S32N5 Real-Time Central Compute Reference Design Board

S32N55-RDB-S

Active

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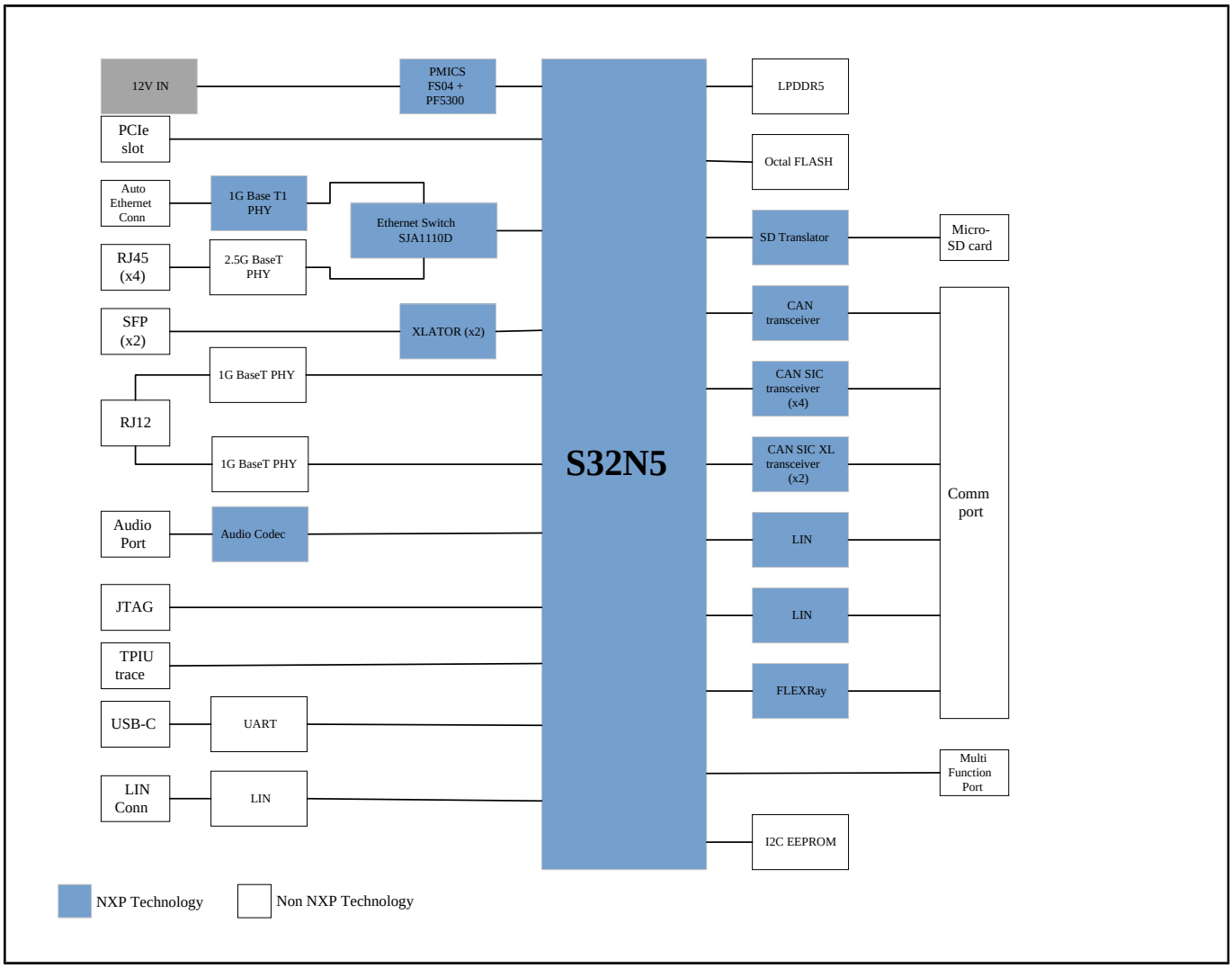
The S32N5 Reference Design Board (RDB) is a scalable, real-time central compute platform designed for next-generation software-defined vehicles (SDVs) and multidomain vehicle control. Built on a production-representative architecture and supported by a ready-to-use development environment, it enables automotive OEMs and Tier 1 suppliers to accelerate prototyping, software integration, system validation and application development, helping bring innovative centralized vehicle architectures to market faster.

The S32N5 RDB supports the development of real-time central vehicle controllers that consolidate multiple electronic control units (ECUs) into a single compute platform. Target applications include vehicle motion control, powertrain and propulsion, vehicle dynamics, body and comfort systems, battery management, vehicle management and gateway functions.

The S32N5 real-time super-integration processor is at the core of the board, combining high-performance real-time processing, advanced hardware security, an integrated multi-port Time-Sensitive Networking (TSN) Ethernet switch, extensive automotive networking interfaces and hardware-based isolation and virtualization. These capabilities enable the safe consolidation of vehicle control, management and service functions on a single system on chip (SoC).

The S32N55-RDB-S is supported by the S32N5 software development kit (SDK), which includes NXP runtime software, development tools, reference integration examples and partner software to streamline evaluation, development and rapid prototyping.

S32N5 Real-Time Central Compute RDB Block Diagram



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