

Silicon Labs Targets Next-Generation TV Tuner IC for Massive China TV Market

Industry's Top-Selling Silicon TV Tuner Optimized for Cost/Performance Requirements of Mainstream TVs

AUSTIN, Texas--(BUSINESS WIRE)-- [Silicon Laboratories Inc.](http://www.siliconlabs.com) (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced a silicon TV tuner solution designed to provide an optimal balance of affordable cost and high performance for TV makers in China and Taiwan. The new Si2155 TV tuner IC extends Silicon Labs' field-proven and industry-leading silicon TV tuner architecture into high-growth emerging markets for digital TVs and set-top box (STB) products.

TV makers in China have been rapidly increasing flat-panel TV production over the last three years, and cost-optimized solutions such as Silicon Labs' Si2155 TV tuner IC will help them deliver high-quality TV models at competitive price points. According to the analyst firm DisplaySearch, China is expected to become the world's largest market for LCD TVs this year. DisplaySearch also predicts that flat-panel TV shipments (both LCD and plasma models) in China will nearly double from the 31 million units reported in 2009 to 59 million units in 2014, reaching a compound annual growth rate of 14 percent.

"Silicon Labs' Si2155 TV tuner provides an ideal solution for our flat-panel TV design needs," said Lang Bai, research and development director, Sichuan Changhong Component Technology Co., Ltd. "The Si2155 exceeds the performance of traditional CAN tuners, providing consumers with outstanding broadcast reception while enabling Changhong to reduce the cost and complexity of TV tuner modules."

The Si2155 TV tuner IC delivers industry-leading RF performance and the design simplicity offered by Silicon Labs' award-winning Si217x TV tuners, which are in high-volume production at five of the world's top seven TV brands. The Si2155 simplifies TV tuner design and qualification across all major worldwide analog and digital broadcast standards. It also combines easily with mainstream TV system-on-chip (SoC) devices, which integrate standard analog demodulators suitable for economy TVs.

The Si2155 is based on Silicon Labs' patented TV tuner architecture, which delivers exceptionally clear TV reception for both analog and digital broadcasts. Offering superior linearity and fully integrated high-quality tracking filter inductors, Silicon Labs' next-generation TV tuners deliver the industry's highest immunity against blocker interference, resulting in the ability to receive the highest number of analog and digital channels in urban settings. The Si2155 IC's RF front-end also offers unparalleled sensitivity performance and consistently tunes distant transmitters in non-urban settings.

Available in a compact 5 mm x 5 mm QFN package, the Si2155 TV tuner helps TV makers reduce system cost by minimizing board size and component count and supporting lower-cost external components. The Si2155 IC integrates the complete signal path from RF input to IF outputs. Compared to traditional discrete MOPLL-based tuner solutions, designs based on the Si2155 eliminate more than 100 external components including low-noise amplifiers (LNAs), tracking filter inductors (unlike other silicon tuners) and surface acoustic wave (SAW) filters, resulting in the simplest, lowest-cost BOM for a hybrid tuner. The Si2155 also enables cost-effective "on-board" tuner implementations using lower-cost external components.

"The Si2155 IC extends Silicon Labs' industry-leading TV tuner architecture into the rapidly growing China and Taiwan TV markets with a perfect match of affordability and exceptional RF performance," said James Stansberry, general manager of Silicon Labs' broadcast video products. "Compared to competing silicon tuners and discrete MOPLL-based tuners, the Si2155 delivers superior picture quality at a much lower system cost. We believe that the Si2155 will be a winning choice for TV makers in today's competitive emerging markets."

The Si2155 IC shares a common application programming interface (API) with Silicon Labs' entire TV tuner portfolio. This shared software API shortens the TV designer's learning curve when moving from worldwide hybrid HDTVs to regionalized platforms and STB designs. A simple application circuit, common across all of Silicon Labs' next-generation TV tuners, makes on-board installations straightforward with immediate cost savings, while also being suitable for simplified, cost-effective CAN tuner modules.

About the Silicon Labs TV Tuner IC Portfolio

The Si2155 TV tuner IC is a part of Silicon Labs' third generation of silicon tuners, which includes the high-performance Si2176 TV tuner IC with integrated analog demodulator, the Si2136 analog receiver, the Si2146 digital-only tuner (ideal for terrestrial and cable STBs, multi-tuner HDTVs and Blu-ray/DVD recorders) and the high-performance Si2156 TV tuner, which offers a

higher frequency range than the Si2155 product. Each of these TV tuner products employs the same high-performance RF front-end and operates within the same pin-out and software API to simplify design efforts across multiple TV and STB platforms.

Silicon Labs pioneered the first silicon TV tuners designed to exceed the performance of traditional discrete tuner implementations. Based on dozens of patents issued or pending, Silicon Labs' digital low-IF architecture enables exceptional TV tuner performance and integration while addressing the challenges created by hybrid analog and digital reception and multiple regional standards. The TV tuners' high level of integration eliminates more than 100 discrete components, enabling simpler designs and lower manufacturing costs, and delivers higher production yields and improved reliability while achieving a new level of reception performance customization and configurability through software. By designing its TV tuners in standard CMOS, Silicon Labs is the only company to offer a roadmap to cost-effective, single-chip TV receivers that integrate hybrid analog and digital tuner and demodulator functions in a single IC.

Pricing and Availability

Samples and production quantities of the Si2155 TV tuner are available now. The Si2155 is priced at \$1.23 (USD) in 10,000-unit quantities. The Si2176-B-EVB and the Si2156-B-EVB, both priced at \$495 (USD), provide comprehensive evaluation platforms for Silicon Labs' next-generation Si2176/46/36 and Si2155/56 TV tuners, respectively. The evaluation boards include control software and the Si2165 DVB-T/C digital transmission standard demodulator.

For more information about Silicon Labs' silicon TV tuners products 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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