HIGH-SPEED CONNECTIVITY SOLUTIONS ›
FOR IN-MODULE AUTOMOTIVE APPLICATIONS

molex

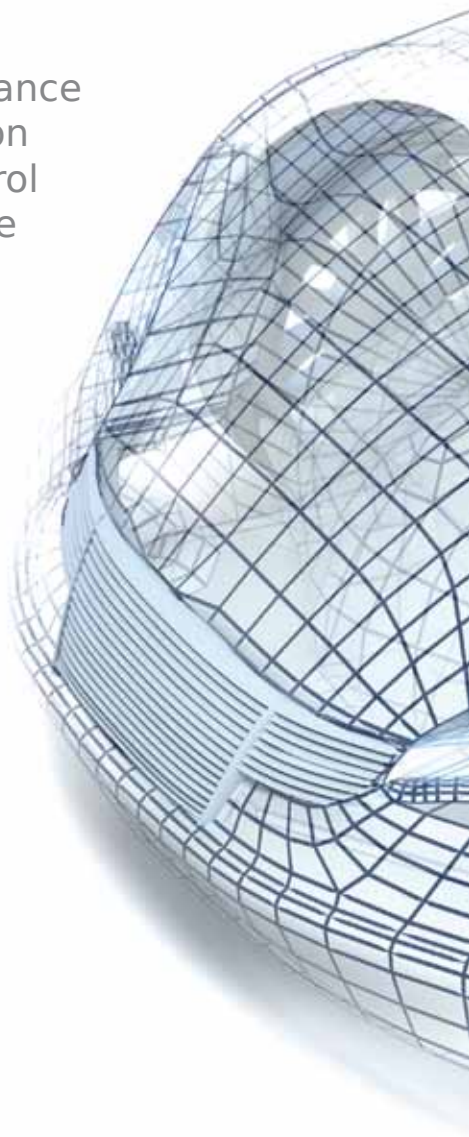
High-Speed In-Module Solutions for Automotive

