CG-759
1322x-USB

FCC/IC Exhibit

Freescale Semiconductor
FCC ID # RUN1322X-USB
IC ID # 6744A-1322XUSB

Operational Description

The 1322x USB Dongle/Zniffer is an IEEE 802.15.4 compliant wireless node based on the Freescale MC1322x device. The heart of the 1322x USB module is Freescale's MC1322x 99-pin LGA Platform-in-Package (PiP) solution that can be used for wireless applications ranging from simple proprietary point-to-point connectivity to complete ZigBee mesh networking. The MC1322x is designed to provide a highly integrated, total solution, with premier processing capabilities and very low power consumption. The 1322x USB Dongle/Zniffer provides a platform to evaluate the MC1322x device, develop software and applications, and demonstrate IEEE 802.15.4 and ZigBee networking capabilities. The dongle connects the core device to a personal computer (PC) through a USB port <> UART port interface device. The small form factor illustrates an extremely small footprint, 4-layer printed circuit board (PCB) layout with a chip antenna. The MC1322x node typically interfaces to the PC through a virtual COM port (VCM). As initially provided from Freescale, the dongle is loaded with a software application that implements a wireless "sniffer" to monitor over-the-air IEEE 802.15.4 traffic.

Features

The 1322x USB Dongle/Zniffer provides the following features:
• Full IEEE 802.15.4 compliant wireless node; ZigBee capable with Freescale's BeeStack software stack
• Based on Freescale's third-generation MC1322x ZigBee platform which incorporates a complete, low power, 2.4 GHz radio frequency transceiver, 32-bit ARM7 core based MCU, hardware acceleration for both the IEEE 802.15.4 MAC and AES security, and a full set of MCU peripherals into a 99-pin LGA Platform-in-Package (PiP)
• MC1322x provides a highly integrated, low cost RF node
— On-board balun and antenna switch in package
— Typical -95 dBm sensitivity
— Typical 0 dBm output power, with max approximately +4 dBm
— Chip antenna
• Powered from USB interface with power-on green LED
• USB interface is full-speed compatible to the USB 2.0 and 1.1 specifications
• 20-pin site for standard JTAG debug/development interface connector
• Programmable user red LED for application purposes
• Reset switch
• Default 24 MHz crystal reference oscillator