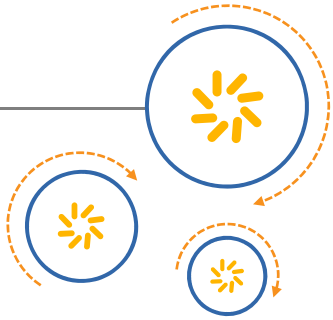
Qualcomm Technologies International, Ltd.



Confidential and Proprietary – Qualcomm Technologies International, Ltd.

(formerly known as Cambridge Silicon Radio Ltd.)

NO PUBLIC DISCLOSURE PERMITTED: Please report postings of this document on public servers or websites to: DocCtrlAgent@qualcomm.com.

Restricted Distribution: Not to be distributed to anyone who is not an employee of either Qualcomm Technologies International, Ltd.or its affiliated companies without the express approval of Qualcomm Configuration Management.

Not to be used, copied, reproduced, or modified in whole or in part, nor its contents revealed in any manner to others without the express written permission of Qualcomm Technologies International, Ltd.

Any software provided with this notice is governed by the Qualcomm Technologies International, Ltd. Terms of Supply or the applicable license agreement at https://www.csrsupport.com/CSRTermsandConditions.

Qualcomm is a trademark of Qualcomm Incorporated, registered in the United States and other countries. All Qualcomm Incorporated trademarks are used with permission. Other product and brand names may be trademarks or registered trademarks of their respective owners.

This technical data may be subject to U.S. and international export, re-export, or transfer (“export”) laws. Diversion contrary to U.S. and international law is strictly prohibited.

Qualcomm Technologies International, Ltd.
Churchill House
Cambridge Business Park
Cambridge, CB4 0WZ
United Kingdom

CSR

Push every boundary.™

BlueCore®

BlueSuite®

User Guide

Issue 9

Document History

Revision	Date	Change Reason
2	12 MAR 08	Original publication of this document.
3	13 NOV 08	Section on Command Line Tools transport options added. Minor text corrections.
4	15 JAN 11	Updated and minor corrections made.
5	08 FEB 11	BlueTest references corrected to BlueTest3.
6	06 AUG 12	Updated for BlueSuite 2.5.
7	30 JAN 14	Updated for BlueSuite 2.5.8.
8	31 JAN 14	Updated Terms and Definitions.
9	28 APR 15	Updated for BlueSuite 2.6. If you have any comments about this document, send an email to comments@csr.com, giving the document number, title and section with your feedback.

Trademarks, Patents and Licences

Unless otherwise stated, words and logos marked with ™ or ® are trademarks registered or owned by CSR plc and/or its affiliates.

Bluetooth® and the Bluetooth logos are trademarks owned by Bluetooth SIG, Inc. and licensed to CSR.

Other products, services and names used in this document may have been trademarked by their respective owners.

The publication of this information does not imply that any licence is granted under any patent or other rights owned by CSR plc or its affiliates.

CSR reserves the right to make technical changes to its products as part of its development programme.

While every care has been taken to ensure the accuracy of the contents of this document, CSR cannot accept responsibility for any errors.

Life Support Policy and Use in Safety-critical Compliance

CSR's products are not authorised for use in life-support or safety-critical applications. Use in such applications is done at the sole discretion of the customer. CSR will not warrant the use of its devices in such applications.

Performance and Conformance

Refer to www.csrsupport.com for compliance and conformance to standards information.

Contents

List of Figures

List of Tables

1 Introduction

BlueSuite is a BlueCore development suite designed to help with your Bluetooth wireless technology development program.

BlueSuite contains:

- Graphical and command-line applications to configure, test and program the BlueCore device in your design.
- The TrueTest Toolkit, a set of libraries for developing production test applications for your BlueCore enabled devices.
- Device drivers to communicate with BlueCore.
- Documentation to help development.

This user guide explains:

- The minimum system requirements to be able to run BlueSuite, see Section 2.
- How to install BlueSuite, see Section 5 and Section 4.2.1.
- The features and functions BlueSuite contains, see Section 3.

2 System Requirements

Minimum system requirements for BlueSuite are:

- Processor and RAM requirements as per the minimum system requirements for appropriate Windows Operating System
- 20 MB of available hard disk space

See Release Notes for details of the software requirements.

3 BlueSuite Components

Note:

User guides for some tools are provided as compiled HTML help. They are installed into a Help folder under the BlueSuite directory and available via the Start menu at:

- `All Programs\CSR BlueSuite <version>\Help`

This enables you to search for help on any word or phrase across all the documentation.

