AN214858

Downloading Firmware to CYW20733 Modules Using BlueTool™

Associated Part Family: CYW20733

This document describes the step-by-step process of downloading the firmware to BCM20733 modules using BlueTool™ software.

1 About This Document

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
BCM20733	CYW20733

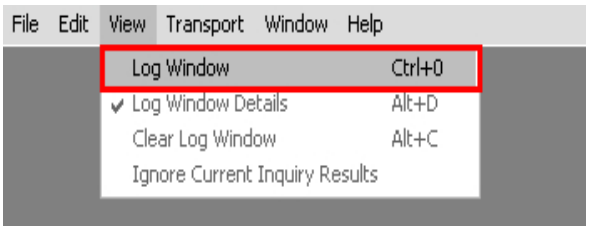
1.2 Acronyms and Abbreviations

In most cases, acronyms and abbreviations are defined on first use. For a more complete list of acronyms and other terms used in Cypress documents, go to: http://www.cypress.com/glossary.

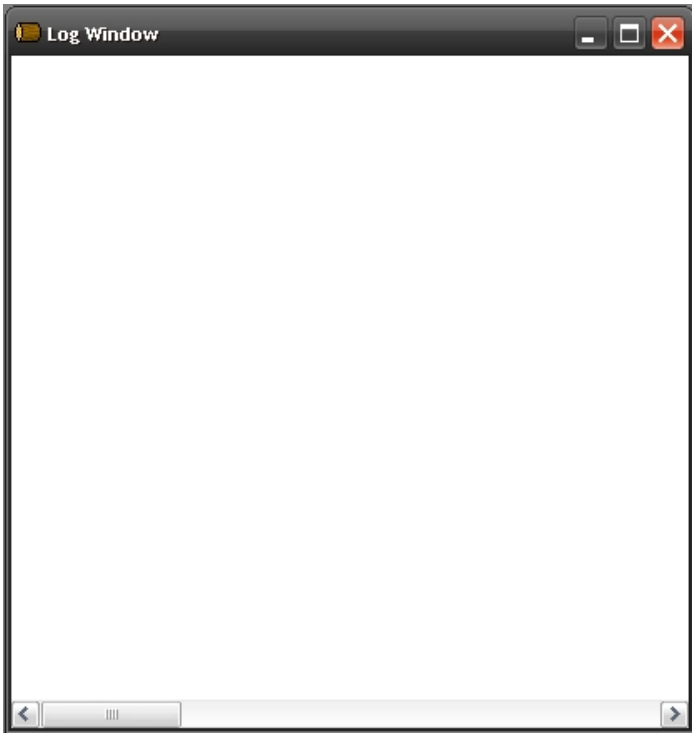
2 Using BlueTool to Download Firmware

2.1 Connecting the CYW20733 Reference Board

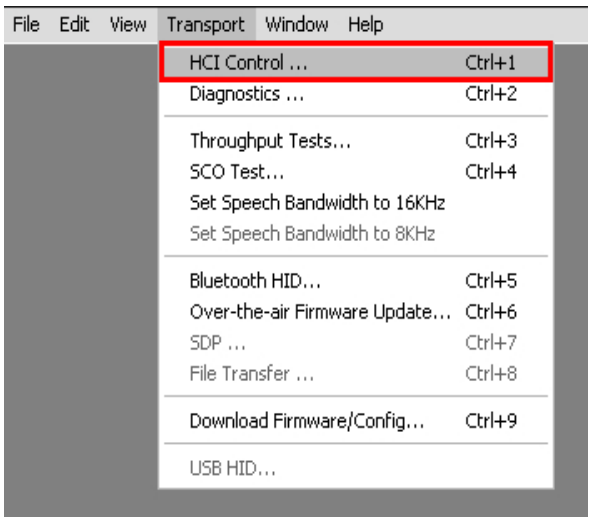
1. Connect the CYW20733 reference board(s) to the computer through the serial UART cable, but DO NOT power on the device yet.
2. Open BlueTool.
3. From the **View** menu, select **Log Window**.



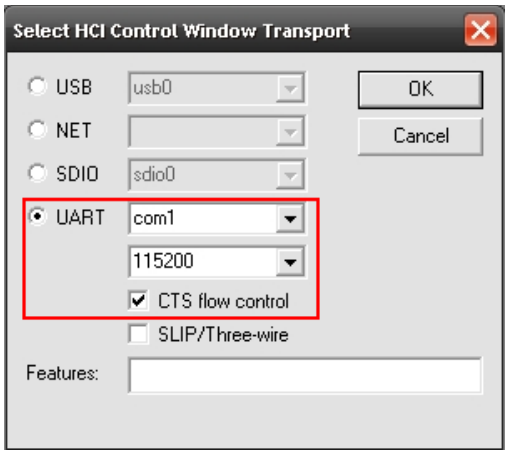
A blank Log Window will open.



