded during device startup like Vendor ID (VID), Product ID (PID), Serial Number, Product String, and other configuration descriptors. The OTPROM can be programmed twice using the dedicated PL2303RA EEPROM Writer utility software which can be requested from Prolific or authorized distributors.

PL2303RA OTPROM Converter Board

When writing data into the internal OTPROM (One-Time Programming ROM) of the PL2303RA, it is required to use the PL2303RA OTPROM converter board as shown below.

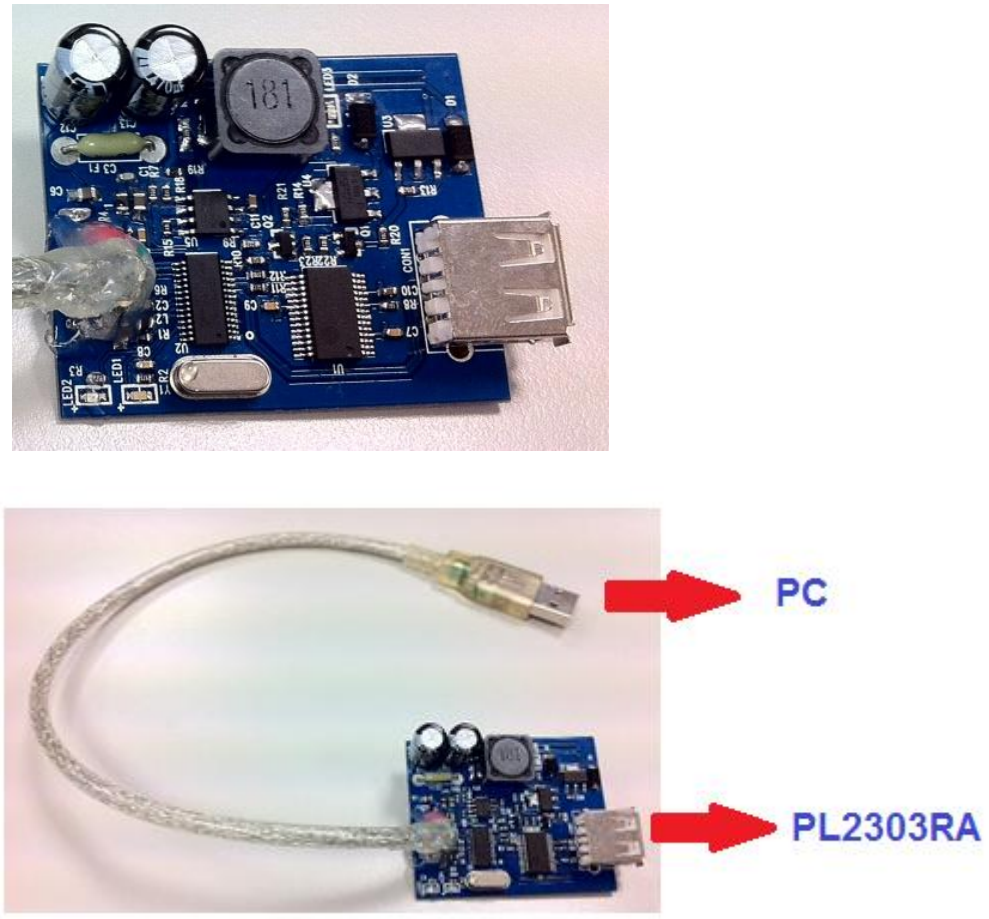

Figure-1: PL2303RA OTPROM Converter Board

NOTE: Do not use PL2303HXD 6.5V-to-5V converter board for writing PL2303RA OTPROM. It might damage the PL2303RA chip.

