

Three-year battery life for wireless human interface devices with new ultra-low-power 2.4-GHz wirelessUSB NX transceiver

May 15 2014, by Samer Bahou

Cypress Semiconductor Corp. today introduced its fourth-generation 2.4-GHz WirelessUSB radio-on-a-chip. The new WirelessUSB NX transceiver delivers Cypress's hallmark robust performance along with ultra-low power consumption, aided by a fast 2 Mbps data rate to limit time spent transmitting and receiving. The solution enables three years of battery life for wireless mice, keyboards, trackpads, remote controls and other Human Interface Devices (HIDs). Cypress is the only supplier to offer a complete HID solution, supporting advanced features and streamlined designs with WirelessUSB NX, low-power microcontrollers and best-in-class capacitive touch sensing technology.

End users demand long battery life for [wireless](#) HIDs, making a [low power consumption](#) radio a must. WirelessUSB NX operates at 900 nA in sleep mode where HIDs spend most of their time, and it offers low active current of 12 mA in transmit mode and 15 mA in receive mode. As with other Cypress WirelessUSB families, the NX radio offers superior performance in the presence of common 2.4-GHz interference from sources such as WiFi, Bluetooth, cordless phones and microwaves. WirelessUSB NX is complemented by Cypress's highly integrated enCoRe VI microcontroller, PSoC 4 system-on-chip devices and complete trackpad modules for sleek, robust touch interfaces, offering manufacturers a single source of supply and support.

"Cypress provided a complete solution for our ZTM600 touch mouse,

which is bundled with the Lenovo High-End All-in-One series of PCs," said L.M. Ding, project manager, at Lenovo. "The WirelessUSB NX transceiver provided low-power wireless connectivity while the enCoRe VI controller integrated touch sensing and system control, thereby reducing BOM cost."

"Our WirelessUSB NX solution delivers an industry-leading combination of low [power consumption](#), robust connectivity and support for advanced features," said Jayant Somani, Senior Marketing Director of Cypress's HID Business Unit. "Cypress is the only supplier that can provide a complete wireless HID solution, with top-quality, low-power wireless radios, flexible microcontrollers and world-class capacitive touch sensing."

WirelessUSB NX offers compatibility with common RF devices that are currently designed into wireless HIDs. Compatibility with these solutions enables customers to reuse existing firmware to reduce development time.

The Received Signal Strength Indicator feature on WirelessUSB NX supports a 5-bit reading for signal strength and a 4-bit reading for noise strength. This provides more accuracy and finer control for wireless systems.

Provided by Cypress

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