freescale
i.MX

i.MX Applications Processors

Evaluation Kit Based on i.MX 6UltraLite

Overview

Freescale delivers the next installment in a line of highly flexible, market-focused development tools with an evaluation kit (EVK) based on the i.MX 6UltraLite applications processor. The i.MX 6UltraLite processor is the first device in the i.MX product line to have a single ARM® Cortex®-A7 core operating at speeds of up to 528 MHz. This EVK enables an LCD display and audio playback as well as many connectivity options. It is designed to showcase the most commonly used features of the processor in a small, low cost package and to facilitate software development with the ultimate goal of faster time to market through the support of the Linux® operating system. A footprint is also available to enable an HDMI display.

i.MX 6UltraLite EVK

i.MX 6UltraLite EVK System Contents

- i.MX 6UltraLite CPU board and base board

Energy Efficient Solutions
optimized for low power

Efficient Performance with Low Power at a Low BOM Cost

Leveraging the energy efficiency of the Cortex-A7 core, the i.MX 6UltraLite is the smallest and most energy-efficient ARM-based processor, providing maximum performance in low-power, space constrained embedded environments. The board is powered by discrete power circuitry consisting of three DC to DC converters and one low dropout (LDO) regulator.

Sensors

The Freescale FXLS8471Q accelerometer is highly versatile for industrial and consumer high-performance low-g applications that offer noise density, board mount offset, temperature performance and sensitivity. Integrated motion detection features include tilt, shake and tap detection with a new vector magnitude output that simplifies implementation and reduces power consumption. The Freescale MAG3110 eCOMPASS is a small, low-power digital 3D magnetic sensor with a wide dynamic range to allow operation in PCBs with high extraneous magnetic fields. A footprint is also available to enable a gyroscope sensor.

MCIMX6UL-EVK Features

CPU Board

Processor	Freescale i.MX 6UltraLite 528 MHz Cortex-A7 core
Power management	Discretes
Memory	• 4Gb DDR3L SDRAM, 400 MHz • 256 MB Quad SPI Flash • MicroSD connector • Footprint for eMMC • Footprint for NAND Flash
Size	2.66 inch x 1.27 inch (6.76 cm x 4.24 cm), 4-layer board

Base Board

Display board interface	• LCD expansion port connector • HDMI connector and footprint for HDMI transmitter
Audio	• Audio codec • 3.5 mm Stereo Headphone output • Mono-Microphone input on board • Left and Right Speaker Out connectors
Connectivity	• One USB 2.0 Micro-B OTG connectors • One USB 2.0 Standard-A host connectors • Two Ethernet (10/100T) connectors • Dual CAN connector • SD/SDIO connector
Camera	Parallel camera connector
Sensors	• Freescale MAG3110 eCOMPASS • Freescale FXLS8471Q accelerometer • Footprint for gyroscope
Debug	• 20-pin standard JTAG connector • UART to Micro USB connector
Expansion port	Arduino header
Size	5.12 inch x 4.25 inch (13.0 cm x 10.8 cm), 4-layer board

Software and Tools

Simplify product design with a low-cost, feature-rich development platform that allows you to work with the majority of the processor's primary features with the corresponding software support. For software, design files, development tools and additional information, visit **freescale.com/iMX6tools.**

For more information, visit freescale.com/iMX6ULEVK
Join fellow i.MX developers online at imxcommunity.org

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