ZARLINK SEMICONDUCTOR

VoiceEdge Solutions

VE8820

Dual Channel Tracking Battery Wideband VoicePort™ Chipset
VE880 Series

APPLICATIONS

- **Voice enabled Cable and DSL Modems**
- **Residential VoIP Gateways and Routers**
- **Media Terminal Adapters (MTA) Standalone & Embedded**
- **Fiber to the User/Premise/Home (FTTH/P/H), Fiber in the Loop (FITL) Optical Network Terminals (ONT)**
- **Wireless Local Loop (WLL), PBX, ISDN NT1/TA**

FEATURES

- **Complete BORSCHT function for 2 channels in a single VoicePort™ chipset**
  - — Battery Feed, Over-voltage support, integrated Ringing, line Supervision, Codec, Hybrid (2W/4W), Test
- **Integrated Power Management**
  - — Integrated high voltage switching regulator controllers
    - – Wide input voltage range (VSW =+3.3V to +35 V)
    - – Switching power supply tracks line voltage minimizing active & ringing state power dissipation
  - — Low power Idle and On-hook transmission states
- **Worldwide Programmability**
  - — Two-wire AC impedance, Balance Impedance, Gain
  - — DC feed voltage and current limit
  - — Ringing frequency, voltage and current limit
  - — 12 kHz and 16 kHz Metering
  - — Programmable loop closure and ring trip thresholds
- **Ringing**
  - — 5 REN
  - — Up to 140-Vpk internal balanced sinusoidal or trapezoidal ringing with programmable DC offset
  - — Unbalanced ringing for PBX trunk compatibility
- **Powerful signal generator**
  - — Universal Caller ID generation
  - — Up to 4 simultaneous tones
  - — Automatic cadencing feature
- **VoicePath™ API-II Software available to implement FXS functions**
  - — Supports chipset calibration
  - — Line configuration via VoicePath Profile Wizard
- **VeriVoice™ Test Suite Subscriber Loop Test**
  - — Seamless integration with API-II software
  - — Utilizes integrated self test capabilities
  - — Line fault detection and reporting
- **Pin selectable PCM/MPI or GCI interface**
- **G.711 µ-law, A-law, or 16 bit linear coding**
- **Wideband 16 kHz sampling mode**
- **Integrated 150 mW 3-V Relay Driver**
- **Small footprint chipset**
  - — 64-pin TQFP and exposed pad 24-pin QFN

ORDERING INFORMATION

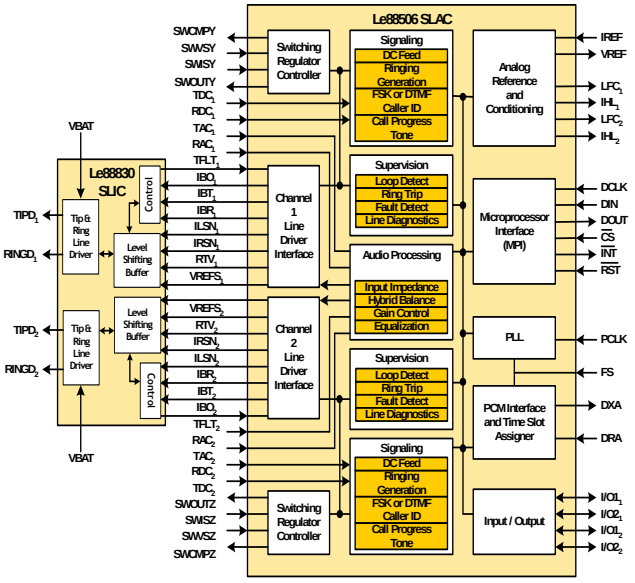
Device OPN	Package Type	Packing[2]
Le88506DVC	64-pin 10 x 10 TQFP (Green)[1]	Tray
Le88830KQC	24-pin 6 x 6 QFN (Green)[1]	Tray

1. *The green package meets RoHS Directive 2002/95/EC of the European Council to minimize the environmental impact of electrical equipment.*
2. *For delivery using a tape and reel packing system, add a "T" suffix to the OPN (Ordering Part Number) when placing an order.*

