i.MX Applications Processor for Multimedia

SABRE Platform for Tablets Based on i.MX53
Take Your Multimedia to the Max

Overview

Freescale delivers the ultimate in performance and design flexibility with its Smart Application Blueprint for Rapid Engineering (SABRE) platform for tablets based on the i.MX53 family of consumer multimedia applications processors. The latest in a series of premiere market-focused reference designs, the SABRE platform for tablets showcases the well-integrated and high-performing i.MX53 series of multimedia applications processors based on ARM® Cortex™-A8 with speeds up to 1 GHz.

Designed with a tablet look and feel, the SABRE platform for tablets can be targeted towards mobile devices requiring low power and an amazing user experience. With more on-chip offerings, system-level power and performance optimizations and form-factor readiness, the SABRE platform for tablets enables customers to rapidly innovate new consumer products.

The SABRE platform for tablets is packed with features and connectivity options that can launch high-performing, cost-sensitive consumer tablets and smartbooks. The SABRE platform for tablets also provides a foundation for enabling new product designs in vertical markets such as industrial, medical and home automation. Broad operating system support includes Android™, Linux® and Windows® Embedded, providing a springboard for product differentiation. Freescale's highly optimized board support packages (BSPs), codecs and middleware maximize the capabilities of the i.MX53 processor's feature set while minimizing the overall system power consumption to provide longer play time.

Key Benefits

- Designed to look and feel like a real consumer tablet, the SABRE platform for tablets allows you to hold in your hands and evaluate the full multimedia performance capabilities of the i.MX53 family, including 1080p video decode, full duplex video in HD (720p), fast web browsing, realistic gaming applications and a richer and more responsive user experience

- Explore the multiple wireless connectivity options enabled by the i.MX53 processor, including Wi-Fi®, Bluetooth®, 2.4 GHz IEEE® 802.15.4/ZigBee®, GPS and a 3G modem (optional)

- Develop and showcase custom user interface (UI) and applications on the sleek and responsive capacitive multi-touch display to provide a more compelling, realistic demonstration to your project stakeholders

- Look at a real world example of how the smartly integrated i.MX53 processor offers more on chip, including an LVDS controller, USB PHYs, SATA and Ethernet passing on significant BOM cost savings in your design

- See for yourself how the i.MX53 processor conserves battery life and can enable hours of 1080p video playback

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

Software and Tools

The SABRE platform for tablets comes pre-installed with the Android operating system. Linux and Windows Embedded BSPs are available for download from freescale.com/iMXSABRE. Android, Linux and Windows Embedded BSPs 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/iMX53tools**.

The user interface is one of the key areas of differentiation in today's world of consumer products. That's why the SABRE platform for tablets is bundled with Inflexion™ UI for i.MX processors by Mentor Embedded at no additional charge*. This exclusive offer enables rapid creation of visually rich, animated UIs to help customers develop compelling and differentiated Android and Linux-based devices.

SABRE Platform for Tablets System Contents

- i.MX53 processor-based tablet with enclosure and battery
- 15V power supply
- Mini HDMI cable
- Quick Start Guide
- DVD with VMware player, getting started video, demos and other documents

Platform Features	
Processor	• Freescale i.MX53 1 GHz ARM® Cortex™-A8 processor • 1 GB DDR3 SDRAM up to 400 MHz (800 MHz DDR) memory • 8 GB eMMC flash
Display	• 10.1" 1024 x 768 LVDS display with integrated P-cap sensing • HDMI connector • LVDS connector (for optional second display)
User Interface	• 10.1" capacitive multi-touch display • Capacitive buttons: home, menu, back, search • Other buttons: power, reset, volume up/down
Power Management	• Dialog DA9053 • 11.1V 3-cell Li+, 40.2-WHr battery and charger • 15V, 3A power supply
Camera	• Omnivision OV5642 5 MP sensor
Wireless Connectivity	• Atheros AR6003 Wi-Fi® + AR3001 BT module • Atheros GM22 GPS receiver • Freescale MC1323X 2.4 GHz IEEE® 802.15.4/ZigBee® • Infineon Amazon-1 3G module (optional)
Audio	• Freescale SGTL5000 audio codec • SPDIF via HDMI • 2 x 1W at 8 ohm speakers • Headphone/microphone jack
Sensors	• Freescale MMA8451Q 3-axis accelerometer • Freescale MAG3110 magnetic sensor
Interface Connectivity	• Full-size SD/MMC card slot • 22-pin SATA data connector • Two High-Speed USB 2.0 host ports • Micro High-Speed USB 2.0 OTG port
Debug Board (separate PCB)	• 10/100BT Ethernet port • DB-9 UART port • 20-pin JTAG connector
Expansion Connector	• Expansion port has parallel LCD interface, I²C, resistive touch and LCD backlight rails

Ordering Information		
Part Number	Description	MSRP (USD)
MCIMX53SMD	SABRE Platform for Tablets	$1499

*Certain restrictions apply. Visit **freescale.com/iMXinflexion** for details.

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