



MCX N94, N54, N53, N52 and N24 with Highly Integrated Low-power Dual Core Arm® Cortex®-M33 MCUs, with on-chip Accelerators and Advanced Security

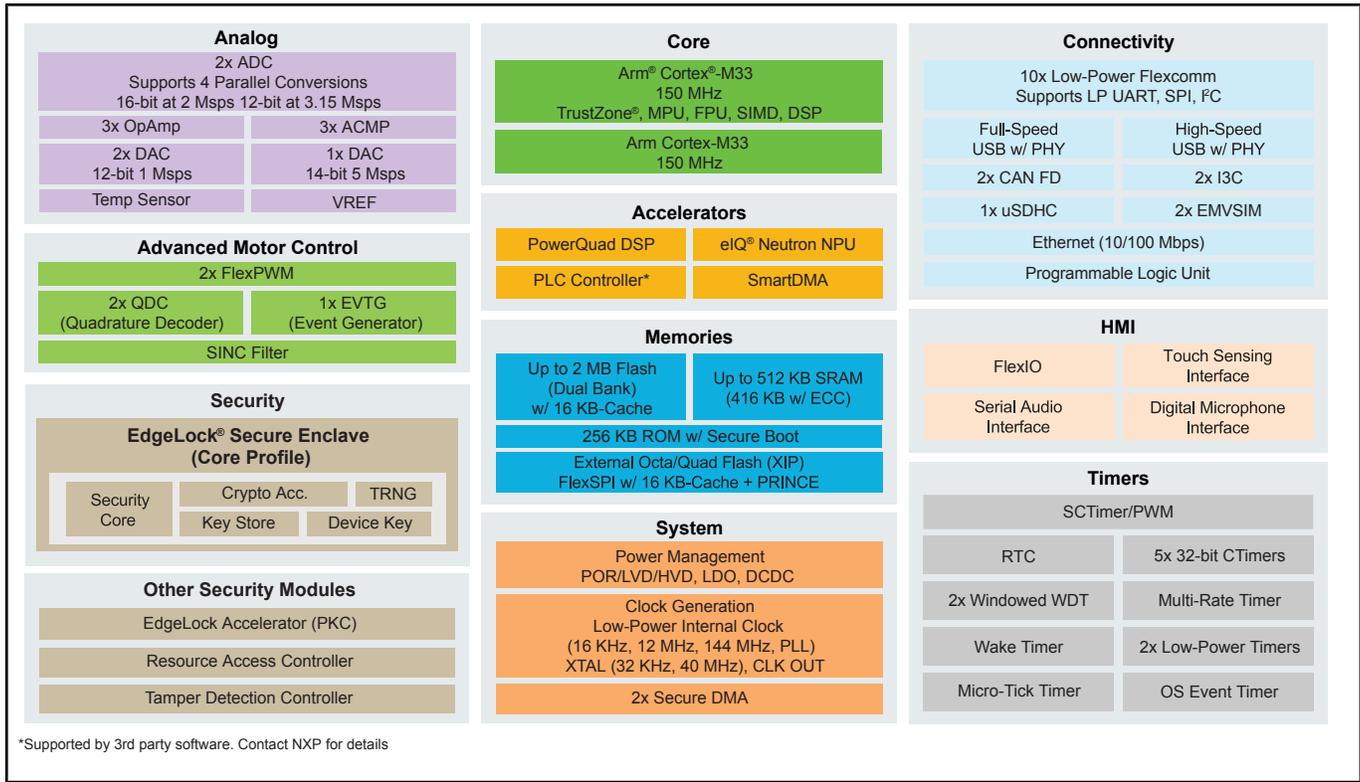
MCX-N94-N54-N53-N52-N24

Last Updated: Feb 24, 2026

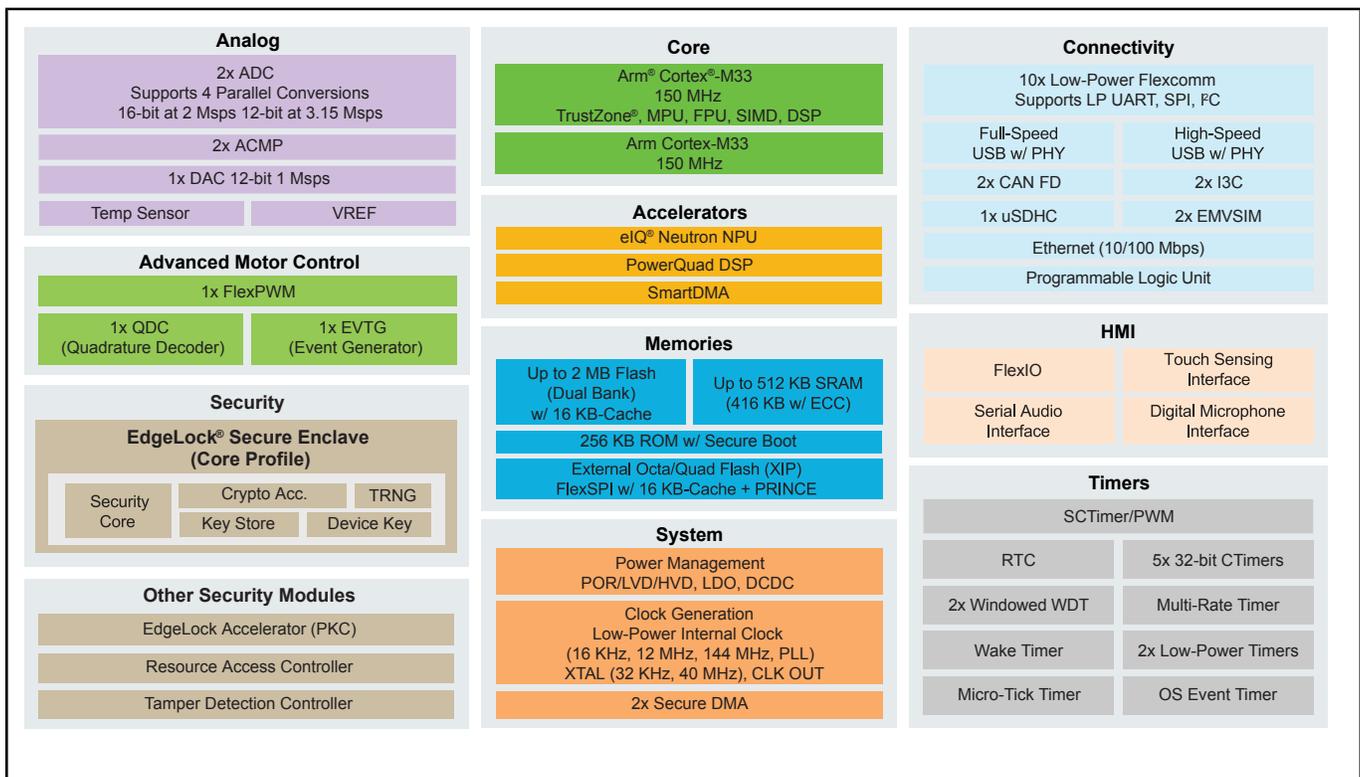
The MCX N94, N54, N53, N52 and N24 include up to two are based on dual high-performance Arm® Cortex®-M33 cores running up to 150 MHz, with 2 MB of Flash with optional full ECC RAM, a DSP co-processor and an integrated [eIQ Neutron NPU](#). The NPU delivers up to 42x faster machine learning throughput compared to a CPU core alone enabling it to spend less time awake and reducing overall power consumption.

The multicore design delivers improved system performance and reduces consumption by enabling smart, efficient distribution of workloads to the analog and digital peripherals. The devices are supported by the [MCUXpresso Developer Experience](#) to optimize, ease and help accelerate embedded system development.

