

CSR8670™

Description

CSR8670™ is our next-generation audio system-on-chip (SoC) solution with wireless connectivity, embedded flash memory and integrated capacitive touch sensors.

CSR8670 will enable the creation of feature rich home entertainment and wearable audio products with a highly compelling user experience and superior audio performance.

CSR8670 is software-portable from CSR's popular BlueCore5-Multimedia™ platform, enabling easy migration of a broad range of CSR **eXtension partner solutions**, thereby facilitating rapid time-to-market deployment of a broad portfolio of consumer electronics products.

Watch the latest presentation and video demos:

Presentation: [Voice and Music](#)

Demo: [aptX® Voice & Music](#)

Demo: [aptX® and DDFA® for quality Bluetooth® streaming audio system](#)

Demo: [Bluetooth® Online cloud-based gaming](#)

Demo: [CSR uEnergy™ Bluetooth® smart accessories for smartphones](#)

Key Features

- Bluetooth® 3.0 (Bluetooth 4.0 compatible)
- 16Mb embedded flash memory (64bit wide)
- Support for up to 64Mb external serial flash (optional)
- Dual-core architecture with Integrated applications processor and an ultra low-power DSP coprocessor
- RF Performance: Tx: +10dBm, Rx: -90dBm
- Integrated high performance stereo codec
- Support for capacitive touch sensors
- Integrated Li-Ion Battery Charger

Benefits

CSR8670 is the first product in a range of next generation audio SOC solutions for wired or wireless audio and consumer devices that enables the following features and applications:

Smaller, Lighter and Thinner Form Factor

- Single chip solution which significantly reduces external component count and eBOM cost
- Leading edge package technology reduces PCB area size, enabling smaller end product designs

Enhanced User Experience

- Superior audio performance using aptX® Hi-Fi quality stereo codec
- Ultra-low power DSP core delivers significant power consumption savings for DSP intensive algorithms such as noise reduction, acoustic echo cancellation, speech recognition, text-to-speech and stereo processing enhancements
- Extended battery life in all modes including standby, talk-time and music playback
- Capacitive touch sensors enable tactile control on accessory devices
- Three RGB LED drivers enable product customisation
- Bluetooth low energy support for CSR's µEnergy® solutions, enabling applications such as health monitoring, remote control functionality or proximity tagging using an audio accessory

Enhanced Development Experience

- Dual-core architecture with embedded flash memory provides a very flexible solution for product differentiation
- Reduced design cycle time using a wide range of third party software plug-ins for the on-chip DSP, accessible from CSR's [eXtension Partner Program](#)
- Faster time to market with a readily available suite of development tools, hardware and application software

Potential applications

- Home entertainment eco-system
 - TVs
 - Smart remote controllers
 - Wired or wireless soundbars
 - Wired or wireless speakers and headphones
 - Bluetooth low energy connectivity to external 3D glasses
- Tablets / PCs / Mobile Connectivity
 - Wired or wireless headphones for music / gaming / multimedia content
 - Wired or wireless speakers
 - Wired or wireless speaker phones
 - Mono Headsets for voice

Product Details

Audio

- High performance stereo ADC and DAC
- Support for 2 x analog microphone inputs
- Support for high quality stereo output
- Support for up to 6 digital microphone (MEMS) inputs

Power Management

- 2 x SMPS regulators
- 3.3V USB regulator
- Additional on-chip linear regulators for internal supplies

Battery Charger

- Li-Ion battery charger with Instant-ON support
- Support for nominal and fast charge current rates
- Support for USB charging spec enumeration

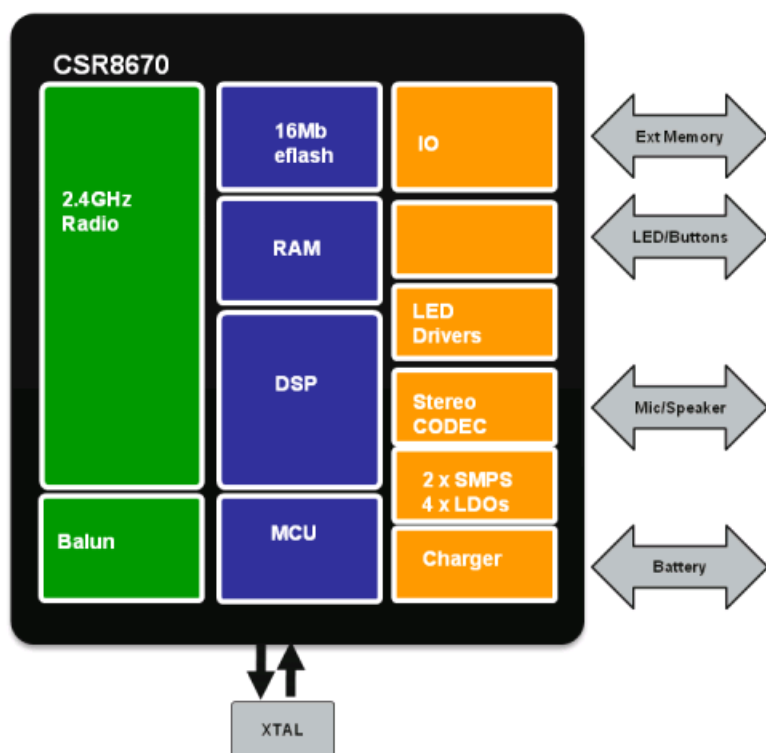
Interfaces

- Host Interfaces : UART / USB2.0 / SPI
- Audio Interfaces : PCM/ I2S / SPDIF
- 14 x general purpose I/Os
- 2 x Analogue inputs/outputs (temperature sensor, charger control, etc)
- 6 x capacitive touch sensors
- Three fully configurable LED drivers

Package Options

- 6.5 x 6.5 x 1.0mm, 0.5mm pitch, 112-ball VFBGA

Related Images



Csr8670a

Sales Offices

Your Local Sales Representative

Click on www.csr.com/contact/sales-representatives to contact your local sales representative.

Source URL: <http://www.csr.com/products/63/csr8670>

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