



Changing the way the world connects

Product Brief

BlueCore4-Headset Refresh

Low cost, easy to use IC for Bluetooth headsets

- Low cost chip with integrated headset peripherals
- Full hardware reference design
- All software included in ROM. Simple UI set up with “Configurator” software wizard
- Latest Bluetooth standards (BTv2.0+EDR)
- eSCO for superior voice quality (MOS = 3.7)
- Up to 11 hour talk time (120mAh battery)



CSR’s BlueCore4-Headset Refresh IC is designed for high performance, low cost Bluetooth headsets. It offers superior audio quality, range and battery life at a lower overall cost than alternative devices. The IC is available in high volume from CSR immediately and is supplied with all of the materials needed to quickly bring a Bluetooth headset to market, including a development kit, tested software and a full reference design.

BlueCore4-Headset Refresh includes many novel features that improve headset performance. It supports eSCO, a technology that reduces annoying pops and clicks by allowing lost data to be retransmitted. As a result BlueCore4-Headset Refresh has excellent audio quality, achieving a score of 3.7 in the industry standard MOS voice quality test. It supports the latest version of Bluetooth, v2.0 + EDR, which increases range and battery life, stretching out talk time to up to 11 hours with a small 120mAh battery.

BlueCore4-Headset Refresh allows users can get to market fast because there is no need to write any additional software. All necessary code is included in ROM, reducing development and testing time. The BlueCore4-Headset Refresh software has been extensively tested with more than 55 popular Bluetooth phones. A full test report is available to customers directly from CSR.

The device is fully configurable using a simple PC based wizard application called the BlueCore4-Headset Refresh Configurator. The Configurator Wizard allows users to configure BlueCore4-Headset Refresh to meet virtually any user interface specification simply by ticking boxes and entering parameters.

Despite offering these advanced features the overall cost of a headset design based on BlueCore4-Headset Refresh is lower than ever before. The chip includes all of the basic peripherals needed for a headset, including codec, Li battery charger, switch mode DC-DC converter, reducing the electronic bill of material (eBOM). As a result of these innovations the overall eBOM is less than \$8, including a lithium battery.

BlueCore4-Headset Refresh Key Features

- Small footprint 8x8mm BGA, 0.65mm BGA ball pitch
- Less than 40mW power dissipation when on a call
- Support for eSCO + HFP v1.5
- Fully qualified Bluetooth v2.0+EDR system
- Integrated mono codec,
- Switched-mode DC-DC
- NiMH/Li charger

BlueCore4-Headset Refresh Key Applications

- Low cost , high quality Bluetooth headsets for mobile handsets
- Low cost , high quality Bluetooth headsets for PC VoIP systems



BlueCore4-Headset Refresh Dev Tools and Resources

BlueVOX headset Development Kit



This kit includes everything needed to start developing low cost, high quality headsets based on BlueCore4-Headset Refresh and future CSR headset solutions. Based on BlueCore4-Audio Flash, a reprogrammable version of BlueCore4-Headset Refresh.

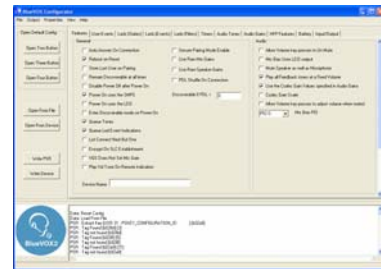
VOIP Dongle



The BlueVOX development kit comes with a VOIP dongle. This device links any headset, for example the BlueVOX development board, to a PC. It enumerates on the PC USB bus as a sound card using standard USB drivers. These drivers are preloaded on the vast majority of modern PCs. As a result, it is not necessary to run any special software on the PC, reducing installation time.

Once connected to a PC the headset can be used with VoIP systems. When used with the Skype system the user can make and receive calls using the buttons on the headset.

BlueCore4-Headset Refresh Configurator Wizard



This software tool, available free of charge to all BlueVOX dev kit users, allows users to modify the user interface of a headset based on BlueCore4-Audio Refresh. Users can specify virtually any headset user interface simply by ticking boxes and entering parameters.

BlueCore4-Headset Refresh web area



The BlueCore4-Headset Refresh web area contains all the information needed to make a headset based on BlueCore4-Headset, including the Configurator Tool, software and documentation. See:

https://www.csrsupport.com/BlueCore4-Headset_Refresh

Ordering Information

Description	Features	Order Number
BlueVOX development system	<ul style="list-style-type: none"> Bluetooth development board VoIP dongle Configurator application 	BV-001-3A, \$500
BlueCore4-Headset Refresh	<ul style="list-style-type: none"> Small footprint 8x8mm BGA, 0.65mm BGA ball pitch Less than 40mW power dissipation when on a call Support for eSCO, HFP v1.5, and BT v2.0+EDR Integrated mono codec, SMPSU and Li Charger 	BC413159A10-IPK-E4

- Buy online at www.csr.com/store
- Or contact your local CSR distributor, see www.csr.com/distributor



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