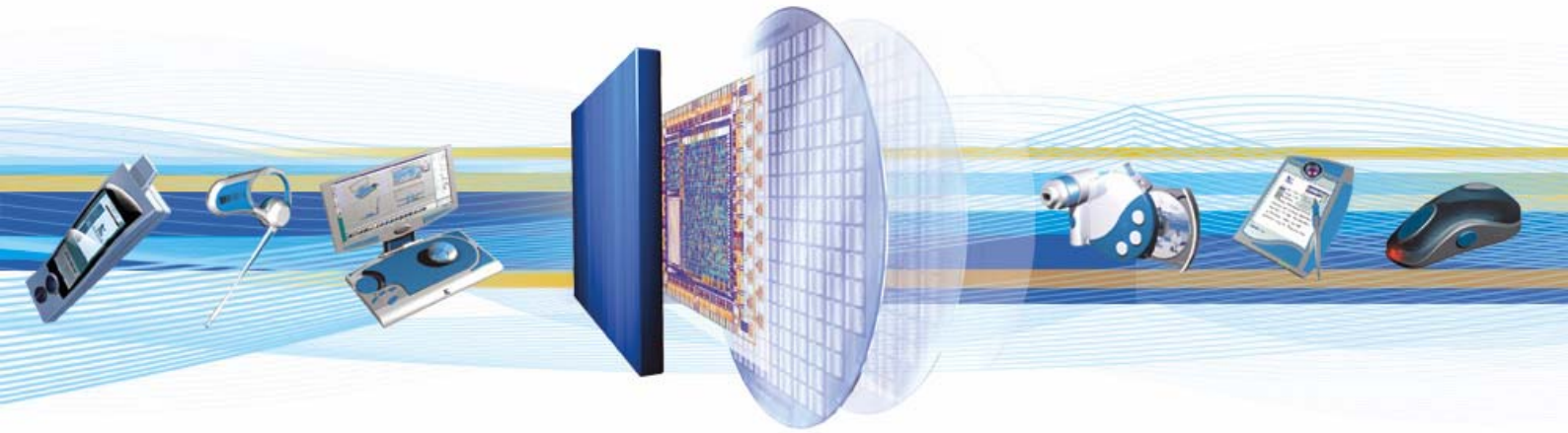
BlueLab™

BlueLab™ v3.2 Combined AV Headset

QuickStart Guide

May 2005



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1 Introduction

The Combined AV Headset enables the user to listen to stereo music streamed over a Bluetooth® wireless technology link while simultaneously maintaining a connection to a Bluetooth-enabled handset. This allows the media stream to be interrupted to make and receive calls.

This document briefly describes the procedure to implement the Combined AV Headset Reference Application provided with BlueLab v3.2.

The procedure is described in more detail in the BlueLab v3.2 Combined AV Headset User guide (blab-ug-005a) which also describes how to extend the application to support MP3 decoding.

Note:

The DSP libraries required to build the MP3 decoder must be obtained and installed separately (please contact the support channel for details).

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2 Installation

Ensure you have the following components before starting:

- BlueCore3-Multimedia Development Board (DEV-PC-1307C with daughter board DEV-PC-1309C)
- CSR SPI Cable
- USB Cable
- CSR USB Multimedia Dongle

Install BlueLab v3.2 using the installer on the CD-ROM or downloaded from www.csrsupport.com, accepting all of the default options. Refer to BlueLab xIDE user guide (blab-ug-002Pa) which is on the BlueLab CD-ROM for further information on the installation procedure.

2.1 Connect the Development Board

1. Connect the Universal Serial Bus (USB) and Serial Peripheral Interface (SPI) connections from the BlueCore3-Multimedia Development Board to your PC.
2. Turn the switch on the Development Board to the ON position.

