

Bluetooth® 4.2 Stereo Audio and BLE Module

Easily Add Bluetooth Audio, Voice and Data Connectivity to Your Application

Summary

The BM62 and BM64 are fully certified Bluetooth 4.2 (BDR/EDR/BLE) stereo audio modules for designers who want to add Bluetooth wireless audio, voice and Bluetooth Low Energy (BLE) to their products.

These Bluetooth SIG-certified modules are available in shielded and non-shielded configurations as Class 2 devices. The BM64 is also available as a Class 2 device. Each provides a complete wireless solution with Bluetooth stack, integrated antenna and worldwide radio certifications in a compact surface-mount package. The BM62 and BM64 have an integrated Li-Ion charger and contain a digital audio interface. They support HSP, HFP, A2DP, and AVRCP audio profiles. Both AAC and SBC codecs are supported for A2DP.

Additionally, the BM62 and BM64 support Bluetooth Low Energy for sending data between devices. The modules also support standard Generic Access Service, Device Information Service and a proprietary service for data communication.

The BM62 and BM64 are fully certified, complete solutions that are identical in features. The key difference between the two modules is the BM64 is slightly larger and includes an I²S™ interface which provides audio in a digital format, allowing for sound quality enhancement. The BM62 and BM64 are ideal for audio and voice applications that require direct communication with a smartphone.

Typical Applications

- Soundbars
- Wireless subwoofers
- Bluetooth speakers
- Multiple speakers
- Professional headsets
- Gaming headsets



Key Features

- Fully certified, embedded 2.4 GHz Bluetooth 4.2 module
- Supports Bluetooth BDR/EDR/BLE specification
- Bluetooth SIG qualified
- On-board Bluetooth stack
- BM62 and BM64 Class 2 module with +2 dBm typical output power
- BM64 Class 1 module with +15 dBm typical output power
- Supports High-Definition (HD) voice
 - 16 kHz noise suppression and echo cancellation
- Transparent UART mode for seamless serial data over UART interface
- Easy to configure with User Interface (UI) tool, a Windows® configuration utility or via an external host MCU
- Firmware upgrade via USB supported
- Supports high-resolution 24-bit, 96 kHz audio data format
- Supports both digital audio I²S and analog audio output
- Compact surface mount modules
 - BM62: 29 × 15 × 2.5 mm
 - BM64: 32 × 15 × 2.5 mm
- Castellated surface-mount pads for easy and reliable host PCB mounting
- Built-in temperature sensor
- Under-voltage protection
- On-board antenna
- FCC, Canada (IC), European Economic Area (CE), Korea (KCC), Taiwan (NCC), Japan (JRF), and China (SRRC) certified

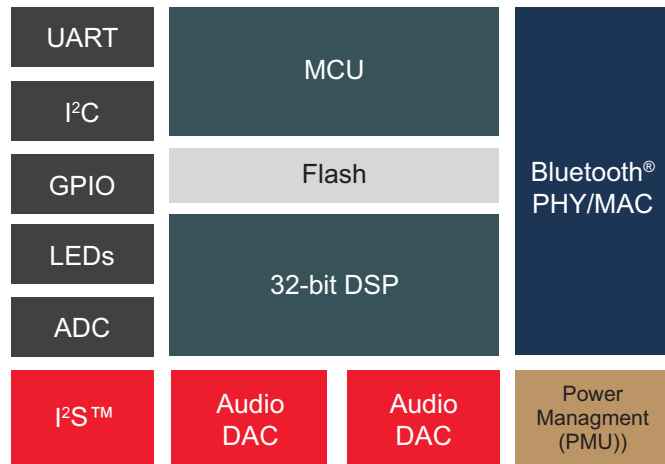


MICROCHIP

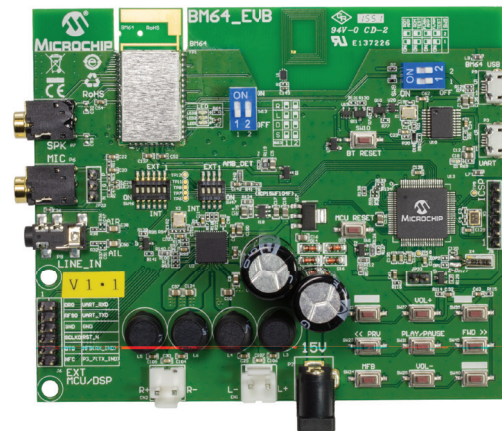
Development Tools

Name	Part Number	Description
BM62 Bluetooth® Audio Evaluation Board	BM-62-EVB	This board enables you to evaluate and demonstrate the functionality of the BM62 stereo audio module.
BM64 Bluetooth Audio Evaluation Board	BM-64-EVB-C1	This board enables you to evaluate and demonstrate the functionality of the BM64 Class 1 stereo audio module.
BM64 Bluetooth Audio Evaluation Board	BM-64-EVB-C2	This board enables you to evaluate and demonstrate the functionality of the BM64 Class 2 stereo audio module.

Block Diagram



BM64 Bluetooth Audio Evaluation Board (BM-64-EVB-C2)



Products

Device	IC	Description	RF Shield	Ordering Number
BM62	IS2062GM	Bluetooth® 4.2 stereo audio module, Class 2	Yes	BM62SPKS1MC2
BM62	IS2062GM	Bluetooth 4.2 stereo audio module, Class 2	No	BM62SPKA1MC2
BM64	IS2064GM	Bluetooth 4.2 stereo audio module, Class 2 with I2S™	Yes	BM64SPKS1MC2
BM64	IS2064GM	Bluetooth 4.2 stereo audio module, Class 2 with I2S	No	BM64SPKA1MC2
BM64	IS2064GM	Bluetooth 4.2 stereo audio module, Class 1 with I2S	Yes	BM64SPKS1MC1
BM64	IS2064GM	Bluetooth 4.2 stereo audio module, Class 1 with I2S	No	BM64SPKA1MC1



MICROCHIP

www.microchip.com/Bluetooth

Visit our web site for additional product information and to locate your local sales office.

Microchip Technology Inc. • 2355 W. Chandler Blvd. • Chandler, AZ 85224-6199

Microcontrollers • Digital Signal Controllers • Analog • Memory • Wireless