EVALUATION KIT BASED ON i.MX 8M NANO ULTRALITE APPLICATIONS PROCESSORS

The i.MX 8M Nano UltraLite (UL) EVK is a feature-rich development platform that enables evaluation and development of high-performance, scalable and cost-optimized solutions.



OVERVIEW

The i.MX 8M Nano UltraLite EVK hardware and software board support packages provide a comprehensive platform for evaluation of the i.MX 8M Nano UltraLite applications processors utilizing 1, 2, or 4 Arm® Cortex®-A53 cores and 1 Cortex-M7 core.

The EVK topology consists of a baseboard and a compute module. The compute module is a size-optimized design that contains the i.MX 8M Nano UltraLite applications processor, NXP® PMIC, DRAM, eMMC and wireless connectivity via NXP Wi-Fi®/Bluetooth® module. The i.MX 8M Nano UltraLite, i.MX 8M Nano, and i.MX 8M Mini processors use the same baseboard, proof that a single hardware design can support both solutions.

The compute module plugs into the baseboard, which provides MIPI-CSI connectors USB 3.0 connectors ideal for embedded and connected high-performance applications. In addition, the baseboard has a microSDTM/MMC slot, 10/100/1000 Ethernet port, and a 3.5 mm headphone jack.

INTEGRATED NXP PMIC AND NXP WI-FI/BLUETOOTH SOLUTIONS

NXP has integrated its PMIC drivers, Wi-Fi/Bluetooth drivers and communications stacks to simplify and accelerate application development. By using the board support packages (BSPs), developers can easily combine power management and wireless connectivity with i.MX 8M Nano UltraLite's capabilities.

TARGET APPLICATIONS

- Building automation — elevator control, HVAC control, smart access control, IoT gateway
- Smart homes — voice-controlled light switches, smart appliances, smart thermostats, service robots
- Imaging and machine vision — retail inventory management, thermal/IR scanners, drones, mobile service robots
- Healthcare — patient monitor, infusion pump, activity and wellness monitor
- Audio entertainment — soundbars, audio/video receivers, wireless speakers, portable music players, public address systems

PROVEN HARDWARE DESIGN

The compute module is the processing and connectivity core of your smart, connected system. The hardware design is a size-optimized 6-layer board with high-speed DDR3L, proven to work at speed with our Linux® operating systems. Help fast-track your product development by using this design as your starting point. Design collateral is available on nxp.com/iMX8MNanoULEVK.

VERSATILE PLATFORM FOR DEVELOPMENT

The EVK system includes the functionality required for you to build your smart, connected application. Wi-Fi 5 is included in the box (no additional board required), and camera accessory boards let you prototype a vision-based system.

i.MX 8M NANO EVK CONTENTS

- i.MX 8M Nano UL EVK baseboard and compute module
- Quick Start Guide
- USB 3.0 Type C to Type A
- USB 2.0 Type A to Type Micro
- USB Type C power supply

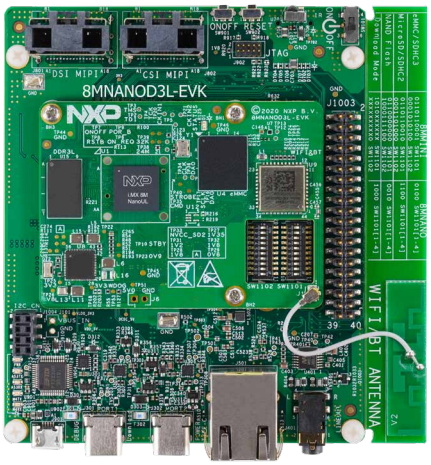
SOFTWARE AND TOOLS

The i.MX 8M Nano UL EVK comes pre-installed with a boot image flashed to the onboard eMMC device. Hardware design files, software tools and BSPs for Linux and FreeRTOS are available from NXP to use as a reference for starting designs. Other reference designs and tools are also available from NXP's ecosystem partners. Additional information can be found at www.nxp.com/iMX8MNanoULEVK.

Visit www.nxp.com/i.MX8-ACCESSORY-BOARDS to see the compatible camera accessory board for the i.MX 8M Nano UL EVK.

ORDERING INFORMATION

Part Number: 8MNANOD3L-EVK
Memory: 1 GB DDR3L, 32 GB eMMC 5.1



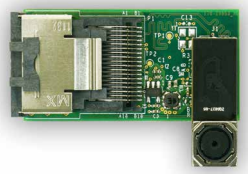
i.MX 8M NANO EVK COMPUTE MODULE

Part Number	8MNANODR3L-EVK
Memory	• DDR3L x16 w/ 1 GB • 32 GB eMMC 5.1 • MicroSD/MMC connector QSPI w/32 MB
Processor	• i.MX 8M Nano UltraLite quad applications processor • 4 x Arm® Cortex®-A53 @ 1.4 GHz • Arm Cortex-M7 @ 750 MHz
Power Management	• NXP PMIC PCA9450B
Wireless	• NXP 88W8987 Wi-Fi®/Bluetooth® module: – Wi-Fi 5 (802.11ac) 1x1 Dual-Band (2.4/5 GHz) – Bluetooth 5.1 • Onboard chip antenna • External antenna connector

i.MX 8M NANO EVK BASE BOARD

Part Number	8MNANODR3L-EVK
Display/Camera Connectors	MIPI-CSI camera mini-SAS connector
Audio	• Audio DAC 24-bit 192 kHz stereo • HP jack 3.5 mm audio connector • Board expansion connector for audio interfaces
Connectivity	• 10/100/1000 Ethernet • USB 3.0 Type C connector
Debug	• JTAG connector • UART via USB
Tools and OS support	• Linux® • FreeRTOS

i.MX 8M NANO UL EVK ACCESSORY BOARD

Description	Part Number	Photo
MIPI-CSI Camera	MINISASTOCSI	

www.nxp.com/iMX8MNanoULEVK

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