Component	Description
BlueTest3	BlueTest3 is a program that enables you to execute BlueCore's Built In Self Test (BIST) functions for RF testing. The BIST functions consist mainly of low level radio tests (transmitting a continuous wave at a prescribed frequency or receiving pseudo random data and calculating bit error rates). Included are tests for the PCM port and other internal blocks. See the *BlueTest3 User Guide*. **Note:** When running BlueTest3 from another machine on a network, Windows displays security errors. This is not an issue with BlueTest3, but is due to a Windows security setting. Use BlueTest3 from the machine on which it is installed, or configure .NET framework as described on the website www.msdn.microsoft.com.
PSTool and PSCli	PSTool enables you to configure an IC's Persistent Store. PSCli provides a similar set of functions, using the command line. See Section 8.3.
BlueFlash and BlueFlashCmd	BlueFlash provides a GUI to write firmware to the IC's flash memory. BlueFlashCmd provides similar functionality in a command line application. See Section 8.2 and the installed BlueSuite Help.
BTCli	Bluetooth Command Line Interface (BTCli) is a command-line program that lets you send Host Controller Interface (HCI) commands to your BlueCore device. Host computers use the HCI interface (part of the Bluetooth specification) to communicate with Bluetooth controllers (e.g. your BlueCore chip). See the *BTCli User Guide* for full details.
E2Cmd	A command line application to configure, dump, write and verify the contents of EEPROMs. E2Cmd also supports broadcast writing to up to 16 devices using the CSR gang programmer hardware. Type `e2cmd -help` for usage instructions.
SpiUnlock	A command line tool to unlock an IC which has had its SPI port locked. See the installed BlueSuite Help.
NVSCmd	A command line tool to read/write from SQI and SPI flash. See the installed BlueSuite Help.
USBPurger	A command line tool to remove references to USB devices from the Windows registry. See the installed BlueSuite Help.

Component	Description
DFU Tools	The CSR DFU Tools are a suite of programs that enable firmware and persistent store files to be signed and combined to form BlueCore DFU files. Complete HTML documentation is provided and installed with the tools.
DFUWizard	DFUWizard performs Device Firmware Upgrade for CSR ICs. See the installed DFUWizard Help.
DFUToolTips	A shell extension that shows tool tips for DFU files in Windows. See Section 8.6.
DFUBabel	A command line application to upgrade firmware on the USB-SPI converter. See Section 8.5.
Drivers	See Section 4.2.
TrueTest	The TrueTest toolkit consists of the necessary libraries and documentation to let you develop applications in a variety of languages for production programming and testing of BlueCore enabled devices. The toolkit is designed for use in production test systems. Instead of writing test scripts to call other BlueSuite programs, you can write a test program that accesses the test APIs (*Application Programming Interface*) directly. See the *TrueTest Toolkit Introduction*.
HidDfu and HidDfuCmd	The HidDfu DLL API provides an interface for the development of PC-based Device Firmware Upgrade for CSR BlueCore devices, using the Windows HID driver rather than the CSR USB driver. See the installed BlueSuite help. The HidDfuCmd application uses the HidDfu API to perform device upgrade and backup operations. Type `hiddfucmd -help` for usage instructions.

Table 3.1: BlueSuite Software Components

4 Software Summary

4.1 Architecture

This section describes the software architecture of BlueSuite.

BlueCore has a Debug (SPI) interface for test, flash and debugging purposes. The user-mode applications communicate with a BlueCore IC debug interface using the SPI protocol over a connection to an LPT port or via a CSR USB-SPI device connected to a USB port.

BlueCore also has a Host interface for control and data transfer purposes. The user mode applications communicate with the BlueCore's host interface over a USB connection or using BCSP, H4, H4DS or H5 over a UART connection.

Table 4.1 lists the interfaces used by the tools.

Tool	SPI Interface	Host Interface
BlueFlash and BlueFlashCmd	✓	X
BlueTest3	✓	✓
BTCli	X	✓
DFU Wizard	X	✓
E2Cmd	✓	X
NVSCmd	✓	X
PSCli and PSTool	✓	✓
SpiUnlock	✓	X
TestEngine	✓	✓
TestFlash, TestE2	✓	X
HidDfu and HidDfuCmd	X	✓

Table 4.1: Interfaces Used by Tools

Figure 4.1 shows the transports available for communicating with a BlueCore IC, the code modules and drivers used for different transports. `pttransport.dll` provides debug SPI communications, while `hcitransport.lib` supports host transports.