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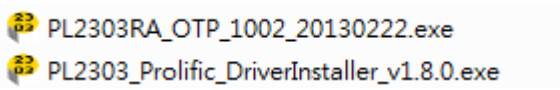
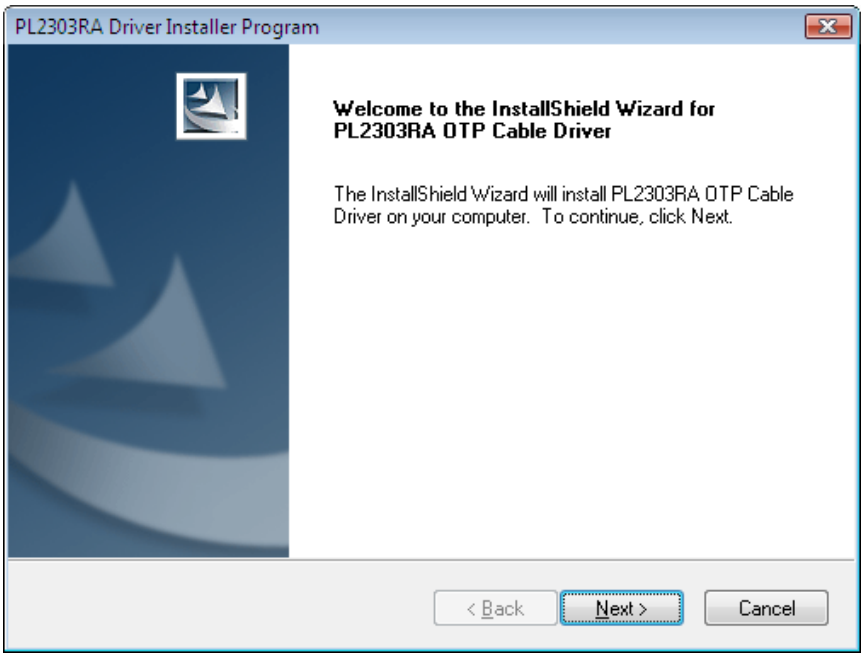
PL2303RA OTPROM Driver & Software Installation (for 32-bit Windows Only)

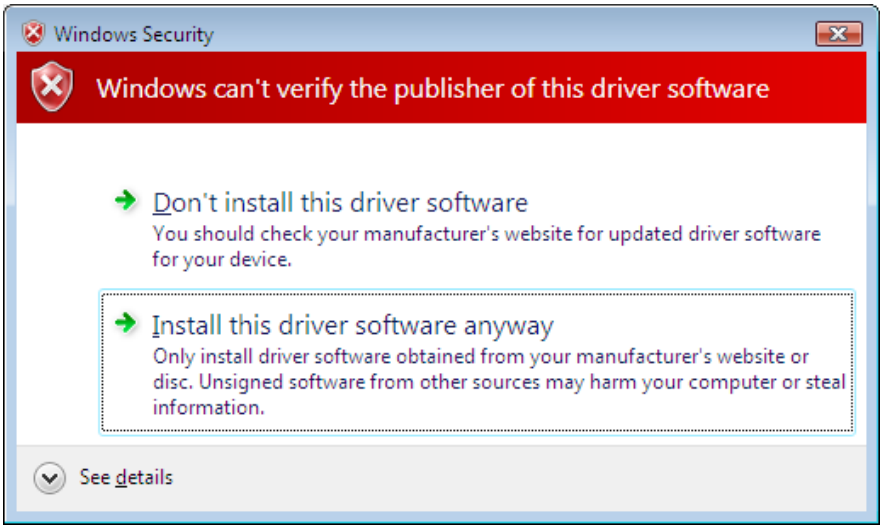
To start, you first need to install the PL2303RA OTP Driver and EEPROM Writer program. You also need to install the standard PL2303 Prolific Driver. Contact Prolific for the latest driver and software.



1. Run the latest PL2303RA OTP Cable Driver Setup program to install the OTP board driver and OTPROM software to the computer. Click Next to continue.



2. Click Install this driver software anyway when Windows Security prompts it cannot verify the publisher of this software.



