

Product Specification



Features

- **Bluetooth Radio**
 - Fully embedded Bluetooth v2.1+EDR with profiles
 - Class 1 radio
 - Complete RF ready module
 - Wireless data communications
 - Integrated chip antenna
 - 128-bit encryption security
 - Range up to 120m LOS
 - FCC & Bluetooth qualified
- **ST Micro Cortex-M3 microprocessor up to 70MHz**
- **Memory**
 - 256K bytes flash memory
 - 48K bytes RAM memory
- **Data Rate**
 - 2M bps maximum data rate
 - Multipoint capability up to 7 slaves
- **Serial Interface**
 - COM port, up to 921K baud
 - USB v2.0
- **User Interface**
 - AT command set (abSerial)
 - Firmware upgrade over UART

Description

The BT-210 Bluetooth USB Adapter is a perfect solution for those looking for easy, all-in-one, Bluetooth connectivity.

Our design eliminates the need for a system to apply its processing and memory resources to running the BT-210 since it already has its own microprocessor, memory, and firmware!

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**
- **BT-11 Datasheet**

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1. Software Architecture

1.1 Lower Layer Stack

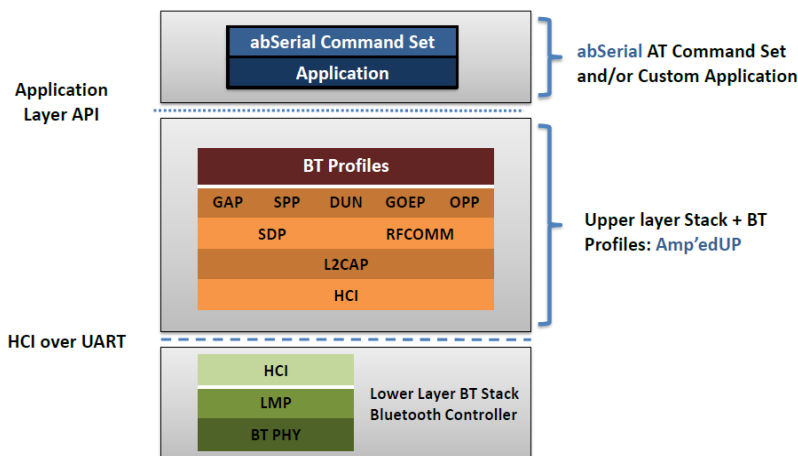
- Full Bluetooth v2.1+EDR data rate (3M bps maximum)
- Device power modes—active, sleep and deep sleep
- Wake on Bluetooth feature—optimized power consumption of host CPU
- Authentication and encryption
- Encryption key length from 8-bits to 128-bits maximum
- Persistent FLASH memory—for BD Address and radio parameter storage
- All ACL (Asynchronous Connection Less) packet types (DM1, DH1, DM3, DH3, DM5, DH5, 2-DH1, 2-DH3, 2-DH5, 3-DH1 3-DH3, 3-DH5, AUX1)
- SCO (Synchronous Connection Oriented) packet types (HV1, HV2, HV3)
- Point to multipoint and scatternet support—3 master and 7 slave links allowed (10 active links simultaneously)
- Park, sniff, and hold modes—fully supported to maximum allowed intervals
- Master slave switch—supported during connection and post connection
- Dedicated Inquiry Access Code—for improved inquiry scan performance
- Dynamic packet selection—channel quality driven data rate to optimize link performance
- Dynamic power control—interference reduction and link performance
- Bluetooth test modes—per Bluetooth specification
- 802.11b co-existence—AWMA and AFH
- Vendor specific HCI commands—to support device configuration and certification test modes

1.2 Upper Layer Stack: Amp'ed UP

- SPP, OBEX, SDAP, GAP, and DUN protocols
- RFCOMM, SDP, and L2CAP supported
- Multipoint with 7 simultaneous slaves

1.3 HCI Interface

- Bluetooth v2.1 specification compliant
- HCI UART transport layer (H4)

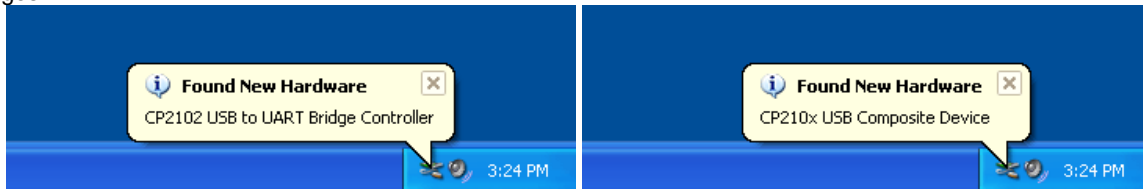


2 Driver Installation

Windows XP Installation Instructions:

Step 1

Simply plug in the BT-210 into any available USB port.
The computer will respond with the following two messages...

