

## PL-2303HXD USB-to-Serial Bridge Controller

### Migration Guide Application Note

#### Introduction

This application note provides important migration guidelines for PL-2303HXD Edition USB-to-Serial Bridge Controller. Refer to this application note if you are migrating from PL-2303HX (Chip Rev A) or PL-2303X (Chip Rev A) to the PL-2303HXD.

#### PL-2303HXA, XA and HXD Chip Comparison Table

Following are the difference between PL-2303HXA, PL-2303XA, and PL-2303HXD chips:

	PL-2303X (Chip A) or PL-2303XA	PL-2303HX (Chip A) or PL-2303HXA	PL-2303HX (Chip D) or PL2303HXD
<b>Core Voltage</b>	3.3V	3.3V	3.3V
<b>RS-232 VDD</b>	3.3V ~ 1.8V	3.3V ~ 1.8V	3.3V ~ 1.8V
<b>Baud Rate setting</b>	75 ~ 6M bps	75 ~ 6M bps	<b>75 ~ 12M bps</b>
<b>Clock Source</b>	External 12MHz crystal & Internal 4X PLL	External 12MHz crystal & Internal 4X PLL	<b>Internal 96MHz clock generator</b>
<b>Initial Startup Configuration</b>	External EEPROM	External EEPROM	<b>Internal OTPROM</b>
<b>Hardware Flow Control</b>	RTS/CTS	RTS/CTS	<b>RTS/CTS or DTR/DSR</b>
<b>General Purpose IO</b>	2 (GP0/1)	2 (GP0/1)	<b>4 (GP0/1/2/3)</b>
<b>Pin Differences</b>	Pin 13 → EE_CLK Pin 14 → EE_DATA Pin 19 → RESET_N <sup>1</sup> Pin 21 → GND Pin 25 → GND_A Pin 27 → OSC1 Pin 28 → OSC2	Pin 13 → EE_CLK Pin 14 → EE_DATA Pin 19 → NC Pin 21 → GND Pin 25 → GND_A Pin 27 → OSC1 Pin 28 → OSC2	<b>Pin 13 → GP3 Pin 14 → GP2 Pin 19 → RESET_N<sup>1</sup> Pin 21 → NC Pin 25 → GND Pin 27 → NC Pin 28 → RESERVED</b>
<b>Circuit</b>	Compatible with HX version	Compatible with X Versions	Compatible with HX or X Versions
<b>Windows 8Support</b>	No <sup>2</sup>	No <sup>2</sup>	<b>YES</b>
<b>PKG</b>	SSOP28	SSOP28	SSOP28 / QFN32
<b>Product Cycle</b>	<b>To be Discontinued 10/2012 (EOL)</b>	<b>To be Discontinued 10/2012 (EOL)</b>	<b>Available</b>

<sup>1</sup> – PL2303HXD Pin 19 has internal pull-up and also 5V tolerant. You can keep Pin 19 PCB layout as NC or short to pin 20.

<sup>2</sup> – Prolific Windows driver does not support Windows 8 for PL-2303HXA and PL-2303XA chip versions.



## PL-2303HXD OTPROM Guidelines

If you need to write custom EEPROM settings into the internal OTPROM (One-Time Programming ROM) of PL-2303HXD, it is required to supply 6.5V (see Figure-3) to the device while executing the program. Prolific can provide 5V-to-6.5V USB port converters to customers; or the schematic diagram upon request if customers want to produce the converters themselves. Contact Prolific for more information.

