Silicon Labs Raises the Bar for Silicon TV Tuners

New Si21x8 TV Tuner Family Enables Lowest System Cost and Delivers Superior RF Performance and Picture Quality

“Our market-proven TV tuners will ship into nearly one third of all TVs sold this year, delivering the performance and reliability required by TV makers to ensure that consumers have a superior viewing experience.”

AUSTIN, Texas--(BUSINESS WIRE)--Silicon Laboratories Inc. (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced a next-generation family of TV tuners offering both best-in-class RF performance and support for all worldwide TV standards while delivering the lowest bill of materials. The new Si21x8 family represents the state-of-the-art in TV tuner technology based on four generations of patented architectural enhancements. The Si21x8 family includes five TV tuner devices optimized for hybrid analog/digital iDTVs, analog-only or digital-only TVs, portable TVs, DVD and Blu-ray recorders, and terrestrial and cable set-top boxes (STBs).

Based on Silicon Labs’ patented, market-leading TV tuner architecture, the Si21x8 family offers unsurpassed sensitivity and selectivity performance and is being designed into nearly all Tier 1 TV brands. New RF enhancements enable the Si21x8 tuners to offer the highest tolerance to Wi-Fi and LTE interference without the need for external filtering components. In addition, the reduced noise floor of the tuner IF output delivers unsurpassed video signal-to-noise ratio (SNR) for analog TV reception. The combination of these improvements results in a clearer, less grainy TV picture and reception of more channels versus competing solutions.

High-quality analog TV support continues to be an important feature for the TV tuner market. Although a few countries have successfully switched to digital-only broadcasts, more than 95 percent of today’s TVs must continue to support analog broadcast reception. In addition, analog-only TVs prevalent in China, India and Southeast Asia represent about 20 percent of the global TV market. For these regions, analog TV tuners often require a high tolerance to non-standard analog TV signal conditions. Based on three previous generations of worldwide field testing and broad adoption by Tier 1 TV makers, the Si21x8 family’s superior RF performance enables robust analog TV reception, even in the presence of non-standard signal conditions.

Requiring only a very low number of inexpensive passive external components, the Si21x8 family enables the lowest bill of materials of any TV tuner available today. Unlike competing products, the Si21x8 TV tuners require no balun on the RF input, which helps reduce system cost and complexity. A new integrated power-on reset monitor, and the ability to operate with a single 3.3 V power supply, further reduce system cost. In addition, enhanced on-chip ESD protection saves cost for high-performance TV modules that demand higher ESD immunity. Like previous generations of Silicon Labs’ TV tuners, the Si21x8 family requires no external wirewound inductors, loop filter capacitors, tracking filter inductors or crystal load capacitors.

The Si21x8 family offers low power consumption (less than 500 mW), enabling TV and STB makers to meet Energy Star and other energy efficiency standards. These standards are continually evolving and becoming a more critical factor in the component selection decision. Lower power consumption reduces heat dissipation and power supply requirements, which is especially useful for multi-tuner TV and STB designs.

As with all TV tuner products from Silicon Labs, the Si21x8 family supports all worldwide TV broadcast standards, including NTSC and PAL/SECAM for analog TV, and DVB-T2/C2/T/C, ISDB-T/C, ATSC/QAM and DTMB for digital TV. For unparalleled flexibility in matching TV tuners with various system architectures, all products within the Si21x8 TV tuner family are pin-to-pin compatible and share a single software API. This allows a single module or PCB design to address multiple TV and STB applications for both digital and analog TV.

“Silicon Labs’ Si21x8 family represents the ‘gold standard’ in TV tuners, offering our customers the utmost in RF performance and system cost reduction,” said James Stansberry, vice president and general manager of Silicon Labs’ broadcast products. “Our market-proven TV tuners will ship into nearly one third of all TVs sold this year, delivering the performance and reliability required by TV makers to ensure that consumers have a superior viewing experience.”

Pricing and Availability

Samples and production quantities of the Si2178/58/48/38/28 TV tuners are available now. The Si2178 hybrid TV tuner with analog demodulator is priced at $1.40 USD in 10,000-unit quantities. The Si2178-A-EVB, Si2158-A-EVB and Si2148-A-EVB evaluation kits, each priced at $495 (USD MSRP), provide comprehensive platforms for evaluating Silicon Labs’ TV tuners for TV and STB applications. For more information about Silicon Labs’ Si21x8 TV tuners and to purchase samples and development tools, please visit www.silabs.com/pr/tv-tuner.

Silicon Laboratories Inc.

Silicon Laboratories 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.

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Contact:

Silicon Laboratories Inc.
Dale Weisman, +1-512-532-5871
dale.weisman@silabs.com

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