

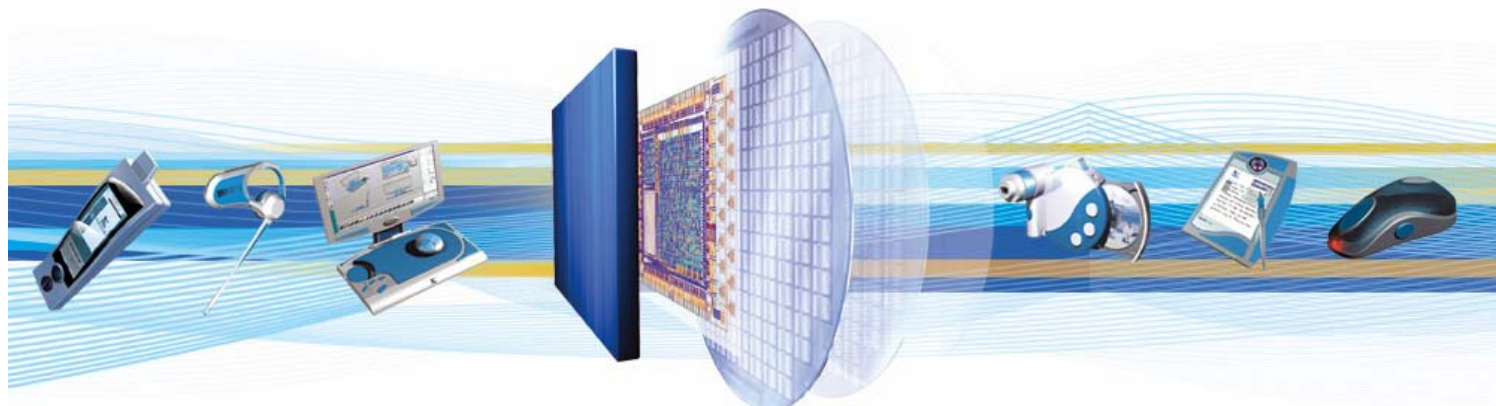


**BlueCore™**

# Vista Feature Pack (VFP) Release 1.06

## Release Notes

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**CSR**

Cambridge Science Park  
Milton Road  
Cambridge CB4 0WH  
United Kingdom

Registered in England 4187346

Tel: +44 (0)1223 692000  
Fax: +44 (0)1223 692001

[www.csr.com](http://www.csr.com)

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# 1 Introduction

This document describes v1.0 of the Vista Feature Pack Release version 1.06 for the CSR/Microsoft Vista Bluetooth program.

## 1.1 Functionality – This Release

This release provides the following functionality:

- Mono Audio (HS/HF)
- Stereo Audio (AVRCP/A2DP)
- Audio Base Profiles (GAVDP/AVCTP/ AVDTP)

## 1.2 Functional Restrictions

Only CSR BlueCore Bluetooth devices are supported.

## 1.3 Supported Languages

This release supports the following languages:

- Chinese (Traditional)
- Chinese (Simplified)
- Danish
- Dutch
- English (US)
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazil)
- Russian
- Spanish
- Swedish

## 1.4 Installing VFP

This section provides instructions for installing VFP on either a 32- or 64-bit system.

**To install VFP:**

1. Reboot the system to make sure that the Bluetooth module is reset correctly.
2. Run the appropriate executable file (either `VFPsetup-32.exe` or `VFPsetup-64.exe`).
3. If the User Account Control (UAC) is enabled, the User Account window opens.
4. Select **Continue**. The InstallShield window opens.
5. Select **Next** to begin the installation.
6. When the Vista Feature Pack installer completes, click **Finish**.
7. Reboot the system.

