

Silicon Labs Meets VoIP Market Demand with Next-Generation Programmable ProSLIC Devices

New Si32x8x Single and Dual ProSLIC Family Reduces Cost, Board Size and Power Consumption for Customer Premises Equipment

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AUSTIN, Texas--([BUSINESS WIRE](#))--[Silicon Labs](#) (NASDAQ: SLAB), a leading provider of semiconductor and software solutions for the [Internet of Things](#) and Internet infrastructure markets, today introduced a new family of subscriber line interface circuits (SLICs) offering the lowest power consumption, smallest footprint, and highest levels of integration and programmability for the voice-over-IP (VoIP) gateway market. Silicon Labs' single- and dual-channel Si32x8x ProSLIC® family provides a best-in-class subscriber line interface solution for a wide range of VoIP customer premises equipment (CPE) including cable gateways, xDSL integrated access devices, xPON optical network terminals, fiber to the home (FTTH), fiber to the building (FTTB) and wireless fixed terminals.

The VoIP market continues to grow steadily each year, driven primarily by new FTTH/FTTB deployments and upgrades of existing xDSL and cable gateways as consumers demand higher broadband speeds and new services. According to Silicon Labs estimates, the VoIP CPE market is expected to exceed 160 million SLIC ports in 2016. Service providers continue to offer additional VoIP features and services while CPE manufacturers face pressures to reduce system costs and optimize the power efficiency of CPE products. As the leading provider of SLIC solutions to the VoIP market, Silicon Labs has enhanced its [market-leading ProSLIC portfolio](#) to meet the bill of materials (BOM), integration and low-power requirements of CPE applications.

Silicon Labs' flagship Si32x8x ProSLIC family provides industry-leading configurability to ensure future-proofed one- and two-channel foreign exchange station (FXS) telephony interfaces in a compact, single-chip solution. The ProSLIC devices minimize SLIC power consumption by using flexible, integrated tracking dc-dc controllers that support patent-pending, ultra-low-cost capacitive boost configuration technology. They also reduce power by leveraging Silicon Labs' patented low-power ringing (LPR) technology and an ultra-low-power 50 mW per channel on-hook mode. Patent-pending smart ringing technology available in dual-channel ProSLIC devices also enables the use of cost-effective power adapters in two-channel CPE designs by typically reducing the required peak current by more than 300 mA. These on-chip innovations make the highly integrated ProSLIC devices the most power-efficient SLIC products available, while significantly reducing system BOM cost over competitive offerings.

The ProSLIC family offers an integrated level shifter/driver, enabling a direct connection to a dc-dc converter's power transistor regardless of input voltage. This innovation eliminates the need for a separate MOSFET pre-drive circuit required by competing SLIC designs, reducing the cost and footprint of a two-channel design by at least 12 external devices. The Si32x8x devices interface to leading CPE SoCs offering a PCM/SPI or ISI digital interface. When coupled with Silicon Labs' next-generation [Si88x4x digital isolators](#) through a 3-wire ISI interface, the Si32x8x family provides the industry's only single-transformer isolated voice solution.

CPE manufacturers are challenged to fit all the functionality required by subscribers into small, inexpensive product designs. The Si32x8x family addresses this footprint challenge by offering the industry's smallest single-channel SLICs in QFN package options as small as 5 mm x 6 mm, as well as a very compact 7 mm x 7 mm dual-channel solution. The Si32x8x BOM footprint is only 4.2 cm² per FXS channel – the smallest SLIC footprint in the industry. This tiny device size enables the lowest BOM cost and smallest footprint per channel for multiline CPE gateways.

“As the leading supplier of programmable SLIC solutions for the VoIP market, Silicon Labs continues to invest in ProSLIC innovations that translate into significant cost, power and time-to-market benefits for our customers,” said Ross Sabolcik, vice president and general manager of access and isolation products at Silicon Labs. “The Si32x8x ProSLIC family is exactly what CPE manufacturers need to develop the next generation of cost-effective, small-footprint and energy-efficient VoIP gateways.”

Silicon Labs provides comprehensive hardware, software and reference design support to accelerate time to market and simplify Si32x8x-based designs. The ProSLIC application programming interface (API), a common software library for the entire ProSLIC portfolio, eliminates the need to develop system-specific software drivers for ProSLIC devices. The ProSLIC API includes example Linux® kernel and userspace device driver examples to further reduce development time. The API supports a rich set of metallic loop tests to diagnose external faults, as well as a set of inward self-tests to support diagnostics. Further easing design challenges, reference design hardware and software support is available from leading vendors of SoC solutions for VoIP gateway equipment.

Pricing and Availability

Beta samples of the Si32x8x ProSLIC devices and evaluation boards are available now. General samples and production quantities are planned for Q1 2016. Single-channel Si3218x device pricing begins at \$1.58 (USD) in 10,000-unit quantities, and dual-channel Si3228x 10K pricing begins at \$2.12 (USD). The ProSLIC evaluation kit is priced at \$250.00 (USD MSRP) and ships with full documentation and Silicon Labs' ProSLIC GUI software to enable easy programming and evaluation of the ProSLIC device. For more information about the Si32x8x family or to request samples, please visit www.silabs.com/ProSLIC.

Silicon Labs

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