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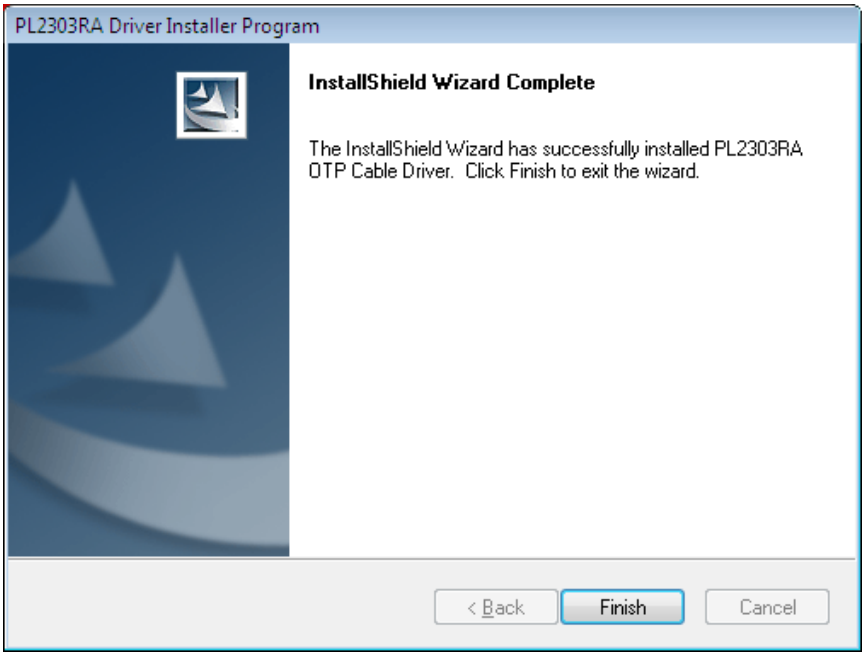
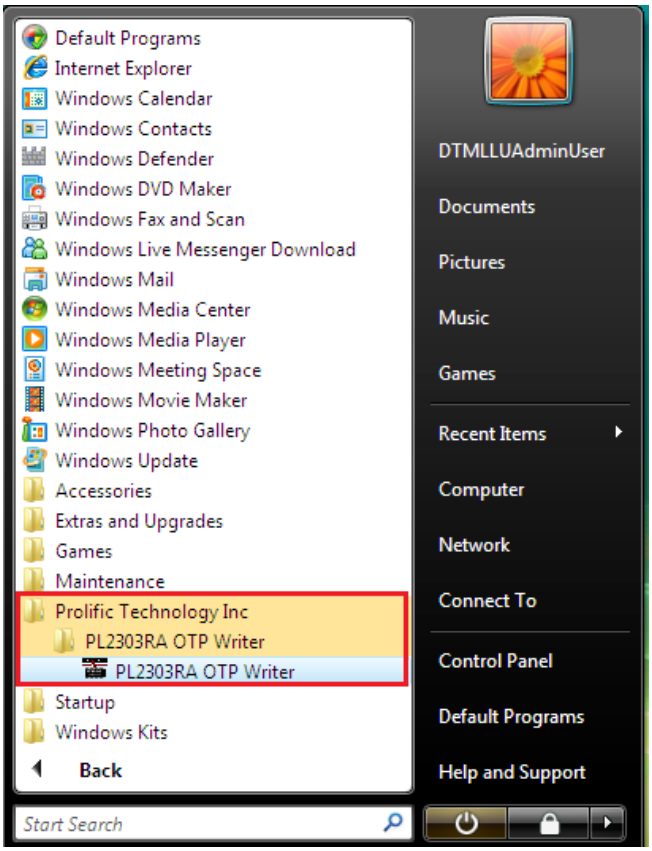
3. Click Finish when the driver software installation is complete.



4. Click Start-Programs and check if there is a 'Prolific