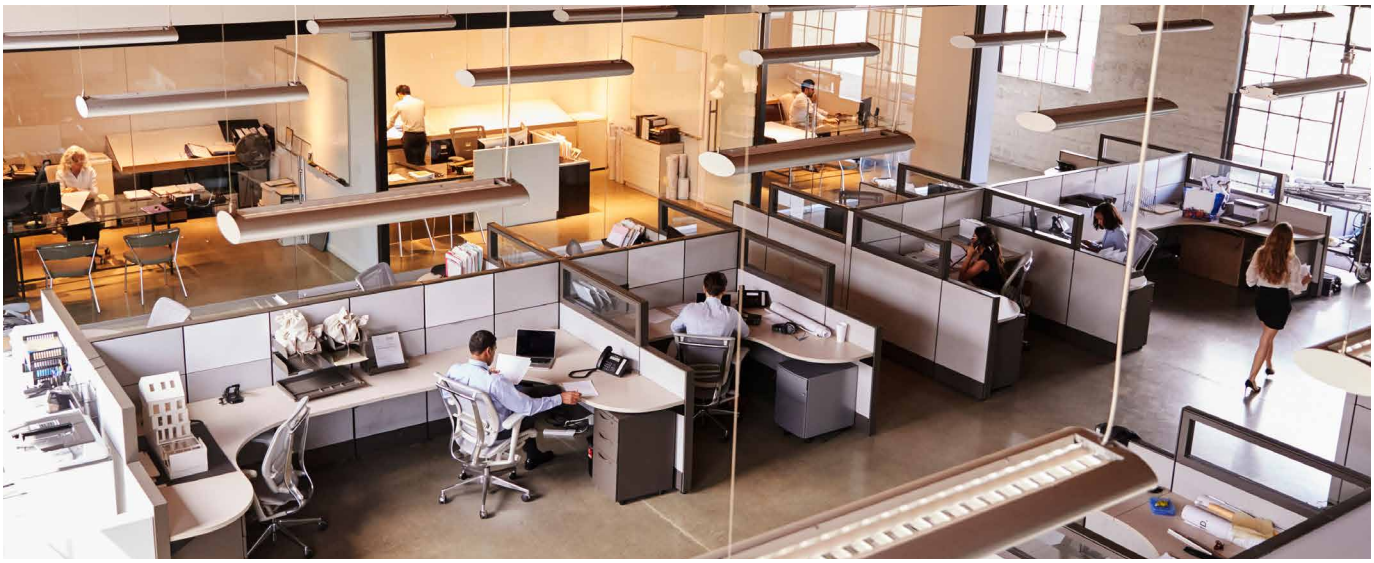
MCX W71 and W72 connected microcontrollers



The MCX W7x series brings rich connectivity to the MCX portfolio enabling innovative edge devices with secure multiprotocol wireless MCUs for Matter™, Thread®, Zigbee®, and Bluetooth® low energy with Channel Sounding.

The MCX W71 and W72 maximize flexibility with a software-upgradeable independent radio subsystem. With scalable memory sizes the MCX W7x series allows devices to be upgraded over time as user needs change and connectivity protocols like Matter continue to evolve.

The MCX W7x series includes the MCX W72, the industry's first wireless MCU to support the new Bluetooth® Channel Sounding standard, which improves the accuracy and security of distance measurement compared to traditional Bluetooth technology. This is supported by NXP's Localization Compute Engine (LCE) to reduce latency. Along with NXP's Trimension® portfolio of ultra-wideband (UWB) secure radar and fine ranging products, the MCX W7x evolves ambient computing into a broad range applications.

