

Product Overview

EZAIRO 7111: Audio Processor, DSP for Hearing Aids

For complete documentation, see the data sheet.

Ezairo® 7111 is an open-programmable DSP-based hybrid module designed specifically for non-wireless hearing aids, including In-the-Canal (ITC) applications.

What's Included in Ezairo 7111

Ezairo 7100 Digital Signal Processor (DSP): Includes a high precision, quad-core architecture that delivers 375 MIPS without sacrificing power consumption.

EA2M: 2 Mb EEPROM memory for storing important hearing aid parameters and firmware.

Passive Components: Enables direct interfacing with hearing aid transducers.

Development Tools

Ezairo Preconfigured Suite

Open-Programmable Evaluation & Development Kit (EDK)

To access Ezairo-based development tools, please contact your Sales Representative or Authorized Distributor.

Features

- Ezairo Pre Suite Firmware Bundle: Provides up to 8 channels of Wide Dynamic Range Compression (WDRC), 16 kHz sampling rate, and adaptive audio algorithms including a new feedback canceller.
- Miniature, User-Friendly Package: Features large pads for easy hand soldering.
- Ultra-Low Power Consumption: 1090 μ A while running Ezairo Pre Suite firmware bundle @ 10.24 MHz with all algorithms active.
- Flexible Programmability: Open-programmable DSP-based system can be customized to the specific signal-processing needs of any manufacturer. Modify or add new algorithms or features without making changes to the chip.
- Quad-Core Architecture: Industry's most integrated, flexible, and power efficient single-chip solution. Features a CFX DSP, HEAR Configurable Accelerator, Arm® Cortex®-M3 processor.
- Ultra-High Audio Fidelity: Provides 85 dB system dynamic range with up to 110 input signal dynamic range to preserve a more detailed sound.
- Configurable System Clock Speeds: Twelve clocking speeds to maximize computing performance versus power consumption.
- Low Audio Delay: Programmable Filter Engine supports 0.044 ms audio delay.

Applications

- Audio Processing

End Products

- Hearing Aids

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	WDR Channels	Graphic EQ Bands	Program Modes	Advanced Algorithms	Acoustic Indicators	Other Features	Wireless Standards	Package Type
E7111-0-102A19-AG		Pb-free Halide free non AEC-Q and PPAP	Active	8	33	8	Adaptive Feedback Cancellation Adaptive Noise Reduction Automatic Adaptive Directionality Directional Microphone Environmental Classification	Tone Sequences Voice Alerts	Datalogging Digital Volume Control Hand Solderable	null	SIP-19
E7111-0-102A19-BPG		Pb-free Halide free non AEC-Q and PPAP	Active	8	33	8	Adaptive Feedback Cancellation Adaptive Noise Reduction Automatic Adaptive Directionality Directional Microphone Environmental Classification	Tone Sequences Voice Alerts	Datalogging Digital Volume Control Hand Solderable		SIP-19

For more information please contact your local sales support at www.onsemi.com.

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