Technology Inc' folder with 'PL2303RA OTP Writer' program folder and software installed.



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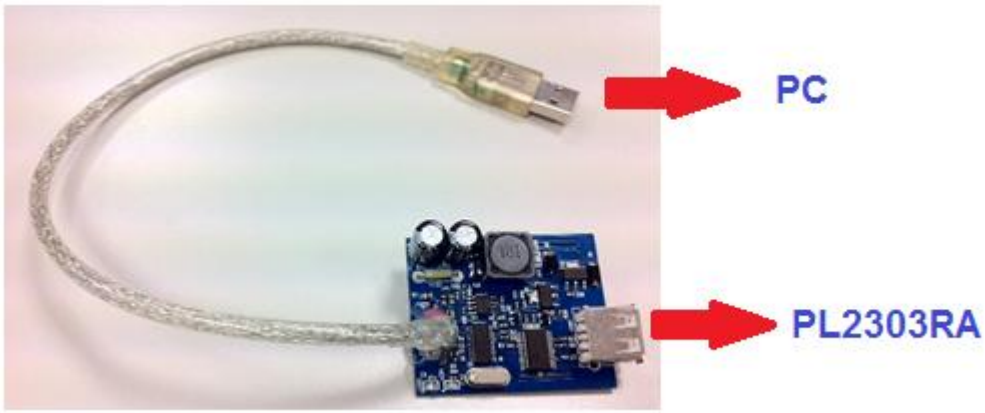
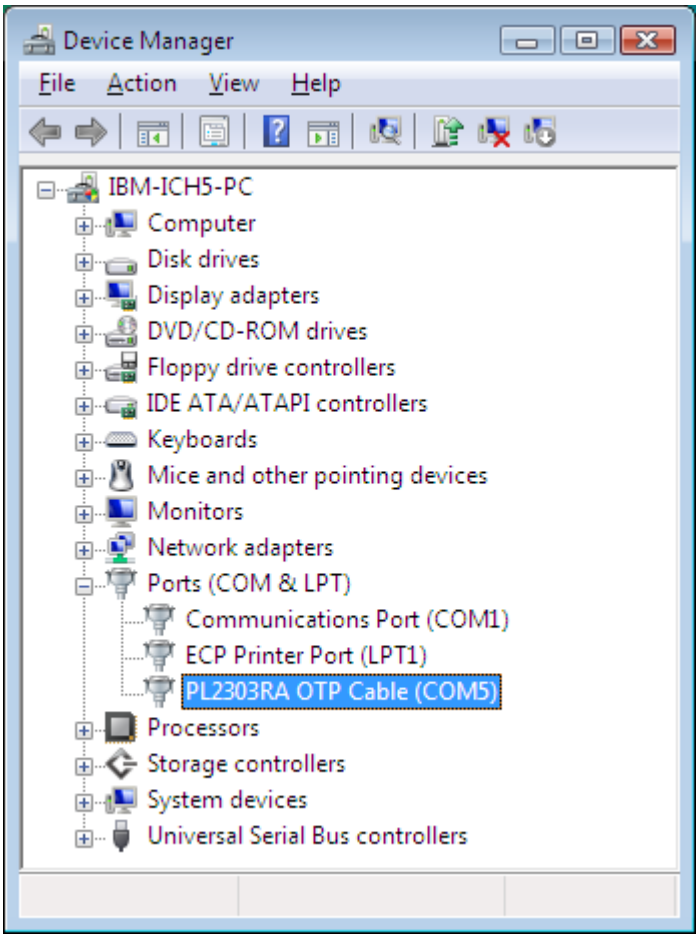
How to use the OTPROM Writer Program