## 2 Command Line Options

### 2.1 Vista Silent Installation

Included in this release are these InstallShield response files for the Vista Feature Pack Silent Install:

Response File	Supports this File
setup-install-32.iss	VFPsetup-32.exe
setup-install-64.iss	VFPsetup-64.exe

**Table 2.1: Response Files for a Silent Install**

The response files are used to automate the installation of the Vista Feature Pack and provides the functionality of a silent install option.

**To install the Vista Feature Pack with the Silent Install option:**

1. Click **Start > Run**. The Run window opens.
2. In the **Open** field, type this command:

```
<path to installer>\VFPsetup-XX.exe /s /f1"<path to response  
file>\setup-install-XX.iss"
```

**Where:**

- XX is replaced with the appropriate number (either 32 or 64) to represent the type of system (either 32- or 64-bit)
- /s indicates to use silent install option
- /f1 indicates the response file to use

**Optional parameter to enable logging:**

Add /f2"<path to log file>\install.log" to the command line to create a log file.

3. Click **OK** to execute the command.

## 3 Operation and Testing

This section lists basic functionality tests that can be performed to verify a successful installation.

### 3.1 Checking Version Information

After a successful installation, the version number for installed drivers can be verified.

**To verify version information for installed drivers:**

1. Navigate to this folder: Windows > System32 > DriverStore > FileRepository.
2. Review the files for the appropriate environment (32- or 64-bit).

System Type	Profile	File Name	Version Number
32-bit	Mono Audio (HS/HF)	bthaudiohf.inf	1.0.0.380
	Stereo Audio (A2DP)	bthav.inf	1.0.0.380
	Stereo Audio (AVRCP)	bthavrcp.inf	1.0.0.380
64-bit	Mono Audio (HS/HF)	bthaudiohf.inf	1.0.0.380
	Stereo Audio (A2DP)	bthav.inf	1.0.0.380
	Stereo Audio (AVRCP)	bthavrcp.inf	1.0.0.380

### 3.2 Pairing and Connecting Devices

This section provides instructions for pairing and connecting a Bluetooth device.

**To pair and connect a Bluetooth device:**

1. Open the Control Panel.
2. Select **Classic View**.
3. Click **Bluetooth Devices**.

**Note:**

If the Bluetooth Devices option is not available, then the Bluetooth radio is not enabled. This option only appears when the Bluetooth radio is recognised by the operating system.

The Bluetooth Devices window opens.

4. Click the **Options** tab.
5. Verify that the **Show Bluetooth Icon in the notification area** check box is selected.
6. Click the **Devices** tab.
7. Press the **Add** button on the bottom of the screen.
8. Place the device to which you want to connect, in pairing mode.
9. Select the **My device is set up and ready to be found** check box. The Next button is enabled.
10. Press the **Next** button. The system searches for the device(s) placed in a pairing mode. When found, the device(s) appears in the devices list.
11. In the devices list, select the device to which you want to connect.
12. Press the **Next** button. A screen opens that allows entry of a passcode.
13. Choose the appropriate option:
  - Let the system choose a passcode
  - Choose my own passcode
14. If required, enter a pairing code in the designated field.
15. Press the **Next** button. The Windows system exchanges passcodes and connects to the selected Bluetooth device.
16. Press the **Finish** button. The connected device now appears in the devices list.
17. Repeat steps 11 through 16 for each device to which you want to connect.
18. Close this panel. If this panel is left open, only mono audio will function correctly.

### 3.3 Verification Tests

To conduct a streaming test (either AV stereo or mono streaming):

1. Do the following:

To conduct this type of streaming	Then pair and connect a headset that supports this profile to the Bluetooth stack
AV stereo	AV/A2DP
Mono	HS/HF

2. Open the Control Panel.
3. Select the **Sound** option. The Sound window opens.
4. Highlight the appropriate option:

For this type of streaming	Select this option
AV Stereo	Bluetooth Audio Renderer
Mono	Bluetooth Hands-free Audio

5. Click **Set Default** at the bottom of the window to set the selected option as the default playback device.

**Note:**

The Set Default button is disabled (greyed out) if the selected option is already set as the default.

