i.MX Applications Processors

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

SABRE Board for Smart Devices System Contents

- i.MX 6Quad processor-based system

- Power supply

- Quick start guide

- Bootable SD card containing an Android OS

Overview

The Smart Application Blueprint for Rapid Engineering (SABRE) board for smart devices introduces developers to quad-core processing, low power consumption and bleeding-edge multimedia and graphics applications on the i.MX 6Quad applications processor based on the ARM® Cortex™-A9 core.

The SABRE board for smart devices was created to simplify product design by offering a low-cost, feature-rich development platform that allows developers to work with the majority of the i.MX 6Quad processor's primary features while remaining schematically compatible with their i.MX 6Quad, i.MX 6Dual, i.MX 6DualLite and i.MX 6Solo designs. This helps to reduce time to market by providing a basic product design and serves as a launching point for more complex designs.

The SABRE board for smart devices was also designed to minimize lab desk clutter by placing connectors on only two edges of the board. This enhances physical stability and reduces the octopus effect, which is common to boards. The SABRE board for smart devices includes complete hardware design files, board support packages (BSP) for Android™ and Linux® and a bootable SD card containing an Android BSP image.

freescale™

i.MX

Key Benefits

- Designed to include all primary features of the i.MX 6Quad processor, the SABRE board for smart devices provides you with a low-cost development platform for software development that is scalable to the entire i.MX 6 series

- Ease of use is the hallmark of the design. The majority of board features are directly accessible to engineers with an optimized cable layout for external connectors

- Explore multiple connectivity options, including Wi-Fi®, Bluetooth®, Ethernet, SD, parallel interfaces, SATA and PCIe

- Quickly develop core software components and evaluate new hardware capabilities without the cost of a full system

- Evaluate a real design example of how the smartly integrated i.MX 6Quad processor offers more on chip, including an LVDS controller, USB PHYs, HDMI PHYs, SATA, PCI Express®, on-board power management and Ethernet, passing on significant BOM cost savings

- Use proven design examples and software drivers to reduce hassles associated with design-in of key connectivity options

Software and Tools

The SABRE board comes with an SD card pre-installed with the Android operating system. Linux is available from Freescale and several third-party OS choices exist. Android and Linux are provided and supported by Freescale. In addition to optimized BSPs, Freescale also provides a large portfolio of optimized video, speech and audio codecs. More information is available at **freescale.com/SABRESDB**.
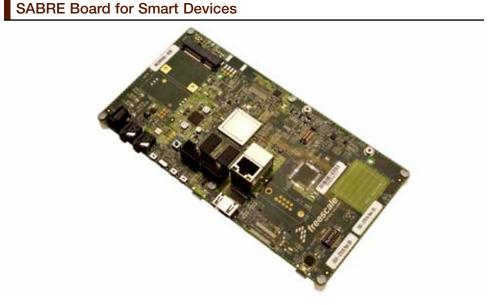
Features

Processor	• Freescale i.MX 6Quad 1 GHz processor based on the ARM® Cortex™-A9 core
Memory/storage	• 1 GB DDR3 SDRAM up to 533 MHz (1066 MTPS) memory • 8 GB eMMC flash
Display	• 2x LVDS conenctors • HDMI connector • LCD expansion connector (parallel, 24-bit)
User interface	• Power, reset, volume buttons
Power management	• Freescale PF series 101
Audio	• Wolfson audio codec • Microphone and headphone jacks
Expansion connector	• Camera MIPI CSI port • I²C, SSI, SPI signals
Connectivity	• Full-size SD/MMC card slots (2x) • 7-pin SATA data connector • 10/100/1000 Ethernet port • 1x USB 2.0 OTG port (micro USB)
Debug	• JTAG connector (20-pin) • 1x Serial-to-USB connector (for JTAG)
OS support	• Linux® and Android™ (Freescale) • Others supported via third party (QNX, WindowsCE)
Tools support	• Manufacturing tool (Freescale) • IOMUX tool (Freescale)
Additional features	• 3-axis Freescale accelerator • USB plug power supply

Ordering Information

Part Number	Description
MCIMX6Q-SDB	SABRE board for smart devices

SABRE Board for Smart Devices

For additional information, please visit freescale.com/iMXSABRE

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