freescale™
i.MX

Consumer, Industrial and Automotive Markets

i.MX 6 Series of Applications Processors

Scalable multicore solutions breaking the boundaries of user experience

Overview

The i.MX 6 series of applications processors is a feature and performance scalable multicore platform that includes single-, dual- and quad-core families based on the ARM® Cortex® architecture, including Cortex-A9, combined Cortex-A9 + Cortex-M4 and Cortex-A7 based solutions up to 1.2 GHz.

Targeting consumer, industrial and automotive applications, the i.MX 6 series combines broad levels of integration and power-efficient processing capabilities all the way up to bleeding edge 3D and 2D graphics, as well as high-definition video, to provide a new level of multimedia performance for an unbounded next-generation user experience. The i.MX 6 series is supported by companion Freescale power management ICs (PMICs).

Nine Scalable Families

The **i.MX 6QuadPlus** family encompasses a quad-core platform running up to 1.2 GHz with 1 MB of L2 cache, enhanced hardware accelerated graphics, prefetch and resolve engine and optimized 64-bit DDR3 or 2-channel, 32-bit LPDDR2 support. Integrated FlexCAN and MLB busses, PCI Express® and SATA-2 provide excellent connectivity while integration of dual, MIPI display port, MIPI camera port and HDMI v1.4 makes it an ideal platform for consumer, automotive and industrial multimedia applications.

The **i.MX 6Quad** family encompasses a quad-core platform running up to 1.2 GHz with 1 MB of L2 cache, hardware accelerated graphics and 64-bit DDR3 or 2-channel, 32-bit LPDDR2 support. Integrated FlexCAN and MLB busses, PCI Express® and SATA-2 provide excellent connectivity while integration of dual, MIPI display port, MIPI camera port and HDMI v1.4 makes it an ideal platform for consumer, automotive and industrial multimedia applications.

The **i.MX 6DualPlus** family provides dual cores running up to 1.2 GHz with 1 MB of L2 cache, enhanced hardware accelerated graphics, prefetch and resolve engine and optimized 64-bit DDR3 or 2-channel, 32-bit LPDDR2 support. Leveraging the same integration of the i.MX 6QuadPlus family, the i.MX 6DualPlus provides a scalable solution for consumer, automotive and industrial applications.

The **i.MX 6Dual** family provides dual cores running up to 1.2 GHz with 1 MB of L2 cache, hardware accelerated graphics and 64-bit DDR3 or 2-channel,

