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AN214770

Downloading Firmware to CYW20702 Modules Using BlueTool™

Associated Part Family: CYW20702

This Application Note describes the step-by-step process of downloading a firmware file to a CYW20702 module using BlueTool™ software. It includes details on installing a driver to allow the CYW20702 module to be connected to a USB port a Windows® machine.

1 Introduction

This Application Note describes the step-by-step process of downloading a firmware file to a CYW20702 module using BlueTool™ software. It includes details on installing a driver to allow the CYW20702 module to be connected to a USB port a Windows® machine.

1.1 Cypress Part Numbering Scheme

Cypress is converting the acquired IoT part numbers from Broadcom to the Cypress part numbering scheme. Due to this conversion, there is no change in form, fit, or function as a result of offering the device with Cypress part number marking. The table provides Cypress ordering part number that matches an existing IoT part number.

Table 1. Mapping Table for Part Number between Broadcom and Cypress

Broadcom Part Number	Cypress Part Number
BCM20702	CYW20702

1.2 Acronyms and Abbreviations

In most cases, acronyms and abbreviations are defined on first use.

For a comprehensive list of acronyms and other terms used in Cypress documents, go to: http://www.cypress.com/glossary.

2 IoT Resources

Cypress provides a wealth of data at http://www.cypress.com/internet-things-iot to help you to select the right IoT device for your design, and quickly and effectively integrate the device into your design. Cypress provides customer access to a wide range of information, including technical documentation, schematic diagrams, product bill of materials, PCB layout information, and software updates. Customers can acquire technical documentation and software from the Cypress Support Community website (http://community.cypress.com/).

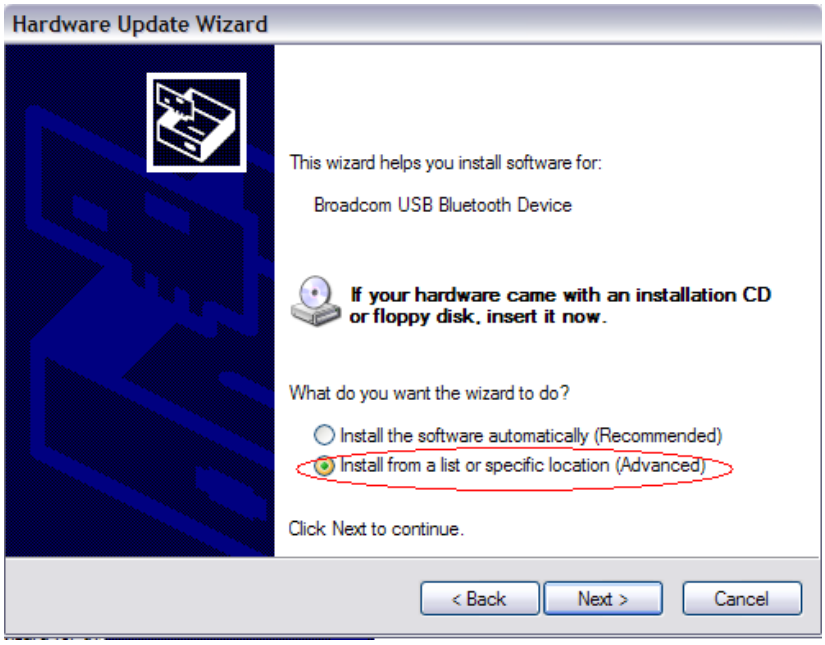
3 Installing the USB Port Driver

Follow the steps below to install the USB Port driver for the CYW20702 module.

1. Copy the btwusb.inf file[1] located in C:\Drivers folder to C:\Program Files\CYPRESS.
2. Connect the Bluetooth module to the PC. The Hardware Update Wizard will open.
3. Select the **No, not this time** option, then click **Next**.

