Collaboration to Provide Ultra-Low Power 802.11n Wi-Fi Capability for AVR and ARM-based Microcontrollers

Atmel [1], a leader in microcontroller and touch solutions, and Redpine Signals [2] announced that system engineers can easily implement 802.11n Wi-Fi to all Atmel AVR and ARM-based microcontrollers (MCUs) using Redpine Signals' Connect-io-n and n-Link modules. System engineers for Atmel AVR XMEGA [3] and AVR UC3 [4] MCU families and Atmel SAM3 [5] and SAM9 [5] ARM-based MCU families can now integrate Wi-Fi capability [6] for a variety of embedded systems in building automation, metering, digital audio and medical applications.

Atmel customers can add 802.11a/b/g/n Wi-Fi connectivity using two easy-to-use solutions from Redpine Signals, which are optimized for Atmel MCUs. The fully-certified Redpine Connect-io-n Wi-Fi modules with integrated TCP/IP stack are ideal for Atmel AVR XMEGA and AVR UC3 MCUs, and Atmel SAM3 ARM-based MCUs, while the high-performance n-Link modules with host-managed TCP/IP stack are ideal for Atmel SAM9 ARM-based MCUs. Redpine's Connect-io-n and n-Link solutions connect to Atmel MCUs through UART, SPI and SDIO interfaces and offer up to 65Mbps of physical bit rate and up to 45Mbps of data throughput on SDIO interfaces. System designers can purchase Wi-Fi kits from Redpine Signals, designed to work with Atmel Xplained boards [1] and ARM- based [7] evaluation kits (EV). The Wi-Fi kit includes optimized drivers and code examples free of charge and customers can also download Linux drivers to use with the Atmel SAM9 ARM-based MCUs.

"Wi-Fi connectivity is fast making its way into embedded applications," said Øyvind Strøm, senior director of wireless marketing, Atmel Corporation. "Our customers are looking for low-power Wi-Fi connectivity for their embedded applications to complement the emerging 802.11n infrastructure network. This is an ideal time to add Wi-Fi capability to our MCU families, and we are excited to collaborate with Redpine Signals to bring greater Wi-Fi connectivity to market."

"Redpine has pioneered low-power 802.11n Wi-Fi technology for over 10 years and established itself as a preferred provider of Wi-Fi connectivity for emerging industrial, medical, residential and smart energy markets. By offering 11n Wi-Fi connectivity for the leading Atmel AVR and ARM-based microcontrollers, including the AVR XMEGA, AVR UC3 and SAM3 and SAM9 ARM-based families, we believe it is a 'win-win' for both companies," said Venkat Mattela, CEO at Redpine Signals. "Our mature, proven module design and manufacturing expertise, combined with our optimal silicon architecture, has enabled us to provide 802.11n single-stream solutions at a lower cost than legacy 802.11b and 802.11b/g solutions."

Pricing and Availability

To begin evaluation, customers may purchase an Atmel evaluation kit, such as the Xplained kit, and a Wi-Fi kit from Redpine Signals. The Atmel Xplained and EV kits are available from Atmel and its distribution partners with a suggested retail price starting at $29. The Redpine Signals Wi-Fi kits are available from Redpine Signals [8] with a suggested retail price starting at $79.

For more information about wireless and Wi-Fi solutions for Atmel microcontrollers, visit www.atmel.com/wireless [9].

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Links:
[1] http://www.atmel.com/products/AVR/xplain.asp?category_id=163&family_id=607?source=pr-redpine
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