

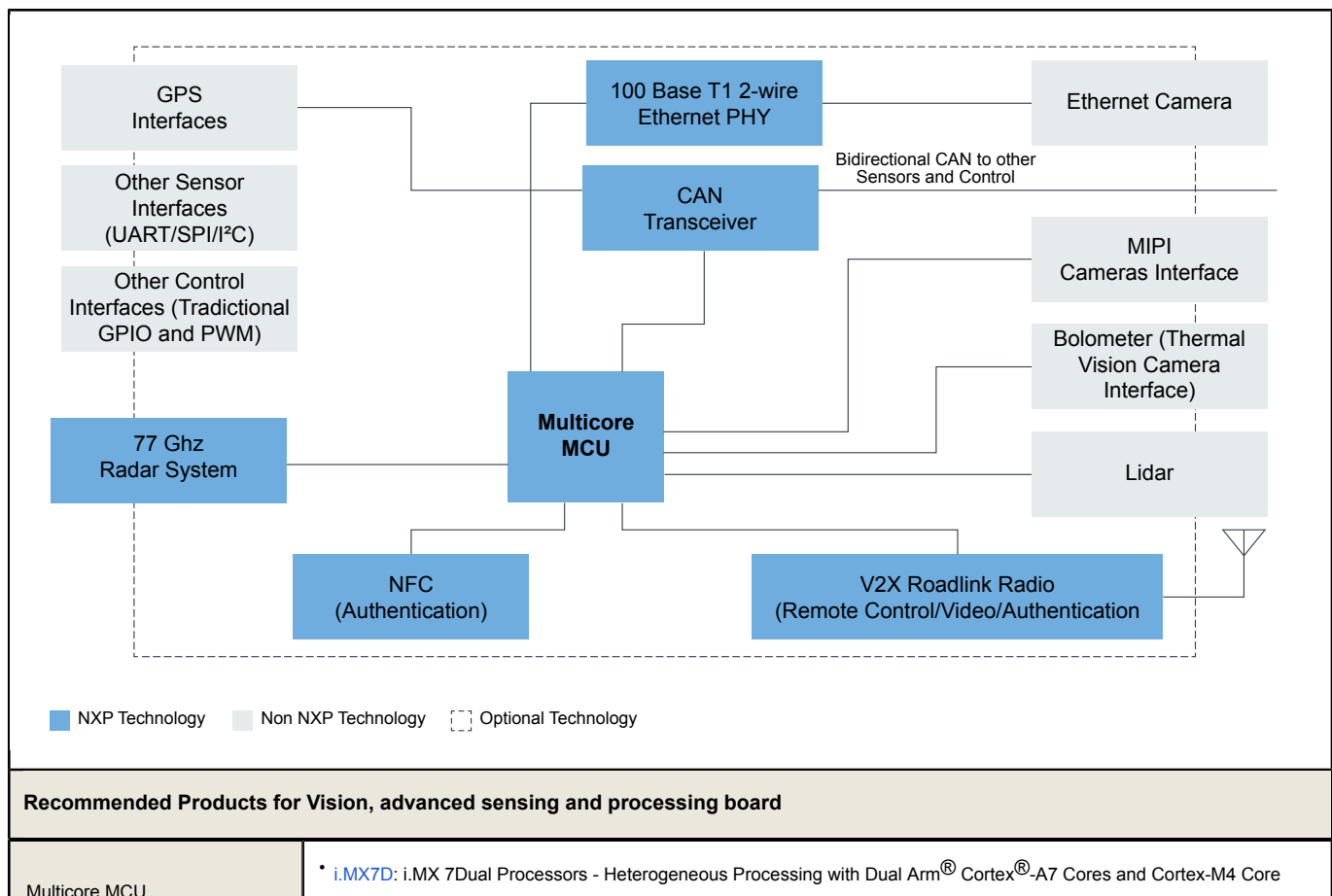


# Vision and Advanced Sensing

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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



	<ul style="list-style-type: none"> <li>• <a href="#">i.MX6D</a>: i.MX 6Dual Processors - Dual-Core, 3D Graphics, HD Video, Multimedia, Arm® Cortex®-A9 Core</li> <li>• <a href="#">i.MX 6 Processors</a>: i.MX 6 Series Applications Processors: Multicore, Arm® Cortex®-A7 Core, Cortex-A9 Core, Cortex-M4 Core</li> <li>• <a href="#">LS1012A</a>: Layerscape® 1012A Low Power Processor</li> <li>• <a href="#">S32V234</a>: S32V2 Processors for Vision, Machine Learning and Sensor Fusion</li> </ul>
Advanced Sensor systems	<ul style="list-style-type: none"> <li>• <a href="#">TEF810X</a>: TEF810x Fully-Integrated 77 GHz Radar Transceiver</li> <li>• <a href="#">MPL3115A2</a>: Absolute Digital Pressure Sensor (20 to 110 kPa)</li> </ul>
CAN Transceiver	<ul style="list-style-type: none"> <li>• <a href="#">TJA144x</a>: Automotive CAN FD Transceiver Family</li> <li>• <a href="#">TJA1463</a>: CAN Signal Improvement Capability Transceiver with Sleep Mode</li> </ul>
77 GHz Radar System	<ul style="list-style-type: none"> <li>• <a href="#">TEF810X</a>: TEF810x Fully-Integrated 77 GHz Radar Transceiver</li> <li>• <a href="#">S32R294</a>: Radar Microcontroller</li> </ul>
NFC	<ul style="list-style-type: none"> <li>• <a href="#">NTAG_I2C</a>: NTAG I²C Plus 2K: NFC Forum Type 2 Tag with I²C Interface</li> </ul>
Ethernet Interface	<ul style="list-style-type: none"> <li>• <a href="#">TJA1101</a>: TJA1101B, IEEE 100BASE-T1 Compliant Automotive Ethernet PHY Transceiver</li> </ul>
V2X	<ul style="list-style-type: none"> <li>• <a href="#">V2X Communications</a>: V2X Communications</li> </ul>

View our complete solution for [Vision and Advanced Sensing](#).

**Note:** The information on this document is subject to change without notice.

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