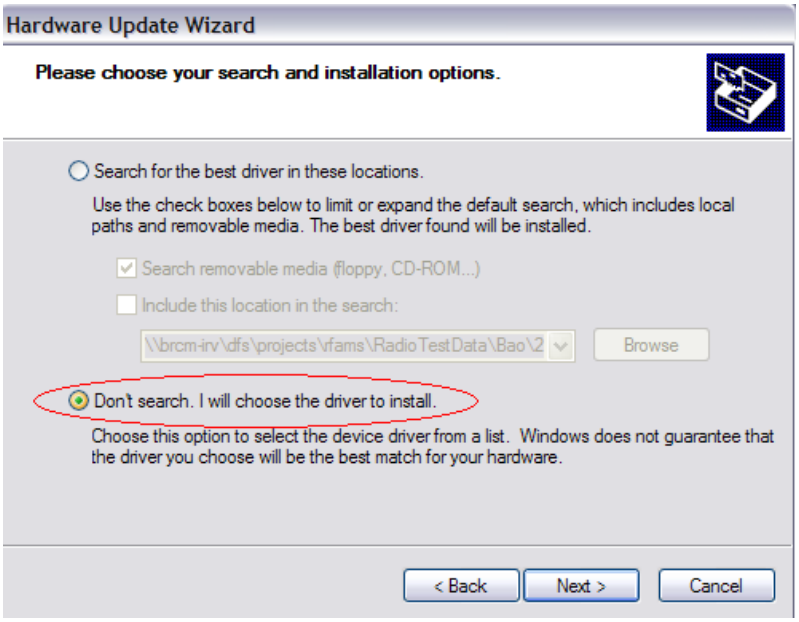


4. Select the **Install from a list or specific location (Advanced)** option, then click **Next**.

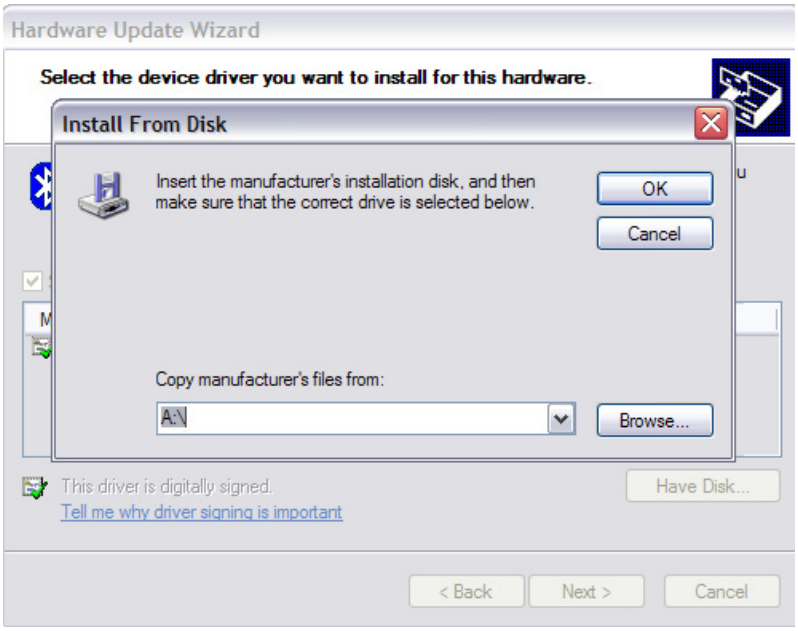


1. This file is provided by your Cypress Sales or Engineering support representative.(See IoT Resources on page 1)

5. Select the **Don't search. I will choose the driver to install** option, then click **Next**.

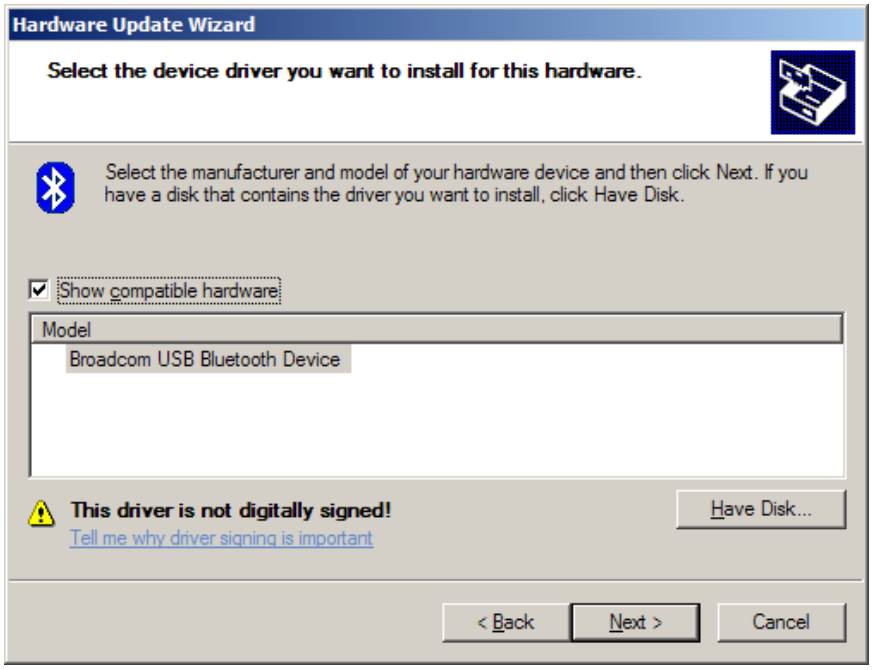


6. In the next window, select the **Have Disk…**option, then browse to **C:\Program Files\CYPRESS**.



