

Product Specification



Description

The BT253 Bluetooth USB Adapter is an evaluation platform for the BT53 module series.

This adaptor allows a developer to quickly utilize the embedded AT command features of the Bluetooth module, without further platform support or development. The Bluetooth profiles and protocol stack come pre-loaded, for easy startup.

Customized firmware for peripheral device interaction, power optimization, security, and other proprietary features may be supported and can be ordered pre-loaded and configured.

Additional Documentation

- **abSerial User Guide**
- **abSerial Reference Guide**
- **abSerial Configuration Guide**
- **BT53 Datasheet**

Features

- **Bluetooth Radio**
 - Fully embedded Bluetooth v4.1 with profiles
 - Class 1 radio
 - Complete RF ready module
 - Integrated chip antenna
 - Range up to 60m LOS
 - FCC/IC/CE & Bluetooth qualified
- **ST Micro Cortex-M4 microprocessor up to 100MHz**
- **Memory**
 - 512K bytes flash memory
 - 128K bytes RAM memory
- **Data Rate**
 - 1.2M bps maximum data rate
 - Multipoint capability up to 6 slaves
- **Serial Interface**
 - COM port, up to 921K baud
 - USB v2.0
- **User Interface**
 - AT command set (abSerial)
 - Firmware upgrade over UART

Software Architecture

Lower Layer Stack

- Bluetooth v4.1, dual mode: BR/EDR + BLE
- Device power modes: active, sleep and deep sleep
- Wake on Bluetooth
- Authentication and encryption
- Encryption key length from 8-bits to 128-bits maximum
- Persistent FLASH memory and BD Address
- All ACL (Asynchronous) packet types
- eSCO (Synchronous) packets
- Point to multipoint and scatter net support: 3 master and 7 slave links allowed (10 active links simultaneously)
- Sniff and hold modes
- Master/slave role switch
- Dedicated Inquiry Access Code
- Dynamic packet selection
- Dynamic power control
- Bluetooth test modes

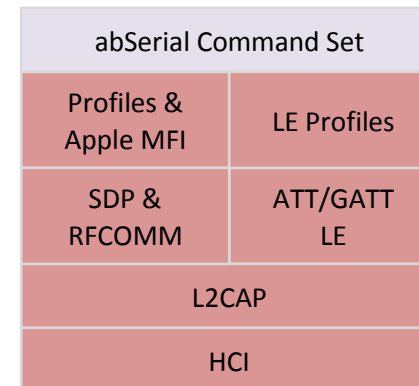
Upper Layer Stack: Amp'ed UP

- SPP, IAP, A2DP, AVRCP, HFP, HID, BLE
- RFCOMM, SDP, L2CAP, ATT, GATT
- Multipoint with 6 simultaneous slaves (limited at application layer)
- Concurrent BR/EDR and BLE usage

HCI Interface

- Bluetooth v4.1 specification compliant
- HCI UART transport layer (H4)

Amp'ed UP Stack 4.1



Driver Installation

Windows XP Installation Instructions:

Step 1

Simply plug in the BT253 into any available USB port. The computer will respond with the following two messages...



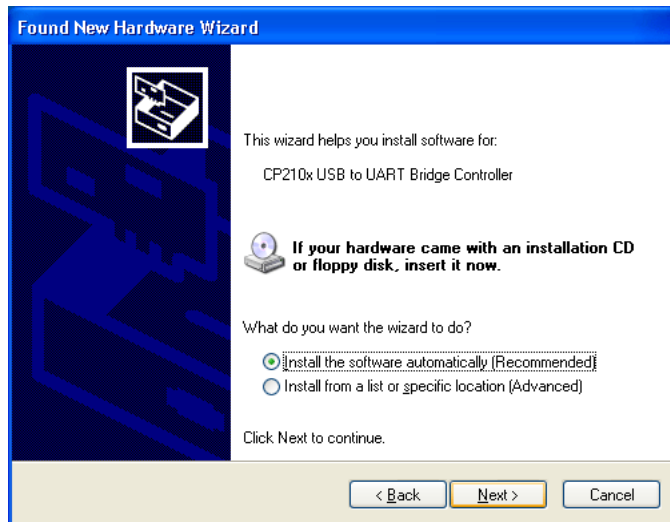
Step 2

Next, Windows will launch a "Found New Hardware Wizard" installation window.

Select YES to locate the drivers from the Microsoft Website.



Click **NEXT** to install automatically.



Now the BT253 USB to UART Controller and Virtual COM port driver is installed.

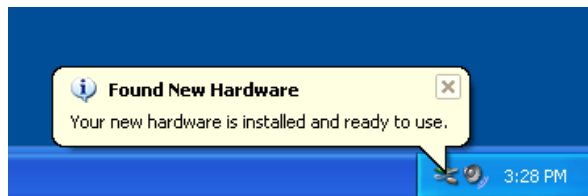
Step 3

The "Found New Hardware Wizard" will now open again in order to install the USB device driver.

Select **YES** to locate the drivers from the Microsoft Website.



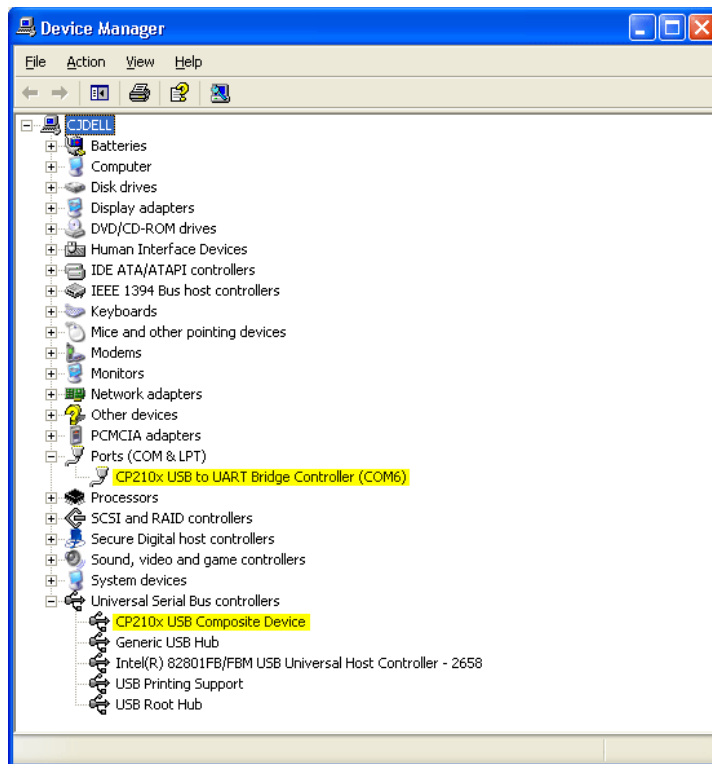
You will now see the following message.



Step 4

You may open the Windows Device Manager application to verify correct installation, and see which COM port has been assigned to your BT253 Bluetooth serial device. The BT253 will usually be assigned the same virtual COM port each time it is inserted (unless you have other virtual COM devices altering port assignments).

You should see the two device drivers for your BT253 Bluetooth device here



The CP2102 chip provides the functionality to use standard UART serial communications from your computer via the Universal Serial Bus, and interfaces directly to our Bluetooth module inside the BT253 Bluetooth serial adapter.