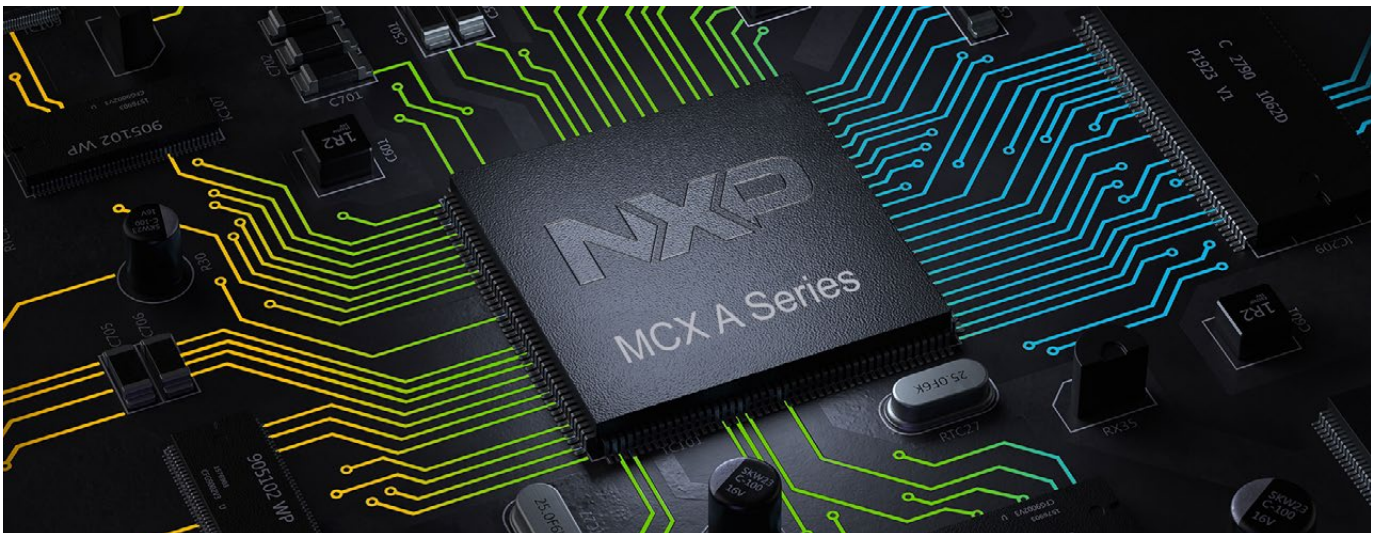


MCX A2 family of microcontrollers

Addressing the engineers' need at the edge with built-in security



The [MCX A2 families](#) extend the MCX platform with higher performance, stronger built-in security, and richer system integration to address more advanced industrial, control and connected applications.

Operating at up to 240 MHz, the MCX A2 families provide a significant performance uplift while maintaining the scalable design philosophy of the [MCX portfolio](#). Integrated AES-256 and SHA-2 hardware engines deliver fast and efficient cryptographic operations, enabling secure installer, authenticated communication and enhanced system protection without burdening the CPU. The MCX A2 devices further expand peripheral capabilities with support for 4×44 segment LCD, enabling more sophisticated HMI implementations and dual CAN FD, offering greater bandwidth and flexibility for industrial networking. These enhancements allow designers to build feature-rich, secure and high-performance systems while preserving software consistency and development efficiency across the MCX portfolio.

Target applications

- Sensing and metering
- Building control and automation
- Smart circuit breaker
- Home appliances
- USB accessories
- Compressor drive
- Smart lighting
- Hand-held devices
- Light motor control
- Power tools
- IoT nodes