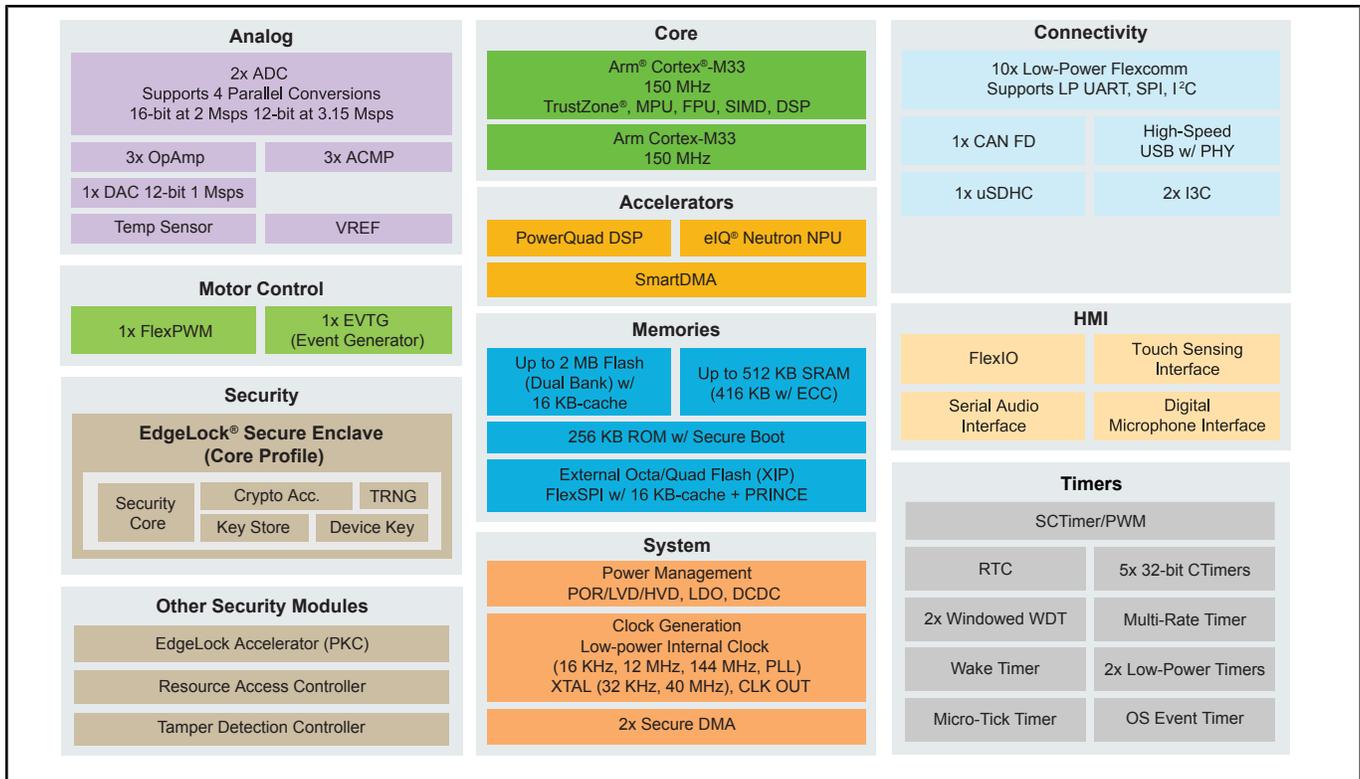
MCX N94x MCUs Block Diagram



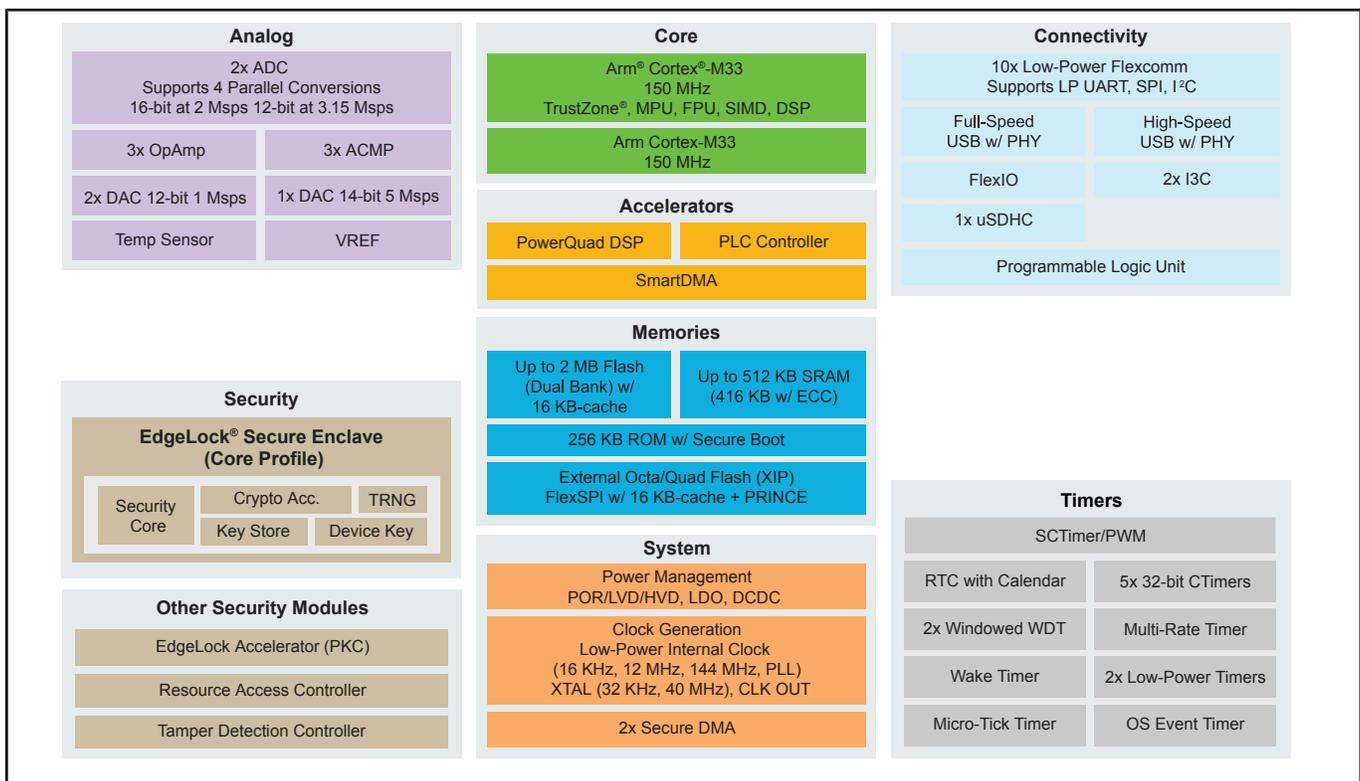
MCX N54x MCUs Block Diagram



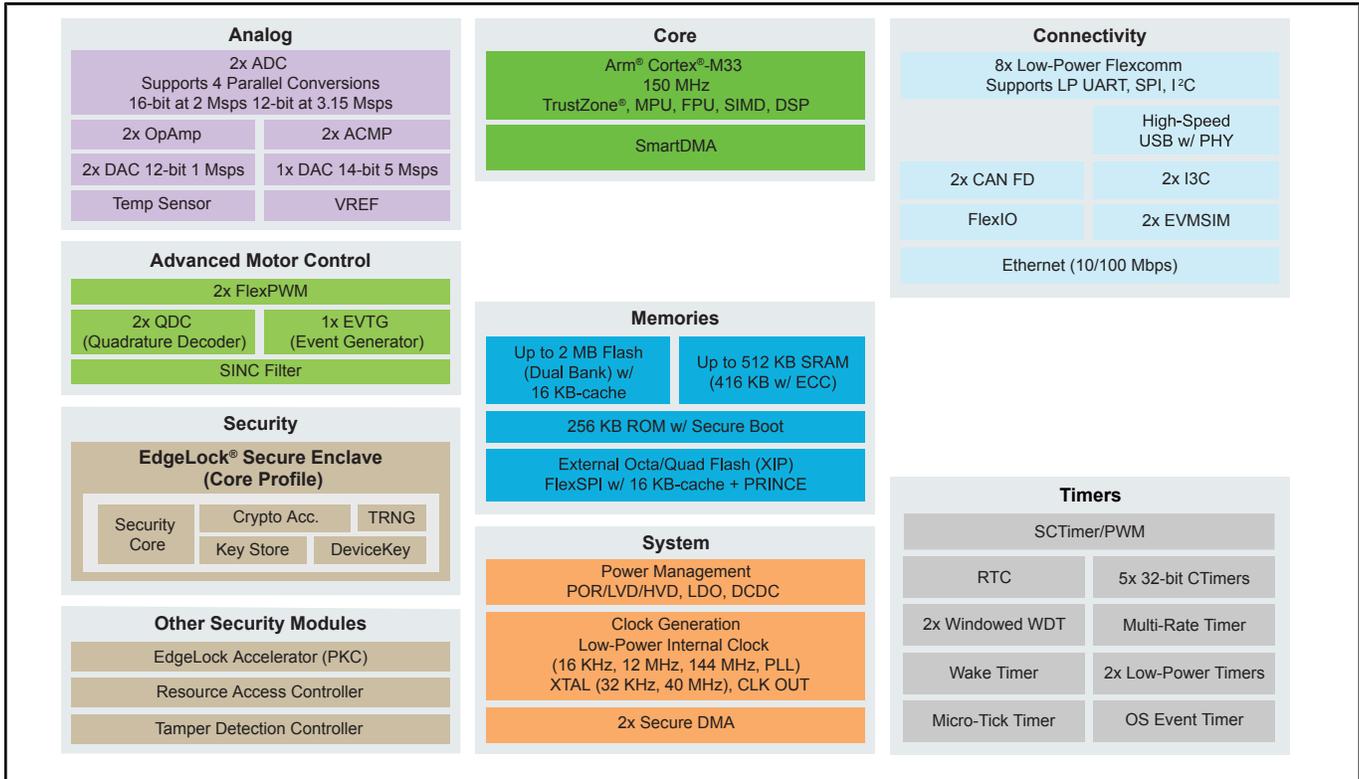
MCX N53x MCUs Block Diagram



MCX N52x MCUs Block Diagram



MCX N24x MCUs Block Diagram



View additional information for [MCX N94, N54, N53, N52 and N24 with Highly Integrated Low-power Dual Core Arm® Cortex®-M33 MCUs, with on-chip Accelerators and Advanced Security.](#)

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