DESCRIPTION

Zarlink's dual channel VE8820 Tracking Battery VoicePort™ chipset implements a dual-channel telephone line interface by providing all the necessary voice interface functions from the high voltage subscriber line to the µP/DSP digital interface. This chipset reduces system level cost, space, and power. Designers benefit by having a simple, cost effective, low-power and dense, interface design without sacrificing features or functionality. The programmable, feature rich VoicePort chipset provides a highly functional line interface which meets the requirements of short and medium loop (up to 1500 Ohms total) applications. Features include: high voltage switching regulator, self-test, line test capabilities, integrated ringing (up to 140-Vpk), worldwide software programmability with wideband capability, flexible signal generator with tone cadencing, caller ID generation and all BORSCHT functions. These VoicePort chipset features are crucial for designing cost-effective, full-featured Voice over Broadband solutions.

VOICEPORT™ CHIPSET BLOCK DIAGRAM



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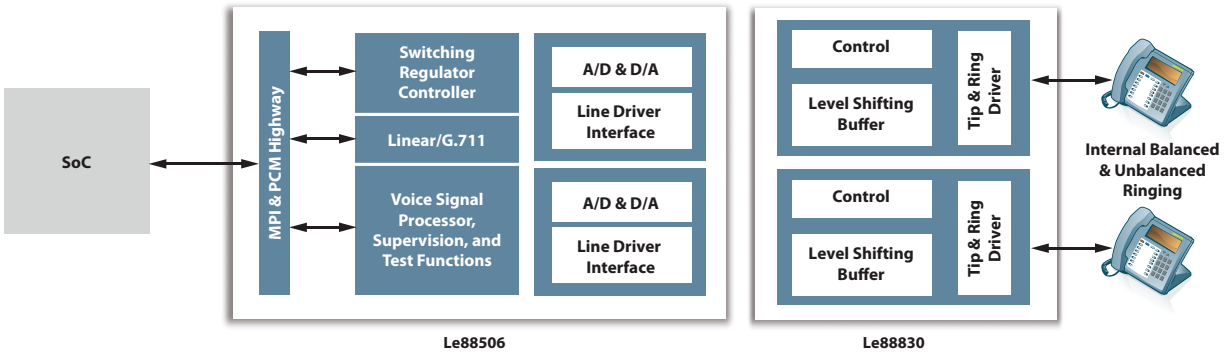
FEATURES	BENEFITS
• Lowest power solution across all operating modes	• Provides lowest power consumption solution for battery-backed and power-sensitive applications
• Highly programmable	• Offers design flexibility to develop one application for worldwide markets
• Integrated ring cadencing and system state control	• Reduces real-time software overhead
• Common application programming interface	• Significantly reduces development time with VoicePath API-II software
• Comprehensive line sensing	• Enables high performance GR-909 diagnostics and subscriber loop test and self test support with VeriVoice Test Suite software
• Integrated switching regulator	• Enables lowest component count and highest efficiency in all states of operation
• Small footprint	• Saves board space

VE8820 VoicePort Chipset



Related Literature

- **Le88116/136 Single-Channel Tracking Battery Wideband VoicePort™ Device Data Sheet***
- **Le88266/286 Dual Channel Tracking Battery Wideband Auto Battery Switching (ABS) VoicePort™ Device Data Sheet***
- **Le88276 Dual Channel Tracking Battery Wideband Auto Battery Switching (ABS) VoicePort™ Device Data Sheet***
- **Le71HR0866G - VE880 Series Line Module (Supports 2FXS with a 12 V Flyback Tracking Power Supply)**
- **Le71HR0864G - VE880 Series Line Module (Supports 2FXS with a 12V ABS Power Supply)**
- **Le71HR8820G/8821G - VE880 Series Line Modules (Supports 2FXS with 12V Flyback Tracking or Inverting Boost Power Supply)**

**Contact your Zarlink Sales Representative to obtain the data sheet.*

Packaging and Availability

See *Ordering Information* on first page.

For More Information:

To find the Zarlink Sales Office nearest you or for technical support, visit our website at: www.zarlink.com

For more information about all Zarlink products
visit our Web Site at

www.zarlink.com

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