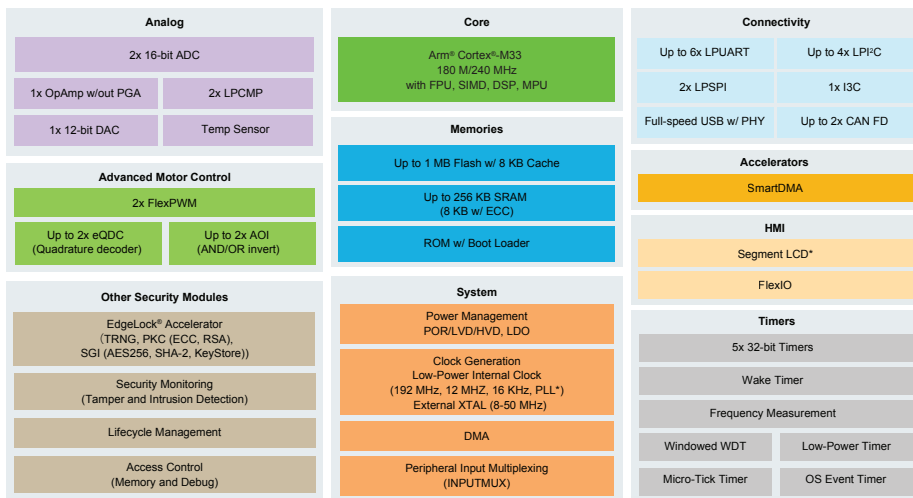
Comprehensive enablement

The MCX MCU portfolio is supported by the [MCUXpresso developer experience](#) to optimize, ease and help accelerate embedded system development.

The MCUXpresso suite includes tools for simple device configuration and secure programming. Developers can choose to work with multiple IDEs including MCUXpresso for VS Code, MCUXpresso IDE, IAR or Keil.

NXP provides drivers and middleware with extensive examples and support for a range of RTOS choices, further complemented by a wide range of compatible middleware from NXP's partner ecosystem, allowing rapid development of a broad range of end applications.

MCX A2 block diagram



* Feature is only enabled on selected products

Hardware platforms

For quick prototyping, we offer our low-cost, compact and scalable FRDM development boards. Developers have easy access to additional tools like our [expansion board hub](#) for add-on boards and the [application code hub](#) for software examples through the MCUXpresso developer experience.

MCX A2 MCU options

Part number	Frequency	Enhanced security	Flash	SRAM	LPI2C	LPUART	LPSPI	I3C	USB FS	FlexIO	Segment LCD	CAN	16b SE ADC	ADC channels	12b DAC	OpAmp	FlexPWM	Comparator	GPIOs	Package
MCXA266VPN	240 MHz	Y	1024 KB	256 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	43	1	1	2	2	114	WFBGA169
MCXA266VLQ	240 MHz	Y	1024 KB	256 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	43	1	1	2	2	114	LQFP144
MCXA266VLL	240 MHz	Y	1024 KB	256 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	39	1	1	2	2	83	LQFP100
MCXA266VLH	240 MHz	Y	1024 KB	256 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	28	1	1	2	2	52	LQFP64
MCXA265VPN	240 MHz	Y	512 KB	128 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	43	1	1	2	2	114	WFBGA169
MCXA265VLQ	240 MHz	Y	512 KB	128 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	43	1	1	2	2	114	LQFP144
MCXA265VLL	240 MHz	Y	512 KB	128 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	39	1	1	2	2	83	LQFP100
MCXA265VLH	240 MHz	Y	512 KB	128 KB	4	6	2	1	1	1	4 x 44	2x CAN FD	2	28	1	1	2	2	52	LQFP64
MCXA256VPN	180 MHz	Y	1024 KB	256 KB	4	5	2	1	1	1	-	1x CAN FD	2	43	1	1	2	2	114	WFBGA169
MCXA256VLQ	180 MHz	Y	1024 KB	256 KB	4	5	2	1	1	1	-	1x CAN FD	2	43	1	1	2	2	114	LQFP144
MCXA256VLL	180 MHz	Y	1024 KB	256 KB	4	5	2	1	1	1	-	1x CAN FD	2	39	1	1	2	2	83	LQFP100
MCXA256VLH	180 MHz	Y	1024 KB	256 KB	4	5	2	1	1	1	-	1x CAN FD	2	28	1	1	2	2	52	LQFP64
MCXA255VPN	180 MHz	Y	512 KB	128 KB	4	5	2	1	1	1	-	1x CAN FD	2	43	1	1	2	2	114	WFBGA169
MCXA255VLQ	180 MHz	Y	512 KB	128 KB	4	5	2	1	1	1	-	1x CAN FD	2	43	1	1	2	2	114	LQFP144
MCXA255VLL	180 MHz	Y	512 KB	128 KB	4	5	2	1	1	1	-	1x CAN FD	2	39	1	1	2	2	83	LQFP100
MCXA255VLH	180 MHz	Y	512 KB	128 KB	4	5	2	1	1	1	-	1x CAN FD	2	28	1	1	2	2	52	LQFP64
FRDM-MCXA266	MCX A266 FRDM development board, supporting MCX A255/256/265/266																			LQFP144

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