Vision, Advanced Sensing and Processing Board

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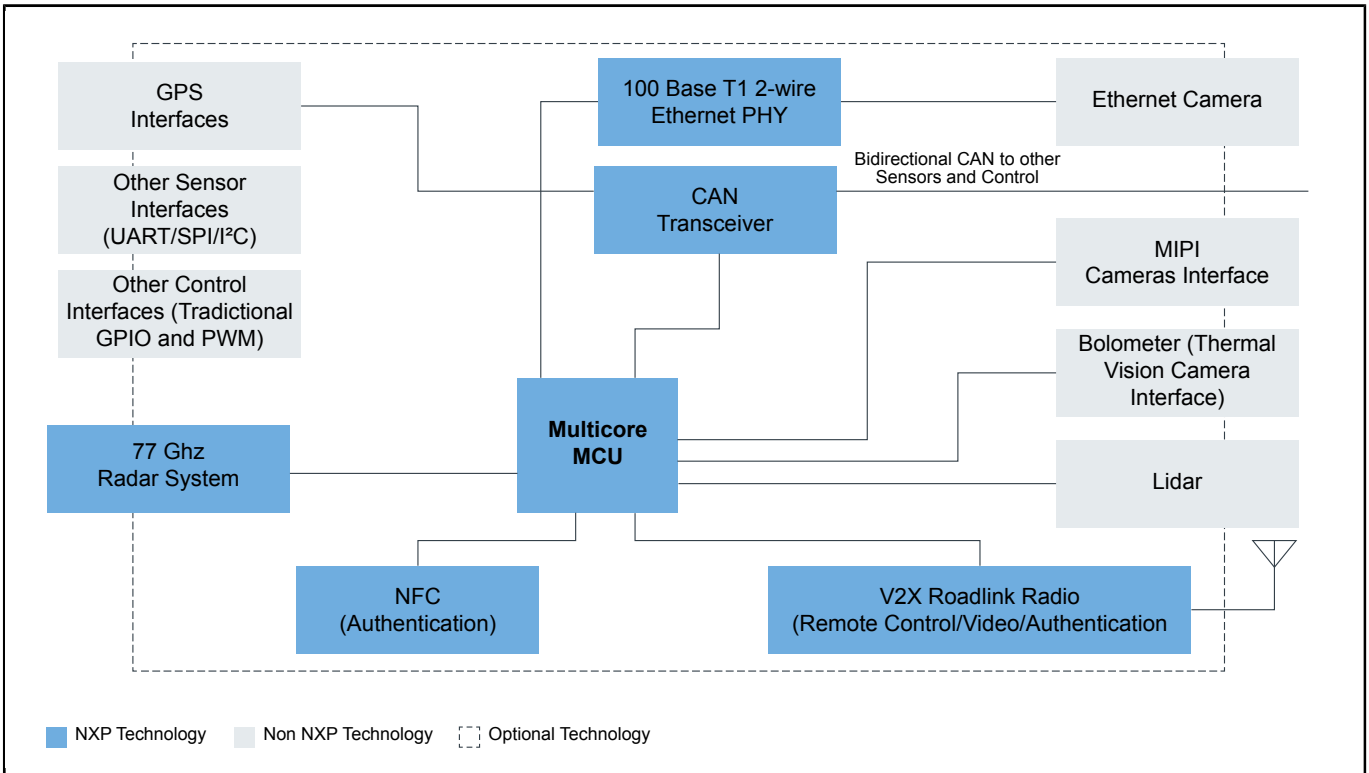
Today's mobile robots (e.g., drones and rovers) need multiple sensor types to determine their location relative to their destination and potential obstacles: inertial sensors and sensor fusion algorithms to accurately know its position in space, or the movement and orientation of an actuator; pressure sensors to measure relative height above ground or as a measurement device for speed or turbulence; and magnetic sensors to provide high reliability angular or rotational measurement. NXP multicore 32 and 64-bit Arm® processors have the embedded hardware IP blocks for vision systems, as well as the processing power and interfaces needed.

Vision, advanced sensing and processing board Block Diagram



Recommended Products for Vision, advanced sensing and processing board

Multicore MCU	• i.MX7D: i.MX 7Dual Processors - Heterogeneous Processing with Dual Arm® Cortex®-A7 Cores and Cortex-M4 Core • i.MX6D: i.MX 6Dual Processors - Dual-Core, 3D Graphics, HD Video, Multimedia, Arm® Cortex®-A9 Core • i.MX 6 Processors: i.MX 6 Series Applications Processors: Multicore, Arm® Cortex®-A7 Core, Cortex-A9 Core, Cortex-M4 Core • LS1012A: Layerscape® 1012A Low Power Processor • S32V234: S32V2 Processors for Vision, Machine Learning and Sensor Fusion
Advanced Sensor systems	• TEF810X: TEF810x Fully-Integrated 77 GHz Radar Transceiver • MPL3115A2: Absolute Digital Pressure Sensor (20 to 110 kPa)
CAN Transceiver	• TJA144x: Automotive CAN FD Transceiver Family • TJA1463: CAN Signal Improvement Capability Transceiver with Sleep Mode
77 GHz Radar System	• TEF810X: TEF810x Fully-Integrated 77 GHz Radar Transceiver • S32R294: Radar Microcontroller
NFC	• NTAG_I2C: NTAG I²C Plus 2K: NFC Forum Type 2 Tag with I²C Interface
Ethernet Interface	• TJA1101: TJA1101B, IEEE 100BASE-T1 Compliant Automotive Ethernet PHY Transceiver
V2X	• V2X Communications: V2X Communications

View our complete solution for Vision, Advanced Sensing and Processing Board.

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