

Transceiver Chipset for WiMAX Broadband Wireless Access

WiMAX equipment designers have a new chipset that supports applications at 3.3-3.8 and 2.3-2.7 GHz

A high performance, flexible WiMAX transceiver chipset has been introduced by SiGe Semiconductor, Inc. Its broad tuning

range and multiple baseband interfaces allow design re-use to meet worldwide requirements for this rapidly-developing technology

The new transceiver is equipped with multiple baseband interfaces, able to support HD-FDD BPS-IF, HD-FDD IQ, and TDD IQ baseband controllers. This, combined with a wide bandwidth of 3.3-3.8 GHz and 2.3-2.7 GHz, allows manufacturers to use a single solution to address worldwide frequencies. Original equipment manufacturers thus reduce cost of inventory and design resources when bringing new WiMAX-capable products from concept to market.

SiGe's new transceiver chipset includes four devices: the SE7051 IF transceiver, the SE7351L 3.5 GHz RF transceiver, the SE7251L 2.5 GHz RF transceiver, and the SE7380L switch. The SE7051L IF transceiver interfaces directly to most commercially available baseband controllers, providing high integration, low noise and high linearity. The device features dual IF and RF synthesizers as well as a high speed digital VGA delivering 50 dB of gain control.

The SE7351L and SE7251L RF transceiver ICs are designed to deliver the high linearity and low phase noise that is ideal for high order modulation schemes. The new transceivers are equipped with a high-speed receive AGC control. The SE7351L and SE7251L support tuning ranges from 3.3 to 3.8 GHz and 2.3 to 2.7 GHz, respectively, and



deliver 40 dB of gain control.

The SE7380L is a GaAs PHEMT SPDT switch well suited for transmit and receive switching applications in the 3 to 4 GHz band. The part is designed for low insertion loss and high linearity for maximum dynamic range with complex modulation formats.

The SE7351L and SE7251L are each packaged in a 40-lead QFN package measuring 6x6 mm, the SE7051L is packaged in a 56-lead QFN package measuring 8x8 mm, and the SE7380L is packaged in a 6-pin QFN. The complete transceiver chipset is priced at US\$30.00 in volume quantities. Samples are available now; production is scheduled for Q3 2005.

SiGe Semiconductor, Inc.
2680 Queensview Dr.
Ottawa, Ontario, Canada K2B 8J9
Tel: 613-820-9244
www.sige.com
HFelink 303