7. Select the **btwusb.inf** file, then click **OK**.

8. Select **Cypress USB Bluetooth Device**, then click **Next**. The wizard will start installing the driver.



9. Click **Finish** when the installation is complete.

4 Downloading Firmware

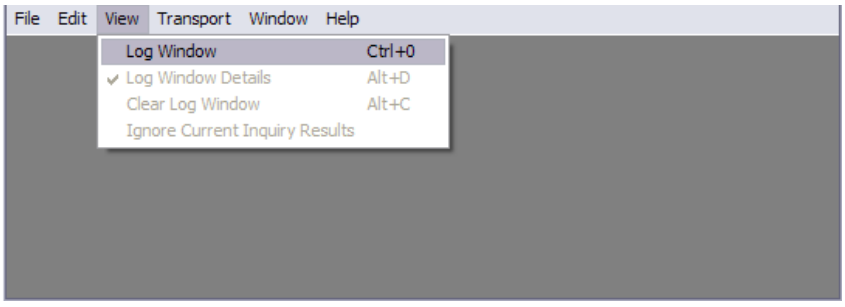
Follow the steps below to download a firmware file into the CYW20702 module.

Note: Make sure you have the latest version of BlueTool installed in your PC.

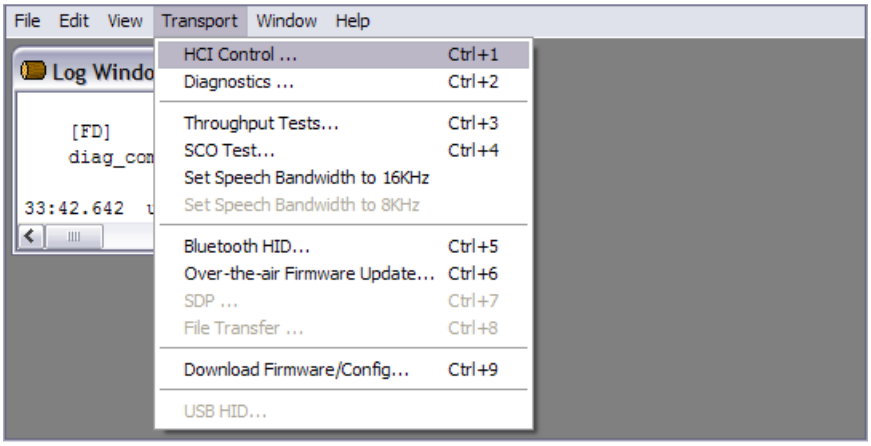
1. Start the BlueTool application. A window like the one shown below will open.