4. From the **Transport** menu, select **HCI Control**.



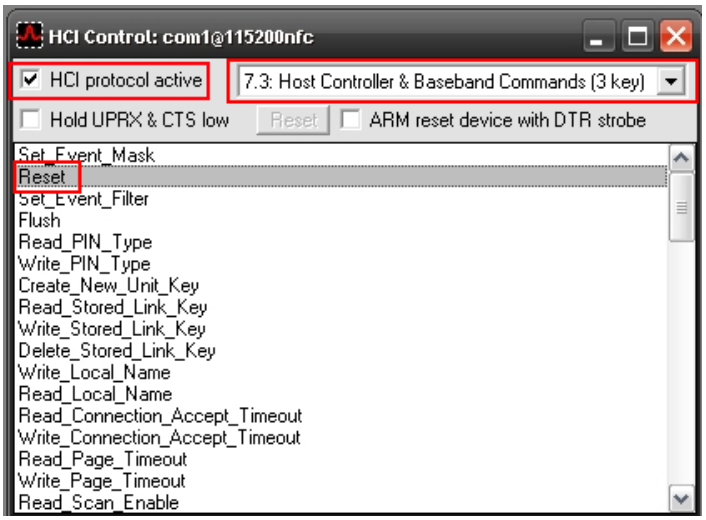
5. In the Select HCI Control Window Transport window, select the **UART** option. Select **com1** as the COM port and **115200** as the baud rate. Make sure that **CTS flow control** is selected.



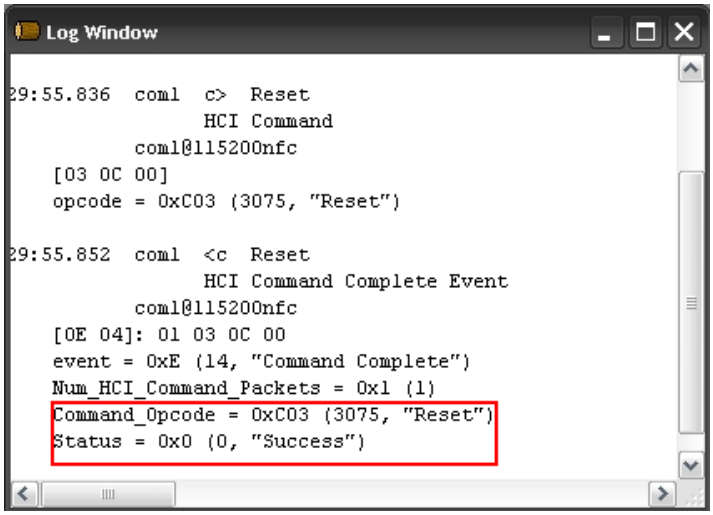
6. Click the **OK** button.

2.2 Setting Up the Download Transport

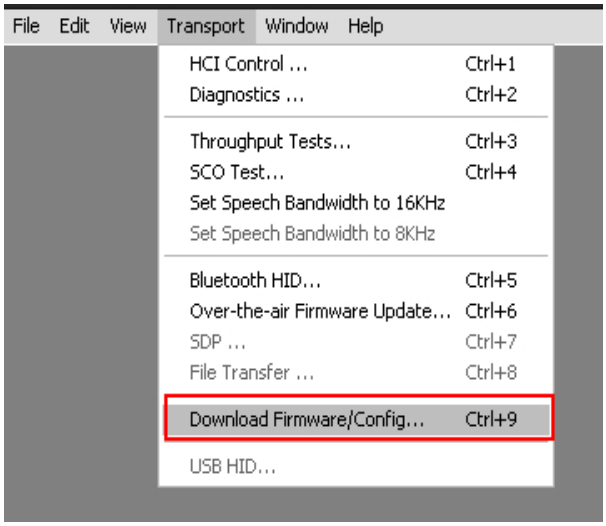
1. In the HCI Control command window, do the following:
   a. Select the **HCI protocol active** option.
   b. Power up the CYW20733 module
   c. Clear and reselect (that is, toggle off, then on) the **HCI protocol active** option.
   d. From the HCI Menu list, select **7.3: Host Controller & Baseband Commands (3 key)**.
   e. Double-click the **Reset** command.



