



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Features

- 80MHz RISC MCU and 80MIPS Kalimba DSP
- Internal ROM, serial flash memory and EEPROM interfaces
- Stereo codec with 2 microphone inputs
- Radio includes integrated balun
- 5-band fully configurable EQ
- CSR's latest CVC technology for narrowband and wideband voice connections including wind noise reduction
- Wideband speech supported by HFP v1.6 profile and mSBC codec
- Voice recognition support for answering a call, enables true hands-free use
- Multipoint HFP connection to 2 phones for voice
- Multipoint A2DP connection enables a headset (A2DP) connection to 2 A2DP source devices for music playback
- Secure simple pairing, CSR's proximity pairing and CSR's proximity connection
- Audio interfaces: I²S and PCM
- Serial interfaces: UART, USB 2.0 (full-speed), I²C and SPI
- aptX, SBC, MP3 and AAC decoder support
- Wired audio support (USB and analogue)
- Support for smartphone/tablet applications
- Integrated dual switch-mode regulators, linear regulators and battery charger
- External crystal load capacitors not required for typical crystals
- 3 LED outputs
- 68-ball VFBGA 5.5 x 5.5 x 1mm 0.5mm pitch
- Green (RoHS compliant and no antimony or halogenated flame retardants)

General Description

BlueCore[®] CSR8645[™] BGA is a product from CSR's Connectivity Centre. It is a single-chip radio and baseband IC for Bluetooth 2.4GHz systems including basic rate and EDR to 3Mbps.

The integrated peripherals reduce the number of external components required, including no requirement for external codec, battery charger, SMPS, LDOs, balun or external program memory, ensuring minimum production costs.

The battery charger architecture enables the CSR8645 BGA to independently operate from the charger supply, ensuring dependable operation for all battery conditions.

BlueCore[®] CSR8645[™] BGA

CSR8645 Stereo ROM Solution
with aptX[™]

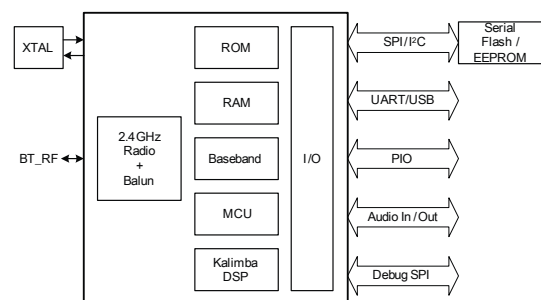
2-mic CVC Audio Enhancement

Fully Qualified Single-chip
Bluetooth[®] v4.1 System

Production Information

CSR8645A04

Issue 1



Applications

- Stereo headsets
- Wired stereo headsets and headphones
- Portable stereo speakers

The enhanced Kalimba DSP coprocessor with 80MIPS supports enhanced audio and DSP applications.

The integrated audio codec supports 2 channels of ADC, 2 digital microphone inputs and stereo output, as well as a variety of audio standards.

See *CSR Glossary* at www.csrsupport.com.

1 Ordering Information

| Device | Package | | | Order Number |
|---------------------------------------|-------------------------|--------------------------------|-----------------|-------------------|
| | Type | Size | Shipment Method | |
| CSR8645 Stereo ROM Solution with aptX | VFBGA-68-ball (Pb free) | 5.5 x 5.5 x 1mm 0.5mm pitch | Tape and reel | CSR8645A04-IBBC-R |

Note:

CSR8645 BGA is a ROM-based device where the product code has the form CSR8645Axx. Axx is the specific ROM-variant, A04 is the ROM-variant for CSR8645 Stereo ROM Solution with aptX.

Minimum order quantity is 2kpcs taped and reeled.

Supply chain: CSR's manufacturing policy is to multisource volume products. For further details, contact your local sales account manager or representative.

1.1 Contacts

| | |
|-------------------------------------|--|
| General information | www.csr.com |
| Information on this product | sales@csr.com |
| Customer support for this product | www.csrsupport.com |
| Details of compliance and standards | product.compliance@csr.com |
| Help with this document | comments@csr.com |

Document History

| Revision | Date | Change Reason |
|----------|----------|--|
| 1 | 3 APR 14 | Original publication of this document. |

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