



SILICON LABS

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Silicon Labs Unveils Industry's Most Frequency Flexible CMOS Clock Generators

New Si5350/51 Any-Frequency Octal Clock Generators with On-Chip VCXO Provide Programmable Solution for Cost-Sensitive Consumer Market

MUNICH--(BUSINESS WIRE)-- [Silicon Laboratories](#) Inc. (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced the industry's most frequency flexible in-circuit programmable CMOS clock generators. The new Si5350/51 octal clock generators with on-chip voltage-controlled crystal oscillators (VCXOs) replace traditional multi-component phase-locked loop (PLL) solutions with a single clock IC that delivers twice the frequency flexibility, 70 percent lower jitter and 30 percent lower power than competing timing products. The Si5350/51 clocks are optimized for cost-sensitive consumer electronics products such as DVRs, HDTVs, set-top boxes and gaming systems as well as printers, projectors, video conferencing, blade servers, single-board computers, RAID systems, femtocells and telecom customer premises equipment.

The Si5350/51 clock generators leverage Silicon Labs' patented MultiSynth technology to provide superior frequency flexibility, lower jitter, lower power and smaller footprint than any three-PLL or four-PLL clock generator on the market today. Unlike traditional clock generators that require a separate PLL to synthesize each non-integer related output frequency, the Si5350/51 devices synthesize a unique frequency on each of their eight output clocks. By integrating clock synthesis in the clock device's output divider stage rather than its PLL, the Si5350/51 provides the equivalent clock synthesis capability of eight PLLs while dramatically reducing board space and power consumption.

The Si5350/51 generates all system clocks (audio, video, interface and SoC) and can synthesize any combination of eight unique, non-integer-related frequencies up to 133 MHz with 0 ppm frequency error. The Si5350/51 can also simultaneously generate free-running clocks from a crystal input as well as clocks synchronized to a reference clock or analog control voltage input, allowing multiple board-level timing domains to be clocked from a single device.

"Silicon Labs innovative timing technology has enabled customers to save time and cost in high-end enterprise and communications applications, eliminating supply chain headaches and providing an unparalleled level of design flexibility," said Mike Petrowski, general manager of Silicon Labs' timing products. "With the introduction of our Si5350/51 clocks, we are bringing our timing technology to bear on cost-sensitive consumer applications to provide reduced system cost, power and space requirements without sacrificing performance."

The Si5350/51 clocks simplify system-level design by providing glitchless frequency shifting between two rates on up to six of the device outputs. This frequency shifting technique simplifies clock synthesis in audio and video applications, which often require a combination of frequencies to support multiple formats and display standards. It also eases processor overclocking to improve CPU performance in embedded applications and enables board-level power savings by enabling a dynamic reduction in output clock frequency.

Custom factory-programmed pin-controlled versions of the Si5350 clock generator are available using Silicon Labs' web-based [ClockBuilder™](#) utility. The ClockBuilder configuration utility provides turnkey, application-specific clocks, eliminating the need for field programming hardware and software. Since the Si5350/51 does not require metal mask changes to customize clock frequencies like traditional clock ICs, lead times are reduced from six weeks to less than two weeks for custom clocks. Silicon Labs also offers a field programming kit to enable rapid prototyping of both the Si5350 and Si5351 clocks.

Pricing and Availability

Samples of the Si5350/51 clock generators are available in space-saving 4x4 mm 20-QFN, 24-QSOP and 10-MSOP packages. Production quantities are planned to be available at the end of 4Q10 for all Si5350/51 products. Pricing ranges from \$0.66 (3 outputs) to \$2.38 (8 outputs) in 10,000-unit quantities. The Si535x-20QFN-EVB and Si535x-24QSOP-EVB evaluation boards are available now and priced at \$150. (All prices USD.)

For more information about the Si5350/51 clock generators and development tools, please visit www.silabs.com/pr/clocks.

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 highly integrated, easy-to-use products offers customers significant advantages in performance, size and power consumption. These

patented solutions serve a broad set of markets and applications including consumer, communications, computing, industrial and automotive.

Headquartered in Austin, TX, Silicon Labs is a global enterprise with operations, sales and design activities worldwide. The company is committed to contributing to our customers' success by recruiting the highest quality talent to create industry-changing innovations. For more information about Silicon Labs, please visit www.silabs.com.

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