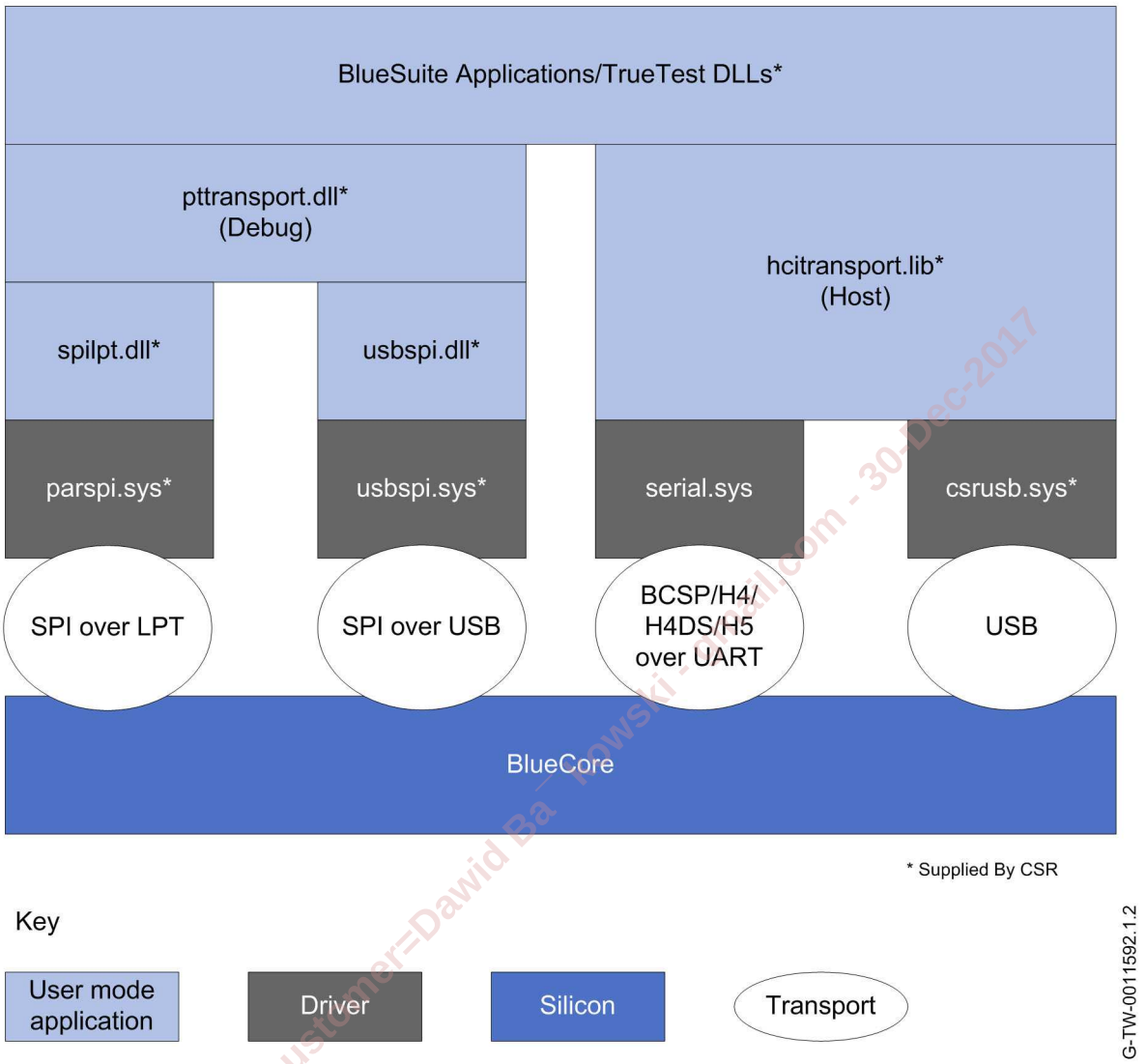


Figure 4.1: BlueSuite User Application Transport Interface

4.2 Drivers

4.2.1 USB Driver

CSR supply a driver for BlueCore USB devices.

It is not compatible with Bluetooth stack drivers, such as the one which comes as standard in Windows. The process to update a standard Bluetooth stack driver to CSR's USB driver is described in the *USB Device Driver User Guide*.

4.2.2 LPT-SPI Driver

CSR supplies a Win32 driver to use a printer port for Debug (SPI) connections to BlueCore ICs. `parspi.sys` is built to the NT driver model, and is not being actively maintained. Windows platforms that do not support NT drivers mean another mechanism must be used. CSR's USB-SPI converter provides one solution, although there are other SPI hardware devices available on the market.

Note:

This driver comes with a batch file to install it and requires a reboot to complete the installation. There are sometimes incompatibilities between this driver and other drivers that use the printer port.

This driver is not supported on 64-bit Windows, and not on Windows 8 or later (32-bit or 64-bit).

4.2.3 USB-SPI Driver

The CSR USB-SPI converter requires this driver.

5 Install BlueSuite

Run the BlueSuite installer and follow the instructions displayed by the setup wizard.

By default the installer does a full installation, as shown in Figure 5.1. If you do not want to install all of the possible components, be sure that you install:

- **Drivers to allow SPI communication with the chip**. You will need these to back-up your BlueCore device.
- **USB Device Driver** if you want to connect your device to your computer's USB port.
- **BlueTest3, Production test DLL's, LIB's and headers** if you want to do production testing.

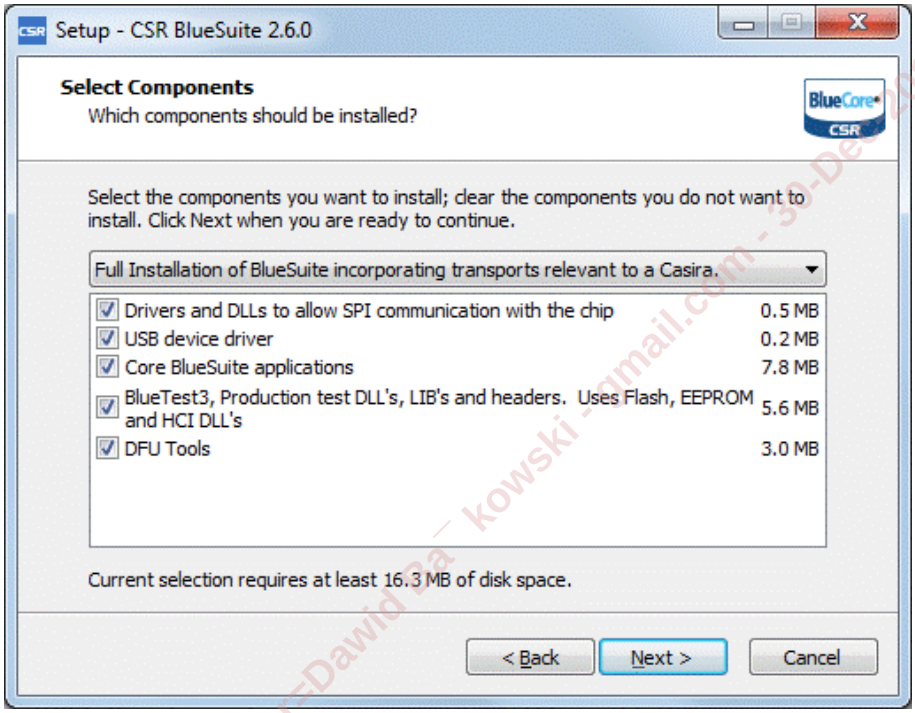


Figure 5.1: Full Installation of BlueSuite

When you get to the Additional Tasks window (Figure 5.2 for 64-bit Windows, Figure 5.3 for 32-bit Windows), you have to select the default debug transport. The installer allows you to select LPT for 32-bit Windows, but use of LPT is only supported for Windows XP. You can change this after installation by changing environment variable `SPITRANS` to `LPT` or `USB`. See Section 8.1