Follow the steps below on how to use the PL2303RA OTPROM program:

1. Plug in the USB A-type connector of the PL2303RA OTP converter board to the USB port of the Windows PC. Plug in the PL2303RA device to the PL2303RA OTPROM USB A-Type receptacle.



2. Go to Device Manager and check if PL2303RA OTP Cable is detected and COM port assigned.



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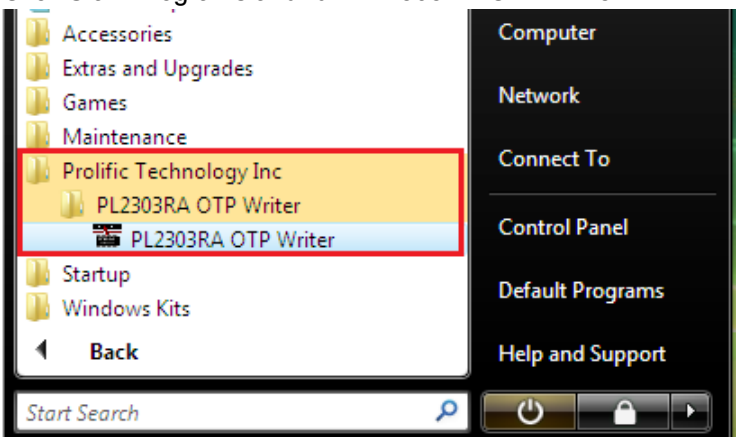
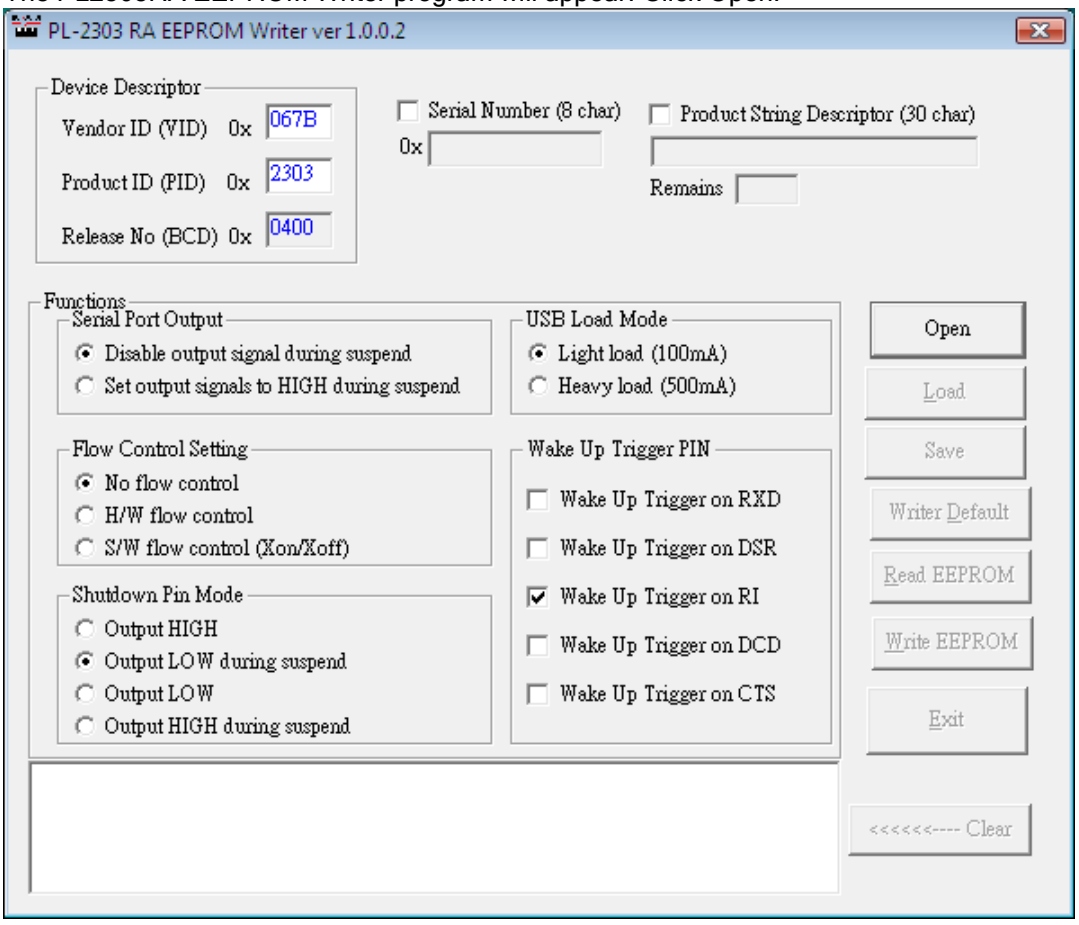
3. Click Start-Programs and run PL2303RA OTP Writer.



