NXP Introduces New Family of Multi-Core Applications Processors Built in Advanced 14LPC FinFET Technology
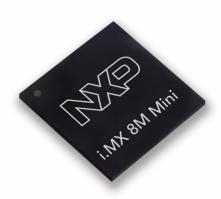
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Scalable core complex of Arm Cortex-A53 running up to 2GHz plus Cortex-M4 real-time processing for edge compute and machine learning applications

NUREMBERG, GERMANY (Embedded World 2018) – February 27, 2018 – Building upon the decade-long success of i.MX 6 series general purpose applications processor family, the i.MX 8M Mini is NXP's first embedded multi-core heterogeneous applications processors built using advanced 14LPC FinFET process technology. The i.MX 8M Mini family of processors brings together high-performance compute, power efficiency, and embedded security needed to drive the growth of fast-growing edge node computing, streaming multimedia, and machine learning applications.

At the heart is scalable core complex of up to four Arm Cortex-A53 cores running up to 2GHz plus Cortex-M4 based real-time processing domain at 400+MHz. i.MX 8M core options are optimized for ultra-low-power, even sub-Watt in specific applications, but offers the breadth of processing power necessary for consumer, audio, industrial, machine learning training and inferencing across a range of cloud providers. The i.MX 8M Mini also packs-in hardware 1080p video acceleration to enable two-way video applications, 2D and 3D graphics to provide a rich visual HMI experience, and advanced audio capabilities to enable audio-rich applications. An extensive selection of high-speed interfaces enabling broader system connectivity, and targeting industrial level qualification, the i.MX 8M Mini family may be used in any general embedded consumer and industrial application.

The i.MX 8M Mini family will provide a range of pin-compatible product offerings and system level enablement to give customers ultimate flexibility when designing their system. Support for DDR3L, DDR4 and LPDDR4 memory will give customers a choice when it comes to system cost optimization and product longevity requirements.

The feature set includes:

Quad-core Arm Cortex-A53 core up to 2GHz
Cortex-M4 at speeds of 400+MHz
1080p video encode and decode
2D and 3D graphics
Display and camera interfaces
Multi-channel audio and digital microphone inputs
Wide range of connectivity options for Wi-Fi/BT, Ethernet, USB and media storage
Low-power and standard DDR memory support
Multiple pin-compatible product offerings

Availability and Information
Sampling in 2Q18. General sampling and production 1Q19.
For more information visit, www.nxp.com/iMX8Mmini