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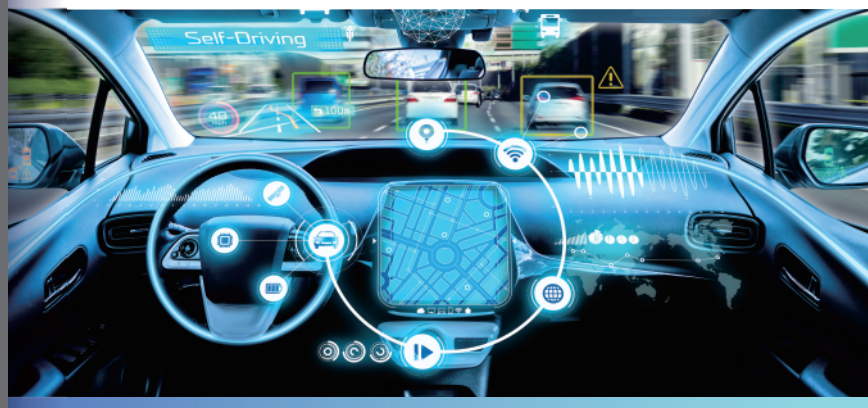
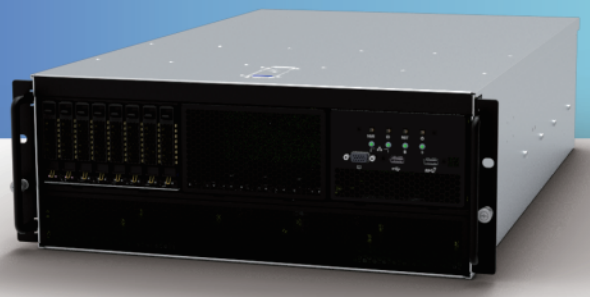
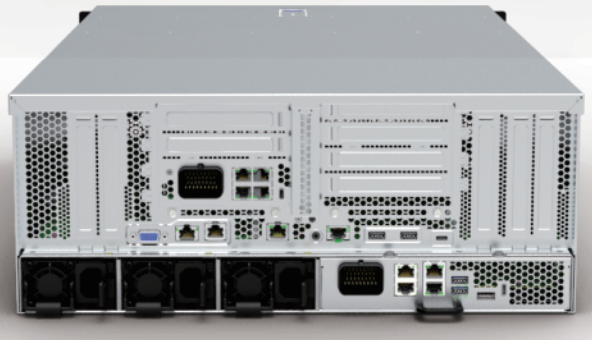


Server for Autonomous Driving





System consists of 2 subsystems, connected through Ethernet

- HPC with 2 Intel Sapphire Rapids CPU, 256GB DDR5 on board
- Flexible and high bandwidth sensor connectivity with
  - 1x 2.5 GbE (optional to 1x 1GbE)
  - 4x 10GbE through NIC card
  - 6x PCIe G5 slots*
- Huge data buffer and store with up to 8 SFF
- Flexible In-vehicle integration with
  - 8x CAN-FD
  - 2x FlexRay
- High available function safety requirements of
  - fault detection by ASIL-D MCU Infineon TC399
  - Fail operation by Safety Companion Subsystem (SCS)
- Hardware level security of
  - Intel hardware-enhanced security module

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Server for Autonomous Driving

Automated Driving Compute System (ADCS)	
CPU	Up to 2 x Sapphire Rapids CPU XCC/MCC up to 350W
PCH	Emmitsburg Server South Bridge
Memory	128GB DDR5 soldered down per CPU
MCU Controller	Infineon TC399 MCU ISO26262 ASIL D
Management	AST2600 BMC
Ethernet Controller	Foxville 2.5GbE MAC/PHY
	Jacksonville 1.0GbE PHY
	Realtek 9068AB
Storage	1 x8 Combo HSBP (8 x U.2 SSD/8 x SFF 6G SATA) equipped with 1TB U.2 SSD
	1 x 1TB M.2 Module
	On Board 32GB eMMC for MCU
Expansion	Support 4 (2x CPU0, 2x CPU1) double-width, full length PCIe G5 extension slots by 2 riser cards
Rear I/O	1 x USB3.1 TypeC, 2 x USB 2.0, Serial Port, VGA, 1 x 1GbE, 1x 2.5GbE, 1x 1GbE RMMNT, 4 x 1000Base-T (connected to PCH, BMC, SCS and ECU), Car Connector (8x CAN FD, 2x FlexRay, Ignition, MCUERR_N output)
Front I/O	1x USB3.1, 2x USB2.0 Type-A, VGA
Add-On Card	1x 4 ports 10GbE NIC
Power Supply	3 x 1300W PSU

Safety Companion Subsystem (SCS)	
CPU	Denverton- AD 16C CPU C3934
Memory	8GB DDR4 Memory Down
MCU Controller	Infineon TC399 MCU ISO26262 ASIL D
Ethernet Controller	Realtek 9068AB
Storage	128GB eMMC
	1 x M.2 interface
Expansion	1 x PCIe G3 x8 (Access when SCS disassembled to external)
Rear I/O	2x 10GbE, 2 x 1000Base-T (connected to PCH, BMC, SCS and ECU), Car Connector (8x CAN FD, 2x FlexRay, Ignition, MCUERR_N output), 2x USB3.0, 1x USB2.0, 1x USB Type C

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