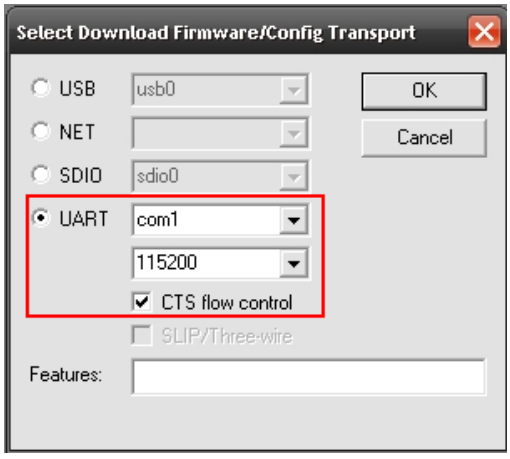
After a successful reset, the log window displays the reset status as “Success”.



2. From the **Transport** menu, select **Download Firmware/Config**.



3. In the Select Download Firmware/Config Transport window, select the **UART** option. Select **com1** as the COM port and **115200** as the baud rate. Make sure that **CTS flow control** is selected.



4. Click the **OK** button. The Download window will open. Go to Setting BlueTool Download Parameters on page 5 to complete the download process.

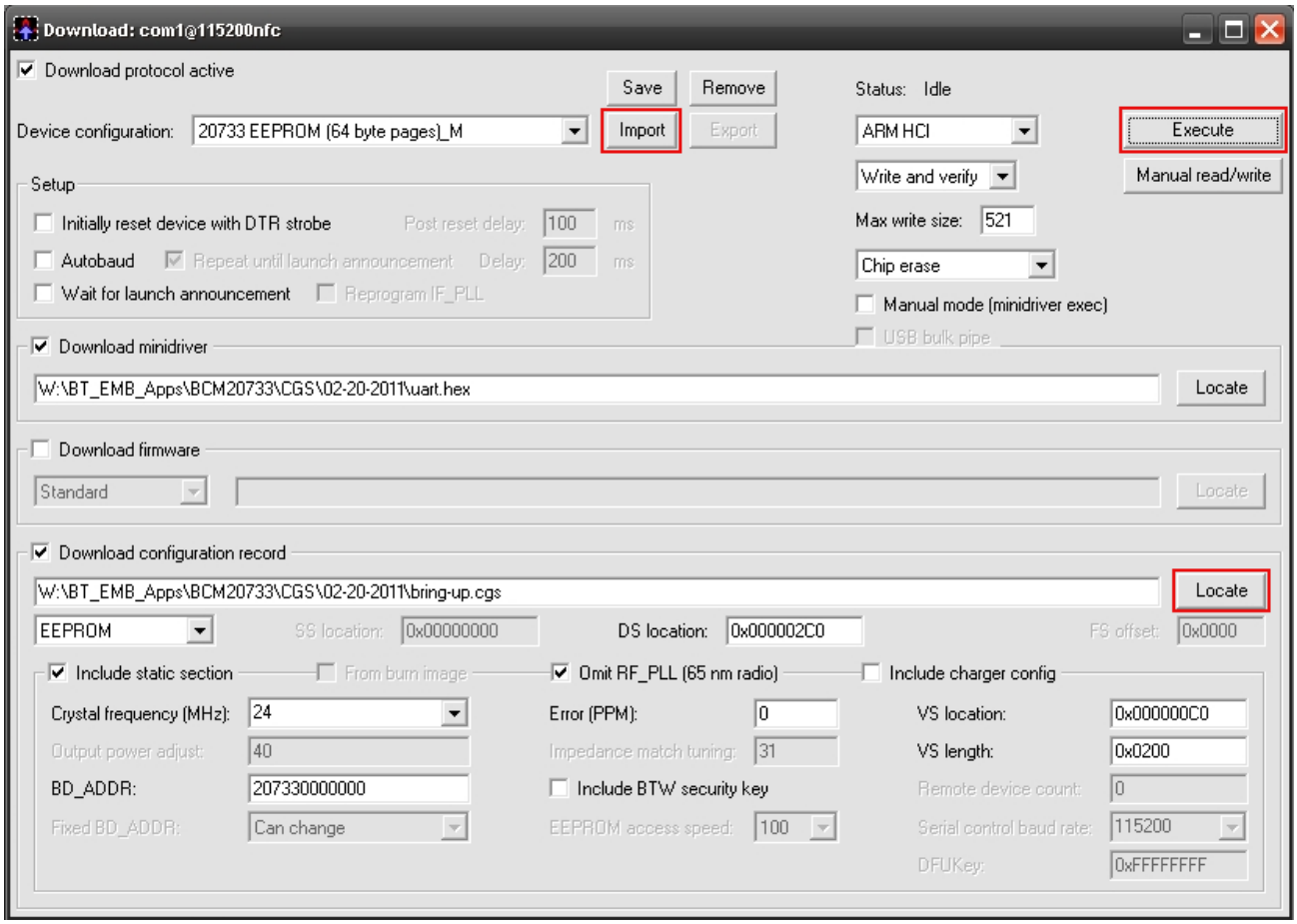
2.3 Setting BlueTool Download Parameters

