Avago Technologies Introduces the Industry's First GPS Front-End Modules that Integrates an FBAR Pre-Filter with a Low Noise Amplifier

November 9, 2009

New GPS Front-End Module Targets Designers of Low-Power Handset and Personal Navigation Device Applications

SAN JOSE, Calif. & SINGAPORE--(BUSINESS WIRE)--Nov. 9, 2009-- Avago Technologies (Nasdaq:AVGO), a leading supplier of analog interface components for communications, industrial and consumer applications, today introduced the industry's first highly integrated miniature GPS front-end modules that combine a film bulk acoustic resonator (FBAR) filter with a high-gain, low noise amplifier (LNA) that offers superior performance levels. Avago's ALM-1912 integrates a LNA and a high-rejection pre-filter in a miniature compact package to provide a complete and compact high-performance GPS radio frequency (RF) front-end module that can help to simplify the design of a wide range of GPS handset applications.

Avago's ALM-1912 is designed for use in mobile handsets, personal navigation devices (PND) and other GPS-enabled applications. This GPS front-end module is housed in a miniature 2.9 by 2.0 by 1.0 mm MCOB package to minimize the amount of printed circuit board space required and is ideal for use in space constrained applications. The integration of FBAR pre-filtering in the ALM-1912 enables the module to provide exceptional rejection at Cell, PCS, and WiFi/Bluetooth frequencies. Additionally, this GPS front-end module effectively leverages Avago's 0.25 µm GaAs enhancement-mode pHEMT process to deliver a 1.62 dB noise figure, 19.3 dB gain, and +1.5 dBm input third order intercept point (IIP3) and more than 50 dBc of out of band rejection at typical operating conditions of 2.7V and 6 mA.

Simultaneous GPS (S-GPS) and other location-based GPS services require a high level of receiver sensitivity. Avago's ALM-1912 delivers a very low noise figure and high linearity which helps to significantly improve the sensitivity of GPS handset applications. A CMOS-compatible shutdown pin is included for turning the LNA on/off or for current adjustment. The integrated pre-filter utilizes Avago's leading-edge proprietary FBAR filtering technologies to provide exceptional rejection at Cell/PCS-band, and WiFi/Bluetooth frequencies making it an ideal solution to help enhance the performance of GPS receivers for S-GPS operation in handsets and other mobile devices.

The ALM-1912 has a built-in shunt inductor at the RF input pin to enhance ESD production, which allows the device to survive more than 3kV of Human Body Model (HBM) ESD charge at the RF input pin. By integrating a GPS LNA with pre- and post high-rejection FBAR filters, the high-performance ALM-1912 simplifies and shortens the RF design process, reduces component count, and provides excellent RF performance levels that are critical in GPS applications.

Features

- Very low noise figure: 1.62 dB typical
- FBAR pre-filters provide exceptional Cell/PCS/WLAN-band rejection to enhance handset performance
- Low external component count
- Fully-matched at RF input and RF output
- Shutdown current: < 1 uA
- CMOS compatible shutdown pin
- ESD: > 3kV at RFin pin
- Adjustable bias current via single external resistor/voltage
- Built-in shunt inductor enhances ESD protection
- Advanced GaAs E-pHEMT and FBAR technology
- Halogen free
- Pb-Free and RoHS compliant

Pricing and Availability

Avago's ALM-1912 high rejection GPS high-gain LNA is priced at $1.31 each in 10,000 piece quantities. Samples and production quantities are available now through Avago's direct sales channel and worldwide distribution partners.

About Avago Technologies

Avago Technologies is a leading supplier of analog interface components for communications, industrial and consumer applications. By leveraging its core competencies in III-V compound and silicon semiconductor design and processing, the company provides an extensive range of analog, mixed signal and optoelectronics components and subsystems to approximately 40,000 end customers. Backed by strong customer service support, the company's products serve four diverse end markets: wireless communications, wired infrastructure, industrial and automotive electronics, and consumer and computing peripherals. Avago has a global employee presence and heritage of technical innovation dating back 40 years to its Hewlett-

Packard roots. Information about Avago is available on the Web at www.avagotech.com

Safe Harbor Statement

This announcement and supporting materials may contain forward-looking statements which address our expected future business and financial performance. These forward looking statements are based on current expectations, estimates, forecasts and projections of future Company or industry performance based on management's judgment, beliefs, current trends and market conditions, and involve risks and uncertainties that may cause actual results to differ materially from those contained in the forward-looking statements. Accordingly, we caution you not to place undue reliance on these statements. Avago Technologies Finance Pte. Ltd.'s Annual Report on Form 20-F filed with the SEC on December 17, 2008, recent Current Reports on Form 6-K, and other filings with the U.S. Securities and Exchange Commission ("SEC") (which you may obtain for free at the SEC's website at http://www.sec.gov) discuss some of the important risk factors that may affect our business, results of operations, and financial condition.

Avago, Avago Technologies, and the A logo are trademarks of Avago Technologies. All other trademarks are the property of their respective owners.

NOTE TO EDITORS: Please direct reader inquiries to Avago Technologies at +1 800 235 0312, or e-mail us at support@avagotech.com.

Source: Avago Technologies

Avago Technologies
EDITORIAL CONTACT:
Alain Dangerfield, 408-435-6385
alain.dangerfield@avagotech.com