

Features

- **Next Generation ZL880 VoicePort Family with Enhanced Features and Performance**
 - Same API interface as the *VE880 Series*
 - 35% lower BOM cost than previous generation
- **Complete BORSCHT Functions for Two FXS Channels in a Single 64-Pin QFN Package**
 - Battery feed, Over-voltage support, integrated Ringing, line Supervision, Codec, Hybrid (2W/4W), and Test
- **Integrated Power Management**
 - Switching power supply tracks line voltage minimizing active and ringing power dissipation
 - Low Power Idle Mode with 45 mW consumption
 - Internal FET drive circuit for lower BOM count
 - Integrated real-time power monitoring tool
- **Ringing**
 - 5 REN with pin for pin compatible 100-V (ZL88701) and 150-V (ZL88702) devices
 - Up to 140-V_{PK} internal sinusoidal or trapezoidal ringing with programmable DC offset
 - Adaptive ringing for lower power
- **Worldwide Programmability**
 - Input impedance, balance impedance, gain
 - DC feed voltage and current limit
 - Ringing frequency, voltage and current limit
 - G.711 μ -law, A-law, or 16 bit linear coding
 - Call progress tone and Caller ID generation
 - Sample coefficients for more than 70 countries
- **Pin-Selectable PCM/MPI or ZSI Interfaces**
 - SPI Mode 0 and 3 support and no inter byte \overline{CS} off time. Also supports legacy MPI Interface.
 - ZSI Mode for a smaller number of interface signals to the host and less expensive isolation
- **VoicePath SDK and VP-API-II Software Available to Implement FXS Functions**
- **VeriVoice Software Suites Available for Manufacturing and Subscriber Loop Testing**
 - Utilizes integrated test tool box

142170

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Ordering Information

Device OPN ¹	Device Type	Package	Packing
ZL88701LDF1	100V-Tracker	64-pin QFN (9x9)	Tape & Reel
ZL88701LDG1	100V-Tracker	64-pin QFN (9x9)	Tray
ZL88702LDF1	150V-Tracker	64-pin QFN (9x9)	Tape & Reel
ZL88702LDG1	150V-Tracker	64-pin QFN (9x9)	Tray

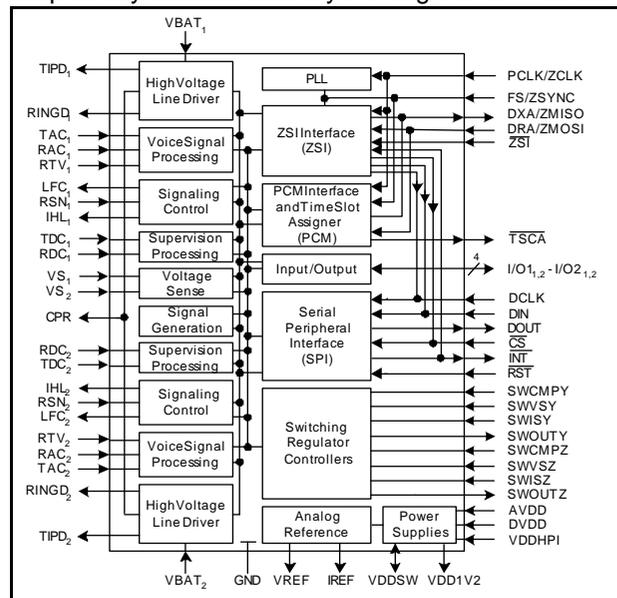
1. The Green package meets RoHS Directive 2002/95/EC of the European Council to minimize the environmental impact of electrical equipment.

Applications

- DSL Residential Gateways and Integrated Access Devices (IADs)
- Cable eMTAs
- PON Single Family Units (SFUs)
- Fiber to the Premise/Home/Building (FTTx) Multiple Dwelling Units (MDUs)

Description

The Microsemi® ZL88701/702 Dual Channel Tracking Battery Wideband VoicePort Device provides complete BORSCHT functions for two telephone line FXS ports. This device is part of the new *ZL880 Series* featuring enhanced functionality, lower BOM cost, and greater power efficiency, while maintaining software compatibility with the industry leading *VE880 Series*.



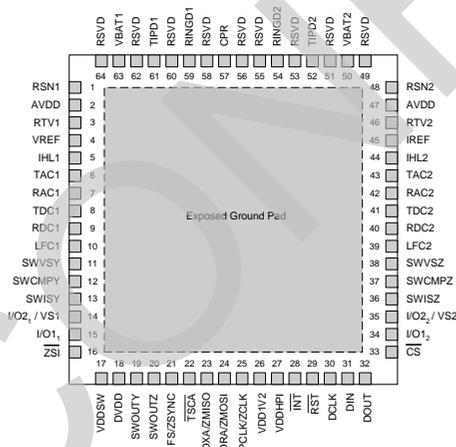
VoicePort Device Block Diagram

Selected Electrical Specifications

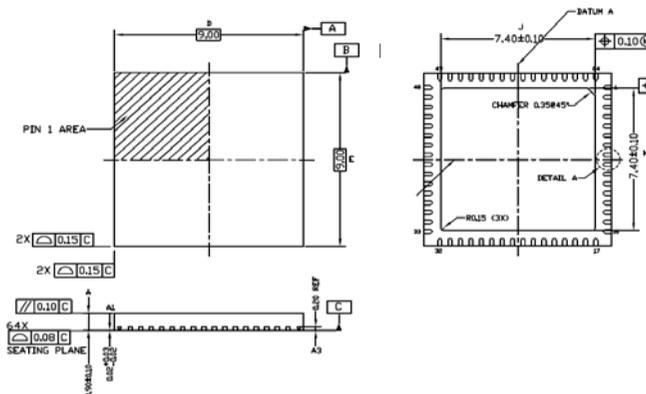
Description	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Ambient Temperature, under Bias	T_A		-40°C		+85	°C	
Digital and Analog Supply Voltages	DVDD,AVDD		3.135	3.3	3.465	V_{DC}	
Host Port Interface Supply Voltage	VDDHPI		1.71	3.3	DVDD	V_{DC}	
Battery Voltages							
For the ZL88701	VBAT _{1,2}		-12	-90	-105	V_{DC}	
For the ZL88702			-12	-130	-150		
Line Current	I_{LA}		18	26	49	mA	
Ringing Voltage							
For the ZL88701	VRING	Flyback Switcher into 5 REN (Tracking)			65	V_{RMS}	
For the ZL88702					99		
Two-Wire Return Loss	R_L	200 to 3400 Hz		30		dB	
Longitudinal Balance		1 kHz		58		dB	
Device Power Consumption (Per Channel)							
Disconnect	P_D	Switcher on, but no DC feed to line		23		mW	
Low Power Idle (On-Hook)		VBAT = -52 V_{DC}		43			
Idle (On-Hook)			300 Ω , I_{LA} = 25mA		85		
Talk (Off-Hook)					435		
Ringing			65 V_{RMS} into 3 REN (Tracking)		480		
Maximum Device Power Dissipation Capability, Continuous	$P_{D(max)}$	T_A = 85°C		2.1		W	
Junction to Ambient Thermal Resistance	θ_{JA}			26		°C/W	

Note: Refer to the ZL88701/702 Data Sheet for test circuits and additional details

Device Pinout



Package Drawings



Related Collateral

- ZL88701/702 Dual Channel Tracking Battery Wideband VoicePort Device - ZL880 Series Data Sheet, Document ID# 141606
- ZL880 VP-API-II Reference Guide, Document ID#: 143271