

# MCX W71x and W72x connected microcontrollers



The MCX W 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.

The first two families in the MCX W series, the MCX W71x and W72x, maximize flexibility with a software-upgradeable independent radio subsystem. With scalable memory sizes the MCX W series allows devices to be upgraded over time as user needs change and connectivity protocols like Matter continue to evolve.

The MCX W series includes the MCX W72x, 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 W evolves ambient computing into a broad range applications.

## Key features

- 96 MHz Arm® Cortex®-M33
  - Localization Compute Engine
- Radio subsystem with dedicated core, flash, and RAM
  - Support for Matter, Thread, Zigbee, and Bluetooth® Low Energy with channel sounding
- 1 MB flash and 128 KB RAM (MCX W71x)
  - Additional 256 KB flash and 88 KB RAM for radio subsystem
- 2 MB flash and 256 KB RAM (MCX W72x)
  - Additional 512 KB flash and 170 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 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.

## Visit [nxp.com/MCXW](https://www.nxp.com/MCXW)

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## MCX W7x: optimized for IoT, industrial and Matter



| Part Number                  | Arm Cortex-M33 (MHz)                     | Package   |           | Embedded Memory |                 | Optional Features                                       |
|------------------------------|--|-----------|-----------|-----------------|-----------------|---|
|                              |  | Pin Count | Type      | Flash App/Radio | SRAM App/Radio  |   |
| 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/PJ               | 96                                       | 48/112    | HVQFN/BGA | 2 MB / 512 KB   | 256 KB / 170 KB | Bluetooth LE, 15.4                                      |
| MCXW727DMFT/PJ               | 96                                       | 48/112    | HVQFN/BGA | 2 MB / 512 KB   | 256 KB / 170 KB | Bluetooth LE, 15.4, Localization compute engine         |
| MCXW727CMFT/PJ               | 96                                       | 48/112    | HVQFN/BGA | 2 MB / 512 KB   | 256 KB / 170 KB | Bluetooth LE, 15.4, Localization compute engine, CAN FD |
| MCX-W71xx-EVK, MCX-W72xx-EVK | MCX W71xx and W72xx full evaluation kits |           |           |                 |                 |   |
| FRDM-MCXW71, FRDM-MCXW72     | MCX W71, W72 FRDM development boards     |           |           |                 |                 |   |

**Preproduction:** This document contains information on preproduction products. For additional information contact [support](#) or your sales representative.