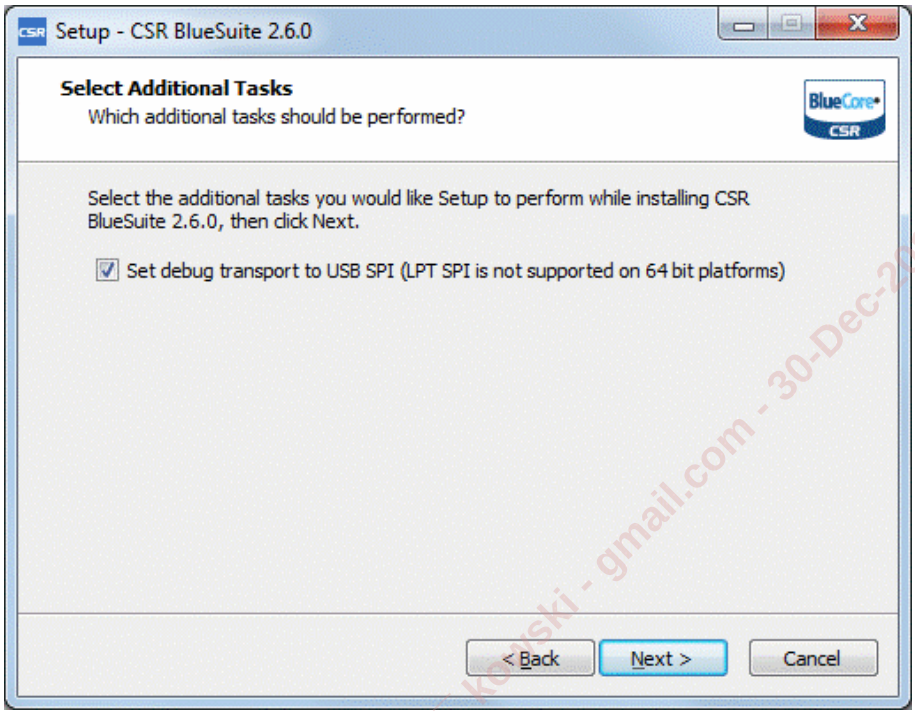


Figure 5.2: Additional Tasks Dialogue 64-bit version

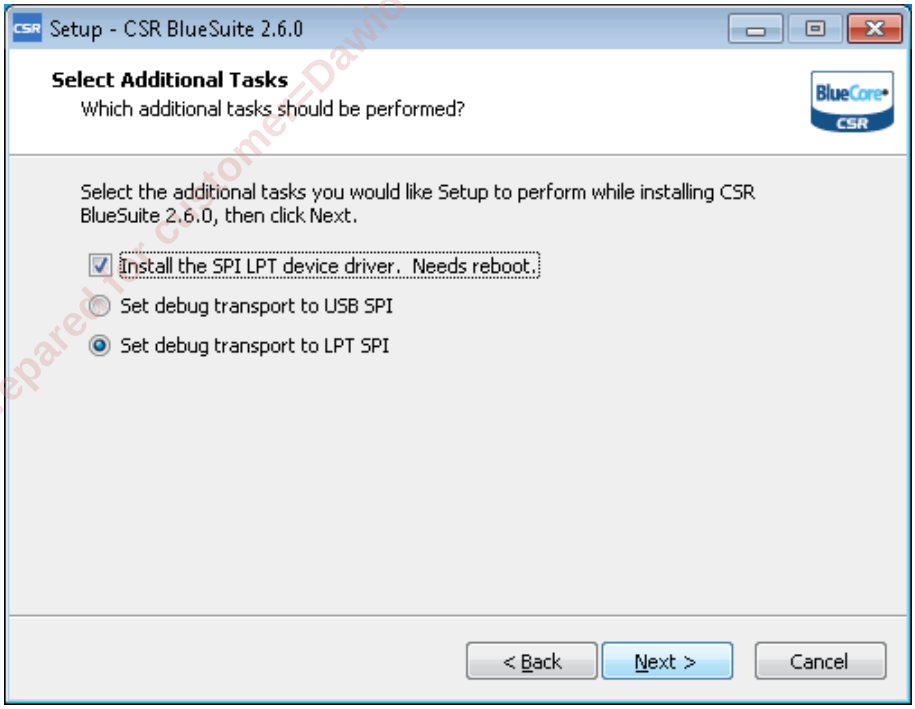


Figure 5.3: Additional Tasks Dialogue 32-bit version

6 Firmware Overview

CSR's BlueCore ICs contain control software (called firmware). Firmware in BlueCores with flash can be updated using tools in BlueSuite:

- BlueFlash (see Section 8.2) is used during development to update your BlueCore's firmware using the SPI debugging interface. TestFlash (part of TrueTest) can be used for the same purpose on the production line.
- DFUWizard (see Section 8.4) can be used to upgrade the firmware both in development and in the field.

