



Motor and Motion Control for Humanoids and Mobile Robots

MOBILE-ROBOTICS-MOTION-CONTROL-HOLOSCAN-

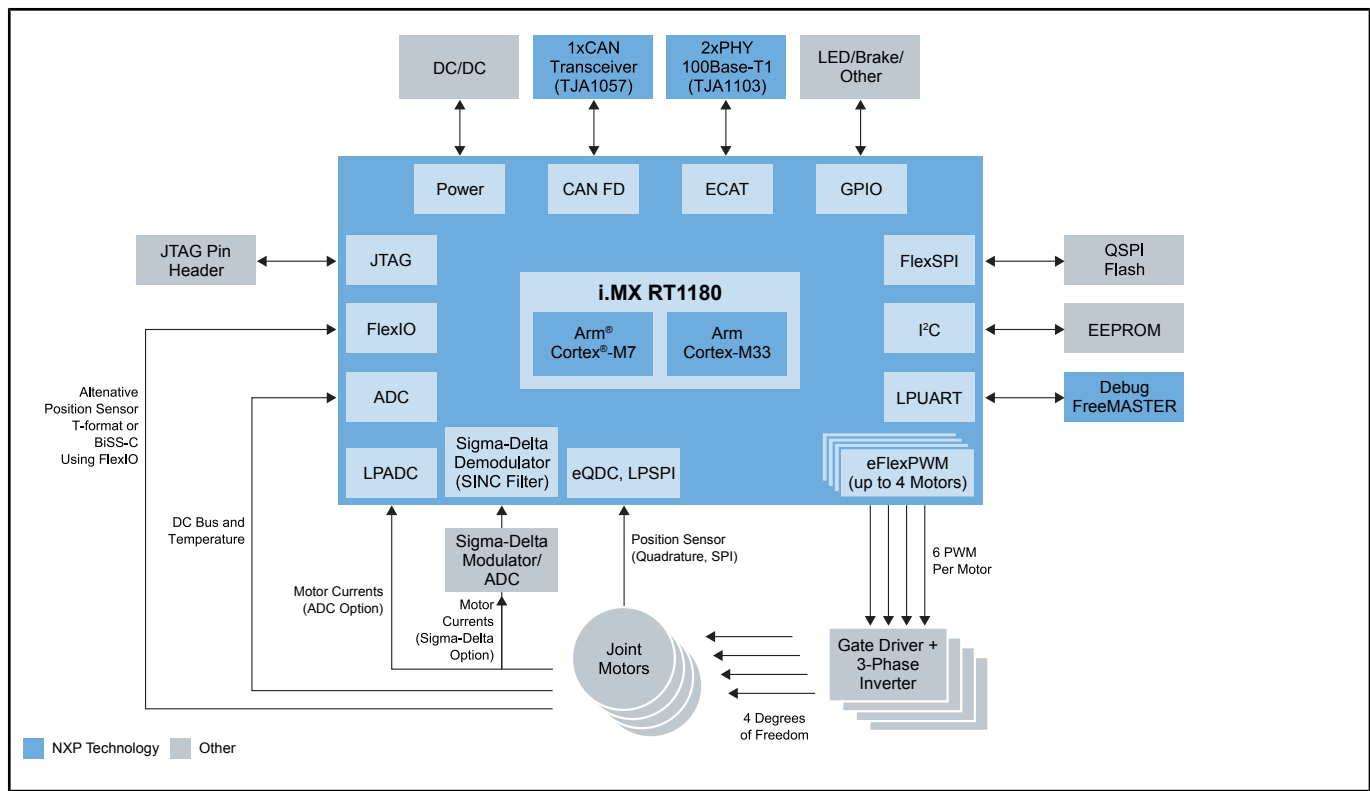
SENSOR NEW

Last Updated: Mar 16, 2026

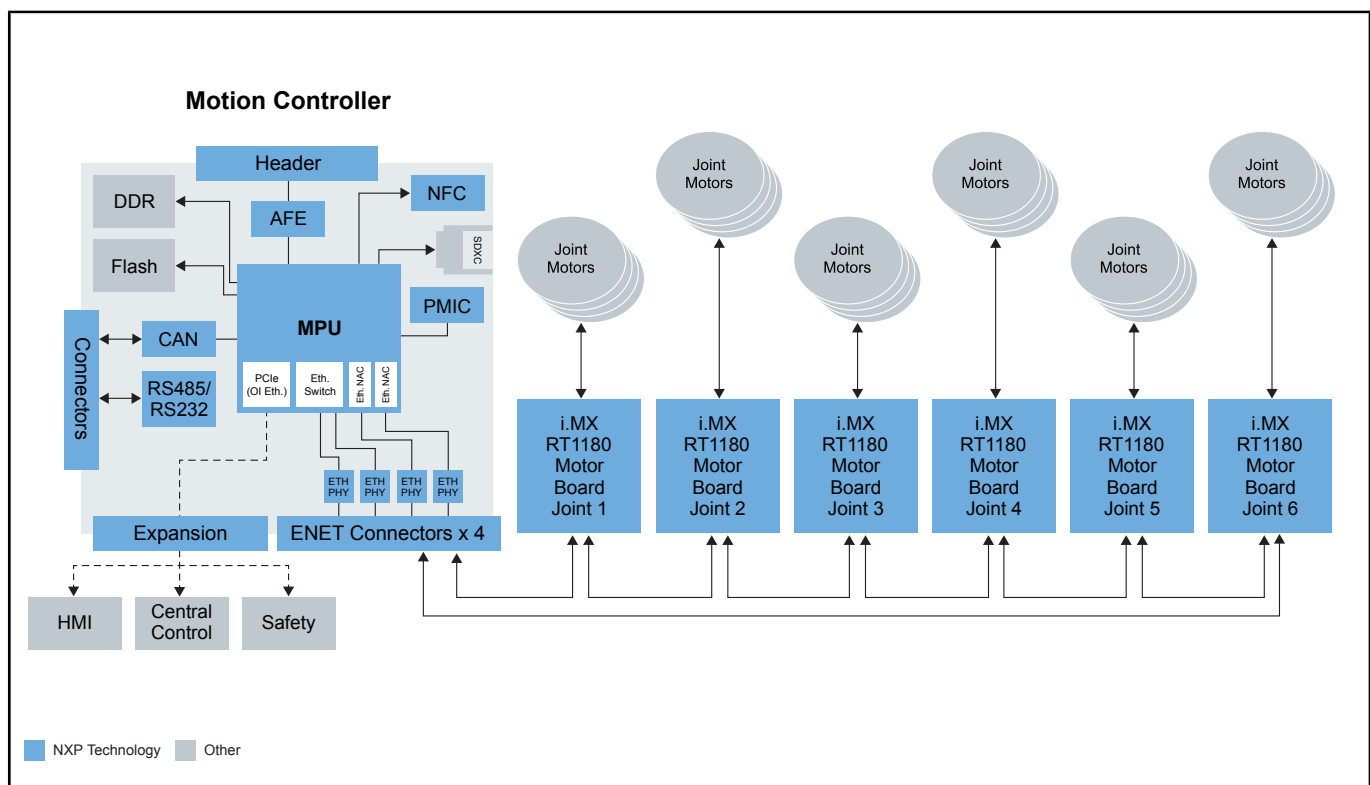
This robotics control solution delivers precise, deterministic motion control for humanoid robots, collaborative robots and autonomous mobile platforms. Designed for synchronized kinematic chains and multi-axis joint control, it enables efficient, scalable and safe motion across complex robotic systems.

Built on NXP's real-time processing portfolio, including i.MX RT crossover MCUs and scalable MCX microcontrollers, the architecture combines advanced motor control, integrated networking and industrial communication support. This integrates deterministic connectivity using time-sensitive networking (TSN) and EtherCAT®, enabling low-latency coordination between distributed joints and centralized control for humanoid limbs and robotic arms.

