

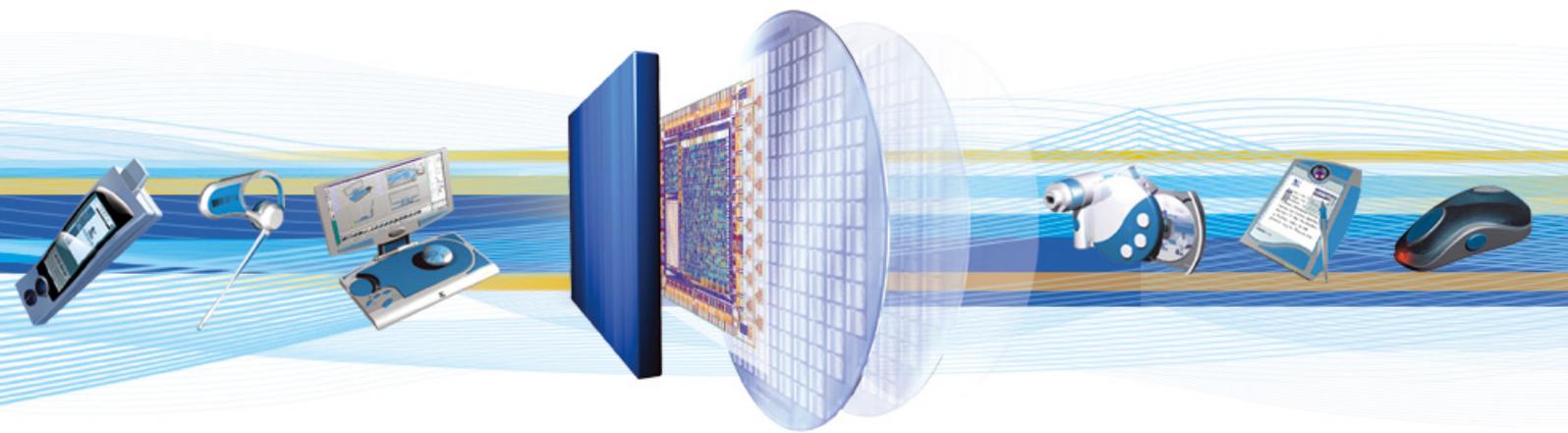


BlueCore™

BlueSuite™ v1.21

Release Note

February 2005



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1 Introduction

This document describes software release **BlueSuite™** v1.21 for CSR's **BlueCore™** Bluetooth® wireless technology chips. This adds bug fixes and some functional enhancements to BlueSuite v1.20, the previous BlueSuite release.

2 Target Devices

The release runs with all previously released versions of the BlueCore chip, and all firmware releases. Some features present in this software, including some new Persistent Store keys, may not be pertinent or present on all firmware releases.

3 Target Software

Apart from the CE versions, the software is able to run on the following Win32 platforms:

- Windows® 2000
- Windows XP Home + Professional

BlueSuite v1.21 has not been developed for Windows CE. CSR will continue to support the 1.20 version of BlueSuite for Windows CE.

4 Components

This release comprises the following software components:

- BlueChat
- BlueTest
- PSTool (and PSCLI)
- BlueFlash (and BlueFlashCmd)
- BTCLI
- RFCLI
- E2Write
- E2Util
- Test DLLs
- SPI device driver
- SPI DLLs
- HCI source code
- USB device driver
- Install scripts
- Windows CE versions of BlueChat

BlueSuite is presented in two release versions, BlueSuiteCasira for use with Casira™ and BlueSuiteCMSira for use with NanoSira™. BlueSuiteCasira is a strict superset of BlueSuiteCMSira, and contains all the above components. BlueSuiteCMSira contains:

- BlueChat
- PSTool
- USB device driver
- Install scripts
- Windows CE version of BlueChat

CSR provides software releases on compact disk (CD) for inclusion with its hardware products. The CD for BlueSuite for Casira contains the following components:

- BlueSuite
- DFUWizard
- BlueLab (including Cygwin and Java RE)
- Acrobat
- Microsoft installer
- Documentation
- Readme file
- HCI Source code
- USB Device Driver
- Install program

The CD containing BlueSuite for MicroSira contains the following:

- BlueSuite
- DFUWizard
- Acrobat Reader
- Microsoft installer
- Documentation
- Readme file
- USB Device Driver
- Install program

5 Testing

5.1 Win32

The software has been tested in the following environments:

- Windows 2000
- Windows XP

Testing was performed with the following HCI firmware builds:

- 16.14
- 18.0
- 18.1 for BC3MM and PSTool

No formal testing was performed on RFCLI, E2Util, E2Write or BTCLI. However, these applications were smoke tested outside in addition to the script test.

The HCI source code release was shown to compile successfully under the environment described in its install note.

5.2 Scope of testing

Not all firmware versions were tested with all components on all platforms. Table 5-1 shows which firmware versions were tested with which components.

	Win2K	WinXP(p)
Firmware Version	HCISStack1.1v16.14 HCISStack1.1v18.0	HCISStack1.1v16.14 HCISStack1.1v18.0
PSTool	F	F
BlueFlash	F	F
BlueTest	F	F
BTCLI	F	F
BlueChat	E	F
RFCLI	E	F
PSCLI	F	F

Table 5-1: Testing on Firmware Versions

F = Full Test

E = Some tests completed on every transport

Appendix A Functional Changes Relative to BlueSuite v1.20

This section lists the significant functional changes made to the firmware relative to BlueSuite v1.20. See also the list of Known Issues addressed in Appendix B.