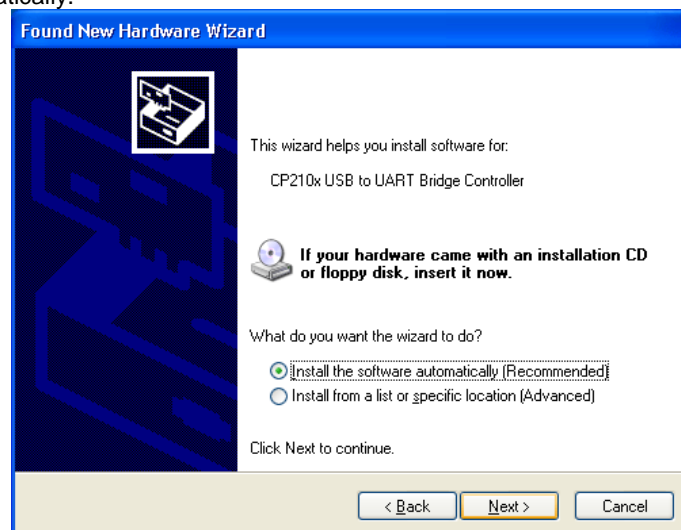


Step 2

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.

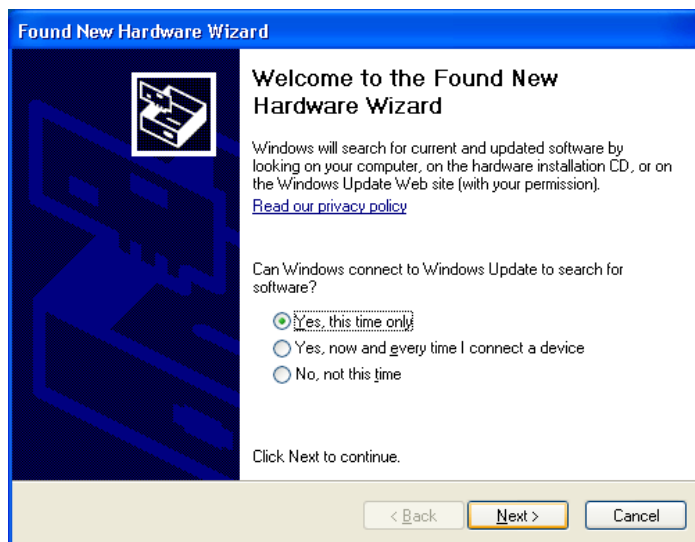


Now the BT-210 USB to UART Controller and Virtual COM port driver is installed.

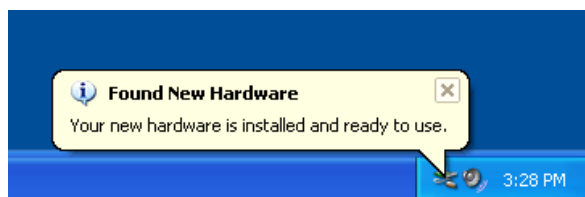
Step 3

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.



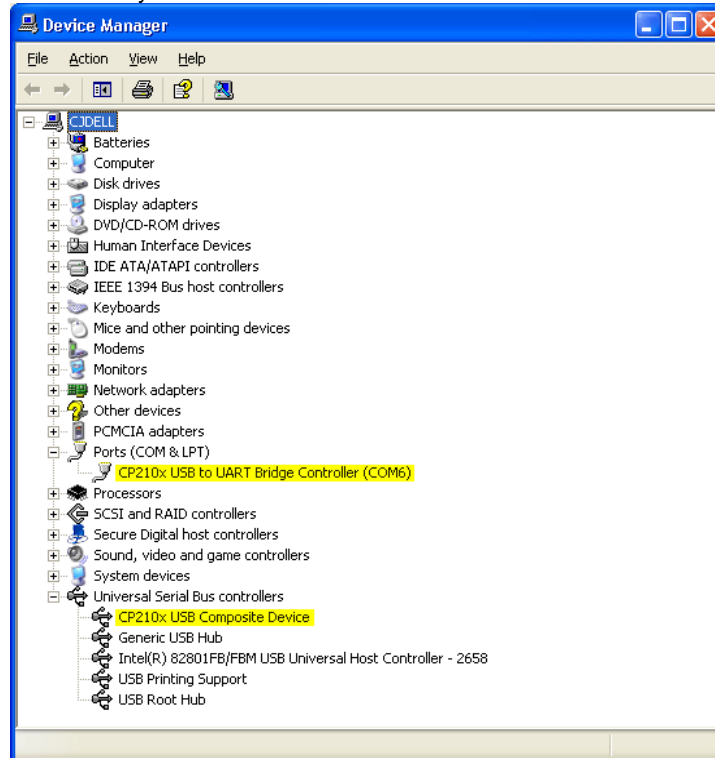
You will now see the following message.



Step 4

You may open the Windows Device Manager application to verify correct installation, and see which COM port has been assigned to your BT-210 Bluetooth serial device. The BT-210 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 BT-210 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 BT-210 Bluetooth serial adapter.