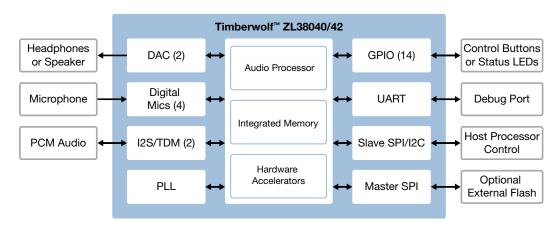


Microsemi Timberwolf[™]Audio Processor

HD Voice Audio for IP Phone

New High-performance Audio Processors Enable the Streamlined Development of IP Phones and Enterprise Hands-free Communication

Designed for IP phones and conference phone applications, Microsemi's new audio processors ZL38040 and ZL38042 feature the company's innovative AcuEdge™ acoustic technology, which is a set of highly-complex and integrated algorithms that allow the user to extract intelligible information from the audio environment from which they are communicating.



ZL38040/42 Block Diagram

Features and Benefits

- Super Wideband, Wideband and Narrowband AEC up to 3 microphone paths (ZL38042)
- Up to 15 microphones using multiple ZL38042 devices
- Wideband and Narrowband AEC (ZL38040)
- 3 to 5 meters voice pick up, full duplex operation
- Long echo tail cancellation
 - Up to 256ms for Narrowband and Wideband
 - Up to 170 ms for Super Wideband
- Advanced Noise Reduction to reduces background noise from the near-end speech signal
- Howling cancellation prevents oscillation in echo canceller audio path

Features and Benefits (Cont.)

- 48kHz Stereo Music Playback with Voice
- Field upgradable
- Embedded class AB amp to drive 16ohm load (headset/handset)

Typical Applications

- Super Wideband conference phone with satellite microphones
- Full duplex speaker-phone for digital telephone
- Echo cancellation for video conferences

Getting Started

Use the following resources to explore:

ZLK38000 Eval Board

IP Phone Reference Design

- IP Phone Reference Design Information
- ZLE38640 IP Phone Reference Design User's Guide

Microsemi AcuEdge™ Technology

- ZL38040 Advanced Audio Processor
- ZL38042 Advanced Multi-Channel Super Wideband Audio Processor

MiTuner™ Automatic Tuning Kit

- MiTuner[™] Information
- MiTuner[™] GUI Software Guide
- ZLS38508 MiTuner™ GUI



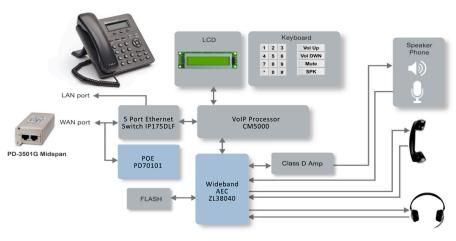
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IP Phone Reference Design (ZLE38640)

The IP Phone Reference Design board has the following feature set:

- Microsemi ZL38040 Advanced Audio Processor
- High-fidelity 16 kHz sampling
- Acoustic Echo Canceller (AEC)
- Speakerphone, Wideband Handset, and Headset interfaces
- Microsemi Power over Ethernet or 5V power operation



IP Phone Reference Design

Microsemi Auto Tuning Tool (ZLE38470)

Microsemi's MiTuner™ Kit eases the system tuning complexity and speed up design cycle for quick development. MiTuner™ kit provides hardware, software and support for the automatic tuning of Calibration Timberwolf family of audio processors.



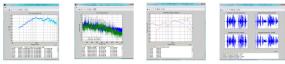


Tuning

Testing



Results based off TIA920/P.1100





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