4. The PL2303RA EEPROM Writer program will appear. Click Open.



NOTE: Do not use PL2303HXD EEPROM Writer for PL2303RA. It is not fully compatible.

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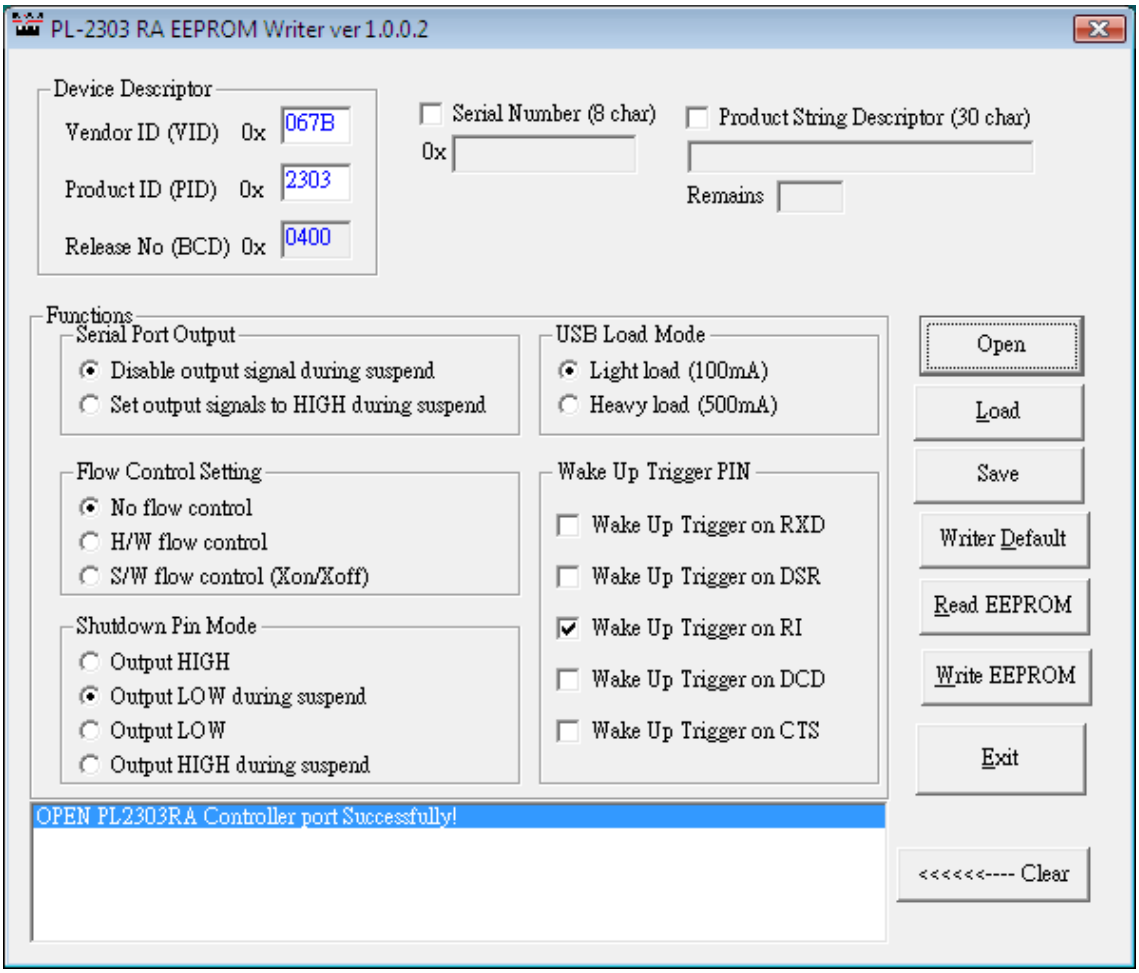
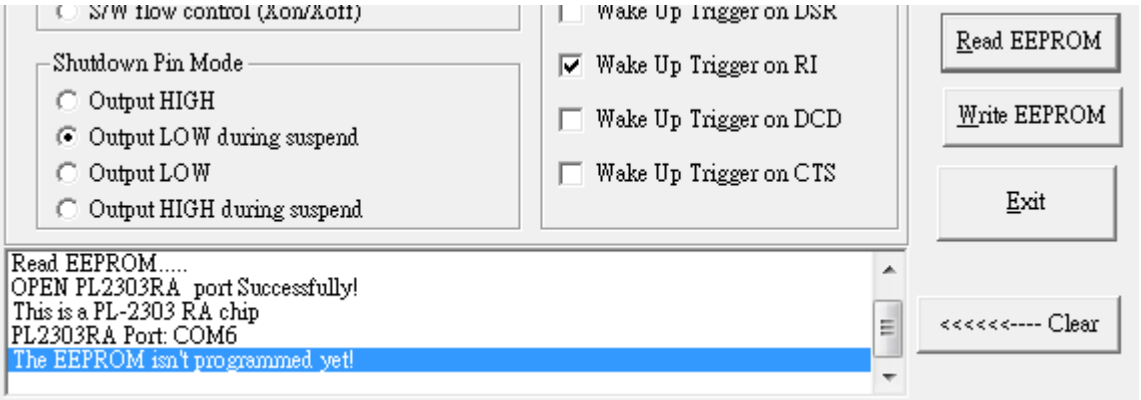
5. Check if open PL2303RA Controller port is successful. Click Read EEPROM.



6. EEPROM Writer will check the chip version if RA chip and COM port number. It will also show EEPROM isn't programmed yet if empty.



