i.MX 8XLite Applications Processors for Telematics, V2X and Industrial Control
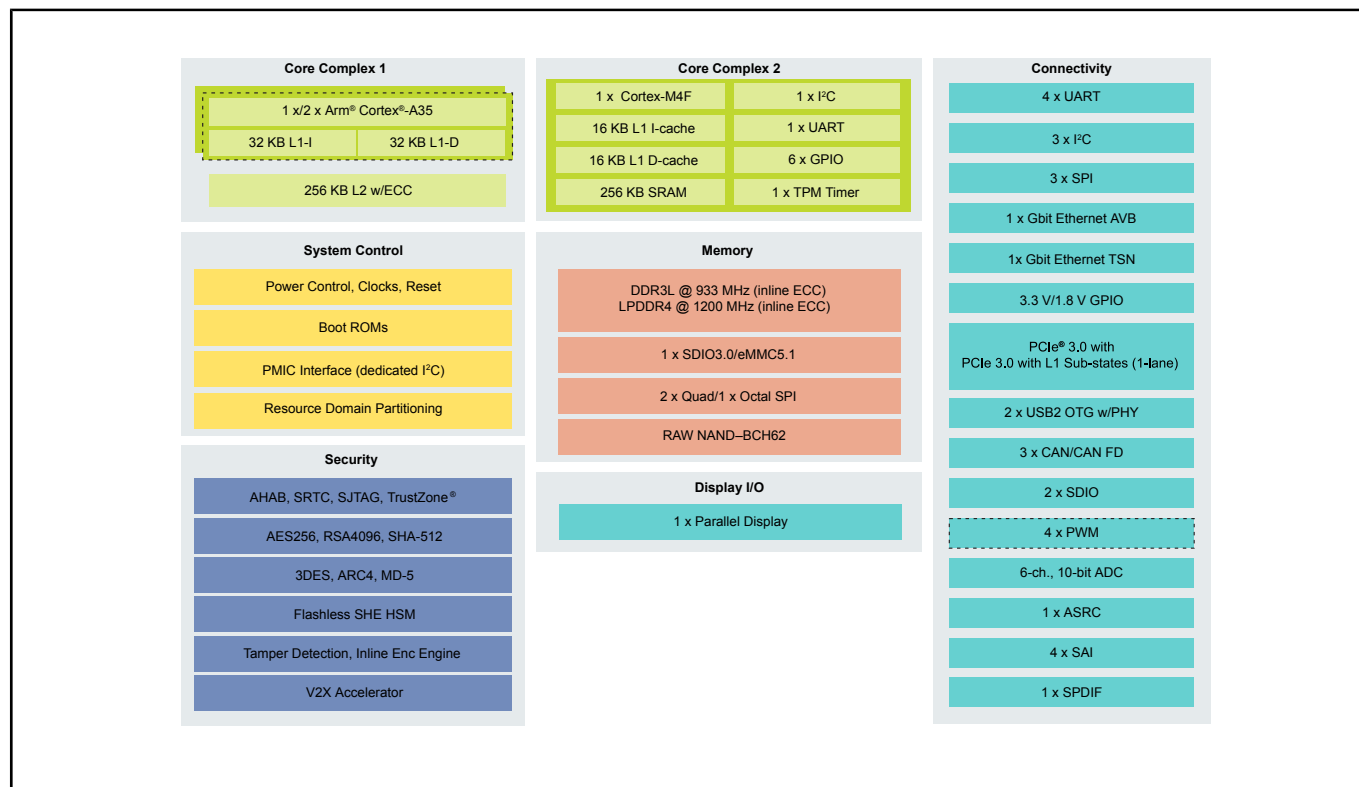
iMX8XLite

Last Updated: Jan 7, 2026

Extending the scalable range of the i.MX 8 series, the i.MX 8XLite family is composed of common subsystems and architecture from the higher-end i.MX 8X family, establishing a range of cost-performance scaling and high levels of software reuse. Supported with an expansive software ecosystem and dedicated Hardware Security Modules to enable telematics solutions and vehicle-to-everything (V2X) applications with a single processor while retaining efficient performance.

i.MX 8XLite applications include vehicle telematics, vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) solutions, road infrastructure connectivity, industrial equipment and building control.

i.MX 8XLite Processors Block Diagram

Core Complex 1

1 x/2 x Arm® Cortex®-A35	
32 KB L1-I	32 KB L1-D

256 KB L2 w/ECC

Core Complex 2

1 x Cortex-M4F	1 x I²C
16 KB L1 I-cache	1 x UART
16 KB L1 D-cache	6 x GPIO
256 KB SRAM	1 x TPM Timer

Connectivity

- 4 x UART
- 3 x I²C
- 3 x SPI
- 1 x Gbit Ethernet AVB
- 1x Gbit Ethernet TSN
- 3.3 V/1.8 V GPIO
- PCIe® 3.0 with PCIe 3.0 with L1 Sub-states (1-lane)
- 2 x USB2 OTG w/PHY
- 3 x CAN/CAN FD
- 2 x SDIO
- 4 x PWM
- 6-ch., 10-bit ADC
- 1 x ASRC
- 4 x SAI
- 1 x SPDIF

System Control

- Power Control, Clocks, Reset
- Boot ROMs
- PMIC Interface (dedicated I²C)
- Resource Domain Partitioning

Memory

- DDR3L @ 933 MHz (inline ECC)
  LPDDR4 @ 1200 MHz (inline ECC)
- 1 x SDIO3.0/eMMC5.1
- 2 x Quad/1 x Octal SPI
- RAW NAND–BCH62

Security

- AHAB, SRTC, SJTAG, TrustZone®
- AES256, RSA4096, SHA-512
- 3DES, ARC4, MD-5
- Flashless SHE HSM
- Tamper Detection, Inline Enc Engine
- V2X Accelerator

Display I/O

- 1 x Parallel Display

View additional information for i.MX 8XLite Applications Processors for Telematics, V2X and Industrial Control.

Note: The information on this document is subject to change without notice.