

BELASIGNA R262

Wideband Voice Capture and Noise Reduction SoC

Product Overview

For complete documentation, see the data sheet.

BelaSigna® R262 is a complete system-on-chip (SoC) solution that provides wideband single- or dual-microphone noise reduction in voice capture devices such as mobile phones, VoIP application including webcams and tablet computers, two-way radios and other applications that can benefit from improved voice clarity.

Featuring a novel approach to removing mechanical, stationary and non-stationary noise, the chip preserves voice naturalness for greater speech intelligibility regardless of acoustic environment or the orientation of the handheld device while in use—providing unmatched freedom of movement for end-users. Designed to be compatible with a wide range of codecs, baseband chips and microphones without the need for calibration or external components, BelaSigna R262 is easy to integrate, improving manufacturers' time to market.

Additional features include de-reverberation, the ability to customize multiple voice capture modes and outputs and to tune the algorithm to the unique needs of a manufacturer's device. The chip includes a highly optimized DSP-based application controller with industry-leading energy efficiency and is packaged in a highly compact 5.3 mm² WLCSP to fit the most sized-constrained industrial designs.

Evaluation hardware and custom tuning inquiries for BelaSigna R262 are available through [Exaudio AB](#).

Features

- Easy to integrate: Drop-in hardware and software solution that works without special tuning, calibration or external components
- Versatile voice capture: Consistently captures voice regardless of acoustic environment or orientation of the device while in use
- Design flexibility: Adaptive nature of algorithm enables flexibility in microphone placement and eliminates production line tuning; compatible with a broad range of microphones
- Advanced noise reduction: Effective against stationary and non-stationary background noise to improve voice clarity while preserving intelligibility and voice naturalness
- Simplified system integration: Complete System-on-Chip takes two microphone signals and plugs directly into a digital microphone interface (DMIC) or into a host chip's microphone inputs
- 360 degree voice pick-up: Conference mode clearly captures distant voices up to 6 meters from voice capture device
- Configurable system: Available PC-based tool provides easy control over all system settings
- Energy efficient: Ultra-low power consumption allows longer operation in active and standby modes without sacrificing performance
- Miniature size: Easily integrates into existing industrial designs due to minimal board area requirements

End Products

Part Electrical Specifications												
Product	Pricing (\$/Unit)	Compliance	Status	DSP Core (bits)	Coprocessor Type	MIPS	Dynamic Range (dB)	RAM (kB)	I _{standby} Typ (µA)	Audio Inputs	Audio Outputs	Package Type
BR262W26A103 E1G			Active	16	WOLA	60	88	-	40	2	2	WLCSP -26

Application Diagram

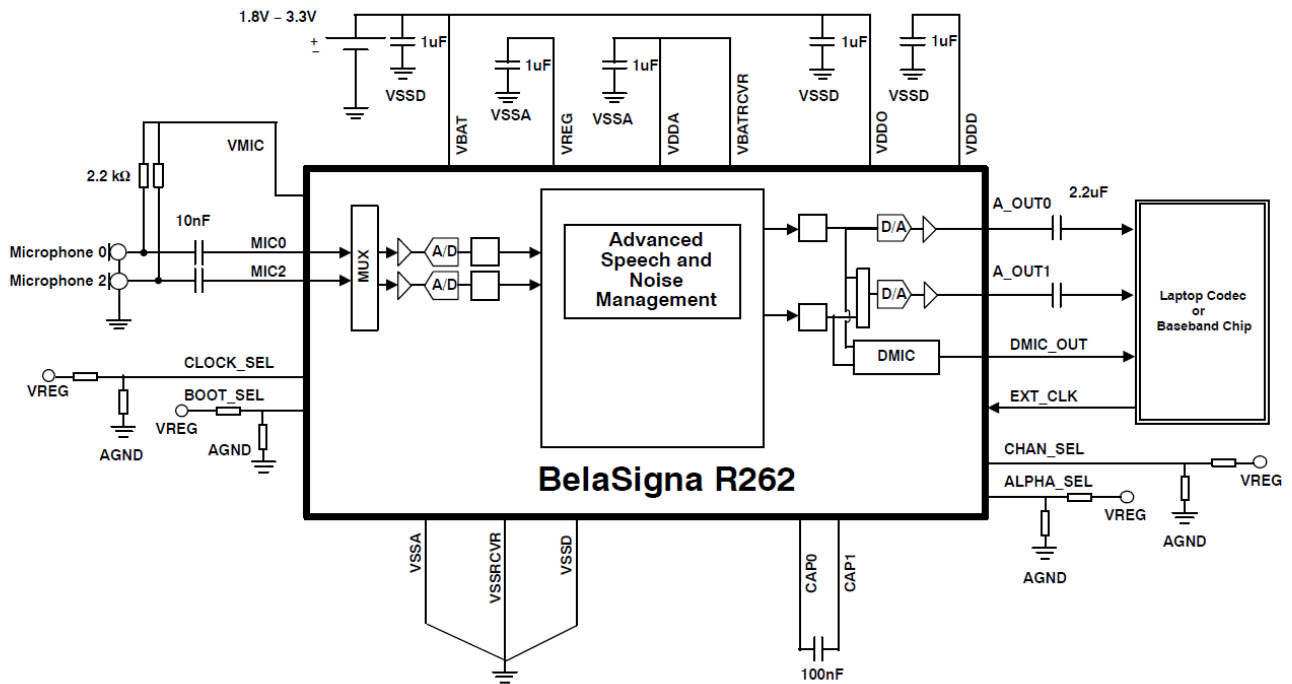


Figure 1. Typical Application Diagram for 30-ball WLCSP Package Option