PROFINET Industrial Ethernet Protocol Software

PROFINET-INDUSTRIAL-COMMUNICATIONS-SOFTWARE
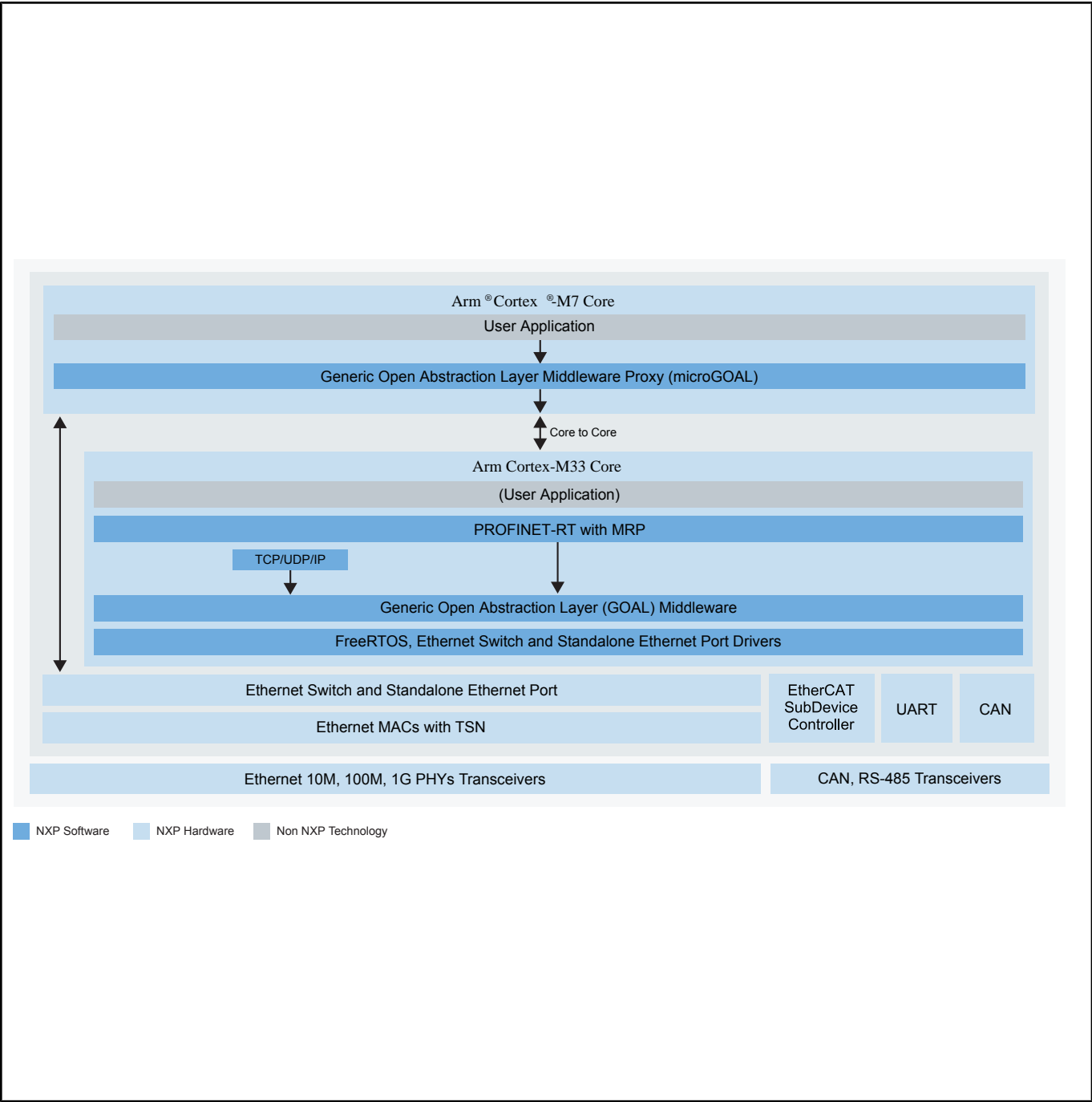
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Last Updated: Dec 10, 2025

PROFINET is an advanced industrial Ethernet protocol designed for real-time automation and networking. Developed by PROFIBUS and PROFINET International (PI) as the successor to PROFIBUS, it supports real-time communication, integrates fieldbus systems and leverages IT standards like TCP/IP.

Standardized under IEC 61158 and IEC 61784, PROFINET enables reliable factory automation, robotics, motor drives, PLCs and remote I/Os. NXP offers certifiable PROFINET protocol software for industrial processors with features, such as media redundancy, diagnostics and evaluation binaries.

PROFINET Industrial Communications Software Block Diagram

Arm ®Cortex ®-M7 Core

User Application

Generic Open Abstraction Layer Middleware Proxy (microGOAL)

Core to Core

Arm Cortex-M33 Core

(User Application)

PROFINET-RT with MRP

TCP/UDP/IP

Generic Open Abstraction Layer (GOAL) Middleware

FreeRTOS, Ethernet Switch and Standalone Ethernet Port Drivers

Ethernet Switch and Standalone Ethernet Port

Ethernet MACs with TSN

EtherCAT SubDevice Controller

UART

CAN

Ethernet 10M, 100M, 1G PHYs Transceivers

CAN, RS-485 Transceivers

NXP Software NXP Hardware Non NXP Technology

View additional information for PROFINET Industrial Ethernet Protocol Software.

Note: The information on this document is subject to change without notice.

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