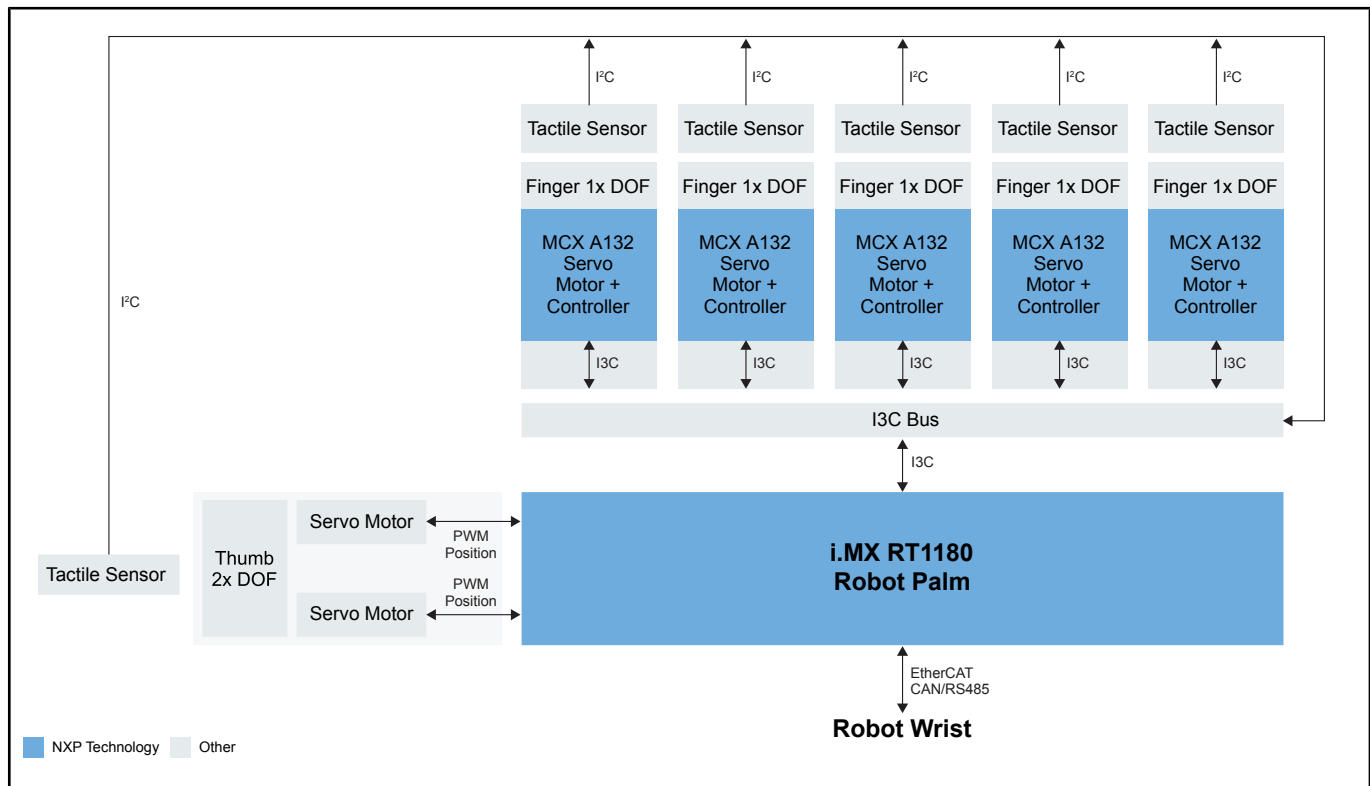
Motor Driver for Humanoid Joint Module Block Diagram



