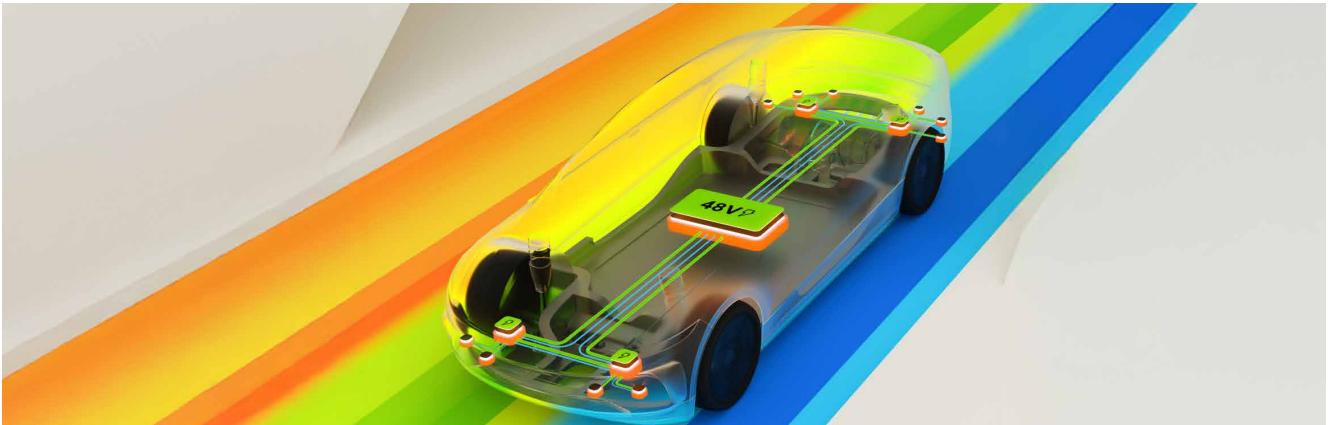


NXP CoreRide Z248 Zonal Reference System



Features

- Optimized chipset for zonal architectures
- Pre-integrated SW and proven system KPIs
- 48 V/12 V Hybrid Power Distribution with latest eFuse technology
- Audio amplifier

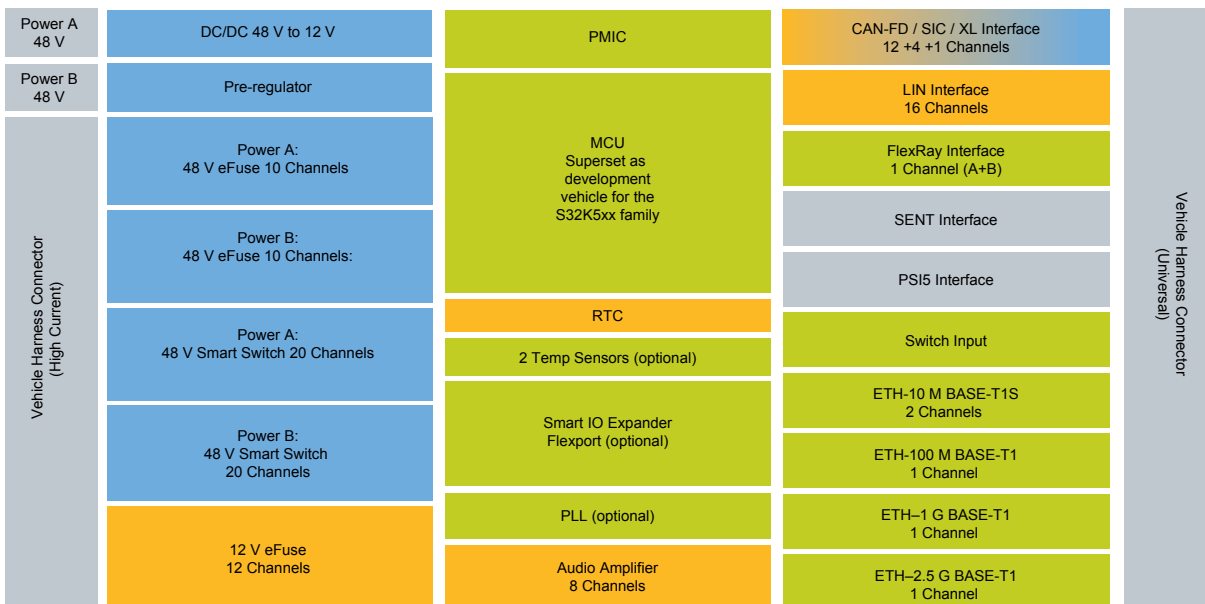
S32K5

- 5–25 K DMIPS compute performance
- Integrated NPU for AI
- 9 MB–41 MB MRAM with up to 1 million write cycles
- <9mW low power standby
- 5 Port switch with up to 6 Gbit/s L2 switching