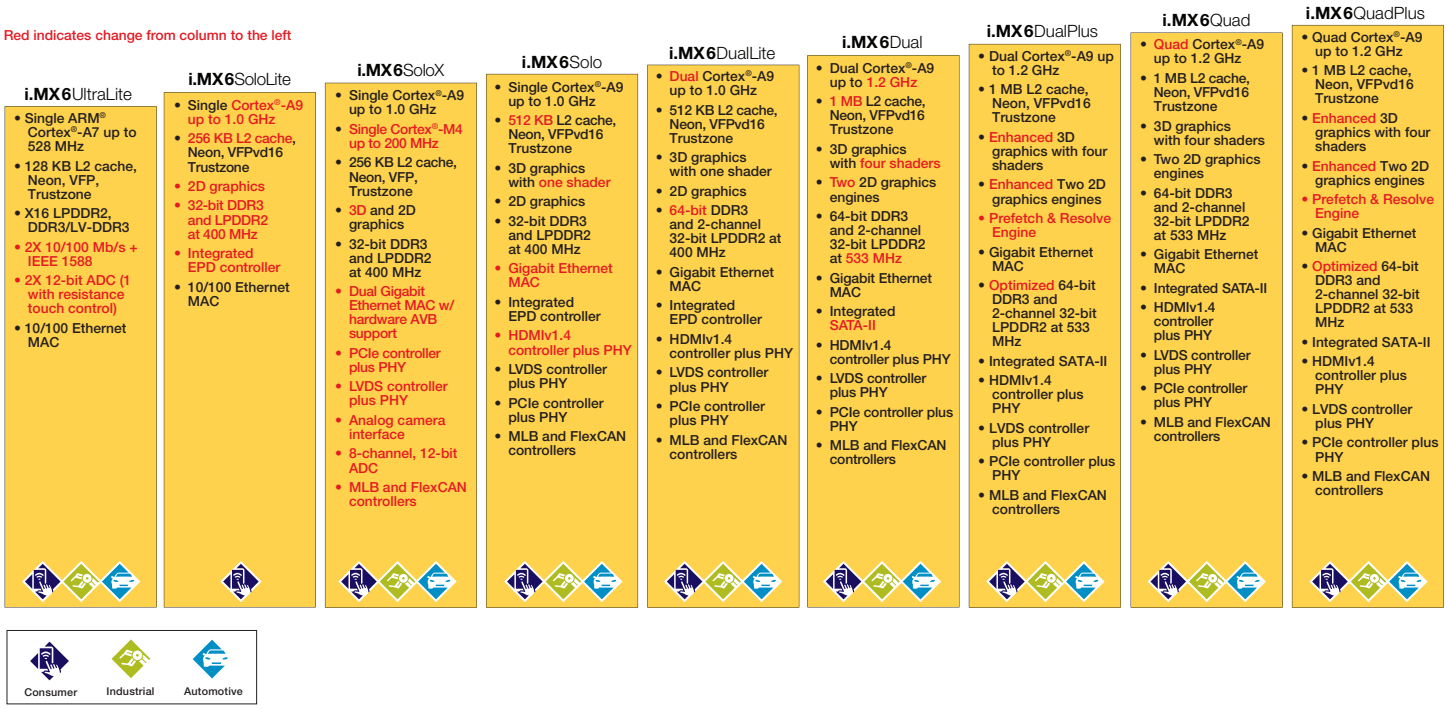
Target Applications

- Automotive infotainment
- Digital signage
- E-Readers
- Human-machine interface
- Home energy management systems
- In-flight entertainment
- Intelligent industrial control systems
- IP phones
- IPTV
- Portable medical
- Smartbooks
- Tablets
- Point-of-sale devices
- Digital cluster
- Vehicle to vehicle connectivity
- Home audio systems
- Secure smart connected devices

10 15 Product Longevity

Energy Efficient Solutions optimized for low power

i.MX 6 Series at a Glance



32-bit LPDDR2 support. Leveraging the same integration of the i.MX 6Quad family, the i.MX 6Dual provides a scalable solution for consumer, automotive and industrial applications.

The **i.MX 6DualLite** family introduces dual cores running up to 1.0 GHz with 512 KB of L2 cache, and 64-bit DDR3 or 2-channel, 32-bit LPDDR2 support. With integrated FlexCAN and MLB busses, PCI Express, LVDS, and support for MIPI cameras and displays as well as HDMI v1.4, the device is a great fit for consumer, automotive and industrial multimedia centric applications.

The **i.MX 6Solo** family provides a single core running up to 1.0 GHz with 512 KB of L2 cache and 32-bit DDR3/LPDDR2 support. Integrated LVDS, MIPI display, MIPI camera port, HDMI v1.4, FlexCAN and MLB enables the i.MX 6Solo to be a flexible platform for consumer, automotive and industrial applications.

The **i.MX 6SoloX** family introduces single cores running up to 1.0 GHz (Cortex-A9) and 200 MHz (Cortex-M4) with 256 KB of L2 cache and 32-bit DDR3/LPDDR2 support. Integrated LVDS, FlexCAN, and PCIe Express enables the i.MX 6SoloX to be a low-power and flexible platform for consumer, automotive and industrial applications that require real-time responsiveness and a higher level of system integrity.

The **i.MX 6SoloLite** family provides a single core running up to 1.0 GHz with 256 KB of L2 cache and 32-bit DDR3/LPDDR2 support. Targeted integration of an electronic paper display (EPD) controller makes it an ideal solution for next generation e-readers and other emerging consumer and embedded devices using EPD technology.

The **i.MX 6UltraLite** family introduces a single Cortex-A7 core running up to 528 MHz with 128 KB of L2 cache and 16-bit DDR3/LPDDR2 support. This efficient, cost optimized multi-market applications processor, with integrated power management, advanced security unit and wide range of connectivity interfaces, provides new ways to address performance scalability and low power for secure smart homes and IoT applications.

For development tools and third-party resources, visit freescale.com/iMX6series

Join fellow i.MX developers online at imxcommunity.org

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