  DFU is a USB standard that allows end users to upgrade the BlueCore's firmware over the USB or UART interfaces.

  DFUWizard requires some firmware (the loader) to already be present in the device. The loader can only be updated by BlueFlash.
- HidDfuCmd (or your own application using the HidDfu API) can be used to upgrade the firmware both in development and in the field. See Section 3.

The firmware version number is an important piece of information. You can identify your current firmware version using BlueFlash, see Section 8.2.

6.1 Firmware File Formats

Table 6.1 describes the different firmware file formats supported.

File Extension(s)	Description
`.xpv/.xdv`	The standard BlueCore firmware file format holds the binary data for firmware releases in two separate files, each of which hold part of the data.
`.xuv`	This firmware file format is one file containing the contents of both the `.xpv` file and the `.xdv` file.
`.dfu`	File format for use with DFUWizard or HidDfu applications. **Note:** DFUTools can convert `.xpv` and `.xdv` files into a `.dfu` file.

Table 6.1: Firmware File Formats

The `.dfu` file format is a flexible container format that can hold multiple different firmware images and multiple versions of the Persistent Store. This means you can have a universal `.dfu` file that works for multiple hardware devices.

See *BlueCore Device Firmware Upgrade Overview* for more information about DFU.

6.2 Persistent Store

As well as containing the firmware image (i.e. control software), firmware files can also contain configuration information known as Persistent Store (PS). DFU files can contain information for a partial or full update of the PS. Any areas of the PS that are not in the DFU file will remain as they were before the update. Other firmware files cannot contain partial information; they either preserve or replace the PS.

Firmware upgrades from the CSR support website do not contain any PS settings, thus the current settings are preserved. Firmware dumps that you make contain PS settings, and so will overwrite any existing ones if you upgrade using a previously dumped file.

Note:

If firmware with no PS is downloaded onto a blank flash, a new PS is created on the flash memory using default values suitable for a Casira module. However, some keys require calibration per module for optimal performance.

See `pskeys.html` in the firmware release for details on using individual PS Keys. Some of the same information is available when you click on a PS Key name in PSTool, see the *PSTool User Guide*.

6.3 Firmware Build Types

The Bluecore's Bluetooth stack firmware comes in two forms, either containing the Bluetooth stack layers up to the HCI layer, or containing all the stack layers up to the RFCOMM layer.

Since Firmware version 18, firmware builds are called *Unified*. They contain all the Bluetooth stack layers up to RFCOMM, but can be configured to present either an HCI interface, or an RFCOMM interface. The behaviour is controlled by PSKEY_ONCHIP_HCI_CLIENT, see the firmware release files for more information.

All types of firmware builds can be held in any BlueCore firmware file format.

6.4 Upgrading Firmware

Go to the Bluetooth Firmware section on the CSR support website (www.csrsupport.com/BluetoothFirmware) to get the latest BlueCore firmware files. Use BlueFlash, DFUWizard or HidDfuCmd to download the firmware to your BlueCore device.

Note:

Casira users should see the *Casira User Guide* for instructions on upgrading their firmware.

7 Getting Started

When you have connected your BlueCore device(s) to your computer, you can use BlueSuite tools to communicate with them.

To test you have connected your BlueCore device(s) successfully, you can use:

- The command-line tool BTCli.
- One of the graphical programs, PSTool (See the *PSTool User Guide*) or BlueTest3 (See the *BlueTest3 User Guide*).

7.1 Exploring the Bluetooth Stack

Use BTCli if you want to explore the Bluetooth stack before starting development, as it provides a lower-level interface than the graphical programs in BlueSuite.

The Bluetooth stack is described in the *Specification of the Bluetooth System* from www.bluetooth.com.

8 BlueSuite Programs - Additional Information

This section gives additional information about BlueSuite programs listed in Table 3.1. Some programs without separate user guides are described in full detail. The User Guides for some of the tools are installed as part of the BlueSuite help system, available from the **Start** menu **Start\CSR BlueSuite\help**.

8.1 Transport Options for Command Line Tools

Some command line tools in BlueSuite take a `-trans` option, which controls the transport options. Table 8.1 indicates which variables can be used with each tool:

Variable	e2cmd/ blueflashcmd	PSCli	Default	Description	Example Values
CSRTRANS	-	x	SPI	The transport to use	`SPI`, `USB`, `BCSP`, `H4` and `H5`
HCIPORT	-	x	autodetect if USB, otherwise COM1	The port to use for the selected HCI transport if not `CSRTRANS=SPI`	`com1`, `com2`, `csr0`
HCIBAUD	-	x	115200	The baud rate to use for uart based HCI transports	`115200`, `38400`, etc.
SPITRANS	x	x	LPT	The SPI transport to use if `CSRTRANS=SPI`	`LPT`, `USB`
SPIPORT	x	x	`1` for LPT-SPI `0` for USB-SPI	The port to use for the selected SPI transport	▪ A LPT port number: `1`, `2` etc. ▪ A USB-to-SPI converter's ordinal position: `0`, `1`, `2`. ▪ A USB-to-SPI converter's serial number (as printed on the converter e.g. `185920`)
SPIMUL	x	x	0	The device to use if the SPI port is multiplexed	`0`, `1`, etc.