ECU

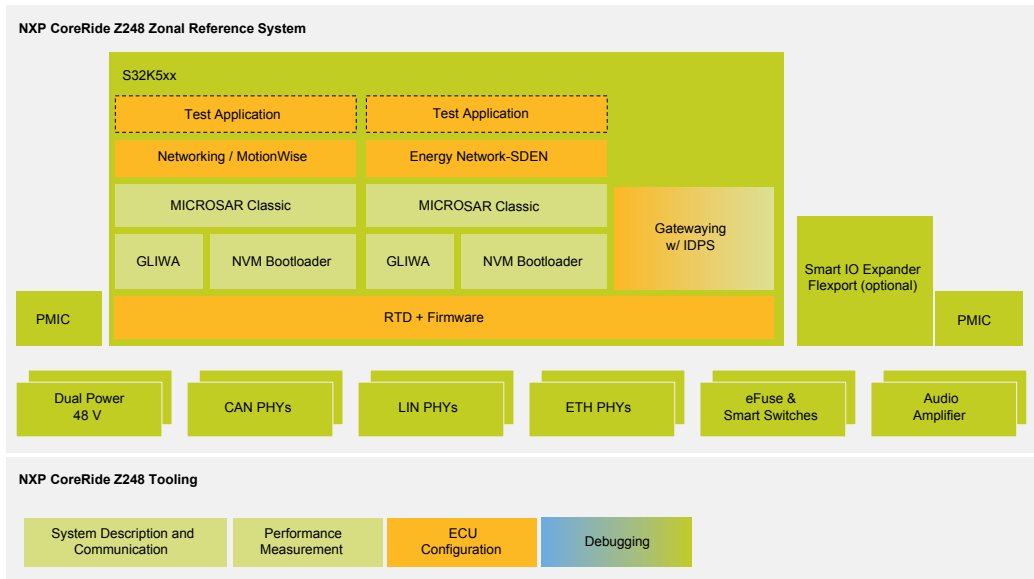
- Robust Reference design with wiring loom and housing
- CI/CD development frame work
- Tool assisted configuration
- Large partner ECO System

NXP CoreRide Z248 Zonal Reference System HW block diagram



Power Domains: 48 V 12 V ≤5V

NXP CoreRide Z248 Zonal Reference System SW architecture



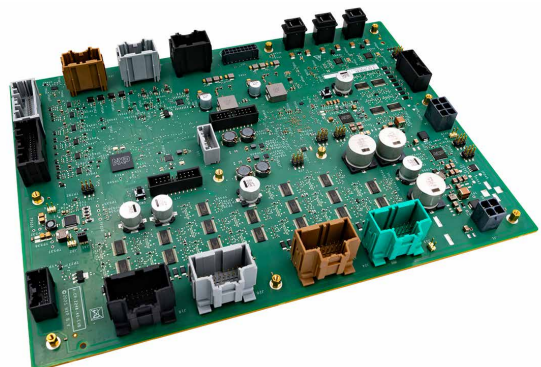
■ 3rd Party SW
 ■ NXP SW
 ■ NXP HW
 Optional

Main core KPIs (KPIs at zonal use case level, demonstrating optimized NXP CoreRide footprint)	
Safe and secure boot	Wake-up from Low power modes
Power consumption of low-power modes	M7 core CPU load (in idle and on gatewaying modes)
Memory footprint (MRAM, SRAM, TCM)	Gatewaying (CAN/CAN, Eth/CAN, Eth/Eth)
eFuses power distribution	Flashing time (MRAM)
Ethernet throughput and QoS	Audio latency zone to zone, micro to loudspeaker

Use cases	NXP CoreRide Z248 key enablers
Vehicle mode driving, living, parking, car access	<ul style="list-style-type: none"> Low power mode support Fast power up with secured boot Low latency HSE2 security engine
Gatewaying sensors fusion	<ul style="list-style-type: none"> Eth2Eth NETC4 L2 routing offloading Eth2Eth/CAN2Eth Secured communication (MACsec, SecOC)
Body control (wipers, seat, windows)	<ul style="list-style-type: none"> Power distribution (12 V and 48 V eFuse) Wakeup from eFuse
Audio	<ul style="list-style-type: none"> 8 channels sound at 48 Hz/32-bits Sound playback on AVB protocol Traffic shaper IEEE 802.1 Qbv

Software continuous delivery	NXP CoreRide Z248 key enablers
SW pre-integrated with partners (Vector, GLIWA, Green Hills Software), optimized and fully validated	Continuous integration with complete automatic tests environment (inc. KPIs)
Quarterly releases	System quality with stepping approach (from early release to product validated)
1 software package, 2 bundles (one for Z248 drivers, one for complete NXP CoreRide SW)	Integration of NXP drivers at "Ready For Production" quality level
Delivery of full set of artefacts to replicate NXP CoreRide environment	Partners SW at production quality level

NXP CoreRide partners:



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