Key features

- 96 MHz Arm® Cortex®-M33
  - Localization compute engine (MCX W72)
- Radio subsystem with dedicated core, flash, and RAM
  - Support for Matter, Thread, Zigbee, and Bluetooth® low energy with channel sounding (MCX W72)
- 1 MB flash and 128 KB RAM (MCX W71)
  - Additional 256 KB flash and 88 KB RAM for radio subsystem
- 2 MB flash and 264 KB RAM (MCX W72)
  - Additional 512 KB flash and 171 KB RAM for radio subsystem
- Ultra-low power architecture
- Edgelock® Secure Enclave Core Profile with Edgelock 2GO support
- Optional CAN FD interface
- -40 to 125° C operating temperature

Target applications

- Smart door locks
- Smart sensors
- Connected window coverings
- Smart thermostats
- Connected small appliances
- Home and building control devices
- Security panels
- Power and energy
- E-bikes

Comprehensive developer experience

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

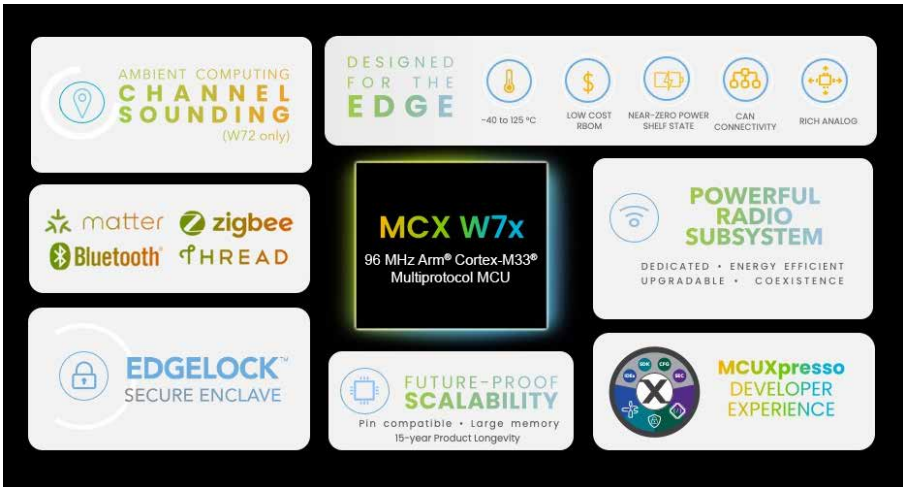
The MCUXpresso suite includes tools for simple device configuration and secure programming. Developers can choose to work with multiple IDEs including MCUXpresso for VS Code, MCUXpresso IDE, or IAR.

NXP provides wireless stacks, drivers and middleware with extensive examples via the MCUXpresso SDK and open-source github repos, further complemented by a wide range of compatible middleware from NXP's partner ecosystem, allowing rapid development of a broad range of end applications.

Flexible hardware platforms

For quick prototyping platforms, NXP offers low-cost, compact and scalable FRDM development boards and full-featured EVKs. 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 W7x: optimized for IoT, industrial and Matter



Part Number	Arm Cortex -M33 (MHz)	Package		Embedded memory		
		Pin count	Type	Flash app/radio	SRAM app/radio	Optional Ffeatures
MCXW716AMFT/FP	96	48/40	HVQFN	1 MB / 256 KB	128 KB / 88 KB	Bluetooth LE, 15.4
MCXW716CMFT/FP	96	48/40	HVQFN	1 MB / 256 KB	128 KB / 88 KB	Bluetooth LE, 15.4, CAN FD
MCXW727AMFT	96	48	HVQFN	2 MB / 512 KB	264 KB / 171 KB	Bluetooth LE, 15.4
MCXW727DMFT	96	48	HVQFN	2 MB / 512 KB	264 KB / 171 KB	Bluetooth LE, 15.4, localization compute engine
MCXW727CMFT	96	48	HVQFN	2 MB / 512 KB	264 KB / 171 KB	Bluetooth LE, 15.4, localization compute engine, CAN FD
FRDM-MCXW71, FRDM-MCXW72	MCX W71, W72 FRDM development boards					
MCXW72-LOC	Localization board for MCX W72 Bluetooth Channel Sounding MCU					
MCX-W71-EVK, MCX-W72-EVK	MCX W71 and W72 full evaluation kits					

MCXW727AMFT

W series

Feature set
7: Performance

Core features
1: Multiprotocol
2: Advanced multiprotocol

Memory size
6: 1MB Flash
7: 2MB Flash

Optional features
A: Bluetooth LE, 15.4
C: Bluetooth LE, 15.4, Loc compute engine (W72 only), CAN-FD
D: Bluetooth LE, 15.4, Loc compute engine (W72 only)

Temperature range
M:-40 to 125° C

Package
FP: 40 HVQFN
FT: 48 HVQFN

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