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QuickLogic Announces Voice Over Bluetooth Low Energy Reference Design for its EOS S3 Voice-enabled Sensor Processing SoC

- *Supports voice-over-BLE connectivity with Amazon Alexa*
- *Reference Design employs Nordic's nRF51822 SoC to wirelessly stream audio data to an Amazon Alexa smartphone application*

SUNNYVALE, Calif., Nov. 28, 2017 (GLOBE NEWSWIRE) -- QuickLogic Corporation (NASDAQ:QUIK), a developer of ultra-low power multi-core voice-enabled SoCs, embedded FPGA IP, display bridge and programmable logic solutions, today announced that it has selected Nordic's award-winning nRF51822 Bluetooth® Low Energy (Bluetooth LE) SoC for its EOS™ S3 Sensor Processing Platform Alexa BLE Wearables Reference Design. This is the first commercially available reference design that supports voice-over-Bluetooth connectivity with Amazon Alexa.

Alexa BLE Wearables Reference Design from QuickLogic

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/470f49e7-d34c-4916-9246-5b928971c188

QuickLogic's Alexa BLE Wearables Reference Design combines QuickLogic's EOS S3 Sensor Processing SoC, which features an ARM® Cortex™ M4F-powered multicore sensor processing SoC that enables a vast array of sensor applications on smartphones, wearables, hearables and IoT devices, with Nordic's nRF51822 multiprotocol Bluetooth LE SoC.

The reference design enables connectivity to the Alexa App on a Bluetooth 4.0 (and later) smartphone using a custom Bluetooth LE Audio Profile via the nRF51822 SoC. Enabled by the QuickLogic EOS S3 SoC's hardware integrated Low Power Sound Detector (LPSD), the chip consumes just 640µW of power (in a typical use case) for 'always-on' listening and wake-word detection. When the voice prompt is recognized, the audio stream is compressed and transmitted over the nRF51822 SoC's Bluetooth LE link to the smartphone. The smartphone then decompresses the audio data and sends it to the Alexa Voice Service (AVS) Cloud server. This results in the AVS server's response being played over the smartphone speaker. A scheduled update will provide the option to have the response also played on a wearable device.

The Alexa BLE Wearables Reference Design supports the seamless transmission of Voice-over-Bluetooth LE, via a custom application developed by QuickLogic using Nordic's nRF5 development tools. The application is stored in the nRF51822 SoC's Flash memory, and buffers the voice data while the Bluetooth LE SoC wakes up. This intelligent power management, enabled by the QuickLogic EOS S3, further minimizes power consumption, while constantly monitoring for the voice activation trigger.

"We selected Nordic's Bluetooth LE solution for its ultra-low power wireless technology's dominance in wearables as well as its interoperability with a wide range of smartphones and tablets," says Brian Faith, QuickLogic's CEO. "The low power consumption of the nRF51822 SoC enabled long battery life. In addition, the ease of use of Nordic's software, as well as the company's outstanding technical support, made us choose their technology again."

"QuickLogic's unique EOS MCU-based SoC with LPSD along with Nordic's proven nRF51 Series hardware and software has enabled this new wearable reference design with Voice-over-Bluetooth LE," says Svenn-Tore Larsen, Nordic Semiconductor's CEO. "The collaboration has resulted in an offering that simplifies the development of a new class of voice-managed wearables, which we believe has the potential to enhance the lives of many people."

About the EOS S3 Sensor Processing Platform
The EOS S3 Sensor Processing Platform is an ultra-low power, processing-efficient system which enables OEMs to extend battery life while designing in sophisticated, always-on sensing capabilities for mobile, wearable, hearable and IoT devices. The EOS S3 employs not only fundamental, but also very sophisticated, always-on, context-aware sensing capabilities while staying well within the strict power budgets of smartphone, wearable, hearable and IoT designs.

About Nordic's nRF51822
Nordic's nRF51822 is a powerful and flexible multiprotocol SoC ideally suited for Bluetooth LE wireless applications. The nRF51822 is built around a 32-bit ARM Cortex M0 CPU, 2.4GHz multiprotocol radio, and 256kB/128kB Flash and 32kB/16kB RAM. The SoC is supplied with Nordic's S130 SoftDevice, a Bluetooth 4.2 qualified concurrent multilink protocol stack solution supporting simultaneous Central/Peripheral/Broadcaster/Observer role connections.

Availability
The EOS S3 Sensor Processing Platform Alexa BLE Wearables Reference Design is available now. For more information, please contact info@quicklogic.com or visit

www.quicklogic.com/platforms/sensor-processing/eos/.

About QuickLogic
www.quicklogic.com

About Nordic Semiconductor ASA
tinyurl.com/NordicSemi

About nRF51822
tinyurl.com/nRF51822

About QuickLogic
QuickLogic Corporation (NASDAQ:QUIK) enables OEMs to maximize battery life for highly differentiated, immersive user experiences with Smartphone, Wearable, Hearable and IoT devices. QuickLogic delivers these benefits through industry leading ultra-low power customer programmable SoC semiconductor solutions, embedded software, and algorithm solutions for always-on voice and sensor processing. The company's embedded FPGA initiative also enables SoC designers to easily implement post production changes, and increase revenue by providing hardware programmability to their end customers. For more information about QuickLogic, please visit www.quicklogic.com.

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