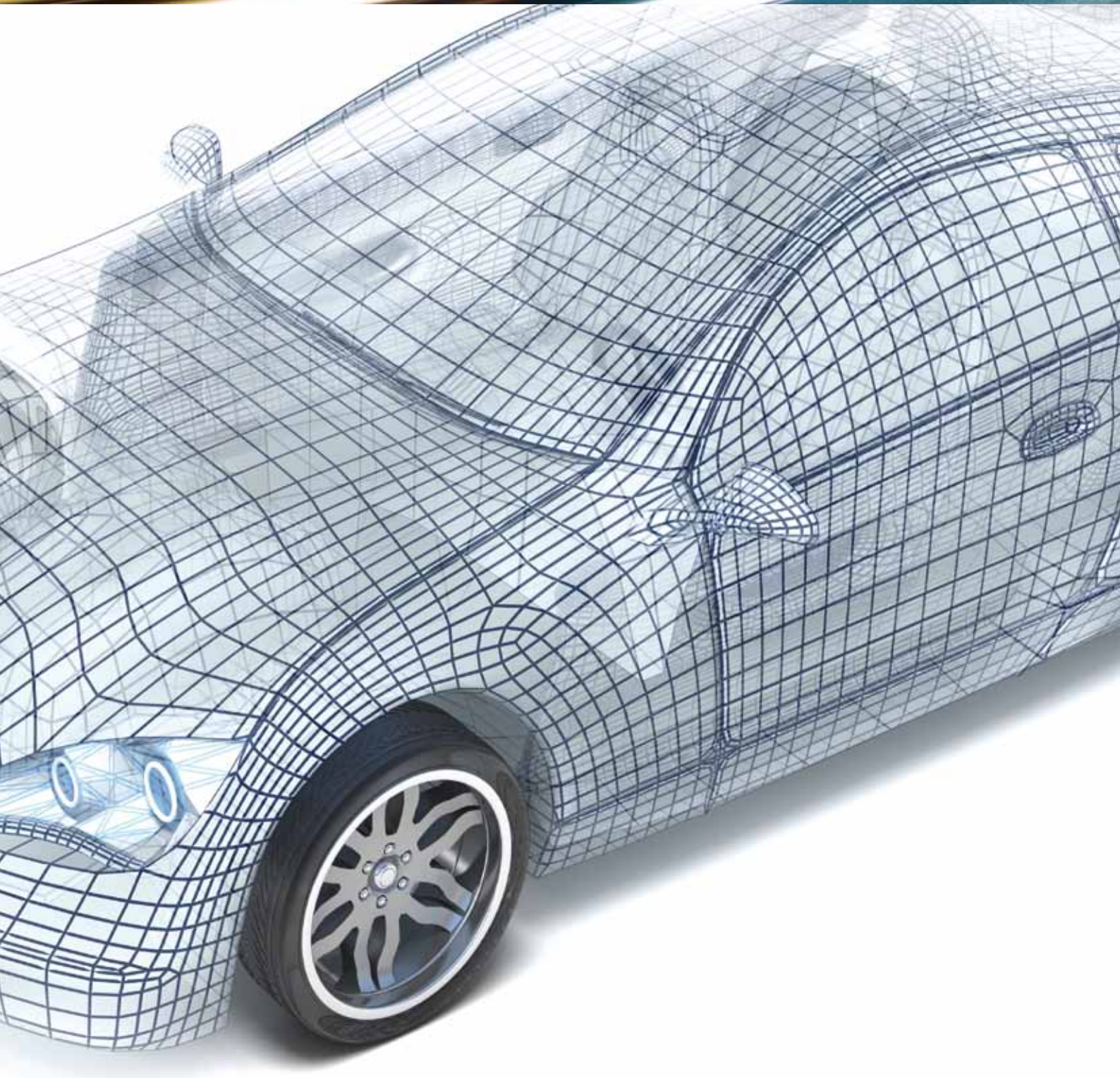
New trends and a rapid evolution of the automotive industry have led to a radical transformation. Increasing consumer demands for smarter cars and more connectivity will take the driving experience to a higher level.

The focus on passenger safety Advanced Driver-Assistance Systems (ADAS) increases the need for higher definition vision systems while Infotainment and Electronic Control Units (ECU) create more and more data that need to be handled.

The trends driving the car of the future are all enabled by more complex and advanced technology with multiple sensors, on-board computing tools, and processors, make the car more aligned to a mini-data center on wheels.

Molex leverages decades of expertise in data storage and processing systems to offer industry-leading high-speed support from design to deployment for your in-module automotive application.





Edge Card Connectors

Already proven in automotive applications, Molex edge card connectors offer broad customization across power and signal configurations, pin-out patterns and AC/DC/signal handling options.

Angled Edge – Maximum Flexibility

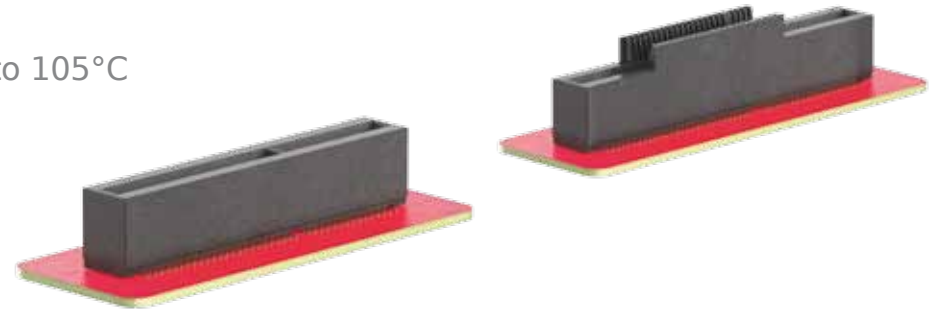
The Molex Angled Edge innovative design solution enables maximum mounting flexibility.

