

Embedded wireless portfolio adds PIC32 Bluetooth digital audio kit, plus Wi-Fi modules



Microchip Technology Inc.

expanded its embedded-wireless portfolio to include the PIC32 Bluetooth Audio Development Kit, featuring modules, stacks and CODECs, and XBee footprint-compatible socket modules with integrated stacks. The new Wi-Fi offerings comprise IEEE 802.11b/g Wi-Fi modules with the company's free source-code TCP/IP stack running on a PIC microcontroller, as well as XBee footprint-compatible socket modules with integrated stacks. Microchip is also adding a low-power 2.4-GHz radio that supports —in one chip — both the IEEE 802.15.4 and proprietary data rates (from 125 kbps to 2 Mbps), including the ZigBee, MiWi and other proprietary protocols. Microchip's next-generation, 2.4 GHz IEEE 802.15.4 MRF24XA transceiver radio provides a low operating voltage range of 1.5 V to 3.6V and receive power consumption of 13 mA, which enables years of battery life. It can support both the IEEE 802.15.4 and proprietary data rates (from 125 kbps to 2 Mbps), including the ZigBee, MiWi and other proprietary protocols. Microchip's 32-bit PIC32 MCUs provide a high-performance platform for developing quality digital-audio playback and accessories.

The new PIC32 Bluetooth Audio Development Kit builds on Microchip's existing stack-integrated Bluetooth audio module with a new, agency-certified Bluetooth HCI transceiver module based on a standard radio, AVRCP and A2DP Bluetooth profiles tailored for the PIC32, as well as both standard and advanced audio CODECs such as SBC, AAC and MP3. Additionally, this kit can be used with Microchip's existing Made for iPod and Android stacks. Together, these elements provide a versatile and powerful development platform with a high level of customization and flexibility.

Some designers want an easy way to migrate their 802.15.4 designs to either Wi-Fi or Bluetooth, in order to make them accessible from smart phones and tablets, or to add Internet connectivity. This includes applications such as wireless sensor networks, remote monitoring/control and measurement, and M2M cable

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replacements for home, commercial and industrial networks. The RN XV series of Wi-Fi and Bluetooth socket modules provide agency-certified, drop-in connectivity for any XBee socket. To simplify designs, the stacks are integrated on the module, configured via simple ASCII commands, and can easily connect to any MCU via a serial interface.

Other designers want to add more extensible Wi-Fi functionality, such as a complete Web server and email, via a configurable source-code TCP/IP stack that is resident on one of many PIC microcontrollers. The new low-power and agency-certified MRF24WG0MA/MB modules connect at all IEEE 802.11b/g data rates, up to 54 Mbps, and are Microchip's first to support a sustained throughput of 5 Mbps. This provides a footprint-compatible migration path for users of Microchip's existing Wi-Fi modules who need greater speed or increased access-point compatibility, along with more features.

Microchip Technology Inc., www.microchip.com [1]

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