2.2 Build and Download the Application

1. From the Start Menu, locate BlueLab and start xIDE.
2. Select **Project** / **Open** and browse to `\BlueLab\apps\av_headset_hfp\sbc_decode.xiw` and select **Open**. This opens the SBC (Sub Band Coding) decode application that runs on the DSP.
3. Select **Build** / **Build** or press **F7** to compile the DSP code.
4. Select **Project** / **Open** and browse to `\BlueLab\apps\av_headset_hfp\av_headset_hfp.xiw` and select **Open**. This opens the VM application.
5. Select **Build** / **Build** or press **F7** to compile the VM application.
6. Select **Debug** / **Run** or press **F5** to execute the application. This downloads the image into flash memory and begins execution. This operation takes approximately 60 seconds.
7. Select **Debug** / **Stop** or **Shift-F5** to halt the application.

2.3 Pair with a Handset

1. Hold down **VOL+** and **VOL-** on the Development Board and press Reset (on the daughter board). Keep **VOL+** and **VOL-** held down until you see the Blue LED flashing. The headset is now discoverable for 60 seconds.
2. Using a Bluetooth-enabled handset, discover the headset and pair with it. Refer to the handset manufacturer's manual for further instructions.

Note: the av_headset_hfp application has a default PIN of 8888.

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2.4 Pair with the CSR USB Multimedia Dongle

1. Insert the CSR USB Multimedia Dongle into a spare USB socket on your PC.
2. Start `avcontrol.exe` found in `\BlueLab\tools\bin`.
3. Hold down **VOL+** and **VOL-** on the Development Board and press Reset (on the daughter board). Keep **VOL+** and **VOL-** held down until you see the Blue LED flashing. The headset is now discoverable for 60 seconds.
4. On the `avcontrol` application press the **Discover New Headset** button.
5. The CSR USB Multimedia Dongle will locate the headset, pair with it and open a media stream. The status of the media connection is displayed on the `avcontrol` application dialog.

   Note: By default a device running the `av_headset_hfp` application has a PIN of 8888. However, Multimedia dongles shipping with previous versions of BlueLab have a PIN of 4444.

   If the devices fail to connect it is probable because the PINs are not matched.

   The way to resolve this conflict is to change the entry in the `av_headset_hfp.psr` file that sets the `PSKEY_FIXED_PIN`. Change &035b = 0038 0038 0038 0038 to &035b = 0034 0034 0034 0034. When the application is run in xIDE the PIN will then be set to 4444.

6. The headset is now ready to use.

2.5 Play a Media Stream

Start *Windows Media Player* and play a music file.

Music played from the *Media Player* is routed to the headset. Control the media stream using the buttons on the Development Board (**Pause/Play, Stop, Vol+, Vol-, Skip Forward** and **Skip Backwards**).

2.6 Connect to the Handset

Connect the handset paired in section 2.3 to the headset.

Incoming calls will suspend the audio stream. When the call is finished, the media stream returns.

- Press the button marked **F1** (Play/Pause) to accept an incoming call.
- Press the button marked **F2** (Stop) to reject and end calls.

Refer to the BlueLab v3.2 Combined AV Headset User Guide (blab-ug-005Pa) for further information on the user interface.

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Document References

Document Title	CSR Reference
BlueLab v3.2 Combined AV Headset User Guide	blab-ug-005Pa
BlueLab xIDE user guide	blab-ug-002Pa

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Terms and Definitions

BlueCore™	Group term for CSR's range of Bluetooth wireless technology chips
BlueLab™	CSR's development toolset for building applications to run in the firmware's VM
Bluetooth®	Set of technologies providing audio and data transfer over short-range radio connections
CSR	Cambridge Silicon Radio
DSP	Digital Signal Processor
MP3	MPEG Audio Layer 3, an audio file compression coding scheme
SBC	Sub-Band Coding
SPI	Serial Peripheral Interface
USB	Universal Serial Bus
VM	Virtual Machine; environment in the BlueCore firmware for running application-specific code produced with BlueLab

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Document History

Revision	Date	Reason for Change
a	28 MAY 05	Original publication of this document. (CSR reference blab-ug-004Pa)

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