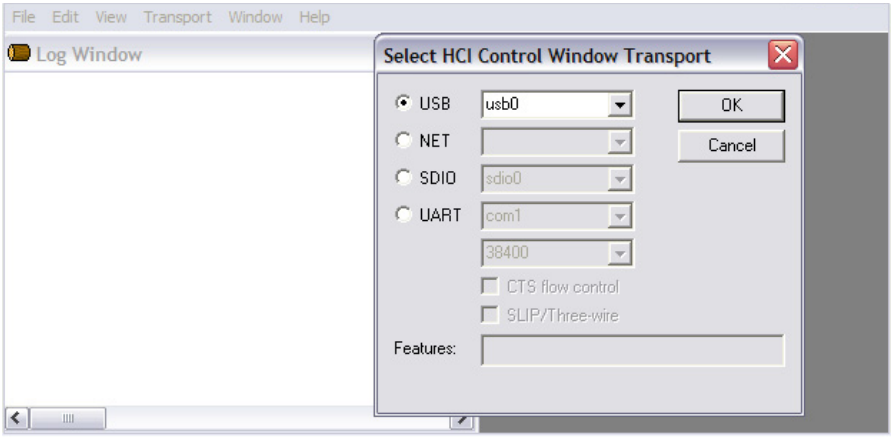
2. Open the **View** menu and select **Log Window**.



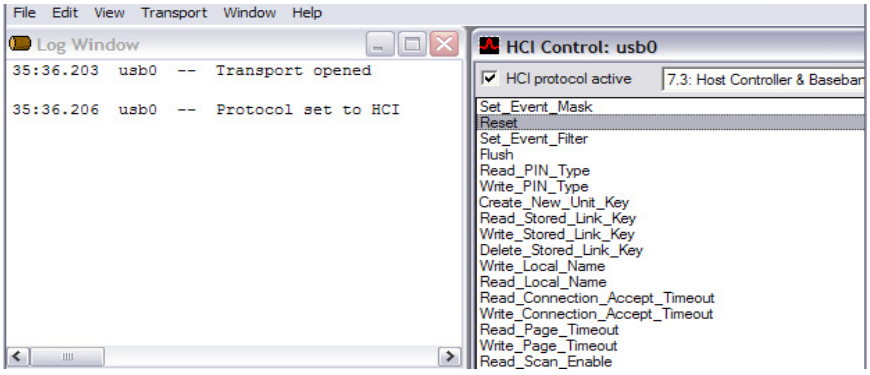
3. Open the **Transport** menu and select **HCI Control**. The **Select HCI Control Window Transport** window will open.



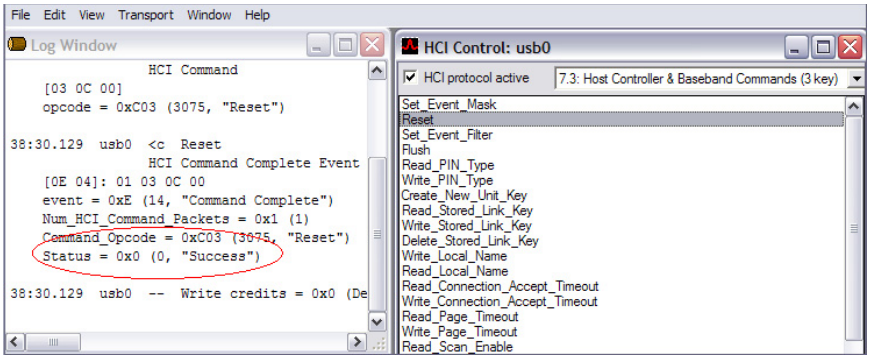
4. Select the correct port from the **USB** list, then click **OK**. The HCI Control window will open.



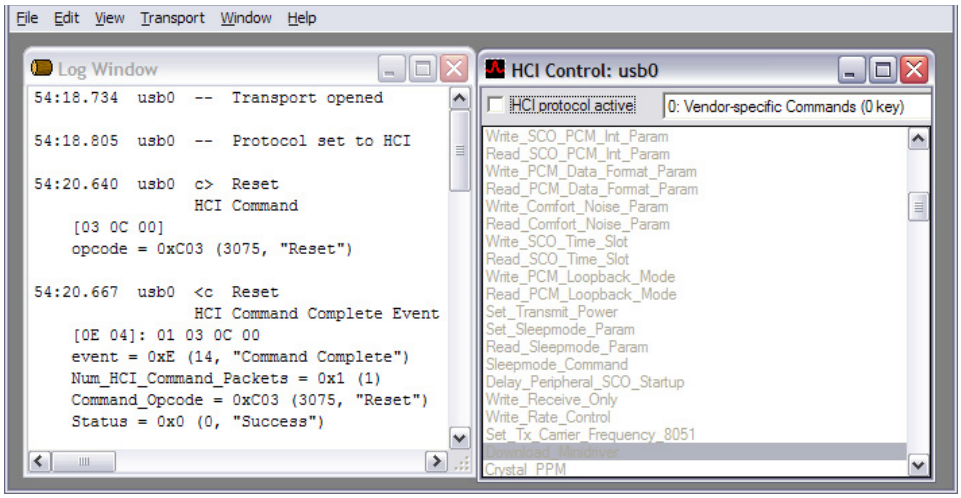
5. Select **7.3: Host Controller & Baseband Commands (3 key)** from the **HCI Control: usb0** list. In the corresponding list of commands, double-click **Reset** to reset the CYW20702 module.



