

# Qualcomm Announces the First Commercially Sampling Tri-mode System-on-Chip with Bluetooth Low Energy 5, Dual band Wi-Fi, 802.15.4 Connectivity for IoT Devices

## --Features Advanced Hardware Security and Support for ZigBee 3.0 and OpenThread with Coexistence across Multiple Wireless Standards and Software Ecosystems--

SAN DIEGO, Feb. 21, 2017 /PRNewswire/ -- Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated (NASDAQ: QCOM), today announced two new System-on-chips (SoCs), the QCA4020 and QCA4024. Qualcomm Technologies is the first to announce a tri-mode SoC QCA4020, integrating Bluetooth® Low Energy 5, Dual-band Wi-Fi®, and 802.15.4-based technologies, including ZigBee® and Thread, while QCA4024 integrates Bluetooth Low Energy 5 and 802.15.4. Both QCA4020 and QCA4024 deliver advanced features from the [Qualcomm® Network IoT Connectivity Platform](#), including seamless coexistence across technologies with pre-integrated support for HomeKit™ and the Open Connectivity Foundation (OCF™) specifications, as well as support for AWS IoT software development kit (SDK) and Microsoft Azure Internet-of-Things (IoT) Devices SDK to connect with Azure IoT Hub. Both solutions support hardware-based security features in a low power, cost-optimized single-chip solution and help address IoT fragmentation, making for flexible product development for OEMs, and support for various devices from different manufacturers to talk to each other across different wireless standards, protocols and communication frameworks, while connecting to a system network and cloud and application services.

With the surge of connected devices in the home and public places, implementing security features for IoT device attacks is a challenge felt industry-wide. Qualcomm Technologies has a strong foundation in device security that stems from our experience with mobile platforms and therefore is uniquely positioned to support IoT security based solutions to help address vulnerabilities and provide advanced security features for devices. QCA4020 and QCA4024 have hardware-based security features and functions integrated in a single integrated circuit (IC), thus providing OEMs with the option of replacing external security chips and potential for bill of materials (BOM) savings.

"Qualcomm Technologies is bringing new interoperability for IoT and addressing ecosystem fragmentation by offering multiple radio, standards, protocols and connectivity framework support on a single-chip solution. This is a game-changer for manufacturers and consumers alike," said Raj Talluri, senior vice president, product management, Qualcomm Technologies, Inc. "The addition of our industry-leading hardware security features allows manufacturers and developers to support applications including smart cities, toys, home control and automation, networking and home entertainment and offer their customers more advanced security that are cost effective."

QCA4020 and QCA4024 build upon the success of Qualcomm Technologies' device-focused IoT solutions such as the QCA400x, QCA401x, QCA4531 that have been proven in hundreds of millions of IoT devices. These solutions can be used to integrate Bluetooth Low Energy 5, Wi-Fi and 15.4 connectivity capabilities across the Qualcomm Network range of solutions complementing portions of the product portfolio beyond IoT devices, such as the recently announced [IPQ8074](#) and [QCA6290](#). Key features include:

- **Tri-mode Intelligent Connectivity with Advanced Smart Coexistence:**
  - **Bluetooth 5** – Low Energy and CSRMesh™ connectivity
  - **Low power Wi-Fi** – 802.11n in 2.4 GHz/5 GHz bands
  - **802.15.4** – ZigBee3.0 and OpenThread
- **Dual-Core Processing:**
  - Dedicated ARM® Cortex® M4 CPU for customer applications

- Low power ARM Cortex M0 CPU for Bluetooth Low Energy drivers and 802.15.4 control and security functions
- **Advanced Hardware-Based Security:** featuring secure boot, trusted execution environment, encrypted storage, key provisioning and wireless protocol security
- **Multiple Protocols:** Full network stack with pre-integrated software for HomeKit and OCF
- **Pre-integrated Support for Cloud Services:** AWS IoT and Microsoft Azure IoT Device SDK to connect devices with Azure IoT Hub
- **Comprehensive Set of Peripherals and Interfaces:** SPI, UART, PWM, I2S, I2C, SDIO, and ADC as well as GPIOs
- **Integrated Sensor Hub:** for post-processing to enable the low power sensor use cases
- **Small Package:** to allow for optimized form factors

QCA4020 and QCA4024 are sampling with select OEMs today and expected to be commercially available in the second half of 2017.

#### About Qualcomm

Qualcomm's technologies powered the smartphone revolution and connected billions of people. We pioneered 3G and 4G – and now we are leading the way to 5G and a new era of intelligent, connected devices. Our products are revolutionizing industries, including automotive, computing, IoT, healthcare and data center, and are allowing millions of devices to connect with each other in ways never before imagined. Qualcomm Incorporated includes our licensing business, QTL, and the vast majority of our patent portfolio. Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, all of our engineering, research and development functions, and all of our products and services businesses, including, our QCT semiconductor business. For more information, visit Qualcomm's [website](#), [OnQ blog](#), [Twitter](#) and [Facebook](#) pages

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*Qualcomm Network solutions and Qualcomm Network IoT Connectivity platform are products of Qualcomm Technologies, Inc. CSRmesh is a product of Qualcomm Technologies International, Ltd.*

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