6. Click **OK** to close the Sound window.
7. Close the Control Panel window and wait for about 30 seconds for the SCO channel to close.

8. Start the Windows Media Player.
9. Stream music.

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## 4 Known Issue

Table 4.1 shows the known issue related to the current VFP release.

Issue	Description
Opening the audio panel causes the Stereo Audio to drop.	Opening the Audio Panel on Vista causes the AV stream to be suspended. Closing the Audio Panel allows the AV stream to resume. This is caused by the Audio Panel opening a SCO connection to the headset for the display of audio metering information. SCO has priority over AV traffic and only one activity can be active at a time. When the Audio Panel is closed, the SCO connection is removed and the AV traffic will resume.

Table 4.1: Known Issue

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## Appendix A HCI Commands

The firmware accepts all HCI commands defined in the Bluetooth Core Specification. The “Available” column identifies if the command’s underlying functionality is provided. The Notes referenced in the Notes column are located at the end of this section.

Link Control Commands		
HCI Command	Available	Notes
INQUIRY	Yes	
INQUIRY_CANCEL	Yes	
PERIODIC_INQUIRY_MODE	Yes	
EXIT_PERIODIC_INQUIRY_MODE	Yes	
CREATE_CONNECTION	Yes	(1) (2)
DISCONNECT	Yes	(2)
ADD_SCO_CONNECTION	Yes	(2) (3) (4)
ACCEPT_CONNECTION_REQUEST	Yes	
REJECT_CONNECTION_REQUEST	Yes	
LINK_KEY_REQUEST_REPLY	Yes	
LINK_KEY_REQUEST_NEGATIVE_REPLY	Yes	
PIN_CODE_REQUEST_REPLY	Yes	
PIN_CODE_REQUEST_NEGATIVE_REPLY	Yes	
CHANGE_CONNECTION_PACKET_TYPE	Yes	(5)
AUTHENTICATION_REQUESTED	Yes	
SET_CONNECTION_ENCRYPTION	Yes	
CHANGE_CONNECTION_LINK_KEY	Yes	
MASTER_LINK_KEY	Yes	
REMOTE_NAME_REQUEST	Yes	
READ_REMOTE_SUPPORTED_FEATURES	Yes	
READ_REMOTE_VERSION_INFORMATION	Yes	
READ_CLOCK_OFFSET	Yes	

Table 4.2: Link Control Commands

Link Policy Commands		
HCI Command	Available	Notes
HOLD_MODE	Yes	
SNIFF_MODE	Yes	
EXIT_SNIFF_MODE	Yes	
PARK_MODE	Yes	
EXIT_PARK_MODE	Yes	
QOS SET-UP	No	
ROLE DISCOVERY	Yes	
SWITCH_ROLE	Yes	
READ_LINK_POLICY_SETTINGS	Yes	
WRITE_LINK_POLICY_SETTINGS	Yes	

Table 4.3: Link Policy Commands

Host Controller and Baseband Commands		
HCI Command	Available	Notes
SET_EVENT_MASK	Yes	
RESET	Yes	
SET_EVENT_FILTER	Yes	
FLUSH	Yes	
READ_PIN_TYPE	Yes	
WRITE_PIN_TYPE	Yes	
CREATE_NEW_UNIT_KEY	Yes	
READ_STORED_LINK_KEY	Yes	
WRITE_STORED_LINK_KEY	Yes	
DELETE_STORED_LINK_KEY	Yes	
CHANGE_LOCAL_NAME	Yes	(6)
READ_LOCAL_NAME	Yes	
READ_CONNECTION_ACCEPT_TIMEOUT	Yes	
WRITE_CONNECTION_ACCEPT_TIMEOUT	Yes	
READ_PAGE_TIMEOUT	Yes	
WRITE_PAGE_TIMEOUT	Yes	
READ_SCAN_ENABLE	Yes	
WRITE_SCAN_ENABLE	Yes	
READ_PAGE_SCAN_ACTIVITY	Yes	
WRITE_PAGE_SCAN_ACTIVITY	Yes	