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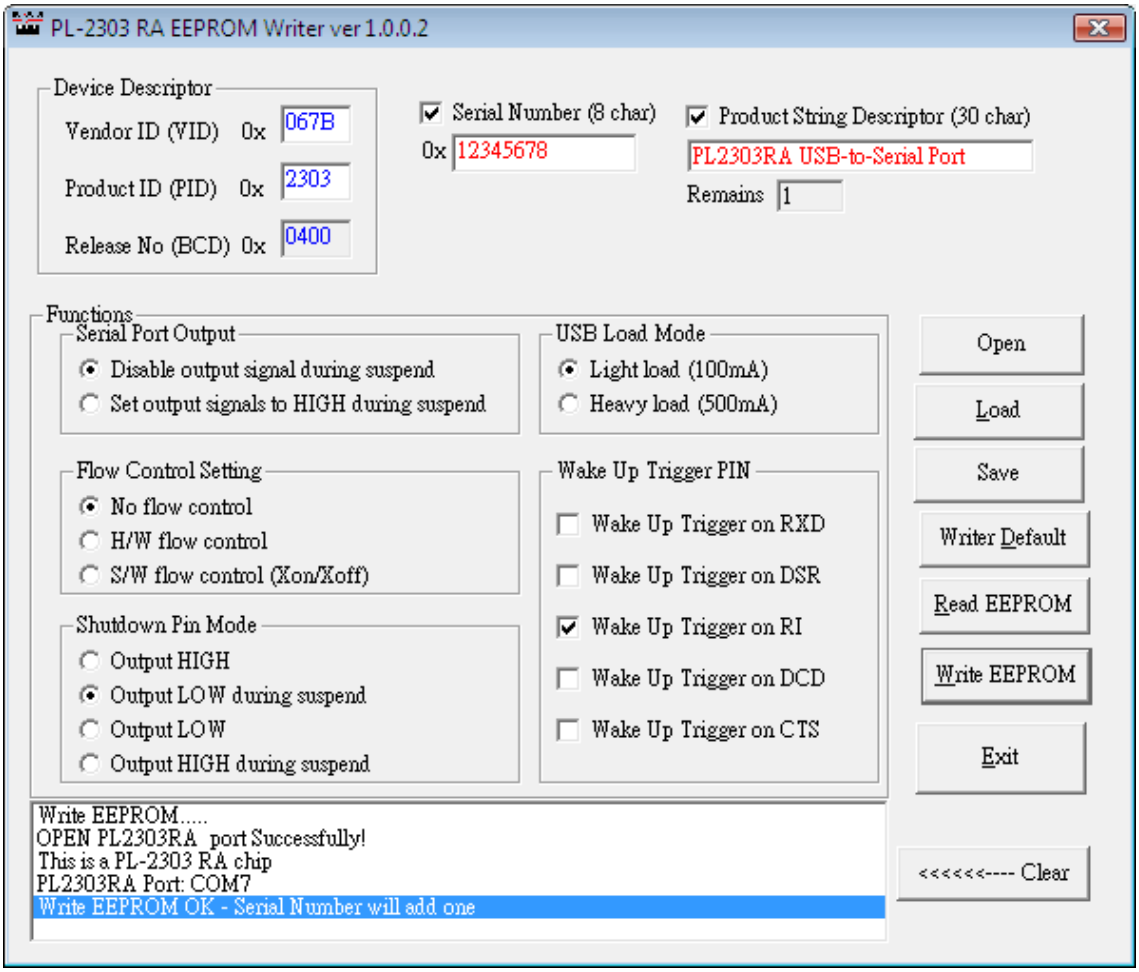
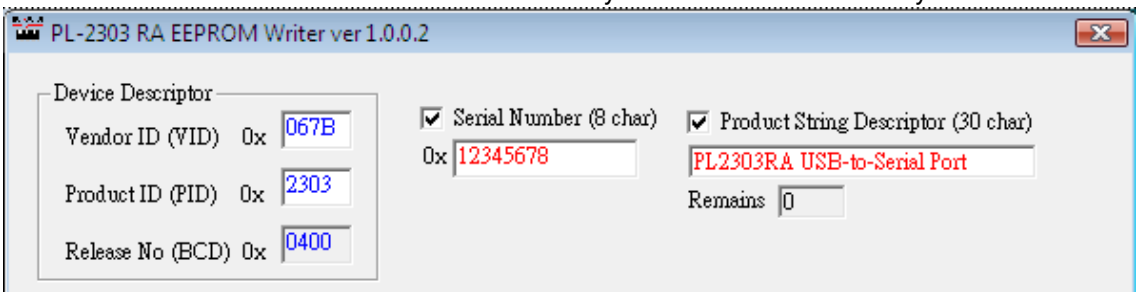
7. Modify the available descriptors and settings for your product requirements. Click Write EEPROM to write the new configuration. The status box will show Write EEPROM OK. If Serial Number is entered, it will automatically add one integer.



NOTE: Changing the VID/PID would require a customized driver to support it. Contact Prolific FAE for driver customization.

8. Note that the PL2303RA OTPROM can only be written twice. If the Remains box shows 0, it means the OTPROM has been written twice already and cannot be written anymore.



