SABRE Board for Smart Devices Based on the i.MX 6 Series

The Smart Application Blueprint for Rapid Engineering (SABRE) board for smart devices was created to simplify product design by offering a feature-rich development platform that allows developers to work with the majority of the i.MX 6 series processor's primary features.

It provides you with a low-cost development platform which includes all primary features of the processors and serves as an example for how to layout complex, high-speed interfaces such as DDR. The SABRE board for smart devices includes complete hardware design files and board support packages (BSP) for Android™, Linux® and FreeRTOS™*.

SABRE boards enable designers to quickly get started with i.MX 6 series processors. The MCIMX6QP-SDB enables development on i.MX 6QuadPlus and i.MX 6DualPlus processors. The MCIMX6Q-SDB enables development on i.MX 6Quad and i.MX 6Dual processors. The MCIMX6SX-SDB enables development on i.MX 6SoloX processors. There are a number of accessory boards that work with the SABRE-SDB to provide additional capabilities such as multi-touch display and Wi-Fi® connectivity.

SABRE BOARD FOR SMART DEVICES SYSTEM CONTENTS

- i.MX 6QuadPlus, 6Quad or 6SoloX processor-based system
- Power supply
- Quick Start Guide
- Bootable SD card

SOFTWARE AND TOOLS

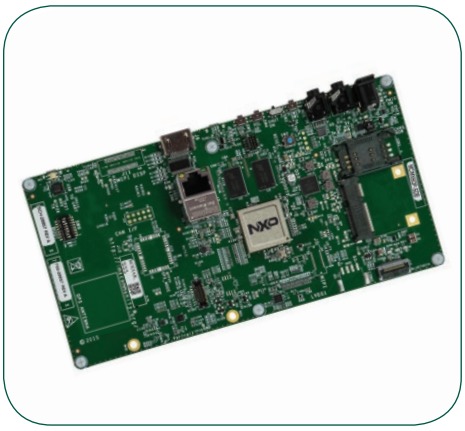
The SABRE board comes with an SD card pre-installed with the Android operating system (MCIMX6QP-SDB & MCIMX6Q-SDB) or the Linux operarting system (MCIMX6SX-SDB). Additional third-party and proprietary software is available. In addition to optimized BSPs, we also provide a large portfolio of optimized video, speech and audio codecs are available.

More information is available at **www.nxp.com/SABRESDB**.

Join fellow i.MX developers online at **www.imxcommunity.org** — an active community of open source developers.

* For ARM® Cortex®-M4 on i.MX 6SoloX applications processors

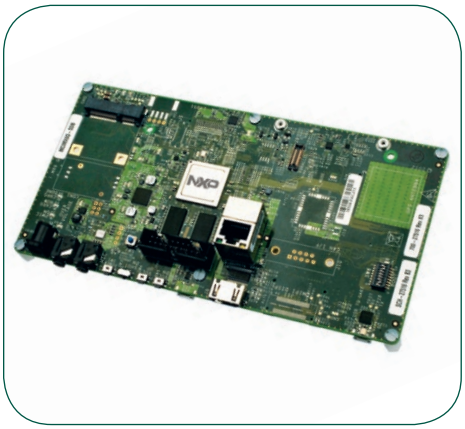
FIGURE 1: MCIMX6QP-SDB



MCIMX6QP-SDB FEATURES

Processor	• i.MX 6QuadPlus 1 GHz processor based on the ARM® Cortex®-A9 core
Development for	• i.MX 6QuadPlus and i.MX 6DualPlus
Memory/Storage	• 1 GB DDR3 SDRAM up to 533 MHz (1066 MTPS) memory • 8 GB eMMC flash
Display	• 2 x LVDS connectors • HDMI connector • LCD expansion connector (parallel, 24-bit) • MIPI DSI connector (two data lanes, 1 GHz each)
User Interface	• Power, reset, volume buttons
Power Management	• NXP MMPF0100F9
Audio	• Audio codec • Microphone and headphone jacks
Expansion Connector	• Camera MIPI CSI port • I²C, SSI, SPI signals
Connectivity	• 2 x Full-size SD/MMC card slots • 22-pin SATA connector • 10/100/1000 Ethernet port • 1 x USB 2.0 OTG port (micro USB) • mPCIe® connector
Debug	• JTAG connector (10-pin) • 1x Serial-to-USB connector (for JTAG)
OS Support	• Linux® and Android™ • Others supported third party (QNX, Windows® Embedded)
Tools Support	• Manufacturing Tool • Processor Expert IOMUX tool
Additional Features	• NXP MMA8451 three-axis accelerometer • NXP MAG3110 three-axis magnetometer • USB plug power supply • NXP 3D magnetometer

FIGURE 2: MCIMX6Q-SDB



MCIMX6Q-SDB FEATURES

Processor	• i.MX 6Quad 1 GHz processor based on the ARM® Cortex®-A9 core
Development for	• i.MX 6Quad and i.MX 6Dual
Memory/Storage	• 1 GB DDR3 SDRAM up to 533 MHz (1066 MTPS) memory • 8 GB eMMC Flash
Display	• 2 x LVDS connectors • HDMI connector • LCD expansion connector (parallel, 24-bit) • MIPI DSI connector (two data lanes, 1 GHz each)
User Interface	• Power, reset, volume buttons
Power Management	• NXP MMPF0100
Audio	• Audio codec • Microphone and headphone jacks
Expansion Connector	• Camera MIPI CSI port • I²C, SSI, SPI signals
Connectivity	• 2 x full-size SD/MMC card slots • 22-pin SATA connector • 10/100/1000 Ethernet port • 1 x USB 2.0 OTG port (micro USB) • mPCIe® connector
Debug	• JTAG connector (20-pin) • 1 x Serial-to-USB connector (for JTAG)
OS Support	• Linux® and Android™ • Others supported third party (QNX, Windows® Embedded)
Tools Support	• Manufacturing Tool • Processor Expert IOMUX tool
Additional Features	• NXP MMA8451 three-axis accelerometer • NXP MAG3110 three-axis magnetometer • USB plug power supply • NXP 3D magnetometer

FIGURE 3: MCIMX6SX-SDB

MCIMX6SX-SDB FEATURES

Processor	• i.MX 6SoloX 1 GHz processor based on the ARM® Cortex®-A9 core and 227 MHz Cortex-M4 core
Development for	• i.MX 6SoloX
Memory/Storage	• 1 GB DDR3L SDRAM up to 400 MHz • 32 MB x 2 QSPI NOR flash
Display	• LVDS connector • LCD expansion connector (parallel, 24-bit)
User Interface	• Buttons: Power (sw3), Reset (sw2), Function1, Function2 • Switch: power
Power Management	• NXP MMPF0200
Audio	• Audio codec • Microphone and headphone jacks • Board-mounted microphone
Expansion Connector	• Parallel camera MIPI CSI port • I^2C and signals
Connectivity	• Full-size SD/MMC card slots (3x) • Two gigabit Ethernet connectors • 1 x USB 2.0 OTG port (micro USB) • mPCIe® connector • 12-bit ADC connector • 2 x CAN (DB-9) using MC34901 CAN transceiver
Debug	• JTAG connector (20-pin) • 1 x Serial-to-USB connector (for JTAG)
OS Support	• Linux® and Android™, our proprietary MQX™ RTOS for ARM Cortex-M4 • Others supported via third party (QNX, Windows® Embedded)
Tools Support	• Manufacturing tool • Processor Expert IOMUX tool
Additional Features	• MMA8451 three-axis accelerometer • MAG3110 three-axis magnetometer • Ambient light sensor

www.nxp.com/iMXSABRE

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