Table 4.4: Host Controller and Baseband Commands

Host Controller and Baseband Commands (continued)		
HCI Command	Available	Notes
READ_INQUIRY_SCAN_ACTIVITY	Yes	
WRITE_INQUIRY_SCAN_ACTIVITY	Yes	
READ_AUTHENTICATION_ENABLE	Yes	
WRITE_AUTHENTICATION_ENABLE	Yes	
READ_ENCRYPTION_MODE	Yes	
WRITE_ENCRYPTION_MODE	Yes	
READ_CLASS_OF_DEVICE	Yes	
WRITE_CLASS_OF_DEVICE	Yes	
READ_VOICE_SETTING	Yes	(7)
WRITE_VOICE_SETTING	Yes	(7)
READ_AUTOMATIC_FLUSH_TIMEOUT	Yes	
WRITE_AUTOMATIC_FLUSH_TIMEOUT	Yes	
READ_NUM_BROADCAST_RETRANSMISSIONS	Yes	
WRITE_NUM_BROADCAST_RETRANSMISSIONS	Yes	
READ_HOLD_MODE_ACTIVITY	Yes	
WRITE_HOLD_MODE_ACTIVITY	Yes	
READ_TRANSMIT_POWER_LEVEL	Yes	
READ_SCO_FLOW_CONTROL_ENABLE	No	(3) (4)
WRITE_SCO_FLOW_CONTROL_ENABLE	No	(3) (4)
SET_HOST_CONTROLLER_TO_HOST_FLOW_CONTROL	Yes	
HOST_BUFFER_SIZE	Yes	
HOST_NUMBER_OF_COMPLETED_PACKETS	Yes	
READ_LINK_SUPERVISION_TIMEOUT	Yes	
WRITE_LINK_SUPERVISION_TIMEOUT	Yes	
READ_NUMBER_OF_SUPPORTED_IAC	Yes	
READ_CURRENT_IAC_LAP	Yes	
WRITE_CURRENT_IAC_LAP	Yes	
READ_PAGE_SCAN_PERIOD_MODE	Yes	
WRITE_PAGE_SCAN_PERIOD_MODE	Yes	
READ_PAGE_SCAN_MODE	Yes	
WRITE_PAGE_SCAN_MODE	Yes	(8)

Table 4.4: Host Controller and Baseband Commands (continued)

Information Parameters		
HCI Command	Available	Notes
READ_LOCAL_VERSION_INFORMATION	Yes	
READ_LOCAL_SUPPORTED_FEATURES	Yes	
READ_BUFFER_SIZE	Yes	
READ_COUNTRY_CODE	Yes	
READ_BD_ADDR	Yes	

Table 4.5: Information Parameters

Status Parameters		
HCI Command	Available	Notes
READ_FAILED_CONTACT_COUNTER	Yes	
RESET_FAILED_CONTACT_COUNTER	Yes	
GET_LINK_QUALITY	Yes	
READ_RSSI	Yes	

Table 4.6: Status Parameters

Testing Commands		
HCI Command	Available	Notes
READ_LOOPBACK_MODE	Yes	
WRITE_LOOPBACK_MODE	Yes	(9)
ENABLE_DEVICE_UNDER_TEST_MODE	Yes	

