i.MX RT1015 Crossover MCU with Arm® Cortex®-M7 Core Operating Up to 500 MHz
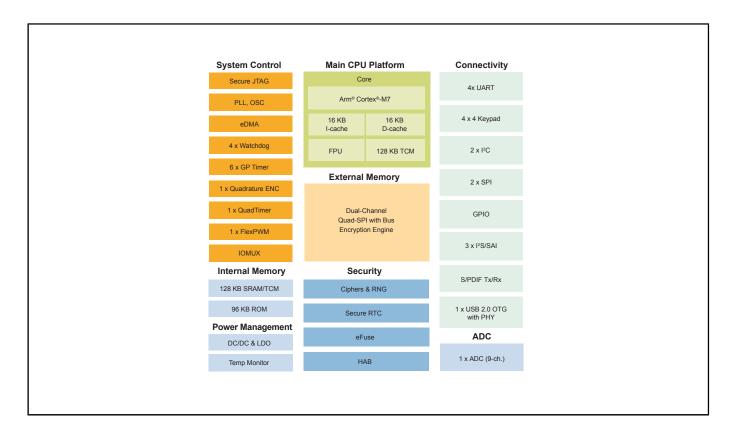
i.MX-RT1015

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i.MX RT1015 Crossover MCUs are based on the Arm® Cortex®-M7 core for real-time performance and high integration and low cost Industrial and IoT applications.

The i.MX RT1015 Arm® Cortex®-M7 operates at up to 500 MHz with 128 KB 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 and USB. 100 LQFP packages for low-cost PCB designs.

The i.MX RT1015 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 RT1015 Block Diagram Block Diagram

System Control

| Secure JTAG |
| PLL, OSC |
| eDMA |
| 4 x Watchdog |
| 6 x GP Timer |
| 1 x Quadrature ENC |
| 1 x QuadTimer |
| 1 x FlexPWM |
| IOMUX |

Main CPU Platform

Core

Arm® Cortex®-M7

| 16 KB I-cache | 16 KB D-cache |
| FPU | 128 KB TCM |

External Memory

Dual-Channel Quad-SPI with Bus Encryption Engine

Connectivity

| 4x UART |
| 4 x 4 Keypad |
| 2 x I²C |
| 2 x SPI |
| GPIO |
| 3 x I²S/SAI |
| S/PDIF Tx/Rx |
| 1 x USB 2.0 OTG with PHY |

Internal Memory

| 128 KB SRAM/TCM |
| 96 KB ROM |

Security

| Ciphers & RNG |
| Secure RTC |
| eFuse |
| HAB |

Power Management

| DC/DC & LDO |
| Temp Monitor |

ADC

| 1 x ADC (9-ch.) |

View additional information for i.MX RT1015 Crossover MCU with Arm® Cortex®-M7 Core Operating Up to 500 MHz.

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