



# **i.MX RT1040 Crossover MCU with Arm® Cortex®-M7 Core Operating Up to 600 MHz and Extended Temperature Range**

## **i.MX-RT1040**

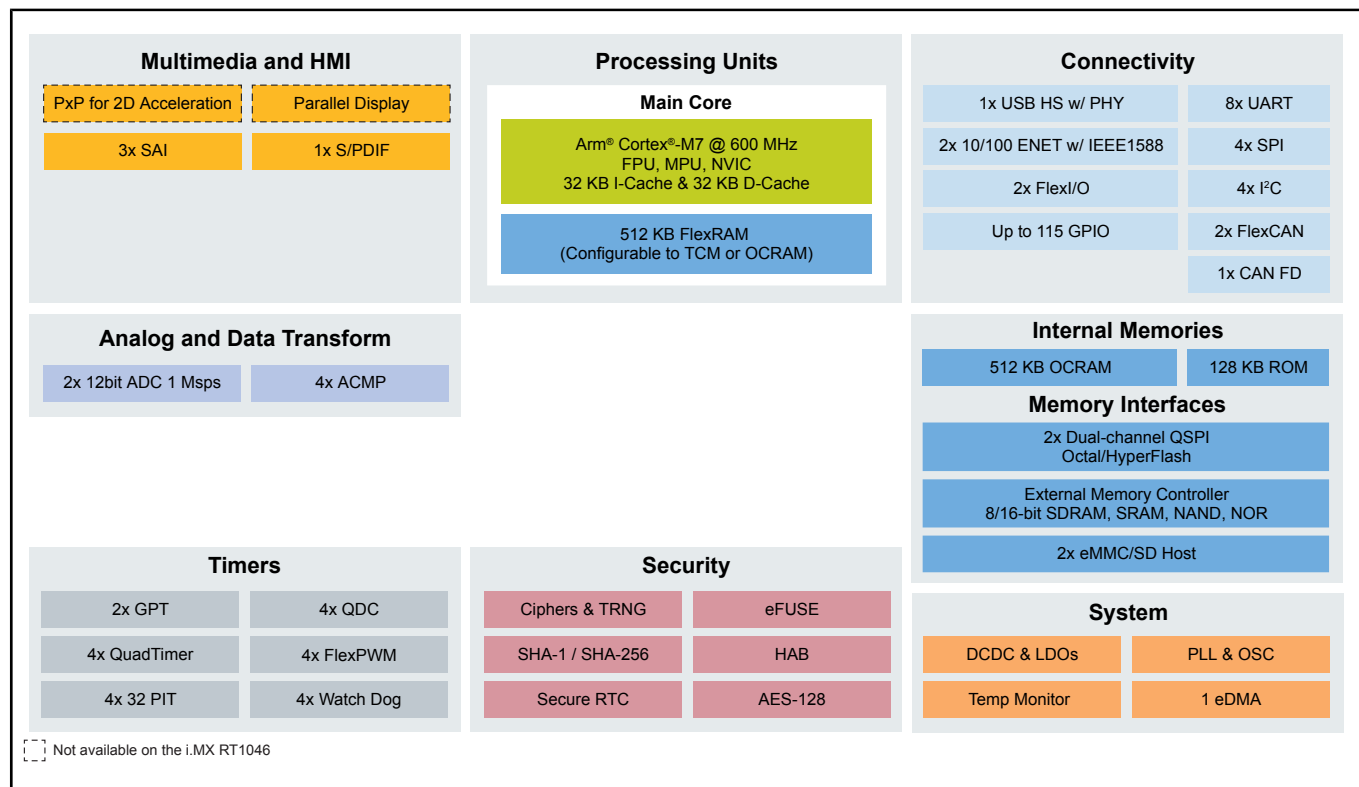
Last Updated: Jan 14, 2026

i.MX RT1040 Crossover MCUs are based on the Arm® Cortex®-M7 core for real-time performance and high integration for Industrial and IoT applications.

The i.MX RT1040 Arm® Cortex®-M7 operates at up to 600 MHz with 1MB on-chip RAM that can be configured as Tightly-Coupled Memory or general-purpose. The family offers various memory interfaces and a wide range of connectivity interfaces including UART, SPI, I²C, USB and CAN. The new i.MX RT1046 provides additional flexibility with 169 BGA compact package and an extended temperature range up to 125°C and the new i.MX RT1043 extends SRAM memory size up to 1 MB with LCD support.

The i.MX RT1040 family is supported by the [MCUXpresso ecosystem](#), which includes an SDK, a choice of IDEs, and secure provisioning and configuration tools to enable rapid development

## i.MX RT104x MCU Block Diagram



View additional information for [i.MX RT1040 Crossover MCU with Arm® Cortex®-M7 Core Operating Up to 600 MHz and Extended Temperature Range](#).

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

**www.nxp.com**

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2026 NXP B.V.