

Silicon Labs Introduces the First Single-Chip Digital Radio Receivers for Consumer Electronics

New Si468x FM Receivers Leverage Software-Defined Radio to Support HD Radio™ and DAB/DAB+ for Portable and Home Audio Products

“Digital radio is the next wave of the broadcast audio industry, enabling CD-quality sound for radio listeners and a host of innovative broadcast data services”

AUSTIN, Texas--([BUSINESS WIRE](#))--[Silicon Labs](#) (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced the industry's first single-die antenna-input-to-audio-output digital radio receiver solution developed for the global portable and consumer electronics markets. Leveraging software-defined radio technology, the new monolithic Si468x receiver ICs bring FM, HD Radio™ and DAB/DAB+ broadcast capabilities to a wide range of audio applications, from price-sensitive clock and tabletop radios to mainstream mini/micro audio systems and CD boomboxes to high-end multimedia devices with displays such as mobile phones, tablets and personal navigation devices.

Digital radio technology is the next generation of radio broadcasting. In addition to providing better audio quality than traditional AM/FM radio, digital radio can transmit program information, weather forecasts, news headlines, music artist and track names, traffic information and other data. Digital radio adoption has been slow due in part to the high cost of delivering a high-performance yet power-efficient RF solution for the consumer electronics market. Silicon Labs' Si468x family directly addresses the consumer digital radio market by providing an advanced, single-die solution that reduces system complexity, bill of materials (BOM) count and power consumption without compromising RF performance.

Leveraging Silicon Labs' proven low-IF digital receiver architecture, the Si468x family delivers superior RF performance compared to existing consumer-grade digital radio solutions. The Si468x receivers support auto-calibrated digital tuning and FM seek functionality based on multiple signal quality and band parameters and provide flexible audio processing features including noise blanking, configurable FM soft mute, FM de-emphasis and FM hi-cut filtering.

The Si468x family enables developers to reduce system cost, size and complexity by integrating most of the external components needed to build a digital radio receiver system including the RF tuner, baseband and stereo audio DACs. The family's wafer-level chip-scale package (WLCSP) option supports very compact designs, enabling a complete digital radio receiver system with only 12 external components to be implemented in less than 100 square millimeters.

The Si468x receivers are engineered with small form factor designs in mind. By integrating the RF tuner and baseband functions on a single die, the Si468x family avoids radio self-interference and streamlines system design, validation and testing. High integration simplifies board layout, reduces board space requirements and enhances system stability, making the receivers a good fit for on-board and small form factor designs where performance, size and reliability are critical considerations. Offering the smallest footprint and lowest power consumption of any digital radio solution on the market (less than 60 mW in analog FM mode and less than 95 mW in HD Radio and DAB/DAB+ modes), the Si468x receivers are also an ideal choice for power- and space-sensitive portable applications.

“Digital radio is the next wave of the broadcast audio industry, enabling CD-quality sound for radio listeners and a host of innovative broadcast data services,” said James Stansberry, vice president and general manager of Silicon Labs' broadcast products. “We've responded to the needs of the global digital radio market by developing a 'digital-radio-on-a-chip' solution that enables developers to reduce implementation costs and simplify their portable and home audio product designs while delivering the highest RF performance and sound quality to consumers.”

The Si468x receivers support worldwide analog FM radio reception and incorporate an integrated decoder for the European Radio Data System (RDS) and North American Radio Broadcast Data System (RBDS) standards including required symbol decoding, block synchronization, error detection and error correction functions. The Si468x family includes the first truly monolithic digital radio receiver ICs certified by iBiquity to support the HD Radio standard for portable and consumer electronics applications. The Si468x receiver family is compatible with the European Eureka 147 DAB and DAB+ standards and is designed to be fully compliant with the United Kingdom's Minimum Specifications for DAB and DAB+ Personal and Domestic Digital Radio Receivers.

Pricing and Availability

Samples and production quantities of the Si468x digital radio receivers are available now in two package options: a 7 mm x 7

mm 48-pin QFN package and a tiny 3.2 mm x 3.8 mm WLCSP package that is ideal for portable and space-constrained designs. Pricing for the Si468x receiver family begins at \$5.62 (USD) in 10,000-unit quantities. To ease digital radio system design based on the Si468x family, Silicon Labs offers comprehensive evaluation kits priced at \$550.00 (USD MSRP). For more information about Silicon Labs' Si468x digital radio receivers and to purchase samples and development tools, please visit www.silabs.com/FMtuners.

Silicon Labs

Silicon Labs is an industry leader in the innovation of high-performance, analog-intensive, mixed-signal ICs. Developed by a world-class engineering team with unsurpassed expertise in mixed-signal design, Silicon Labs' diverse portfolio of patented semiconductor solutions offers customers significant advantages in performance, size and power consumption. For more information about Silicon Labs, please visit www.silabs.com.

Cautionary Language

This press release may contain forward-looking statements based on Silicon Labs' current expectations. These forward-looking statements involve risks and uncertainties. A number of important factors could cause actual results to differ materially from those in the forward-looking statements. For a discussion of factors that could impact Silicon Labs' financial results and cause actual results to differ materially from those in the forward-looking statements, please refer to Silicon Labs' filings with the SEC. Silicon Labs disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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