CEL introduces fully-integrated RF Transceiver System-on-Chip for ZigBee / IEEE 802.15.4 applications

Santa Clara, CA — June 23, 2008 — CEL has added a line of new, fully-integrated ZigBee transceiver ICs to its family of IEEE 802.15.4 solutions. The ZIC2410 Series combines a powerful, ZigBee-compliant RF transceiver with an industry-workhorse, 8051-based 8-bit microprocessor. Available in a choice of packages, these low cost, System-on-Chip solutions help simplify radio designs, shrink their size, lower power consumption, and reduce overall system cost.

At +8 dBm, the ZIC2410 delivers the industry’s leading output power. Combined with excellent –98 dBm receiver sensitivity, the ZIC2410 delivers a best-in-class link budget of 106 dB. The high sensitivity ensures immunity to interference from other 2.4GHz transmissions, while the high output power and link budget can eliminate the need for power amplifiers and peripheral range extension components.

The low power, high performance 8-bit 8051-based MCU offers a robust set of peripherals which help eliminate the need for additional external components. These include an onboard a-law/µ-law audio CODEC with ADPCM support that, combined with an I²S interface, enables the ZIC2410 to transmit voice data.

Features and specifications include:

- **Tx/Rx Frequency**: 2.400 – 2.4835 GHz
- **Package**: QN48 or VFBGA72
- **Operating Voltage**: 1.5 – 3.3 V
- **Max output power**: +8 dBm
- **Sensitivity**: -98 dBm
- **Data rate**: 250K/500K/1Mbps
- **MCU Architecture**: 8051
- **Flash Memory**: 96 KB
- **Data Memory**: 8 KB
- **Power Consumption**
  - **Transmit Mode**: QN48: 30.6 mA @ 0 dBm
    - VFBGA72: 29.7 mA @ 0 dBm
  - **Receive Mode**: 33.2 mA
  - **Standby Mode**: 0.3 µA

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ZIC2410 transceivers are ideal for remote sensing, AMR/AMI, home and building automation, and security networks. With some of the lowest transmit, receive and standby power consumption figures available, they’re an excellent choice for applications in which battery life is critical.

ZIC2410 transceiver ICs are part of broad family of CEL ZigBee products, including integrated radio modules and discrete power amplifiers, LNAs and RFIC switches for ZigBee range extension.

About CEL:

CEL is an exclusive sales, marketing and development partner of NEC Electronics. Our 45-year alliance with NEC gives our customers access to world-class technology. At the same time, our independence allows us to design, manufacture and deliver high frequency solutions that meet our customers’ unique needs. CEL has sales and support offices throughout the country, plus a network of independent representatives and distributors worldwide.