Product Summary

BE63

High performance, standalone Bluetooth 5.0 Dual mode Audio module

- Arm® Cortex® M4 with Dual Bluetooth for Audio applications
- Ultra compact - 16 x 10 x 2 mm
- High performance
- Dual Mode - Bluetooth 2.1 + EDR and Bluetooth 5.0

Overview

BE63 is a high performance, Bluetooth 5.0 dual mode module, targeted for audio applications where highly reliable wireless connection, High performance and ease of integration are the key requirements.

BE63 is a highly integrated Bluetooth Classic 2.1 + EDR and BLE 5.0 dual mode module. It is composed on an ARM core and an ultra-low power DSP core with high efficiency computing power, high performance Audio codec, power management unit, ADC, ultra-low current RF transceiver, and smart I/O distribution controller.

The module ships with an on board high performance antenna and all integrated peripherals.

Key features

Protocol	Bluetooth 5.0, Bluetooth 2.1+EDR
Processor	32 Bit ARM Cortex-M4 with FPU
RAM	16 KB X 8 data + 8KB X 2 cache
ROM	1 MB
Crystals	40 MHz
Antenna	Ceramic chip

Audio	> Supports HFP 1.7, HSP 1.2, A2DP 1.3, AVRCP 1.6, SPP 1.2 and PBAB 1.0
Form factor	16 mm x 10 mm x 20 mm
Footprint	Castellations 28

Applications

Mono headset

Stereo headset

Real Wireless Stereo (RWS) headset

Mono speaker

Stereo speaker

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Block diagram

BE63 MODULE		
2.4 ISM Radio	32 Bit ARM Cortex-M4F	40 MHz crystal
		1 MB Flash
RAM/ROM 16 KB X 8 data + 8KB X 2 cache/ 786 KB		

Chip antenna

- VBAT
- VDD_ADP
- 3V3
- Debug_log
- SWDIO
- SWDCLK
- MIC1/MIC2
- Speaker Out L/R
- LED (Upto 2)
- Key (Upto 7)
- Reset
- Thermistor
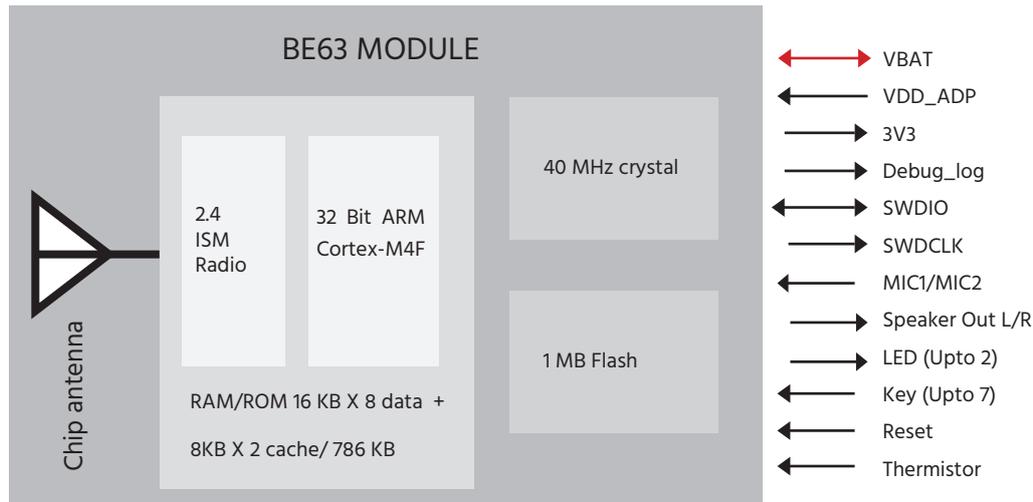
Specifications

Module FEATURES

- Bluetooth 5.0 specification compliant
- Supports HFP 1.7, HSP 1.2, A2DP 1.3, AVRCP 1.6, SPP 1.2 and PBAB 1.0
- Supports Bluetooth Classic (BDR/EDR)
- Real Wireless Stereo (RWS)
- Supports USB Type-C Audio
- Supports High resolution audio codec upto 24 Bits.
- Supports Dual analog MIC, AUX-IN, I2S digital audio, analog output
- Supports High Speed UART
- Supports USB BC1.2 battery charging with integrated dual switch mode power regulators, and battery charger; charging current upto 255 mA
- DSP Audio processing with 24 bit DSP core
- Noise suppression and echo cancellation
- SBC, and AAC-LC audio codecs supported for BT audio streaming

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