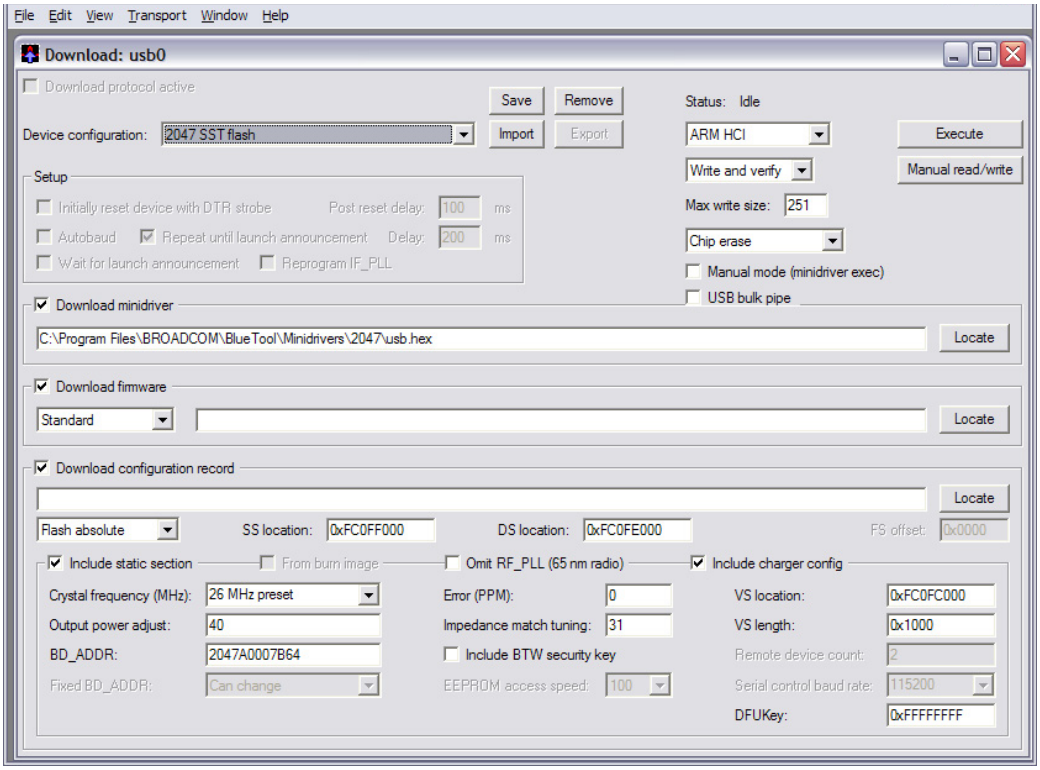
6. Check the **Log Window** field. If the reset was successful, **Status = 0x0 (0, "Success")** will be displayed in the field.