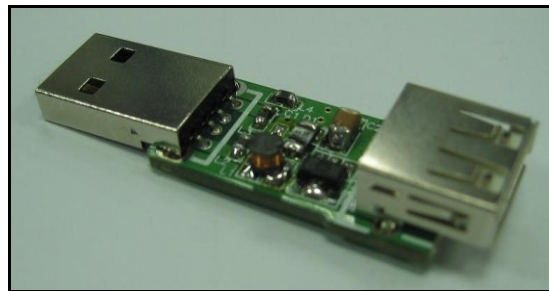
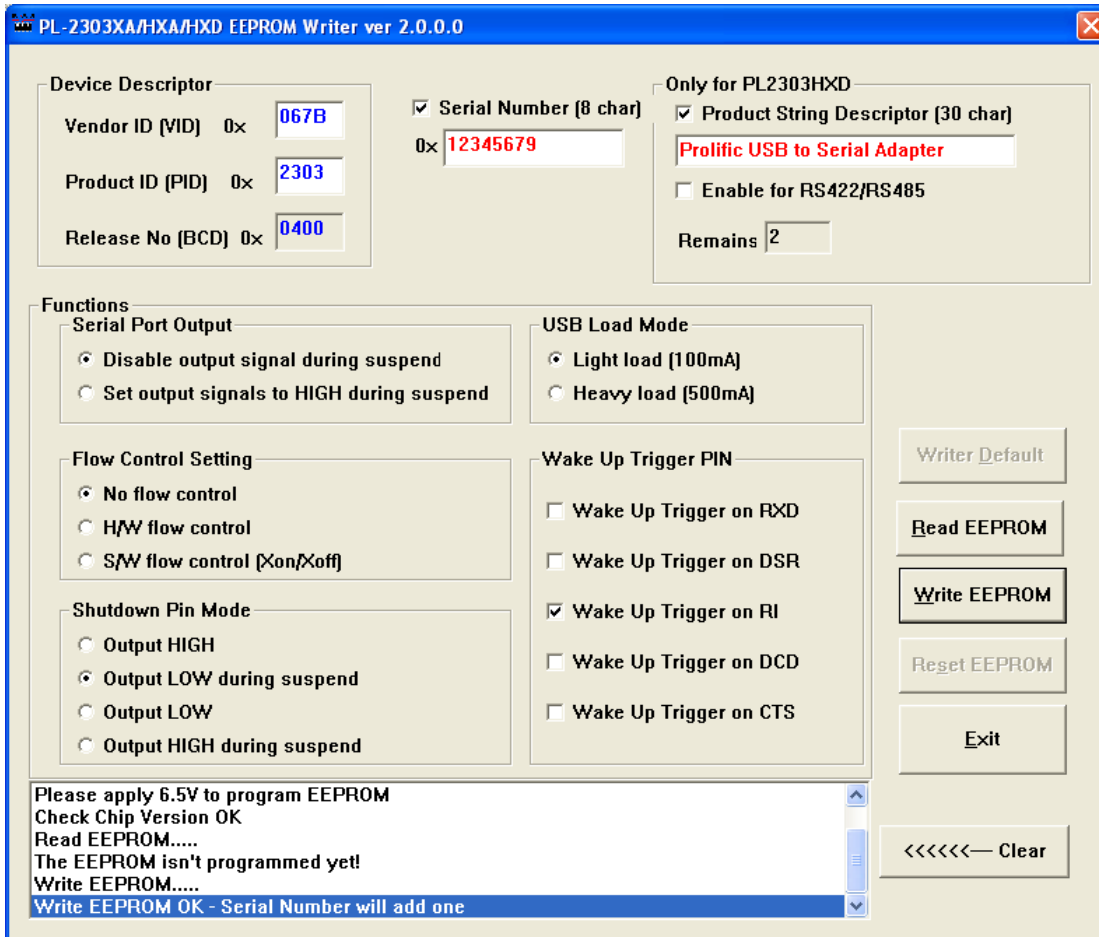


Figure-3: USB 5V-to-6.5V Port Converter

### How to run OTPROM for PL-2303HX:

1. Run the PL-2303 Windows Driver Setup program to install the device driver to the computer. Please make sure to install the latest Windows driver version to run OTPROM.
2. Plug the USB 5V-to-6.5V Port Converter into the USB port of the USB Hub or PC.
3. Plug the PL-2303HXD device to the Converter's A Type Receptacle Connector.
4. Windows will detect the PL-2303HXD device and loads the pre-installed driver. Check Systems-Device Manager if COM Port number is properly designed. The COM port number assigned must not be over COM30.
5. Download and run the latest PL2303 EEPROM Writer program to write new configuration data into the OTPROM. Please see screenshot figures next page. Refer to the PL2303 EEPROM Writer User Manual. Contact Prolific FAE for support.



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