NXP CoreRide Z248 Zonal Reference System

CORERIDE-Z248   NEW

Preproduction
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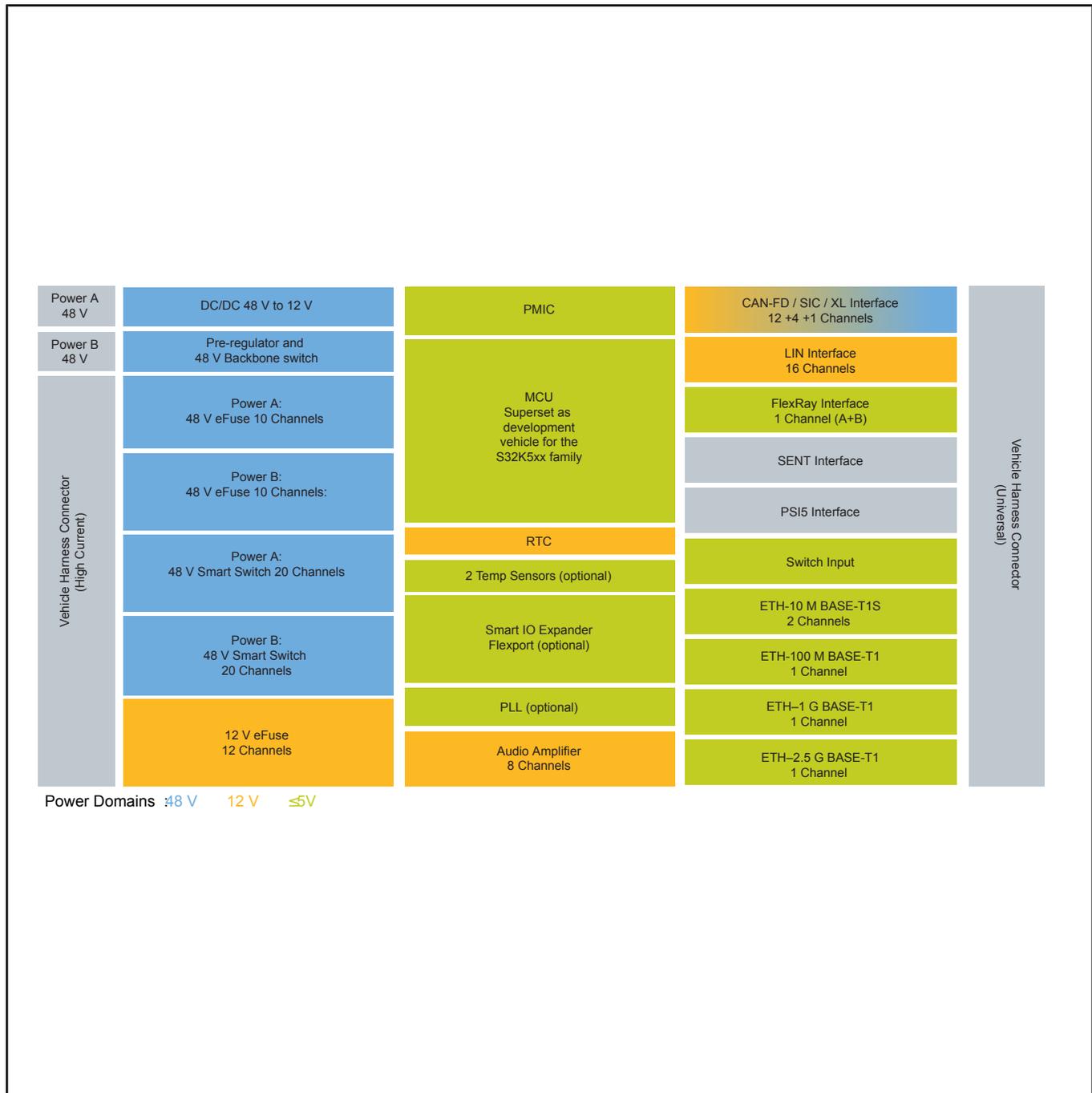
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NXP CoreRide Z248 Zonal Reference System is a compact ECU solution that merges 48 V power management, data routing, diagnostics and AI#enabled sensing into one unit. Built on the S32K5 microcontroller, it reduces complexity and speeds development for next#generation software#defined vehicles.

The design helps automakers simplify E/E architectures, supports mixed 48 V/12 V systems and accelerates software deployment across vehicle platforms. Its CI/CT/CD#ready environment and preintegrated software ecosystem enable rapid prototyping and faster transitions from legacy architectures.

Delivered with full validation and a scalable chipset, the Z248 supports consistent performance across ICE, hybrid and BEV platforms and integrates seamlessly with NXP's broader 48 V and networking technologies.

NXP CoreRide Z248 Features Block Diagram

Power A 48 V	DC/DC 48 V to 12 V	CAN-FD / SIC / XL Interface 12 +4 +1 Channels
Power B 48 V	Pre-regulator and 48 V Backbone switch	
		PMIC
	Power A: 48 V eFuse 10 Channels	LIN Interface 16 Channels
		MCU Superset as development vehicle for the S32K5xx family
	Power B: 48 V eFuse 10 Channels:	FlexRay Interface 1 Channel (A+B)
		SENT Interface
	Power A: 48 V Smart Switch 20 Channels	PSI5 Interface
		RTC
	Power B: 48 V Smart Switch 20 Channels	2 Temp Sensors (optional)
		Switch Input
		Smart IO Expander Flexport (optional)
	12 V eFuse 12 Channels	ETH-10 M BASE-T1S 2 Channels
		ETH-100 M BASE-T1 1 Channel
		PLL (optional)
		ETH–1 G BASE-T1 1 Channel
		Audio Amplifier 8 Channels
		ETH–2.5 G BASE-T1 1 Channel

Vehicle Harness Connector (High Current)

Vehicle Harness Connector (Universal)

Power Domains   48 V   12 V   ≤5V

View additional information for NXP CoreRide Z248 Zonal Reference System.

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