Demodulator Simplifies Video Front-Ends for TVs and Set-Top Boxes

Silicon Laboratories Inc. today introduced the broadcast video industry's most advanced, single-chip multimedia demodulator, enabling developers to simplify the design of iDTV, set-top box (STB) and Blu-ray/DVD recorder products. The new Si2169 device is the first demodulator to integrate the emerging DVB-T2 standard, advanced DVB-S2 standard, and existing DVB-T, DVB-S and DVB-C standards into a single CMOS chip supporting terrestrial, satellite and cable TV broadcast. The Si2169 is complemented by the Si2168, a pin-compatible DVB-T2/T/C demodulator designed for terrestrial and cable TV broadcast.

The Si2168/69 demodulators offer the industry's highest level of DVB-T2 terrestrial broadcast performance, outperforming other competing DVB-T2 demodulators in challenging reception conditions and fully complying with the NorDig 2.2.1 and D-Book 7 specifications. Offering superior echo performance in all DVB-T2 transmission modes, the new demodulators enable the industry's fastest DVB-T2 channel lock times under the most challenging echo conditions. In fact, Silicon Labs has implemented a special architecture to reduce DVB-T2 lock times to industry-leading values unlike competing demodulators that typically require significantly longer time to lock onto difficult channels.

When combined with Silicon Labs' market-leading silicon TV tuners, the Si2168/69 demodulators enable a complete video front-end solution from RF to baseband. The Si2168/69 architecture is also flexible enough to support other tuner options including mixer oscillator phase-locked loop (MOPLL)-based modules and standard intermediate frequency (IF) terrestrial silicon tuners.

"Leveraging our proven digital demodulation architecture, the Si2169 achieves excellent reception performance for each digital media type while reducing video front-end design complexity, power consumption and cost," said James Stansberry, vice president and general manager of Silicon Labs' broadcast products. "The combination of next-generation DVB-T2/S2 multimedia support and single-chip integration makes the Si2169 the industry's most flexible and highest-performance

demodulator solution available."

The Si2168/69 devices are the smallest footprint digital TV and multimedia demodulators available, making them ideal for ultra-thin iDTV designs either directly on the main TV/STB board or inside a compact module. The Si2168/69 devices require no specific, costly components, thus simplifying the system BOM and reducing cost. The new demodulators also use only two power supplies, resulting in the industry's lowest power dissipation (450 mW typical) for the most computation-intensive DVB-T2 mode.

Pricing and Availability

Samples and production quantities of the Si2169 and Si2168 demodulators are available now in 7 mm x 7 mm 48-pin QFN packages. The Si2169 and Si2168 demodulators are priced at $9.94 and $7.92 (USD), respectively, in 10,000-unit quantities. Silicon Labs provides comprehensive evaluation platforms for video front-end designs including the DVB-T2/T/C/S/S2 Si2169 EVB containing the industry-leading Si2176 hybrid tuner and the DVB-T2/T/C Si2168 EVB containing the Si2146 digital-only tuner.

For more information about Silicon Labs' TV demodulator products and to purchase samples, please visit www.silabs.com/pr/tv-demodulator [1].

www.silabs.com [2]

Posted by Sara Cohen, Editorial Intern

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