Introduction

The USB to UART Bridge Controller (CY7C64225) is a fully integrated USB to UART controller that provides USB connectivity to devices with a UART interface. The device includes a USB 2.0 Full-Speed Controller, Voltage Regulator and internal EEPROM in a 28-pin SSOP package. These features make the product ideal for upgrading legacy peripherals to USB interface, supporting data transfer rates from 300 bps to 256000 bps and data format of 8 data bits, 1 stop bit and no parity. The controller supports bus and self-powered modes, and enables efficient system power management with suspend and remote wake-up signaling.

USB to UART Bridge Controller is a USB-IF certified, fixed function device that requires no programming from the user. Royalty free Virtual COM Port (VCP) drivers available with it ensure that it appears as a COM port to PC applications.

Features

- USB Compliant:
  USB-IF Certified with Test-ID (TID) : 40001425
- Single Chip Fully Integrated Solution:
  Integrated Clock, EEPROM, USB Termination Resistors and Voltage Regulator
- UART Controller:
  Data rates up to 256 Kbps
  Tx/Rx data buffers
  LED driver indicating data activity
- Driver Support:
  WHQL certified Virtual COM Port Drivers

Functional Overview

1. supports the following baud rates and data format
   Baud rates (bps): 300, 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200 and 256000 bps.
   Data Format:
   - 8 data bits
   - 1 stop bit
   - No parity
   Note At lower baud rates (300 bps to 2400 bps), UART data transfer is slower than the USB data transfer.
2. Hardware Reset
3. Suspend and Resume
4. Wakeup

Applications

- USB to UART Cable
- POS Printer Terminal
- Networking System
- Industrial and Power Meter
- USB Bar Code Reader
- USB Digital Camera Interface
- USB Wireless/Wired Modem

Driver Description and Setup
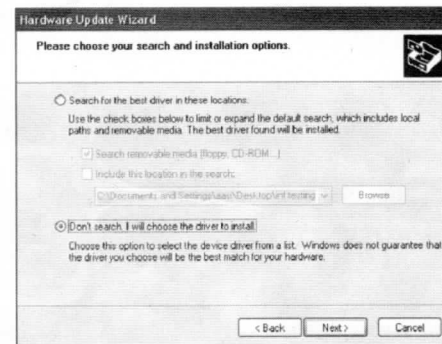
WHQL Certified for Cypress VID/PID 0x04B4/0x0008
1. Supports Windows XP, Vista, 7 and 8 (both 32-bit and 64-bit)
2. Supports Linux, Android and Mac

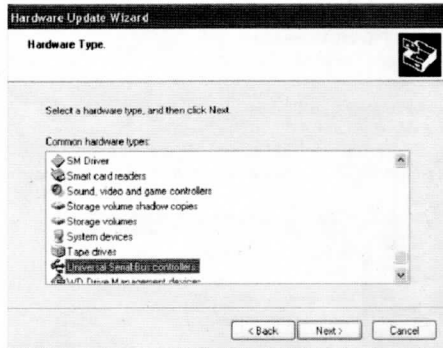**Following are steps involved in installing the driver**
1. Connect the CY7C64225 device to the host PC.
2. Hardware Upgrade Wizard window pop-ups requesting the driver to be used.
3. In the Hardware Upgrade Wizard window select "**Install from a list of specific location (Advanced)**" and click Next
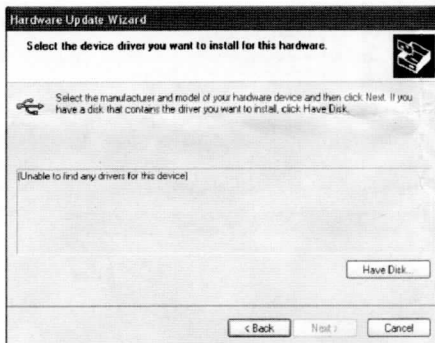

4. Select "**Don't search. I will choose the driver to install**" and click Next
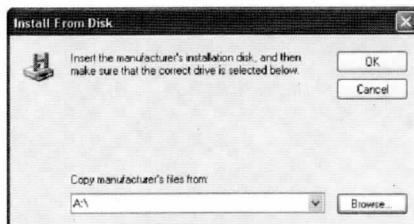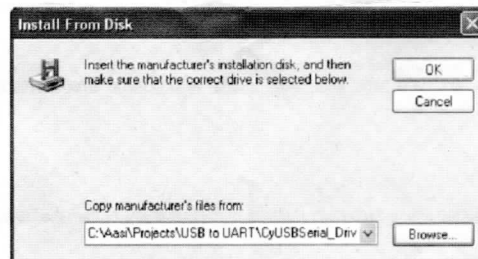

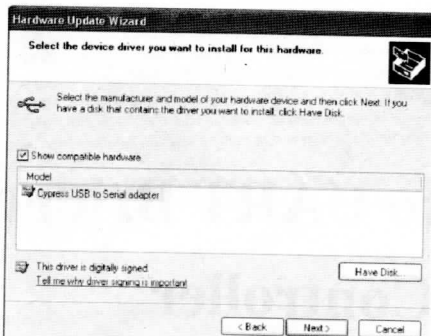5. Click Next

6. Click Have Disk. . .

7. Click Browse

8. Navigate to the location of the driver files (based on the OS and CPU-architecture) and point to CypressUsbAndBus. inf and then click Open.

9. Click OK.

10. Now the Model field will show the list of drivers. In this case it will the entry with the name "**Cypress USB to Serial adapter**" with a signed certificate symbol next to it. This symbol indicates that the driver is digitally signed. Select this entry and click Next

11. The driver files will be copied to the appropriate system folders. Click Finish
12. Follow steps 2 to 11 again and now point to CypressSerial. inf.
13. Now the CY7C64225 USB to UART is ready for use.

Baud Rate Configuration

CY7C64225 supports configurable baud rates. Terminal emulator applications like Hyperterminal, Teraterm, and so on to allow selecting the baud rate to be used for communication on the COM port. While opening the Virtual COM port, CDC class request SET_LINE_CODING is sent by the Terminal emulator with the selected baud rate. Based on this request, CY7C64225 configures the baud rate of its UART interface.