Table 8.1: Command Line Transport Options

Note:

Where appropriate, BlueSuite tools attempts to prepend `\\.\` to a string in HCIPORT. For example the name of a CSR USB device on WinXP is `\\.\csr0`; BlueSuite tools re-interpret `csr0` as `\\.\csr0`.

Examples

To use USB-SPI (where 185920 is the serial number printed on the USB-SPI):

```
-trans "CSRTRANS=SPI SPITRANS=USB SPIPORT=185920"
```

(or just `"SPITRANS=USB SPIPORT=185920"`)

Most command line applications now support shortcuts of `-usb` and `-lpt` so instead of `-trans "spitrans=usb spiport=185920"`, you can use `-usb 185920`.

To use BCSP on COM1 at 38.4 kbaud:

```
-trans "CSRTRANS=BCSP HCIPORT=com1 HCIBAUD=38400"
```

It is possible to set these as Windows environment variables, which are then used as the default setting for a variable e.g. `"set SPITRANS=USB"` would change the default SPI transport from LPT-SPI to USB-SPI.

8.2 BlueFlash

BlueFlash is a utility that allows you to download and upload firmware to and from the flash memory on the Casira modules or on your own BlueCore designs.

As described in Section 6, there are several different firmware file formats, and firmware files may contain Persistent Store settings. Read Section 6.2 to make sure you do not accidentally change Persistent Store settings and to see which parts of BlueCore's firmware is updated by BlueFlash.

Important Note:

Do not erase the Persistent Store with **Flash Erase** (either by selection or via **Full Erase**) unless you are completely sure.

Fully erasing the flash removes all Persistent Store settings. Use **Full Erase** only in the event that there may be a problem with the Persistent Store and you want to reload to a previous known working version.

8.2.1 User Interface

BlueFlash opens with a user interface window, see Figure 8.1.

Table 8.2 explains the function of each button or area.

