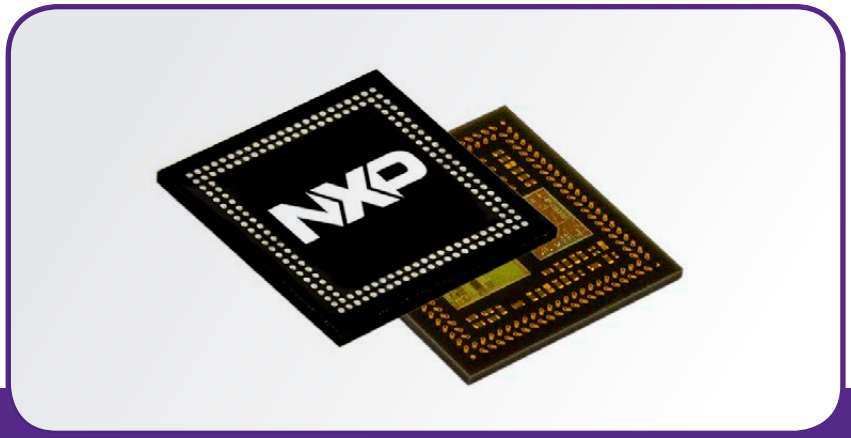


The latest addition to the world's smallest family of single-chip system modules

SCM-i.MX 6SoloX

NXP's single-chip system modules (SCM) drastically reduce time-to-market by providing a solution that significantly reduces design complexity and design cycle time.

TARGET APPLICATIONS

- Wearable medical devices
- Mobile patient care
- Industrial scanners and printers
- Test and measurement equipment
- Smart and secure home
- Factory, process and building automation

OVERVIEW

The newest member of the portfolio, the SCM-i.MX 6SoloX, contains NXP's i.MX 6SoloX applications processor, a power management system, and over forty passive system components. The result is a tightly integrated system solution that will reduce your time-to-market and allow you to create a CPU/PMIC/memory sub-system design that is smaller than a discrete implementation.

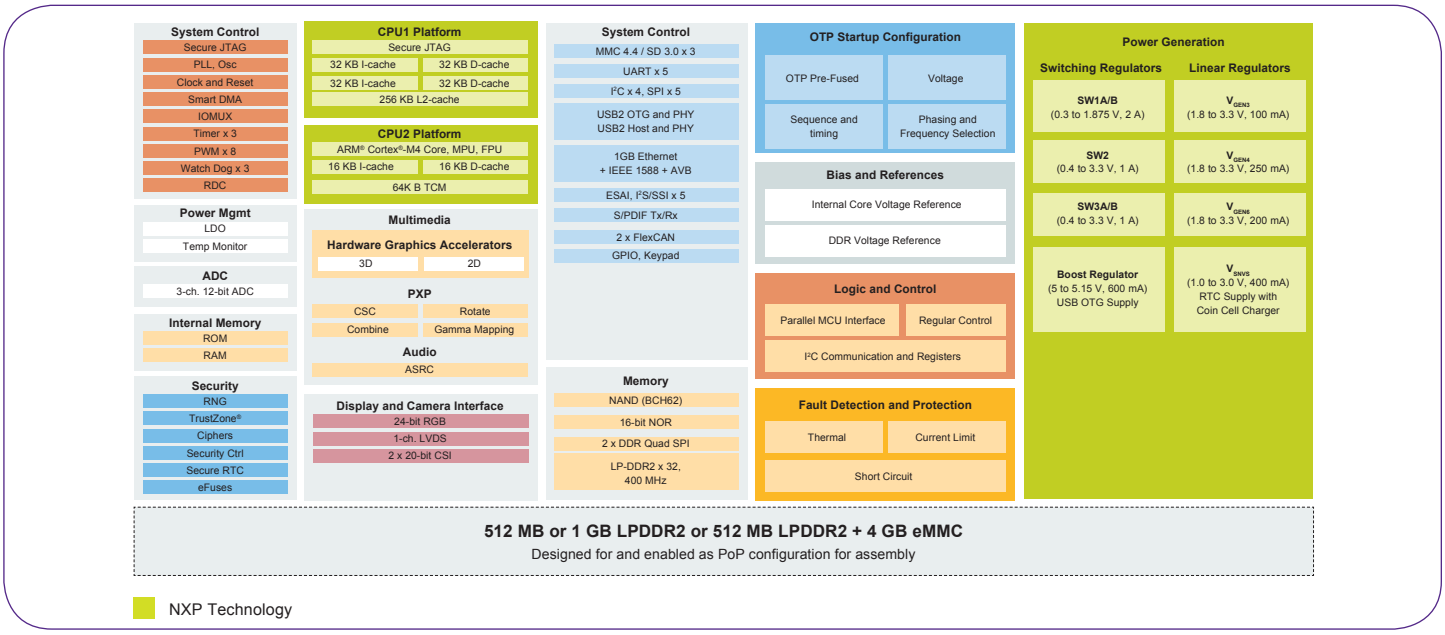
The SCM-i.MX 6SoloX speeds and eases development time by eliminating the need for high-speed DDR layout, reducing the power management design complexity, eliminating the need to place bulky passive components, and providing a known tested hardware configuration of CPU core plus memory plus power management. The product is enabled and validated with 512 MB or 1 GB LPDDR2 or a combination of 512 MB LPDDR2 and 4 GB eMMC memory via package-on-package (PoP) packaging technology.