ID	Description
B-27	The USB device driver was not releasing bandwidth on close.
B-214	SCO over USB fails. It loses packetisation after 4 seconds.
B-237	Adding a SCO connection to USB can cause the HCI interface to lock up.
B-364	BlueCore2 with stacked flash had chip erase problems in BlueFlash.
B-584	PSTool now displays the presentation or base keys in the Description dialog.
B-655	There is no facility to access the Factory store from within the Stores menu on PSTool.
B-657	On a Kalimba Plug-and-Go module, you get "Recognised AMD on BlueCore 2". This should read "... BlueCore 3".
B-699	Some tools were incorrectly decoding and reporting the air mode from the HCI_Synchronous_Connection_Complete event.
B-1273	Allow the USB Transport to use the longer internal device names.
B-1487	In BlueFlash many of the chip variants were not correctly identified.
B-1708	The Canned Operations for Baud rate have been modified to cater for the new baud rate PS Key in HCI 18 and newer firmware.
B-2284	BTCLI's -p option does not work anymore.
B-2310	Additional Stores options were added to PSTool
B-2368	There is an undocumented mode of behaviour in BlueFlash's Firmware ID function. If the chip is stopped, the Firmware ID will report the ID of the DFU Loader (if present). If the chip is running, the Firmware ID will report the ID of the main Bluetooth Stack.
B-2461	There were some apparent memory leaks in a few of the Test Engine functions.
B-2511	The host code did not perform peer restart detection.
B-2565	Broadcast mode of BlueFlashCmd.exe mis-programmed flash device on port #3 occasionally.
B-2604	BlueFlash now reports more BlueCore chip variants.
B-2612	In PSTool, some Presentation keys were missing from the list in for HCI 18 and newer Firmware.
B-2681	Refactor the on-chip application from BlueFlash for future maintainability.
B-2878	Usbpurger.exe has a fixed list of VIDs + PIDs it purges on. You can now add a specific VID+PID on the command line, so you can purge the drivers for custom BlueCore applications.
B-2938	The key list in PSTool now gets refreshed when the user clicks on Reconnect.
B-3151	The btclictrl application, used to start up BTCLI, is missing the H5 transport.

B-3388	Improved the flash size measurement in BlueFlash to use the CFI data if available, and a look-up table if not.
B-3467	Incorporated several fixes to the USB device driver from IVT.
B-3555	When you reset the chip using USB as a transport, the transport failed to reconnect.
B-3597	The delay for some applications to enumerate the COM ports has been reduced.
B-3620	BlueCore2 Stacked Flash devices can now perform the Chip Erase operation.
B-3742	Improved the command line help for PSCLI.
B-3834	BlueFlash and BlueFlashCmd now support Kalimba Stacked Flash.
B-3889	Selection of non-standard port settings (especially multispi) has been improved.
B-4150	Changed algorithm, for determining sector write in BlueFlashCmd -broad so there is an additional CRC calculation. This means sectors are now correctly written to after partial flash erases.
B-4499	In BlueFlashCmd -broad mode, we are now more sensitive to the timeouts on potentially failing devices.
B-4699	SPI transports failed on fast (>2.1GHz) machines. The problem was caused by a signed integer being used for storing the clock speed.

Table 5-2: Functional Changes Relative to BlueSuite v1.20

Appendix B Known Issues

The following issues are known and unresolved at the time of release.

ID	Description
B-176	Local loopback mode makes BTCLI crash in USB mode.
B-184	Some copyright fields in software versions contain the wrong date.
B-287	BlueChat's Chat mode may stop after about a minute.
B-3231	BlueFlash can contain more than one reference to the same filename, but which can contain different or old versions of the file. This may be confusing.
B-3259	In the event of an SPI failure, PSTool still displays too many warning messages.
B-4574	Command-line tools should display version information as a matter of course

Table 5-3: Known Issues

Abbreviations and Definitions

BCSP	BlueCore Serial Protocol
BIST	Built-In Self-Test
BlueChat	Software for demonstrating and exercising BlueCore chips
BlueCore™	Group term for CSR's range of Bluetooth wireless technology chips
BlueFlash	Software for programming BlueCore's associated flash device
BlueLab	CSR's development toolset for building applications to run in the firmware's VM
BlueSuite™	BlueCore family of software utilities for Bluetooth evaluation and development
BlueTest	Software for executing BlueCore's BIST functions
Bluetooth®	Set of technologies providing audio and data transfer over short-range radio connections
BTCLI	Command-line based software for exercising the HCI layer of BlueCore
Casira™	CSR's main Bluetooth evaluation hardware system
CD	Compact Disk
CSR	Cambridge Silicon Radio
DFU	Device Firmware Upgrade
DLL	Dynamically Linked Library
E2Write	Command-line application for writing BlueLab applications to I ² C EEPROM devices over an SPI interface
EEPROM	Electrically Erasable Programmable Read Only Memory
HCI	Host Controller Interface
HCI Source Code	Source code for CSR's implantations of BCSP, H4 and USB, along with primitive conversion and device management
I ² C	Inter-Integrated Circuit
Persistent Store	Storage of BlueCore's configuration values in non-volatile memory
PS Key	Persistent Store Key
PSTool	Software for manipulating the BlueCore's Persistent Store
RFCLI	Command line application to communicate with RFCOMM firmware
RFCOMM	Protocol layer providing serial port emulation over L2CAP; element of Bluetooth
SPI	Serial Peripheral Interface
USB	Universal Serial Bus
VM	Virtual Machine
Windows CE	Embeddable version of Microsoft's Windows operating system

Record of Changes

Date	Revision	Reason for Change
28 FEB 05	a	Original publication of this document. (CSR reference: bcore-srn-064Pa)

BlueCore™

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bcore-srn-064Pa

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