BlueTool download parameters can be set up manually or through a *.btp configuration file[1].

2.3.1 Setting Download Parameters with a Configuration File

Follow the steps below to set BlueTool download parameters using the *.btp file.

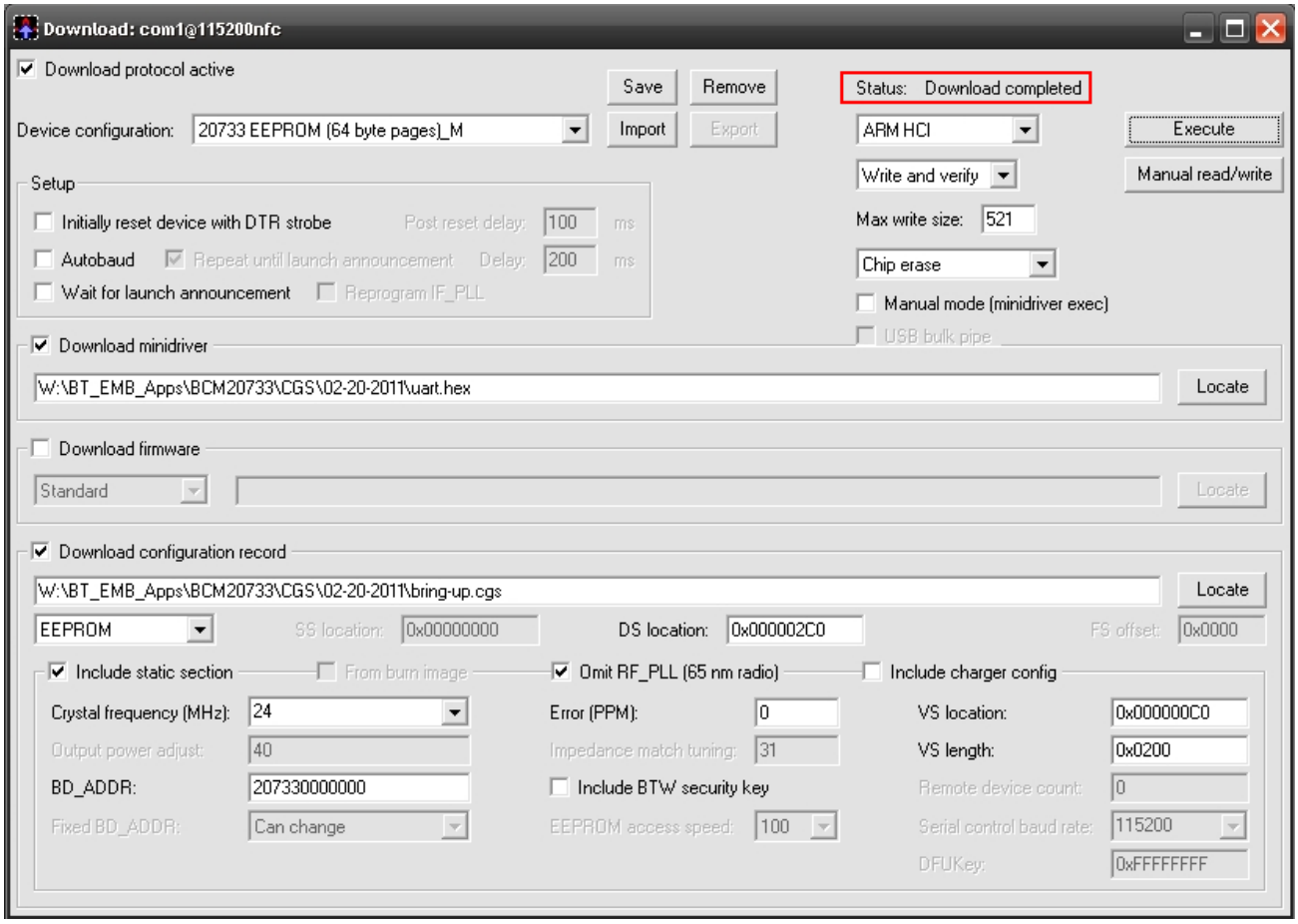
1. Click the **Import** button to import the *.btp file.
2. Click the **Locate** button and select the *.cgr[1] or *.cgs[1] configuration file.