- Allowing card angles from 0 to 27°
- Data Speed: up to 10 Gbps
- Superior Electrical Perfomance: Insertion loss <0.4 dB at 5 GHz
- Operating Temperature: up to 105°C

EdgeLine High-Speed Connectors – Maximum Speed

The Molex EdgeLine portfolio consists of vertical 25 Gbps edge card connectors which deliver low-cost, flexible and scalable solutions.

- Vertical
- Data Speed: up to 25 Gbps
- Current: 2.2A
- Operating Temperature: up to 105°C



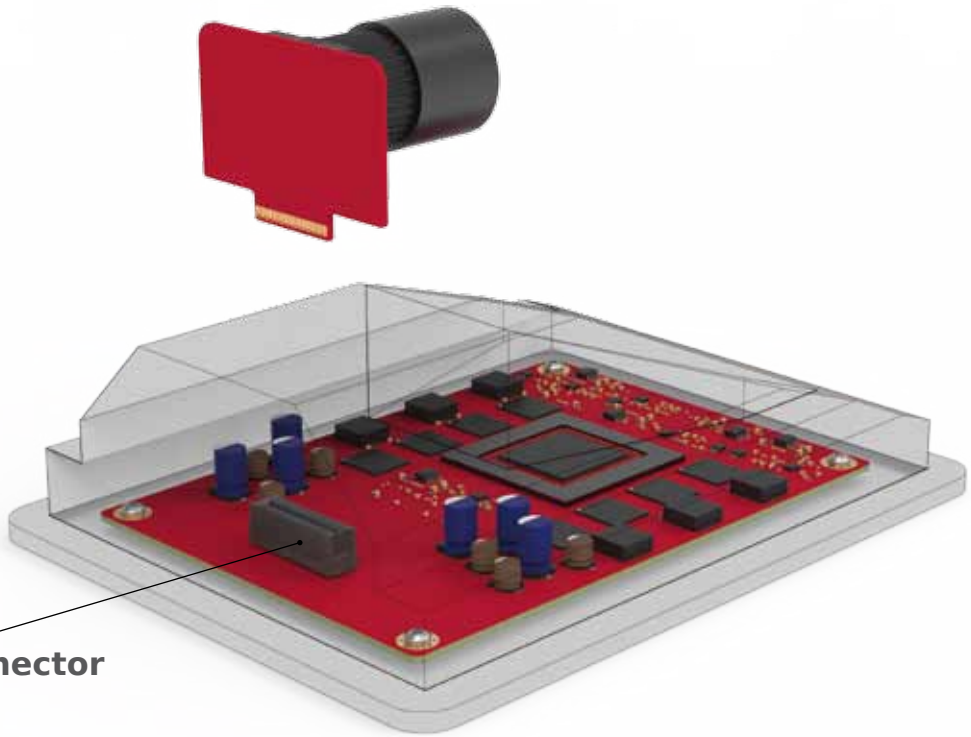
iPass+ HD Connector System

The Molex iPass+ HD connector system offers low power consumption while reducing cable-management challenges.