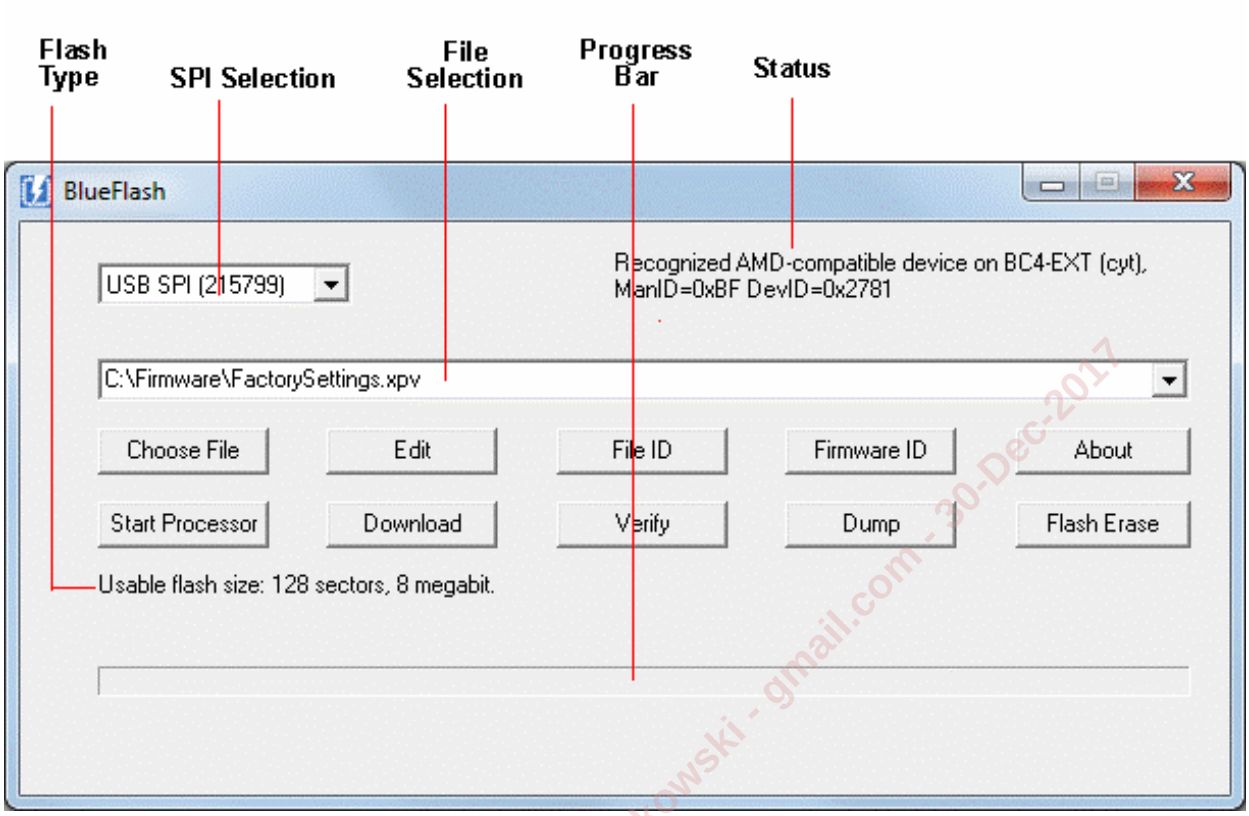


Figure 8.1: BlueFlash User Interface

Button or Area	Explanation
Choose File	Opens a dialogue box for selection of the firmware file to download to the flash on the BlueCore Module. You may open a `.xpv`, `.xuv` or `.xbv` firmware file **Note:** If you open a `.xpv` file, the `.xdv` file must be present in the same folder.
Edit	If pressed, a message indicates that this is no longer supported.
Download	Copies the selected file to the flash on the BlueCore module. This process updates each flash block as required and verifies them in turn.
Verify	Compares the selected file with the code programmed into the flash on the BlueCore module. **Verify** only compares components contained in the file. The status area shows any reported differences.
Status	Provides a text report of the status of the current operation.
Progress Bar	Displays a visual indication of progress for the current operation.
Start Processor	Changes depending on the status of the processor. If it displays **Stop Processor**, the processor is running. It must be stopped before attempting to download code. When the new code has been loaded, the processor can be restarted by clicking **Start Processor**.
Firmware ID	Identifies which version of firmware is currently loaded on the module. If BlueFlash is unable to identify the firmware version, you can still upgrade the firmware using this utility.
Dump	Allows the user to dump the contents of the flash on the BlueCore module to a file. The data can be stored either as a pair of `.xpv`/`.xdv` files, as a combined `.xuv` file or as a raw binary file. The dumped file also contains all of the Persistent Store settings, allowing you to restore to a known firmware build and Persistent Store settings.
Flash Erase	Provides options for erasing some or all of the flash memory including the Persistent Store area.
File ID	Displays the name and version of firmware of the file selected for download on the module.
File Selection	Displays the name and location of the file selected for download.
Flash Type	Displays the type of flash memory that has been identified on the BlueCore module. Flash type is identified after you stop the processor. Different types of flash memory may have different memory block structures that require adjustments to BlueCore's memory map. If the flash type indicates `Unrecognised Flash`, either the flash on the BlueCore module is not supported, or there is a problem with the SPI connection. See Section 8.2.2.
SPI Selection	Allows the user to select the LPT or USB port to which the SPI cable is connected.
About	Indicates the version of the BlueFlash application in use. CSR advises using the most up to date version. Refer to the CSR support website for available updates.

Table 8.2: Explanation of the BlueFlash User Interface

8.2.2 Troubleshooting BlueFlash

Potential problems:

- If BlueFlash cannot identify the current build of firmware on BlueCore, check your firmware version.
- If BlueFlash cannot identify flash type, BlueFlash fails to stop processor or BlueFlash times out trying to make a connection to BlueCore, ensure that the following actions have been completed.

  If using LPT:

  - Run `InstParSpi.bat` (`C:\Program Files\CSR\BlueSuite\drivers`) to copy and register the `parspi.sys` device driver, making sure you have administrative rights . Reboot your PC.
  - Driver has been installed in the registry by looking for `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Parspi`
- SPI cable is correctly connected
- Check for conflicts with other drivers, especially printer drivers (this includes the PDF converters). Conflicting printer drivers should be removed. To amend or remove a driver, select **Printers and Faxes** in the **Control Panel** and select **File\Server Properties**. Click on the **Ports** tab. Move the port to another location or delete the device.
- Ensure that another SPI application is not trying to access the SPI port. SPI uses mutexes around port access, therefore another application may lock the port. Close all SPI based applications (use Task Manager if necessary) and retry. Reboot if necessary.

8.2.3 BlueFlashCmd

BlueFlashCmd is a command-line tool to download and upload firmware to flash memory on your BlueCore device.

Type `BlueFlashCmd.exe -help` for usage instructions.

Note:

Running BlueFlashCmd will reset your BlueCore chip

8.3 PSTool

PSTool is an editing suite that allows you to read and modify the Persistent Store. The Persistent Store consists of configuration keys that modify the operation of the firmware. BlueCore is a very flexible device with many setup options and PS Keys must be set correctly for BlueCore to work in a particular design. Some PS Keys must be calibrated for each module.

Note:

Take care when configuring BlueCore ICs, because it is possible to use PSTool to render your IC inoperable.

See the PS Key documentation provided with firmware releases and the PS Key descriptions within PSTool.

8.3.1 PSCli

PSCli is a command-line interface for reading and modifying the Persistent Store. Type `pscli.exe -help` to see usage instructions.

8.3.2 Documentation

PSTool and PSCli are described in the *PSTool User Guide*.

See `pskeys.html` in the firmware release for details on using individual PS Keys.

8.4 DFU Wizard

The DFU Wizard is a program for end users to upgrade the firmware on their BlueCore devices.

8.5 DFU Babel

The USB to SPI Converter (or Babel) transforms the USB packets from the host computer to SPI signals sent out over Category 5 cable.

DFU Babel is a program that lets you upgrade your USB to SPI Converter with new firmware. If CSR release a firmware upgrade for the USB to SPI Converter, you will be able to find it on www.csrsupport.com.

See the *USB-SPI Converter User Guide*.

8.5.1 Upgrading The USB to SPI Converter Firmware

Important Note:

Do not attempt to upgrade a USB to SPI Converter with firmware designed for different hardware (e.g. Casira firmware). The USB to SPI Converter needs special firmware and any other firmware may make it permanently unusable.

See the *USB-SPI Firmware Upgrade Guide*.

8.6 DFU ToolTips

BlueSuite comes with DFU ToolTips, a shell extension that shows tool tips for DFU files in Windows. To see the tool tip, point the mouse over a DFU file, and wait for the tool tip to appear. Figure 8.2 shows a DFU tool tip.

