i.MX 937 Applications Processor: Secure, Smart, Power# and Cost#Efficient, Scalable Edge AI Processing
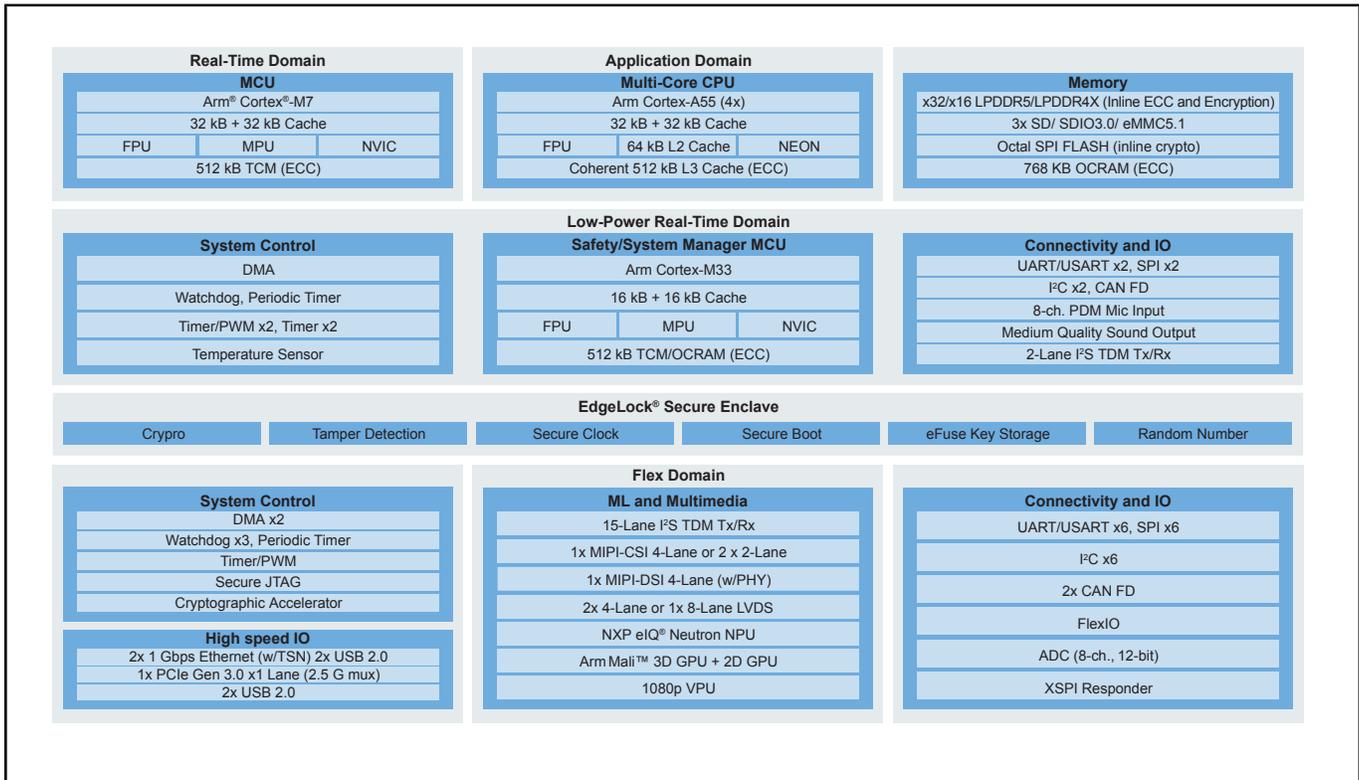
i.MX-937 NEW

Preproduction

This page contains information on a preproduction product. Specifications and information herein are subject to change without notice. For additional information contact support or your sales representative.

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The i.MX 937 application processor is designed for power# and cost#efficient edge AI#driven applications, powered by the integrated eIQ® Neutron neural processing unit (NPU). It delivers 1080p60-capable graphics and video processing, vision and ML acceleration, efficient CPU performance and real#time processing, along with advanced security through the integrated EdgeLock® secure enclave to support energy#efficient edge computing. The processor targets automotive, industrial and commercial (IoT) applications.

Access to FRDM i.MX 937 development boards will be available in late 2026, with full silicon available in early 2027.

i.MX 937 Applications Processor Block Diagram

Real-Time Domain

MCU
Arm® Cortex®-M7
32 kB + 32 kB Cache

FPU	MPU	NVIC

512 kB TCM (ECC)

Application Domain

Multi-Core CPU
Arm Cortex-A55 (4x)
32 kB + 32 kB Cache

FPU	64 kB L2 Cache	NEON

Coherent 512 kB L3 Cache (ECC)

Memory

x32/x16 LPDDR5/LPDDR4X (Inline ECC and Encryption)
3x SD/ SDIO3.0/ eMMC5.1
Octal SPI FLASH (inline crypto)
768 KB OCRAM (ECC)

Low-Power Real-Time Domain

System Control
DMA
Watchdog, Periodic Timer
Timer/PWM x2, Timer x2
Temperature Sensor

Safety/System Manager MCU
Arm Cortex-M33
16 kB + 16 kB Cache

FPU	MPU	NVIC

512 kB TCM/OCRAM (ECC)

Connectivity and IO
UART/USART x2, SPI x2
I²C x2, CAN FD
8-ch. PDM Mic Input
Medium Quality Sound Output
2-Lane I²S TDM Tx/Rx

EdgeLock® Secure Enclave

Crypro	Tamper Detection	Secure Clock	Secure Boot	eFuse Key Storage	Random Number

Flex Domain

System Control
DMA x2
Watchdog x3, Periodic Timer
Timer/PWM
Secure JTAG
Cryptographic Accelerator

High speed IO
2x 1 Gbps Ethernet (w/TSN) 2x USB 2.0
1x PCIe Gen 3.0 x1 Lane (2.5 G mux)
2x USB 2.0

ML and Multimedia
15-Lane I²S TDM Tx/Rx
1x MIPI-CSI 4-Lane or 2 x 2-Lane
1x MIPI-DSI 4-Lane (w/PHY)
2x 4-Lane or 1x 8-Lane LVDS
NXP eIQ® Neutron NPU
Arm Mali™ 3D GPU + 2D GPU
1080p VPU

Connectivity and IO
UART/USART x6, SPI x6
I²C x6
2x CAN FD
FlexIO
ADC (8-ch., 12-bit)
XSPI Responder

View additional information for i.MX 937 Applications Processor: Secure, Smart, Power# and Cost#Efficient, Scalable Edge AI Processing.

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