## Overview

The Ezairo Preconfigured (Pre) Suite is a complete hearing aid framework consisting of algorithm and firmware bundles, a cross-platform software SDK, and evaluation and configuration tools.

Ezairo 7150 SL is the first hybrid to be supported by the Ezairo Pre Suite. The Ezairo 7150 SL firmware bundle features up to 8 channels of Wide Dynamic Range Compression (WDRC) and a collection of adaptive hearing aid algorithms ideal for developing mid-range, Bluetooth® low energy technology-enabled hearing aids and Over-the-Counter (OTC) devices.
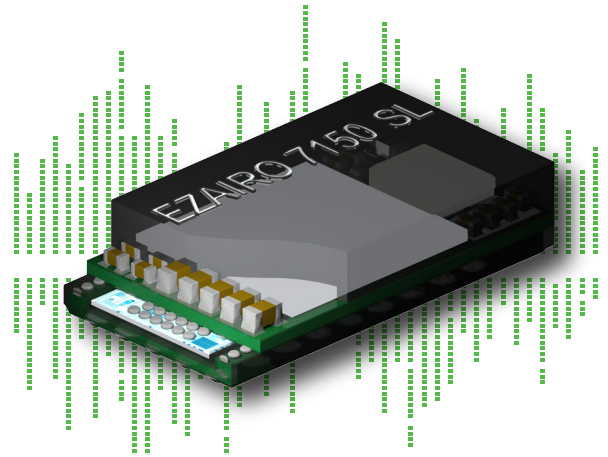
Wireless Features
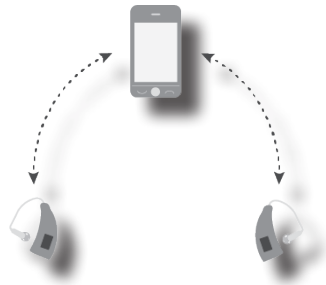
2.4 GHz Bluetooth Low Energy
Provides support for Control over BLE, including volume control, memory profile switching, and battery level indication, and full access to adjust all public algorithm parameters (wireless fitting) from any Bluetooth low energy-enabled device.

Audio Streaming
Using a proprietary 2.4 GHz protocol, Ezairo 7150 SL can be connected wirelessly to a remote dongle for audio streaming. This dongle can be used as a wireless microphone or can be connected via a standard audio jack to any media device (e.g.,TV) for stereo audio streaming.

Wireless Fitting
The Ezairo Sound Designer Software Development Kit (SDK) provides support for fitting software to communicate directly with an Ezairo 7150 SL-based hearing aid wirelessly, removing the need for inconvenient, proprietary programming cables.

Application Diagram
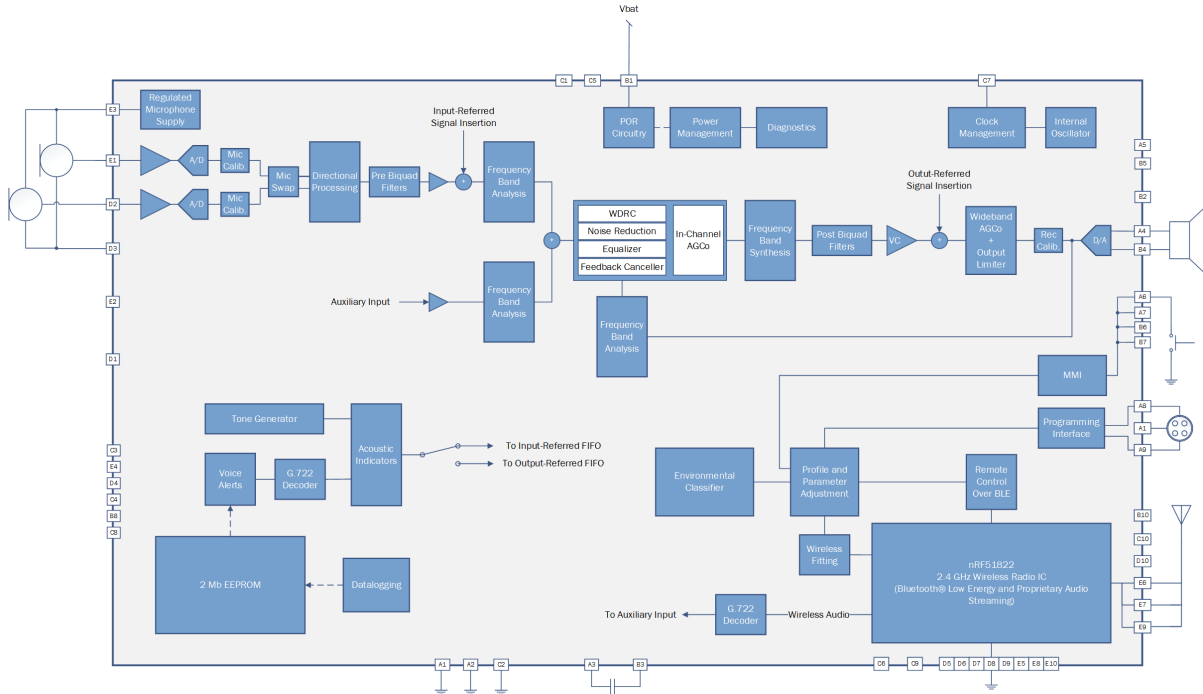
Additional Features

Audio Performance
- 16 kHz sampling rate
- 24-bit audio processing
- High quality, low delay (~5 ms) filterbank
- Wideband AGCo with output limiter
- 33-band graphic equalization
- 8 programmable biquadratic filters

Adaptive Algorithms
- Adaptive Feedback Cancellation
- Static and Adaptive Directional Microphone processing
- Noise Reduction

Wide Dynamic Range Compression (WDRC)
8 channels of WDRC with in-channel AGCo are provided, each with individual settings for low-level gain, high-level gain, upper and lower thresholds, expansion ratio and threshold, and output limit.

Datalogging
Enables the recording of various hearing aid parameters and environmental characteristics with a configurable frequency from 1 second to 60 minutes.

Acoustic Indicators and Voice Alerts
Support for tone-based and recorded voice alerts assignable to system events such as volume change, profile switch, low battery warning, and BLE pairing events.

Other Features
- Up to 8 memory profiles
- In-situ tone generation with built-in support for acoustic calibration
- Volume and memory retention
- Configurable pushbutton events (volume and memory select) with associated acoustic indicators
- Firmware upgradeable in-the-field
- Adjustable on-board microphone bias voltage
- Ultra-low power consumption

Ezairo Sound Designer Software
A complete, Windows®-based hearing aid development toolset providing plug-ins to model transducers, construct product libraries, configure and fine-tune hearing aid parameters, and calibrate hearing aids.

Ezairo Sound Designer Software Development Kit (SDK)
The Ezairo Sound Designer SDK enables manufactuers to easily create fitting software and BLE-enabled mobile applications. The core Application Programming Interface (API) provides support for a number of industry-standard communication interfaces (in addition to BLE) from a variety of programming languages. Support for in-the-field hearing aid firmware updates is integrated into the SDK, allowing easy deployment of firmware bundles containing updates and new features.

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