



Real-Time Edge Software

REALTIME-EDGE-SOFTWARE

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The real-time edge software enables real-time applications for the i.MX and Layerscape products and can be easily integrated with the Yocto Project® SDKs for these products. Real-time edge software enables real-time capabilities via support for Preempt-RT Linux® for low latency applications, baremetal framework and support for real-time operating system (RTOS) on the Arm® Cortex®-A or Cortex®-M cores.

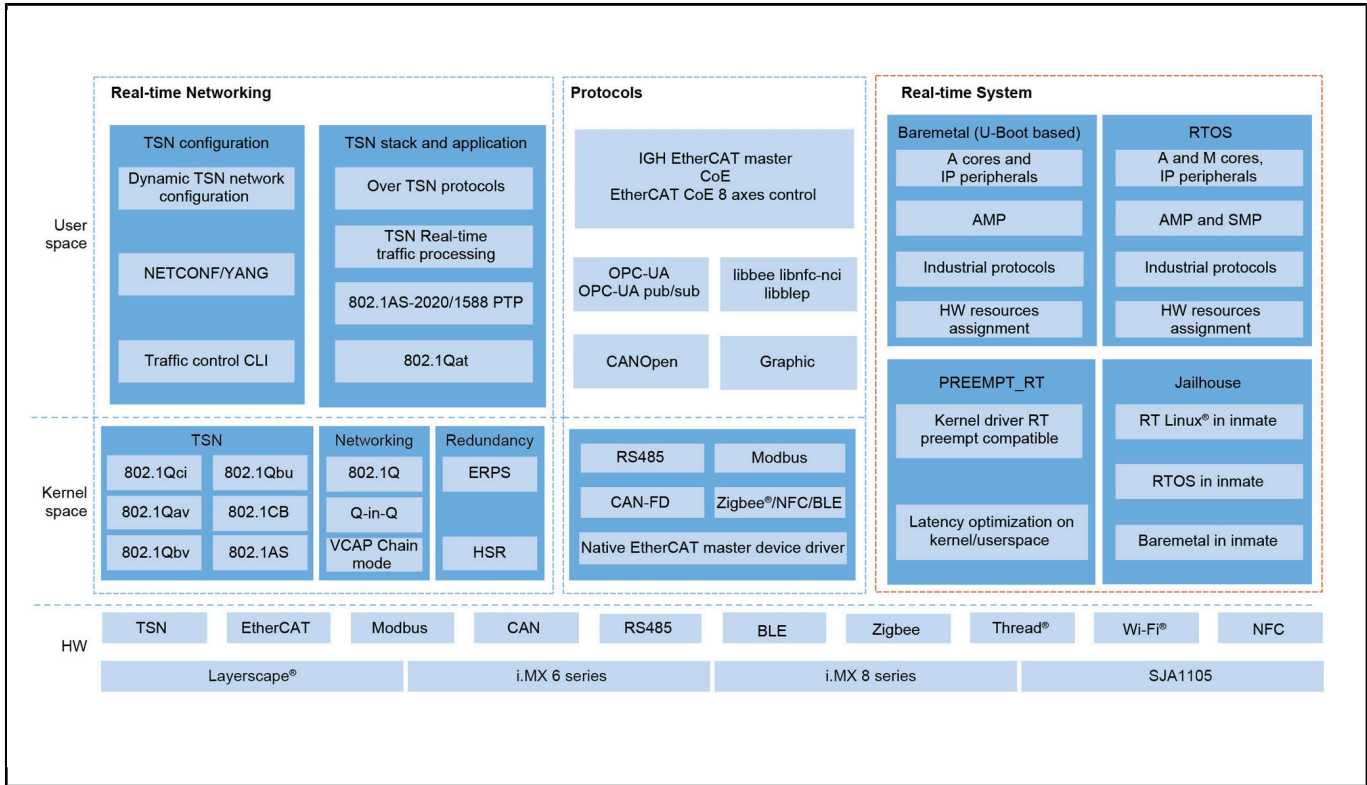
Heterogeneous Multicore Framework enables the flexible boot combination by assigning different systems to different cores with unified lifecycle management, Inter-core communication for message communication and high-performance data transferring, and resource sharing when the hardware IP has been assigned to one of the cores.

Heterogeneous Multi-SoC framework enhances the capabilities of the selected MPU by connecting it to an industry MCU (i.MX RT1180) to support the Real-time domain running on MCU with Industrial protocols and switching capability and computing domain running on MPU with computing-heavy tasks.

Real-time edge software also supports Industrial Networking with Industrial Ethernet, Fieldbus, Digital Encoder and Sensor network. Industrial Ethernet includes rich EtherCAT® master stack with native driver optimization, time-sensitive networking for deterministic transfer, OPC UA Pub/Sub, Modbus®-TCP and Modbus-Simulator. Fieldbus supports the CANopen® and Modbus-RTU/ASCII etc.

Complete with reference software and system-validated board support package (BSP), NXP provides you with the tools to test and maximize the performance of the applications you develop.

Real-Time Edge Software Block Diagram Block Diagram



View additional information for [Real-Time Edge Software](#).

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