Digital Audio Broadcast (DAB) Receiver from Maxim Integrated Enables Software-Defined Radio (SDR) Through Its RF to Bits® Architecture

Maxim Integrated Products, Inc. - April 10, 2013

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Maxim's highly integrated DAB RF to Bits tuner eliminates the need for a dedicated demodulator, which saves space, lowers the BOM, and significantly increases system flexibility.

PR Newswire

SAN JOSE, Calif., April 10, 2013

SAN JOSE, Calif., April 10, 2013 /PRNewswire/ -- Maxim Integrated Products, Inc. (NASDAQ: MXIM) today announced the MAX2173 RF to Bits tuner for digital audio broadcast (DAB) applications in automobiles and other mobile DAB/FM products. The industry's first RF to Bits DAB/FM tuner integrates a radio tuner, analog-to-digital converter (ADC), and digital filtering, and uses a digital I²S output to interface directly to digital signal processors (DSPs). RF to Bits radios will enable system designers to implement baseband processing using off-the-shelf DSPs. This architectural partition will facilitate faster development times and seamless software based upgradability. This level of integration eliminates numerous external components associated with traditional RF tuners to reduce cost, BOM count, and space.

(Logo: http://photos.prnewswire.com/prnh/20120912/SF71654LOGO)

By integrating ADCs with digital filtering, the MAX2173 reduces the output data rate and eases the
processing load on the back-end DSP. The clear separation between the radio's front-end and the DSP simplifies system design. The DSP's processing capacity is freed to support other functions or future upgrades. The MAX2173's high performance and flexible RF front-end supports DAB, FM, and Terrestrial Digital Multimedia Broadcast (T-DMB) applications in the FM, VHF band-III, and L-band frequency bands.

**Key Advantages**

- Wide applications range: DAB and T-DMB for VHF band-III (168MHz to 240MHz), L-band (1452MHz to 1492MHz), and FM band (76MHz to 108MHz)
- Enables SDR implementations for higher system level flexibility and software reuse:
  - Digital I\( ^2 \)S interface enables flexible support for a wide range of digital basebands including DSPs, application processors, or dedicated baseband modems
  - Embedded digital filtering reduces digital baseband processing requirements
- Highly integrated:
  - Integrated RF tuner, ADCs and digital filtering lower back-end DSP MIPs, reduce hardware costs, and free space
  - Integrated digitally controlled crystal oscillator (DCXO) eliminates the need for a voltage-controlled crystal oscillator (VCXO), which reduces costs and improves accuracy
  - Integrated low-dropout regulators (LDOs) eliminate the need for an external regulator

**Industry Commentary**

- "Maxim Integrated's latest DAB/FM tuner is a revolutionary step towards transforming the architecture of auto infotainment into flexible, software defined solutions," said Vickram Vathulya, Managing Director at Maxim Integrated. "This DAB/FM RF to Bits tuner delivers automotive grade RF performance while supporting the widest array of ecosystem baseband products for an unmatched level of design flexibility to optimize cost, performance and size."
- "Software-based functionality is becoming a key differentiator for the automotive infotainment semiconductor market, which is expected to exceed $4.0 billion by 2018," said Richard Robinson, Director of Automotive Analysis at Strategy Analytics.

**Availability and Pricing**

- Available in a 40-pin TQFN package (6mm x 6mm).
- Specified over the -40°C to +85°C temperature range.
- Contact factory for pricing.

**About Maxim Integrated**

At Maxim Integrated, we put analog together in a way that sets our customers apart. In Fiscal 2012, we reported revenues of $2.4 billion.

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