Automotive High Performance Compute

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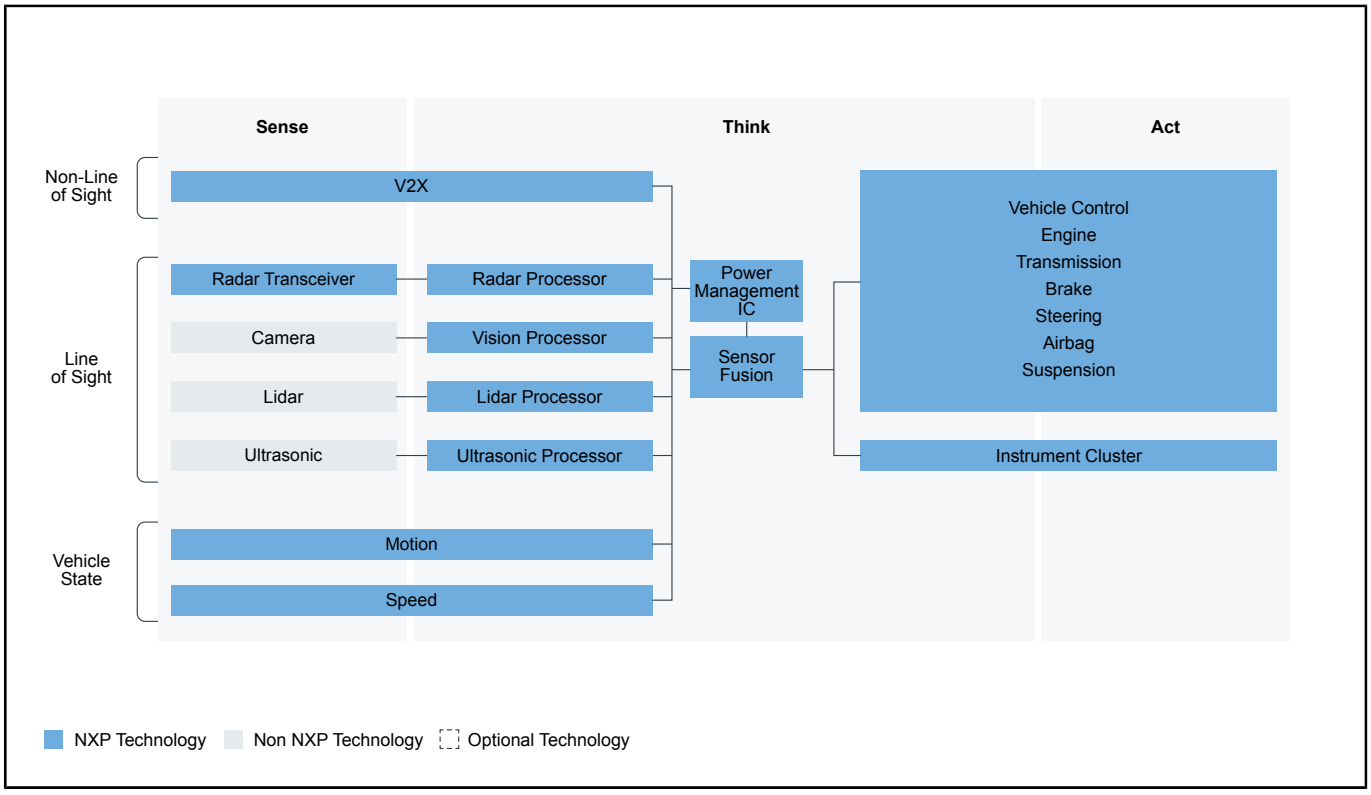
NXP Automotive High Performance Compute is accelerating the autonomous vehicle development leveraging seamlessly interoperable and automotive-grade solutions to maximize safety.

The data generated by the Increasing numbers of sensors, such as cameras, radars and lidars and V2X communications, needs to be processed (or fused together) to perceive the environment around the vehicle more accurately and reliably, to enable better and safer decisions.

Our sensor fusion solutions range from our S32V vision and sensor fusion processor to the NXP BlueBox Automotive High Performance Compute development platform, providing the requisite performance and functional safety for distributed and centralized data fusion.

Safe Central Compute Block Diagram



Recommended Products for Safe Central Compute	
Instrument Cluster	• Infotainment and In-Vehicle Experience: Infotainment and In-Vehicle Experience
Lidar Processor	• S32V234: S32V2 Processors for Vision, Machine Learning and Sensor Fusion
Motion Sensor	• Accelerometers: Accelerometers
Radar Processor	• S32R294: Radar Microcontroller • S32R45: S32R45 High-Performance Processor for Imaging Radar
Radar Transceiver	• TEF810X: TEF810x Fully-Integrated 77 GHz Radar Transceiver
Sensor Fusion	• BlueBox 3.0 Automotive High-Performance Compute (AHPC) Development Platform • LS2084A: Layerscape 2084A and 2044A Multicore Processors
Speed Sensor	• Accelerometers: Accelerometers
Ultrasonic Processor	• S32K1: S32K1 Microcontrollers for Automotive General Purpose
V2X Communications	• V2X Communications: V2X Communications • SAF5400: RoadLINK® SAF5400 Single Chip Modem for V2X
Vision Processor	• S32V234: S32V2 Processors for Vision, Machine Learning and Sensor Fusion
Vehicle Control	
Power Management IC	• VR5510: Multi-Channel (9) PMIC for S32G Processor – 8 High Power, 1 Low Power, Fit for ASIL D Safety Level • FS86: Safety System Basis Chip For Domain Controller, Fit For ASIL B and D • FS84: Safety System Basis Chip for S32 Microcontrollers, Fit for ASIL B • FS85: Safety System Basis Chip for S32 Microcontrollers, Fit for ASIL D • FS5502: High Voltage PMIC with Multiple SMPS and LDO, Primary Companion Chip for S32Rx • FS5600: Automotive Dual Buck Regulator and Controller with Voltage Monitors and Watchdog Timer • PF7100: 7-Channel Power Management Integrated Circuit for High Performance Applications, Fit for ASIL B Safety Level

View our complete solution for Automotive High Performance Compute.

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