Table 4.7: Testing Commands

**Notes:**

- (1) This indicates slave of one master or master of one to seven slaves only.
- (2) Chip resource limits constrain the rate at which ACL and SCO connections can be made and broken to approximately 20 per 15 seconds. The time limit can be configured.
- (3) Up to three SCO links flowing over HCI over BCSP or one SCO link flowing over the chip's PCM interface, plus up to two SCO links flowing over HCI over BCSP. Support for SCO over USB or H4 is in place, but testing has been minimal.
- (4) There is no HCI SCO Host Controller to Host flow control support.  
There is no HCI SCO Host to Host Controller flow control support.
- (5) Changing HV1 to HV1 is incorrectly refused with reason "SCO Offset Rejected".
- (6) Local name is maintained through a reset/reboot.
- (7) Commands are extended according to [BT] Erratum 1275 to support transparent SCO.
- (8) Optional paging schemes are not supported.
- (9) Remote ACL loopback sometimes deadlocks when the devices' flow control mechanisms assert to each other.

## Appendix B HCI Events

The Bluetooth wireless technology module only generates the HCI event messages needed to support the implemented features. For example, the chip does not support the optional Page Scan modes, so the firmware does not generate the Page\_Scan\_Mode\_Change event. The table's "Available" column indicates whether the release of the firmware can generate the event message.

HCI Event	Available	Notes
INQUIRY_COMPLETE	Yes	
INQUIRY_RESULT	Yes	
CONNECTION_COMPLETE	Yes	
CONNECTION_REQUEST	Yes	
DISCONNECTION_COMPLETE	Yes	
AUTHENTICATION_COMPLETE	Yes	
REMOTE_NAME_REQUEST_COMPLETE	Yes	
ENCRYPTION_CHANGE	Yes	
CHANGE_CONNECTION_LINK_KEY_COMPLETE	Yes	
MASTER_LINK_KEY_COMPLETE	Yes	
READ_REMOTE_SUPPORTED_FEATURES_COMPLETE	Yes	
READ_REMOTE_VERSION_INFORMATION_COMPLETE	Yes	
QOS_SETUP_COMPLETE	Yes	
COMMAND_COMPLETE	Yes	
COMMAND_STATUS	Yes	
HARDWARE_ERROR	Yes	
FLUSH_OCCURRED	Yes	
ROLE_CHANGE	Yes	
NUMBER_OF_COMPLETED_PACKETS	Yes	
MODE_CHANGE	Yes	
RETURN_LINK_KEYS	Yes	
PIN_CODE_REQUEST	Yes	
LINK_KEY_REQUEST	Yes	
LINK_KEY_NOTIFICATION	Yes	
LOOPBACK_COMMAND	Yes	
DATA_BUFFER_OVERFLOW	No	(1)
MAX_SLOTS_CHANGE	Yes	
READ_CLOCK_OFFSET_COMPLETE	Yes	
CONNECTION_PACKET_TYPE_CHANGED	Yes	
QOS_VIOLATION	No	
PAGE_SCAN_MODE_CHANGE	No	(2)
PAGE_SCAN_REPETITION_MODE_CHANGE	Yes	

**Table 4.8: HCI Events**

**Notes:**

- (1) Significance and expected recovery procedure is ill defined.  
(2) Optional paging schemes are not supported.

## Terms and Definitions

Term	Definition
AVRCP	The Audio/Video Remote Control Profile (AVRCP) specifies the features and procedures that ensure interoperability between Bluetooth™ devices with audio/video control functions.
A2DP	The Advanced Audio Distribution Profile (A2DP) in Bluetooth™ specifies the protocols and procedures that define the distribution of high quality audio content, in either mono or stereo, on Asynchronous Connectionless Link (ACL) channels.
BlueCore™	Group term for CSR's range of Bluetooth™ wireless technology chips.
Bluetooth®	Set of technologies providing audio and data transfer over short-range radio connections.
CSR	Cambridge Silicon Radio
HSHF	Headset / Hands-free (HSHF) profile that defines the requirements for Bluetooth™ devices to support the Headset & Hands-free use case.
VFP	Vista Feature Pack

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## Document History

Revision	Date	History
CS-115957-RN	AUG 2007	Original publication of document.

# BlueCore™

## Vista Feature Pack 1.06

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