The i.MX 6SoloX applications processor is the first device in the market utilizing both the ARM® Cortex®-A9 and Cortex-M4 cores. Its heterogeneous asymmetric architecture provides the ultimate flexibility for customers by enabling a single-chip solution that can run sophisticated operating systems and provide real-time responsiveness. The i.MX 6SoloX incorporates four independently controlled resource domains for maximum effectiveness and security when portioning system resources such as memory and peripherals.

The PF0100 SMARTMOS power management integrated circuit (PMIC) provides a highly programmable/configurable architecture. With up to three buck converters, three linear regulators, RTC supply, and coin-cell charger, the PF0100 can provide power for a complete system, including applications processors, memory, and system peripherals, in a wide range of applications while requiring only a single external supply.

The system also includes over forty discrete components, which are key systems capacitors and unique current reference resistors for the i.MX 6SoloX. Additionally, the SCM-i.MX 6SoloX is enabled for 2 memory options as a PoP configuration for assembly: 1) 512 MB or 1 GB LPDDR2 only 2) 512 MB LPDDR2 and 4GB eMMC (ePoP).

SCM-i.MX 6SOLOX BLOCK DIAGRAM



SCM-i.MX 6SOLOX ECOSYSTEM

NXP has collaborated with companies which include engineering designers, component suppliers and manufacturing partners. Software customization services, hardware design services, and PoP assembly services will be available through the partners in the ecosystem.

SCM-i.MX 6SOLOX TECHNOLOGY INSIDE

- NXP i.MX 6 SoloX processor based on the ARM Cortex-A9 core, operating up to 800 MHz, and the Cortex-M4 core, operating up to 227 MHz
- NXP MMPF0100 for power management
- >40 discrete components
- PoP LPDDR2 or LPDDR2 plus eMMC (ePoP) enabled for assembly

SCM-i.MX 6SOLOX SOFTWARE SUPPORT AND TOOLS

The software solution is Linux based leveraging the i.MX 6 Series General Available (GA) BSP. The GA BSP provides software components, including tool suite, boot loader, Linux® kernel, and root file system.

The SCM-i.MX 6SX is supported by the evaluation board for SCM-i.MX 6SX and comes with an SD card pre-installed with the Linux operating system. The Cortex-M4 core on the i.MX 6SX processor is supported by the MQX™ RTOS.

SCM-i.MX 6SOLOX FEATURES AND BENEFITS

Majority of the components integrated inside the module	Reduce your hardware design time by up to 25% and bring your products to market faster
Unprecedented, ultra-small form factor (13 mm x 13 mm)	PCB area reduction over current discrete solutions
Enabled for LPDDR2 and/or eMMC PoP memory and embedded power management	Reduces your design complexity and cost of integrating and validating DDR memory and power management sub-system
NXP, with its partners and ecosystem, provides SW/HW customization and support	Reduces your supply chain complexity and provides proven options to improve your product time-to-market

SCM-i.MX 6SOLOX PACKAGING TECHNOLOGY

The SCM packaging technology allows the build-out of highly integrated devices in an incredibly small footprint. At 13 mm x 13 mm the package is smaller than a U.S. dime. In addition, the SCM-i.MX 6SoloX package is designed to enable LPDDR2 or a combination of LPDDR2 and eMMC memory via PoP configuration for assembly. This design provides advantages not just in the elimination of high-speed memory design layout, but also in terms of PCB area size, enabling you to create ultra-compact designs and/or more feature-packed products. If you're new to PoP technology, we have partners that can help you assemble your own PoP designs. Or, you can order pre-stacked SCM devices with 512 MB, 1 GB or 512 MB LPDDR2 and 4 GB eMMC (ePoP) through Arrow Electronics®.

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