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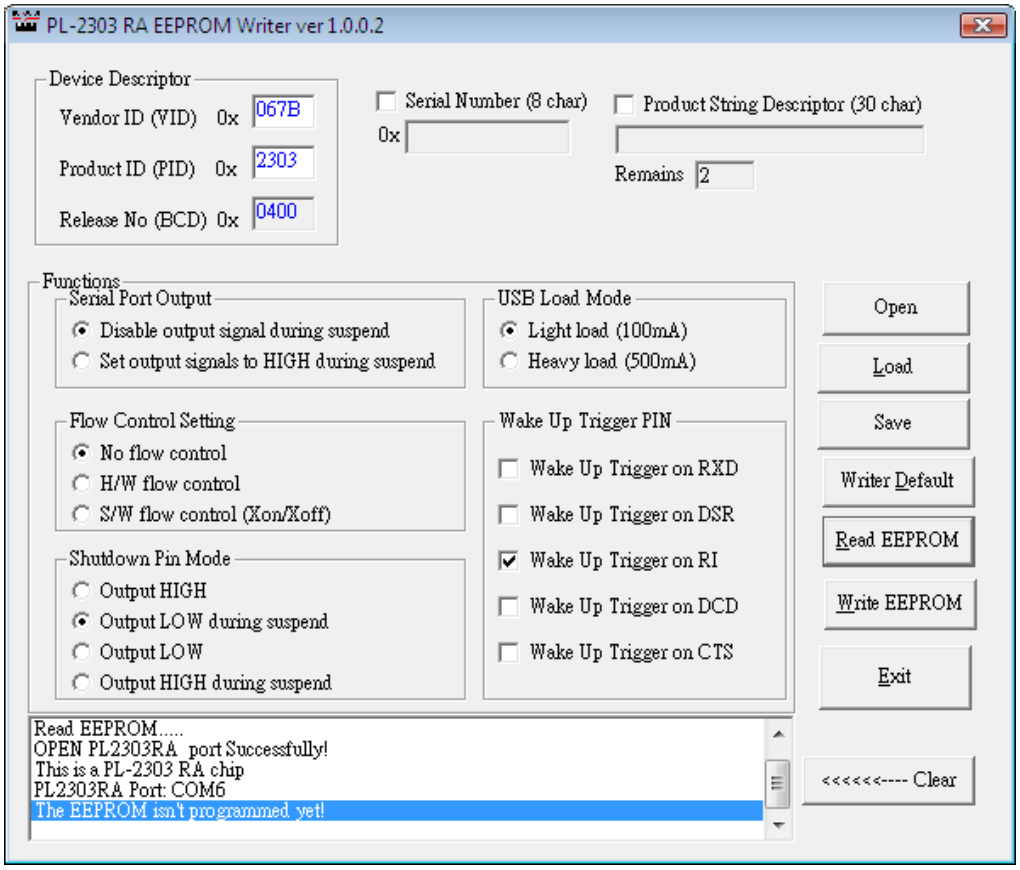
PL2303RA EEPROM Writer Program

This section describes the options provided in the PL2303RA EEPROM Writer program:



Item	Default	Description
Vendor ID (VID)	067B (hex)	USB unique Vendor ID of Company or Manufacturer. This ID is applied and registered from USB-IF. Refer to this website for applying VID: http://www.usb.org/developers/vendor/
Product ID (PID)	2303 (hex)	USB Product ID assigned by Company or Manufacturer.
Rel. No. (BCD)	0400	This field reports the internal chip release number. This field is fixed and not allowed to be changed.
Serial No. (8 hex characters)	No Serial Number	This field allows you to enter product USB serial number. Entering a unique serial number allows the device to be assigned the same COM Port number even when plug to other USB ports of the same PC.
Product String Descriptor	None	This field when entered will be the string displayed by Windows and other OS when device is first detected before driver is loaded.
Remains	2	The PL2303RA OTPROM can be written twice only and cannot be erased. This chip does not support external EEPROM.

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Functions	Default	Description
Serial Port Output	Disable	This option allows to set output signals to HIGH during suspend mode.
USB Load Mode	Light Load (100mA)	This option sets the USB device power mode if 100mA (low-power) or 500mA (high power).
Flow Control Setting	No Flow Control	This option allows to set the flow control initial setting to none, H/W, or S/W control. Note: H/W and S/W control can also be set by user serial program software.
Wakeup Trigger Pin	Wakeup trigger on RI	This option allows setting the trigger pin for remote wakeup function. **Note:** Enable this function (Remote Wakeup) for PL2303RA to support USB Selective Suspend which will suspend chip power when chip is idle for 10 seconds and COM Port is not open.
Shutdown Pin Mode	Output LOW during suspend	This option allows to set the Shutdown pin mode to Output HIGH or LOW. Refer to the PL2303RA chip datasheet or schematic for the Shutdown pin number.

Button Function	Description
Open	This button enables the attached PL2303RA COM port to be opened. You need to click this button during first-time enumeration.
Load	This new button feature allows you to load a previously saved EEPROM Writer configuration INI file.
Save	This new button feature allows you to save the existing EEPROM Writer configuration in INI file.
Writer Default	This button will automatically write the Prolific EEPROM default settings like VID (067B), PID (2303), and other defaults.
Read EEPROM	This button will read the OTPROM contents of the PL2303RA device.
Write EEPROM	This button will write the settings you modified to the OTPROM of the PL2303RA chip. **NOTE:** PL2303RA can only be written twice and will warn you if there is no more remaining space.
Exit	This button will close the program.
<<<<----- Clear	This button will clear all log information on the display box.

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