

High Performance Zigbee® Solutions for Smart Energy Applications



RF Micro Devices, Inc. recently announced it has teamed with Freescale Semiconductor to deliver ZigBee® solutions for a broad range of smart grid applications.

RFMD's newly introduced RF6535 ZigBee front end module (FEM) has been combined with Freescale's MC1321x System-in-Package (SiP) to create the RF6535/MC1321x reference design. The RF6535/MC1321x reference design simplifies RF design requirements, while reducing product cost and complexity.

The reference design is targeted at ZigBee Smart Energy and Home Area Network (HAN) applications that require high RF performance to ensure a robust and reliable operation in varying environments. Working together, RFMD® and Freescale address the need for aggressive size reductions in IEEE 802.15.4 designs with a reduced solution footprint and minimized component count.

RFMD's highly integrated RF6535 features a 2.4 GHz to 2.5 GHz +22dBm power amplifier, Tx harmonic output filter, double-pole double-throw (DPDT) diversity

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switch, and a low-noise amplifier (LNA). The RF6535 is housed in a 3.5 x 3.5 x 0.5 mm package that is three times smaller than competitive offerings, greatly reducing discrete component requirements while minimizing footprint and assembly costs. The transceiver interface is a two-port Rx/Tx integrated balun.

RFMD's expanding portfolio of ZigBee FEMs enables customers to accelerate new ZigBee products to market while reducing component count, size, cost, and power consumption. RFMD's RF6535 single-chip ZigBee FEM is specifically optimized for Smart Energy/AMI applications including smart meters, and HAN devices including Home Energy Gateways, In-home Displays and appliances.

Freescale's MC1321x family incorporates a low-power 2.4 GHz radio frequency transceiver and a microcontroller into a single LGA package to meet cost and limited product space budgets while providing excellent RF system performance. Coupled with RFMD's RF6535 FEM, the MC1321X fits perfectly with most ZigBee applications in consumer electronics, energy management, health care, home automation, telecommunication services, and building and industrial automation.

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