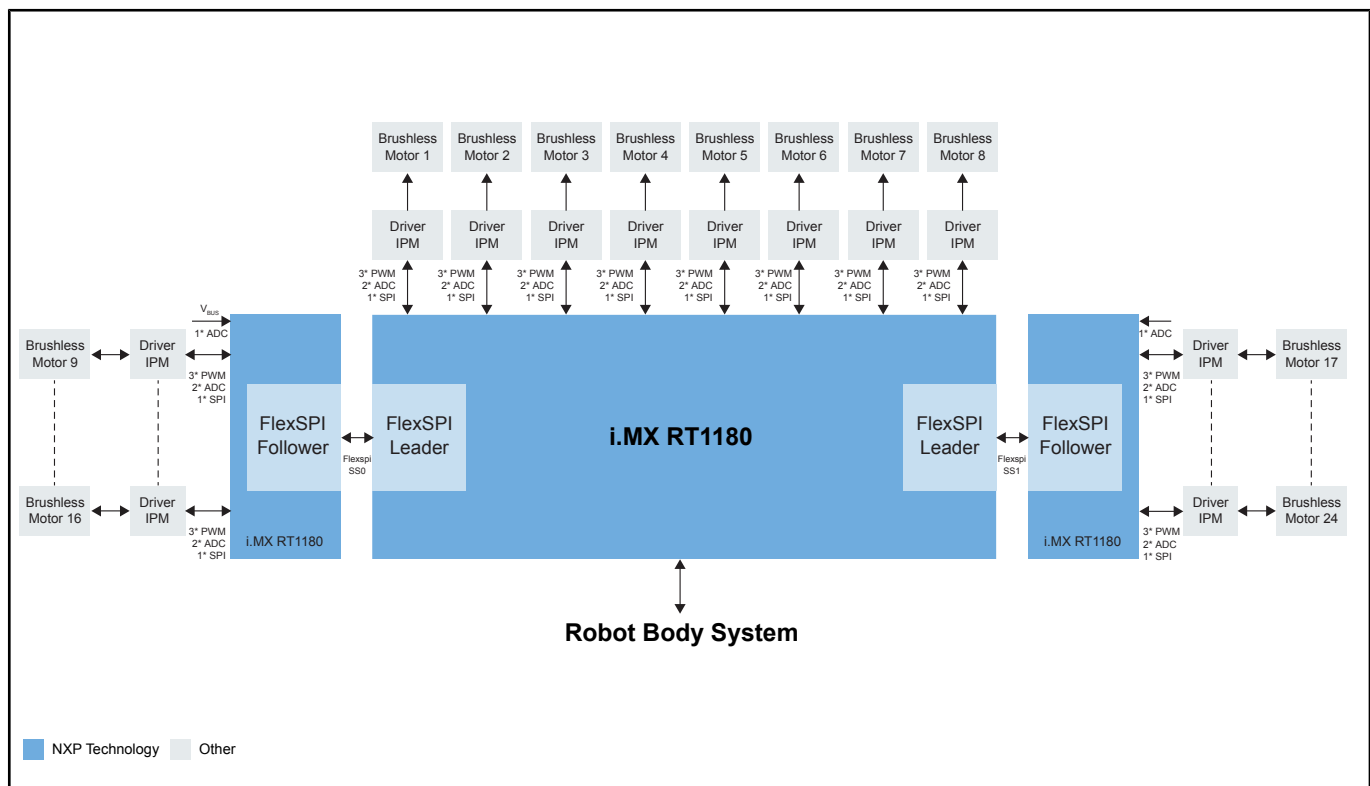
Cobot or Humanoid Arm Block Diagram



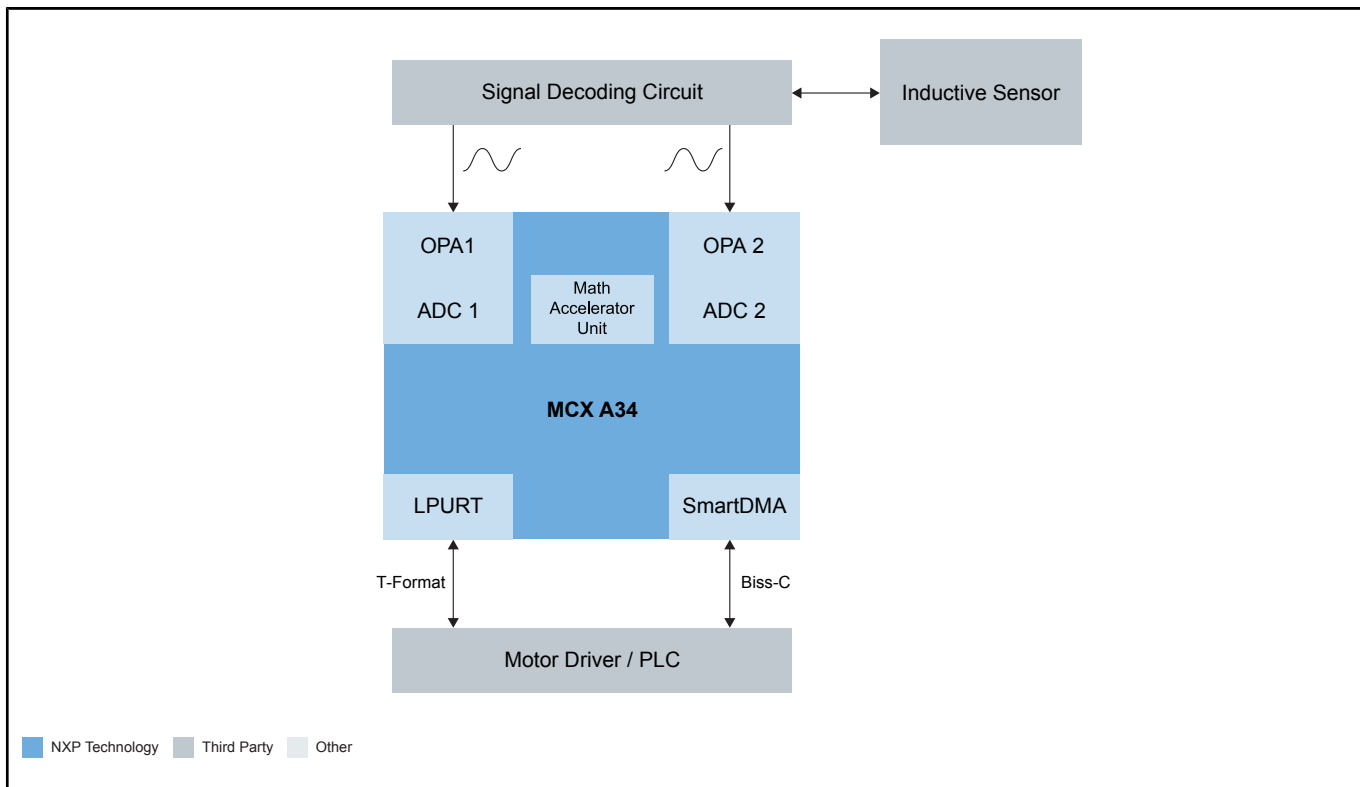
Simple Dexterous Hand Block Diagram



Advanced Dexterous Hand Block Diagram



Inductive Encoder Block Diagram



View additional information for [Motor and Motion Control for Humanoids and Mobile Robots](#).

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