If the tool tip does not appear, you may have disabled tool tips in your version of Windows. To enable tool tips for files:

1. Go to the **Control Panel**
2. Open **Folder Options**
3. Select the **View** tab
4. Scroll down the Advanced settings to **Show pop-up description for folder and desktop items**. Tick this box.
5. Click **OK**

DFU ToolTips also lets you right-click on a DFU file, and **Download to BlueCore**. This runs the DFU Wizard to download the DFU file to your BlueCore device.

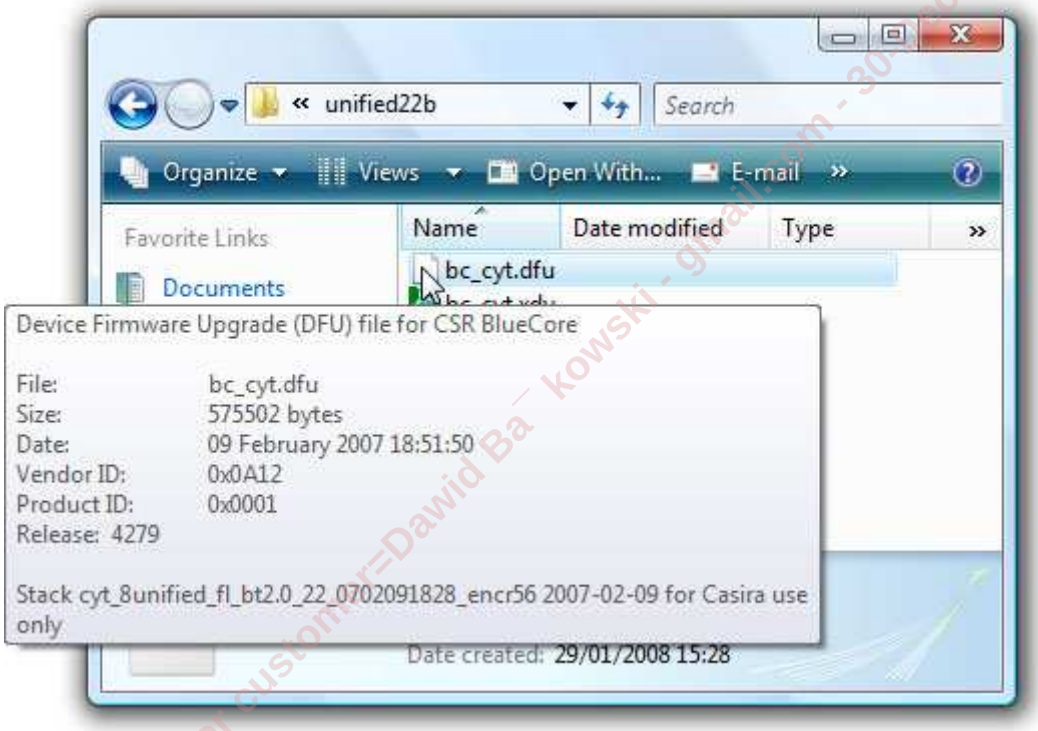


Figure 8.2: A DFU ToolTip

9 Document References

Document	Reference
Specification of the Bluetooth System	Version 4.1, 03 December 2013 www.bluetooth.com
BlueCore Class 2 Example Designs	www.csrsupport.com
BlueCore Production Information Data Books	www.csrsupport.com
BlueCore Device Firmware Upgrade (DFU) Overview	CS-112861-AN
USB Device Firmware Upgrade Specification	Part of the USB Specification http://www.usb.org/developers/devclass_docs/DFU_1.1.pdf
PSTool User Guide	CS-101505-UG
BlueTest3 User Guide	CS-102736-AN
USB-SPI Converter User Guide	CS-114776-UG
TrueTest Toolkit Introduction	CS-101531-AN
Casira User Guide	CS-102077-UG
USB-SPI Firmware Upgrade Guide	CS-203416-UG
USB Device Driver User Guide	CS-208306-UG

Terms and Definitions

Term	Definition
API	Application Programming Interface
BCHS	BlueCore Host Software
BIST	Built-In Self-Test
BlueCore®	Group term for CSR's range of Bluetooth wireless technology ICs
BlueSuite®	BlueCore family of software utilities for Bluetooth evaluation and development
BTCli	Bluetooth Command Line Interface
CSR	Cambridge Silicon Radio
DFU	Device Firmware Upgrade
DLL	Dynamically Linked Library
e.g.	*exempli gratia*, for example
etc	*et cetera*, and the rest, and so forth
HCI	Host Controller Interface
HID	Human Interface Device
HTML	HyperText Markup Language
i.e.	*Id est*, that is
IC	Integrated Circuit
LPT	Line Printer Terminal
PC	Personal Computer
PCM	Pulse Code Modulation
PDF	Portable Document Format
Persistent Store	Store of configuration values in non-volatile memory
PS	Persistent Store
PSCli	Persistent Store Command line interface
PSTool	Persistent Store Graphical User Interface
RAM	Random Access Memory
RF	Radio Frequency
RFCOMM	Radio Frequency COMMunication. Protocol layer providing serial port emulation over L2CAP
SPI	Serial Peripheral Interface
TrueTest	A set of libraries for developing production test applications for BlueCore-enabled devices
UART	Universal Asynchronous Receiver Transmitter
USB	Universal Serial Bus