



Mindtree

A Larsen & Toubro Group Company

Welcome to possible



EtherMind Bluetooth Audio Codecs

SBC/mSBC and LC3 Codec for Classic and Bluetooth LE.

Mindtree has invested over 500 person-years in Bluetooth technology since 2000. We have implemented several Bluetooth specifications that have been licensed and proven in production at semiconductor companies, and audio and automotive OEMs. Audio codecs are one of the building blocks for any audio solution, and Mindtree has been a pioneer in building and licensing the standard codecs defined by Bluetooth SIG for Classic and Bluetooth low energy.

Our SBC/mSBC implementation has been licensed and is in production with multiple customers. Our LC3 codec implementation has been certified by Bluetooth SIG and is licensed by multiple semiconductor companies.

LC3 Codec Features

- Fixed point implementation, optimized for ARM, Tensilica (Easily portable to other MCU/DSP of choice from the customer)
- Optimized for MCPS, code and data memory
- Supports all defined configurations (sampling frequency, bit pool value etc.)
- Supports all the mandatory and optional features from the specification
 - Sampling rates: (8, 16, 24, 32, 44.1, 48) kHz
 - Frame interval: 7.5, 10 ms
 - 16 and 24 bits/sample
 - Bitrates/channel:16-320 kbps
 - PLC support
- For details on MIPS and memory requirements, please contact: bluetooth@mindtree.com


SBC Codec Feature

- Fixed point implementation, optimized for ARM
- Developed as per the Bluetooth SIG defined A2DP specifications
- All sampling frequencies (16, 32, 44.1 and 48) kHz, as specified in A2DP
- All channel modes (Mono, Dual, Stereo and Joint Stereo), as specified in A2DP
- All block lengths (4, 8, 12 and 16), as specified in A2DP
- All subbands (4 and 8), as specified in A2DP
- All bit allocation methods (SNR and Loudness), as specified in A2DP
- All bitpool values ranging from 2 to 250. The decoder and encoder will support all possible values that do not result in excess of the maximum bit rate. The Advanced Audio Distribution Profile limits the available maximum bit rate to 320 kb/s for mono, and 512 kb/s for two channel modes.

mSBC Codec Feature


- Fixed point implementation, optimized for ARM (Easily portable to other MCU/DSP of choice from the customer)
- Built to support wide band speech with the hands-free profile,
- Sampling frequency (16 kHz), as specified in HFP
- Channel mode (Mono), as specified in HFP
- Block lengths (15), as specified in HFP
- Subbands (8), as specified in HFP
- Bit allocation method (Loudness), as specified in HFP
- Bitpool value (26), as specified in HFP


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About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 275+ enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 22,000 entrepreneurial, collaborative and dedicated "Mindtree Minds."