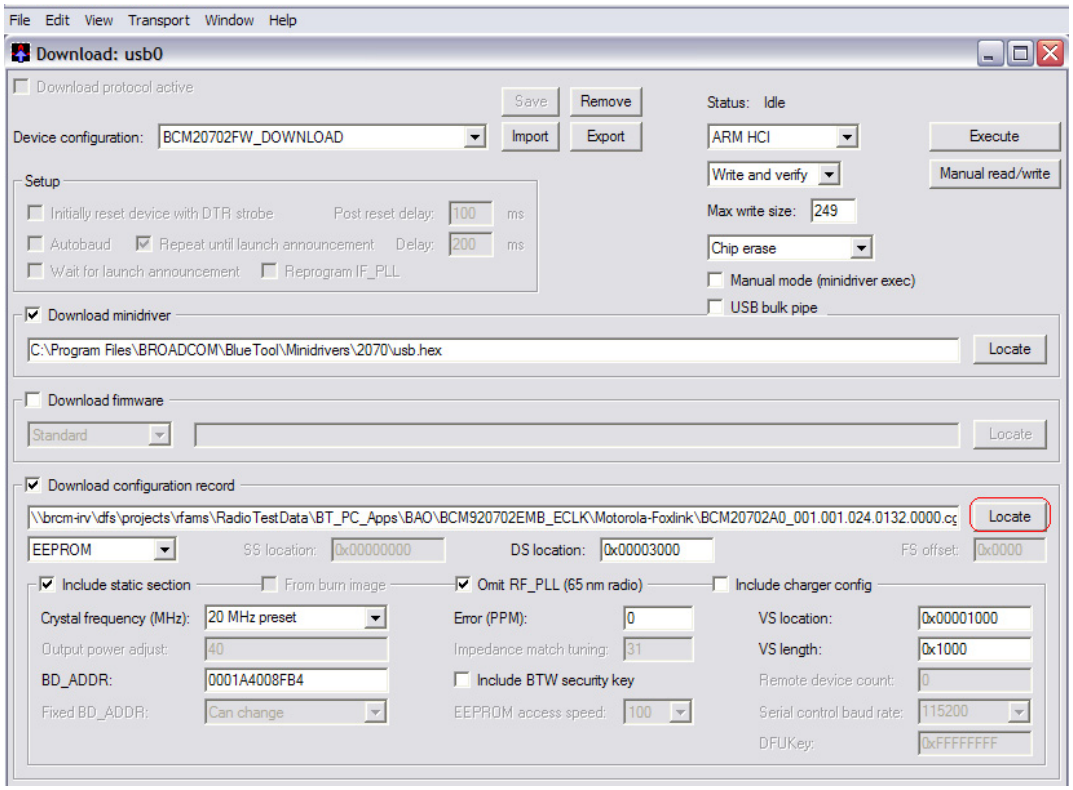
7. Select **0: Vendor-specific Commands (0 key)** from the **HCI Control: usb0** list. In the corresponding list of commands, double-click **Download_Minidriver**.



8. Open the **Transport** menu and select **Download Firmware/Config…,** then choose the correct USB port and click **OK**. The Download window will open as shown below.



9. Click the **Import** button to import the *.btp file[2]. A Download window similar to the one shown below will open.



10. Click the **Locate** button and select the *.cgr[2] or *.cgs[2] configuration file.
11. **Crystal Frequency**: this value is set through the *.btp file. If the frequency is incorrect for the crystal installed on the CYW20702 module, manually enter the appropriate value.
12. **BD_ADDR**: enter the board address for the specific CYW20702 module.
13. Click **Execute** to start downloading the firmware.
14. Cycle the power on the device. The CYW20702 module is now ready for normal operation.

5 References

The references in this section may be used in conjunction with this document.

Note: Cypress provides customer access to technical documentation and software through its Customer Support Portal (CSP) and Downloads & Support site (see IoT Resources on page 1).

For Broadcom documents, replace the “xx” in the document number with the largest number available in the repository to ensure that you have the most current version of the document.

	Document (or Item) Name	Broadcom Number	Cypress Number	Source
[1]	CYW20702 Single-Chip Bluetooth Transceiver and Baseband Processor Data Sheet	20702-DS1xx-R	002-14773	community.cypress.com

2. This file is provided by your Cypress Sales or Engineering support representative.

Document History

Document Title: AN214770 - Downloading Firmware to CYW20702 Modules Using BlueTool™ Document Number: 002-14770				
Rev.	**ECN No.**	**Orig. of Change**	**Submission Date**	**Description of Change**
**	–	–	06/27/2011	20702-AN300-R: Initial release
*A	5466350	UTSV	10/07/2016	Updated in Cypress template
*B	5841787	AESATP12	08/02/2017	Updated logo and copyright.

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