

Silicon Labs Introduces the World's Most Advanced DVB Demodulators for TVs and Set-Top Boxes

New Si216x/6x2 Family Supports Latest Digital Video Broadcast Standards, Features the Industry's First Dual-Channel DVB Demodulators

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AUSTIN, Texas--([BUSINESS WIRE](#))--[Silicon Labs](#) (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced a new family of universal digital video broadcast (DVB) demodulators that support the latest worldwide DVB standards for cable, terrestrial and satellite reception. Designed to simplify the design of complex, high-performance video front-ends for integrated digital TVs (iDTVs) and set-top boxes (STBs), Silicon Labs’ new Si216x/6x2 family includes the industry’s first dual-channel DVB demodulators targeting multi-receiver iDTV and STB applications.

Silicon Labs’ Si216x/6x2 demodulator family supports all first and second-generation DVB broadcast standards for cable (DVB-C2/C, ITU J.83 Annex A/B/C), terrestrial (DVB-T2/T) and satellite (DVB-S2/S, DSS). Leveraging Silicon Labs’ industry-leading digital demodulation architecture, the single-channel Si216x and dual-channel Si216x2 demodulators enable excellent reception performance for each DVB standard while minimizing front-end design complexity, footprint size, system cost and power dissipation. For TV and STB makers looking to add additional features like personal video recorder (PVR) and picture-in-picture, multiple demodulators are essential components. Silicon Labs’ dual demodulators enable TV/STB makers to simplify and reduce the cost of these multi-receiver designs.

The Si216x/6x2 family includes single and dual demodulators that comply with the recent DVB-C2 specification for cable reception, enabling highly efficient use of existing cable networks for delivery of innovative new services such as video-on-demand (VOD) and high-definition television (HDTV). The rapidly emerging DVB-C2 standard is increasingly important in the German TV market and is also becoming a “must-have” feature for the broader European market. High-end TVs designed for European consumers have begun supporting DVB-C2, and this trend will continue to accelerate. Many of Western Europe’s leading cable operators, representing more than 22 million households, have chosen to adopt the new DVB-C2 standard.

The Si216x/6x2 family supports the latest DVB-T2 specification (ETSI EN 302 755-V1.3.1), also known as DVB-T2-Lite. New markets that are migrating to digital terrestrial TV broadcasting are switching directly from analog to DVB-T2-Lite. DVB-T2 adoption continues to expand to various African countries, as well as Singapore, Russia, India, Malaysia and Colombia. To date, 35 countries have adopted DVB-T2, 19 have deployed and nine are running trials. Silicon Labs currently has the highest market share for DVB-T2 demodulators among all Tier 1 TV manufacturers. The field experience gained as a result of this leading market position is integrated into Silicon Labs’ latest generation of DVB-T2 demodulators.

The DVB-T2-Lite specification allows simpler receiver implementations for mobile and handheld reception. Additionally, the specification enables “scrambling of L1 post-signaling,” an attractive feature for new DVB-T2 infrastructure deployments that reduces the cost of the power amplifier in the broadcast transmitter. Emerging countries recently deploying DVB-T2 have implemented these lower cost transmitters. Legacy DVB-T2 demodulators that do not support DVB-T2-Lite will not be able to receive T2-Lite broadcasts. Therefore, it is imperative that TV and STB makers use a demodulator that supports DVB-T2-Lite to address the global terrestrial broadcast market.

Silicon Labs’ Si216x/6x2 family is designed to reduce demodulator lock times across the DVB-C2/C/T2/T/S2/S standards. The new demodulators demonstrate very short lock times in DVB-C2 mode, and they provide the industry’s fastest DVB-T2 lock times, even in the presence of co-channel interference (CCI), which is an important consideration in countries where DVB-T2 and analog broadcasting coexist. Fast lock time is a critical feature for TV and STB makers since it enables shorter “zapping” time (the speed of changing channels), an attractive consumer experience feature for TV viewers. Noticeably long zap time can be irritating for TV viewers while very fast zapping can be a key performance consideration and differentiator when selecting a new TV or STB in the retail market.

“Silicon Labs has achieved the largest share of advanced DVB demodulators in the TV market by consistently supporting the latest DVB standards and providing highly integrated solutions like our new dual demodulators that enable customers to reduce design complexity and cost,” said James Stansberry, vice president and general manager of Silicon Labs’ broadcast products. “When combined with Silicon Labs’ market-leading [TV tuners](#), the Si216x/6x2 demodulators provide customers with the highest performance video front-end solution from RF to baseband.”

The single-channel Si216x demodulators use the same 7 mm x 7 mm QFN-48 package as Silicon Labs' previous demodulator family, providing pin-to-pin compatibility, simplifying board design and reducing cost. The dual Si216x2 demodulators are pin-compatible in a compact 8 mm x 8 mm QFN-68 package. The Si216x and Si216x2 demodulators share the same API software, enabling customers to easily adapt their application software to these new demodulators and upgrade their iDTV and STB products to the latest DVB-T2-Lite and DVB-C2 features.

Pricing and Availability

Samples and production quantities of the Si216x and Si216x2 DVB demodulators are available now. The Si2164 universal DVB-C2/C/T2/T/S2/S demodulator and Si21642 dual DVB-C2/C/T2/T/S2/S demodulator are flagship products within Silicon Labs' complete single and dual demodulator portfolio. Depending on the supported DVB standards, product pricing in 10,000-unit quantities begins at \$6.86 (USD) for single-channel demodulators. The Si216x/6x2 demodulator family is supported by a comprehensive set of evaluation boards. Reference design schematics, layout Gerber files and sample driver source code help expedite time to market while reducing development costs.

For more information about Silicon Labs' latest DVB demodulator products and to obtain samples, please visit www.silabs.com/tv-demodulator.

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.

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