



NXP Accelerates Edge Computing Revolution

February 26, 2019

Expands i.MX 8M Family, Software and Ecosystem Partners

News Highlights

- NXP announces i.MX 8M Nano – power-optimized, scalable, multi-core heterogeneous applications processors built in advanced 14nm LPC FinFET process
- Pin-compatible with i.MX 8M Mini and software-compatible within the i.MX 8M family; the announcement reaffirms NXP's commitment to provide scalable, high-performance solutions for industrial and Internet-of-Things (IoT) edge compute, machine learning, and media streaming applications
- NXP joins Microsoft in announcing Azure IoT Edge enablement across all i.MX applications processor platforms to harness the full power of Azure in edge computing applications

NUREMBERG, Germany, Feb. 26, 2019 (GLOBE NEWSWIRE) -- **(Embedded World 2018)** – NXP Semiconductors N.V. (NASDAQ: NXPI) today unveiled the i.MX 8M Nano, a pin-compatible expansion to its popular i.MX 8M applications processors. The multi-core i.MX 8M Nano is scalable from one, two or four Arm® Cortex®-A53 cores running up to 1.5GHz plus an Arm Cortex-M7 that can run up to 600MHz, yet power-optimized for less than 2W total dynamic power (TDP) and sub-watt in many Internet-of-Things (IoT) edge applications. The device features general-purpose 3D graphics (GC7000UL) with support for Vulkan in high-performance real-time graphics and OpenCL 1.2 in advanced machine learning applications. The i.MX 8M Nano is the first to provide hardware acceleration for asynchronous sample rate conversion (ASRC) for up to 32 channels of high-quality audio streaming with extremely low noise and distortion. With the i.MX 8M Nano, developers will have access to up to 12 software-compatible and nine pin-compatible high-performance applications processors across the i.MX 8M family with support from a fast-expanding software and hardware developer ecosystem.

"With i.MX 8M Nano, NXP reaffirms leadership in providing developers with choices," said Martyn Humphries, vice president and general manager of i.MX applications processors at NXP. "One size does not fit all. Our customers need processors that best fit their applications; that don't require restarting software and hardware development with every new product. The introduction of the i.MX 8M Nano provides greater flexibility as the newest member of the growing i.MX 8M family, and is specifically optimized for power-sensitive, high-performance needs of the intelligent edge."

"Leviton's recently announced Decora Voice Dimmer with Amazon Alexa Built-in, featuring NXP's high performance i.MX 8M Mini applications processor adds even more intelligence, combining the convenience of hands-free voice control and intelligent management of smart home devices with Leviton's best-in-class smart lighting controls without the need for additional hardware," said Aaron Ard, Senior Director of Engineering at Leviton. "We're excited to see the introduction of the new i.MX 8M Nano as its innovative, future-proof, pin-compatibility answers our need to continue to make our solutions accessible to customers at a value they can appreciate."

Ideal Combination of Flexibility, High-Performance and Low Power

NXP's i.MX 8M Nano is pin-compatible with the i.MX 8M Mini, and software-compatible with the i.MX 8M, providing customers with ultimate scalability when designing their system. It also makes it easy for developers to maximize design and software reuse across multiple applications. Furthermore, all i.MX 8M processors are qualified to stringent industrial quality standards, making them ideal for Industry 4.0 applications.

The i.MX 8M Nano is NXP's second platform built in advanced 14nm LPC FinFET technology node that enables high performance at low power. Power consumption of less than one watt is possible in many IoT applications even with all four Cortex-A53 cores running, making it ideal for power-sensitive edge computing applications. The real-time processing domain powered by high-performance Cortex-M7 core (up to 600MHz), enables further power reduction through task offload from Cortex-A cores, power-optimized audio playback, low-power system-level task monitoring and more.

Cloud Enablement, Tools and Ecosystem

Built upon the decades-long success of NXP's i.MX 6 and i.MX 7 series of general purpose applications processors, the i.MX 8M families are fully supported on Linux and Android operating systems (OS). In addition, NXP and Microsoft are working to bring Azure IoT Edge to i.MX 8M applications processors across Linux and Windows 10 IoT core OS. As part of this effort, Azure IoT Edge will be enabled across all i.MX applications processor platforms, and customers can deploy and manage IoT Edge container applications from the Azure cloud dashboard. NXP customers will have access to industry's widest range of applications processors, from i.MX 6 to i.MX 7 and i.MX 8M, that are able to seamlessly connect and harness the full power of Azure capabilities in their intelligent edge products.

The i.MX 8M families are supported by a fast-growing ecosystem of software and hardware developers — for example, the i.MX 8M Mini is now supported by over eighteen world-wide board developers (Embedded Board Systems – EBS – partners). This growing ecosystem support will extend to i.MX 8M Nano. The Nano development board (EVK) is a two-board solution that consists of a compact compute module and a larger base board that brings out the broad connectivity that is needed for product evaluation. The compute module is designed to support a variety of memory types (LPDDR4, DDR4, DDR3L) alongside the i.MX 8M Nano, PMIC, eMMC, and soldered-down Wi-Fi/BT module for connectivity out of the box. The same EVK design is used for the i.MX 8M Mini, making it easy for developers to switch to the compute module that best fits their product needs.

Availability and Information

Sampling in 2Q19. General sampling and production 4Q19. For more information visit, www.nxp.com/iMX8Mmini and www.nxp.com/iMX8Mmini.

About NXP Semiconductors

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For more information, please contact:

Americas

Tate Tran

Tel: +1 408-802-0602

Email: tate.tran@nxp.com

Europe

Martijn van der Linden

Tel: +31 6 10914896

Email: martijn.van.der.linden@nxp.com

Greater China / Asia

Ming Yue

Tel: +86 21 2205 2690

Email: ming.yue@nxp.com



NXP USA, Inc.