


## Voice Processor with Dual Narrow Band Codec 56-Pin QFN EP

### Tray



Images are for reference only

<b>Manufacturer:</b>	<a href="#">Microchip Technology, Inc</a>
<b>Package/Case:</b>	QFN56
<b>Product Type:</b>	Embedded Processors & Controllers
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active

[Inquiry](#)

### General Description

Microsemi AcuEdge™ Technology ZL38012 is a hardware platform designed to support advanced acoustic echo canceller and noise reduction with the ZLS38507 firmware pack for hands-free car applications. Simplified Block Diagram Typical Applications Hands-free car kits Full duplex speaker-phone for digital telephone Echo cancellation for video conferences Intercom Systems Security Systems Features & Benefits Voice processor with hardware accelerator On-board memory Dual  $\Delta\Sigma$  ADCs with input buffer gain selection programmable to 8 kHz sampling Dual  $\Delta\Sigma$  DACs with output sampling of 8 kHz Dual function Inter-IC Sound (I2S) or Secondary TDM port Primary PCM port supports TDM (ST BUS, GCI or McBSP framing) or SSI modes at bit rates of 128, 256, 512, 1024, 2048, 4096, 8192 or 16384 Kb/sec Separate slave (microcontroller) and master (Flash) SPI ports, maximum clock rate = 25 MHz 5 General Purpose Input/Output (GPIO) pins General purpose UART port Bootloadable for future software upgrades External oscillator or crystal/ceramic resonator 1.2 V Core; 3.3 V IO with 5 V-tolerant inputs Firmware Overview Microsemi AcuEdge™ Technology ZLS38507 - Firmware for Hands-free Application Selectable Acoustic and Line Echo Cancellers (AEC & LEC) with acoustic Noise Reduction Programmable echo tail cancellation length from 8 to 256 ms Noise Reduction - up to 20 dB for white noise Non-linear Echo Controller No divergence due to double-talk (patented Adaption Control) Superior voice quality with patented Non-Linear Processor (NLP) Patented Narrow-band signal divergence protection Patented Anti-howling - prevents oscillation in echo canceller audio path Speaker path AGC (Rout) Documentation ZL38012 Data Sheet Software Manuals ZLS38507 Firmware Manual Application Notes ZLE38470 Automatic Tuning Guide AGC Settings for ZLS38507 Product Previews ZL38012 Product Preview Voice Processor Product Selection Guide Downloads, Firmware and Drivers IBIS Models: ZL38012LDG1 IBIS Evaluation Boards ZLE38012 User's Guide Software URL ZLS38507: Speakerphone Firmware ZLS38508 LITE: MiTuner LITE GUI ZLS38520: SPI driver Maximize Download Parts Total: 2 Matching: 2 Reset Compare Parts Part Status In Production Package Type 56 QFN 8x8 Package Carrier Tape & Reel Tray ZL38012LDF1 In Production 56 QFN 8x8 Tape & Reel ZL38012LDG1 In Production 56 QFN 8x8 Tray Order Status Sales Contacts RFQ/SAMPLES Contact Support Documents and Resources Packaging Information Product Portals Quality Returns Training

## Key Features

Voice processor with hardware accelerator

On-board memory

Dual  $\Delta\Sigma$  ADCs with input buffer gain selection programmable to 8 kHz sampling

Dual  $\Delta\Sigma$  DACs with output sampling of 8 kHz

Dual function Inter-IC Sound (I2S) or Secondary TDM port

Primary PCM port supports TDM (ST BUS, GCI or McBSP framing) or SSI modes at bit rates of 128, 256, 512, 1024, 2048, 4096, 8192 or 16384 Kb/sec

Separate slave (microcontroller) and master (Flash) SPI ports, maximum clock rate = 25 MHz

5 General Purpose Input/Output (GPIO) pins General purpose UART port

Bootloadable for future software upgrades

External oscillator or crystal/ceramic resonator

1.2 V Core; 3.3 V IO with 5 V-tolerant inputs

## Application

Hands-free car kits

Full duplex speaker-phone for digital telephone

Echo cancellation for video conferences

Intercom Systems

Security Systems

## Recommended For You

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### ZL49031DCF1

Microchip Technology, Inc

SSOP

### ZL49010DAA

Microchip Technology, Inc

DIP8

### ZL88801LDF1

Microchip Technology, Inc

QFN64

### ZL49021DAA

Microchip Technology, Inc

BGA

### ZL49031DDEI

Microchip Technology, Inc

SSOP

### ZL49031DDF1

Microchip Technology, Inc

SSOP

### ZL38010DCEI

Microchip Technology, Inc

SOIC-28

### ZL38015QCGI

Microchip Technology, Inc

QFP

### ZL38010DCE

Microchip Technology, Inc

SOIC-28

### ZL38010DCF1

Microchip Technology, Inc

SOP-28

### ZL88702LDF1

Microchip Technology, Inc

QFN

### ZL50111GAG2

Microchip Technology, Inc

BGA

### ZL49020DAA1

Microchip Technology, Inc

DIP8

### ZL50110GAG2

Microchip Technology, Inc

BGA

### ZL792588GDC2

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LBGA