3. **Crystal Frequency**: this value is set through the *.btp file. If the frequency is incorrect for the crystal installed on the CYW20733 module, manually enter the appropriate value.
4. **BD_ADDR**: enter the board address for the specific CYW20733 module.
5. Click **Execute** to start downloading the firmware.

1. This file is provided by your Cypress Sales or Engineering support representative (see Cypress Developer Community).

6. Once the download is finished, the status changes to **Download completed**. Cycle the power on the device. The CYW20733 is now ready for normal operation.

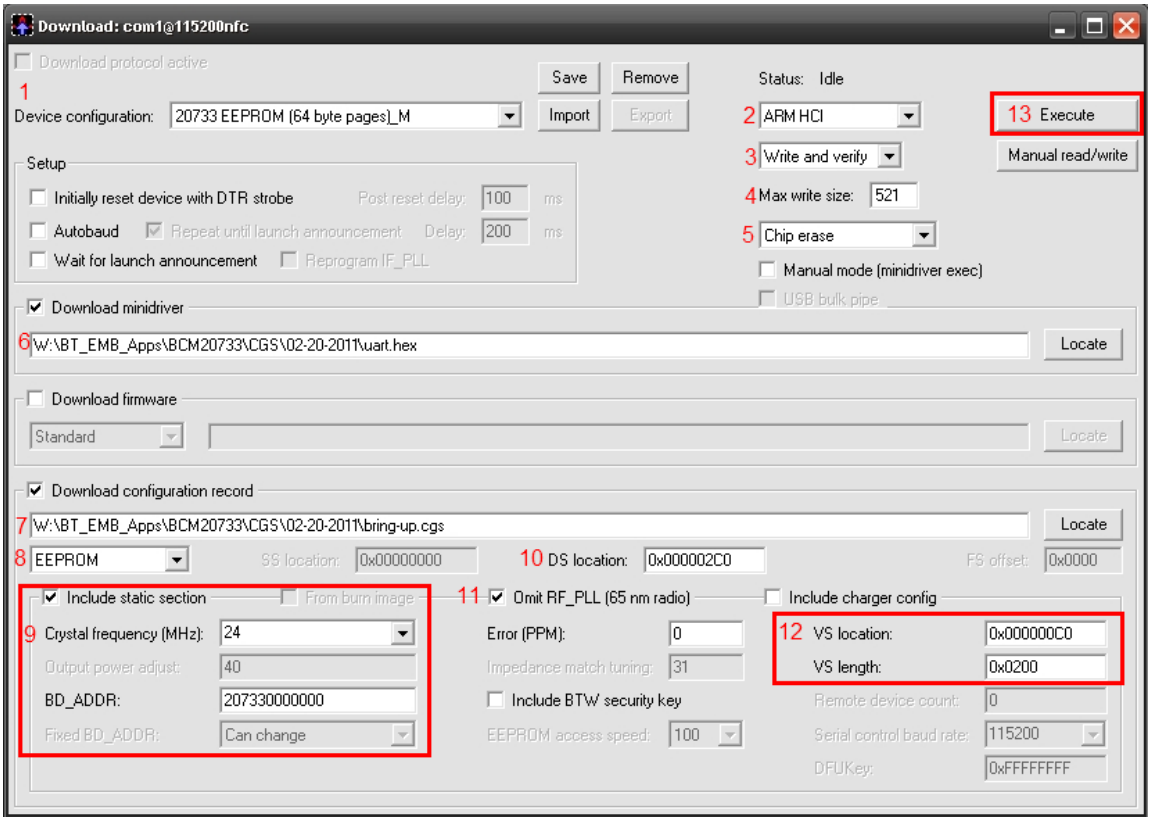


2.3.2 Setting Download Parameters Manually

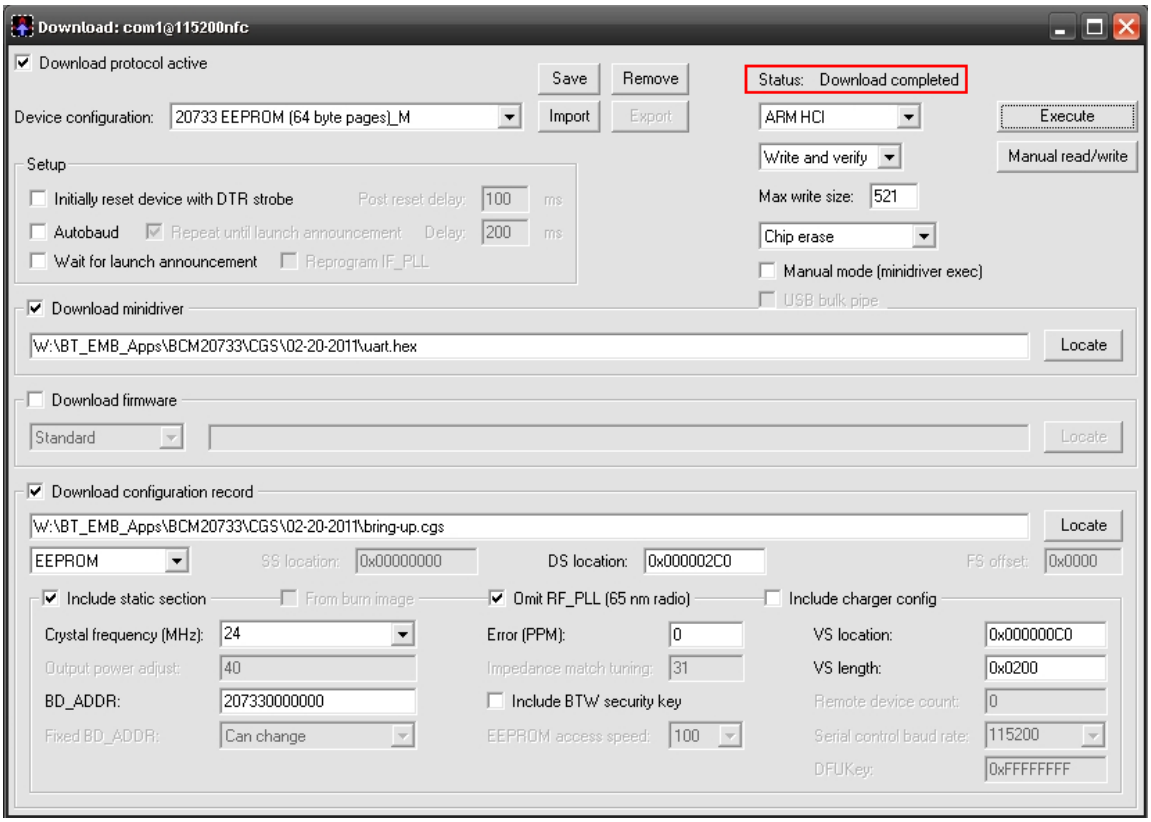
Follow the steps below to manually set BlueTool download parameters.

1. In the Download window, set the following options:
   a. From the **Device configuration** list, select **CYW20733 EEPROM (64 byte pages)**.
   b. Select **ARM HCI**.
   c. Select **Write and verify**.
   d. For **Max write size**, enter **251**.
   e. Select **Chip erase**.
   f. Select **Download minidriver**, then click **Locate** to browse for the uart.hex file.
   g. Select **Download configuration record**, then click **Locate** browse for the desired cgs/cgr file.
   h. Select **EEPROM** as the memory.
   i. Select **Include static section**. From the **Crystal frequency** list, select **24** MHz. For **BD_ADDR**, enter the relevant BD Address.
   j. For **DS location**, enter **0x000002C0**.
   k. Select **Omit RF_PLL (65nm radio)**.
   l. For **VS Location**, enter **0x000000C0**. For **VS length**, enter **0x0200**.

m. Click **Execute** to begin the download.



2. Once the download is finished, the status changes to **Download completed**. Cycle the power on the device. The CYW20733 is now ready for normal operation.



Document History Page

Document Title: AN214858 - Downloading Firmware to CYW20733 Modules Using BlueTool™ Document Number: 002-14858				
Rev.	**ECN No.**	**Orig. of Change**	**Submission Date**	**Description of Change**
**	–	–	06/23/2011	20733-AN200-R Initial release
*A	5461578	UTSV	10/04/2016	Updated to Cypress template Added Cypress part numbering scheme
*B	5881048	AESATMP8	09/12/2017	Updated logo and Copyright.

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