- Data Speeds: up to 24 Gbps (vertical)
- Current: 0.5A

Applications

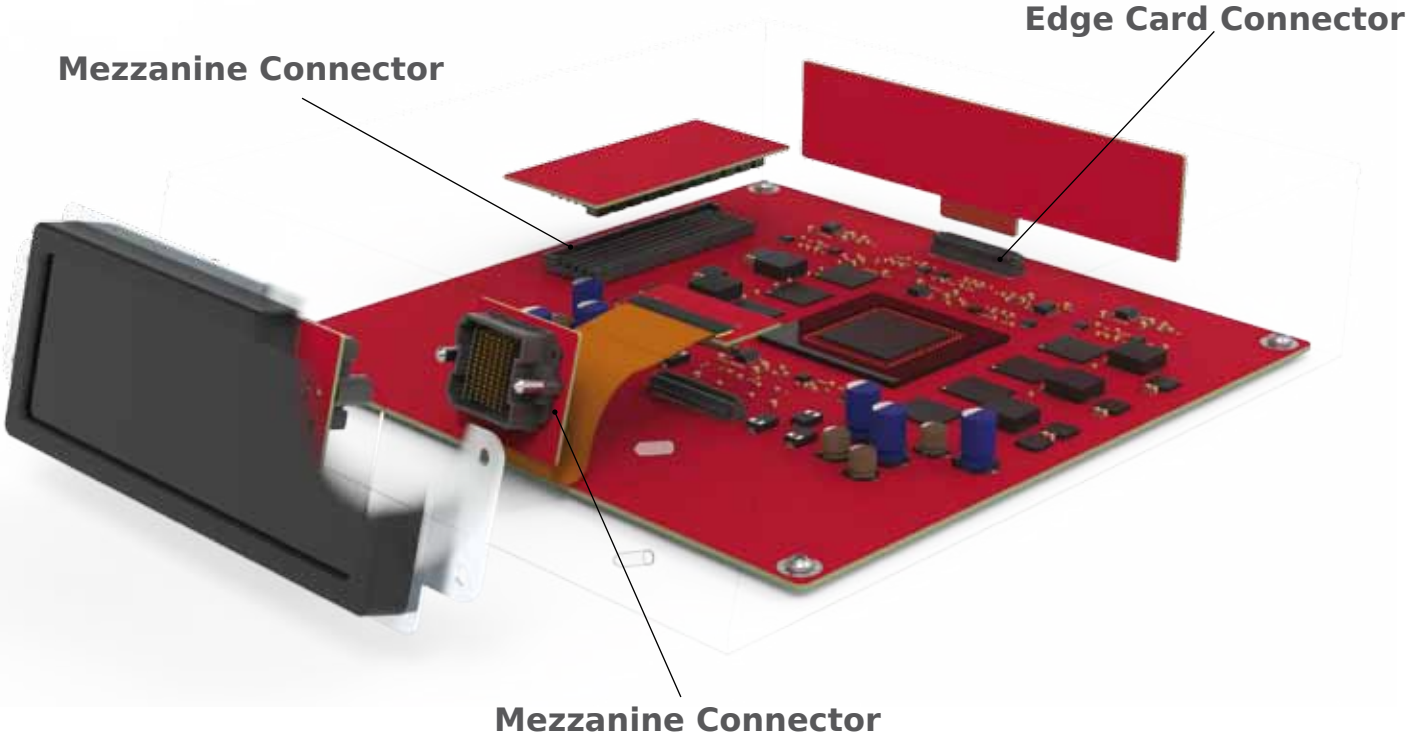
- Infotainment
- Electronic Control Units
- Front Camera Modules



Mezzanine Connector System

The Molex HD Mezz, Searay and Mirror Mezz Connector systems enable automotive engineers to design a generic motherboard for all of their customers while giving them the freedom to program the mezzanine card for specific end-customer applications.

- Robust and reliable interfaces
- Shock and vibration proof
- Automotive Certified Parts (ACP)

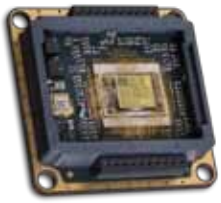


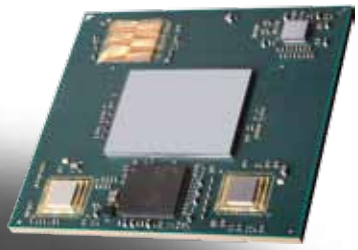
Sensor Processing Modules and Microelectronics Packaging

Sensor processing in automotive applications requires a blend of signal processing hardware and microelectronics packaging.

Molex engineering teams can take any type of sensor prototypes and package them to meet the size, density, thermal and automotive qualification requirements of today's advanced applications.

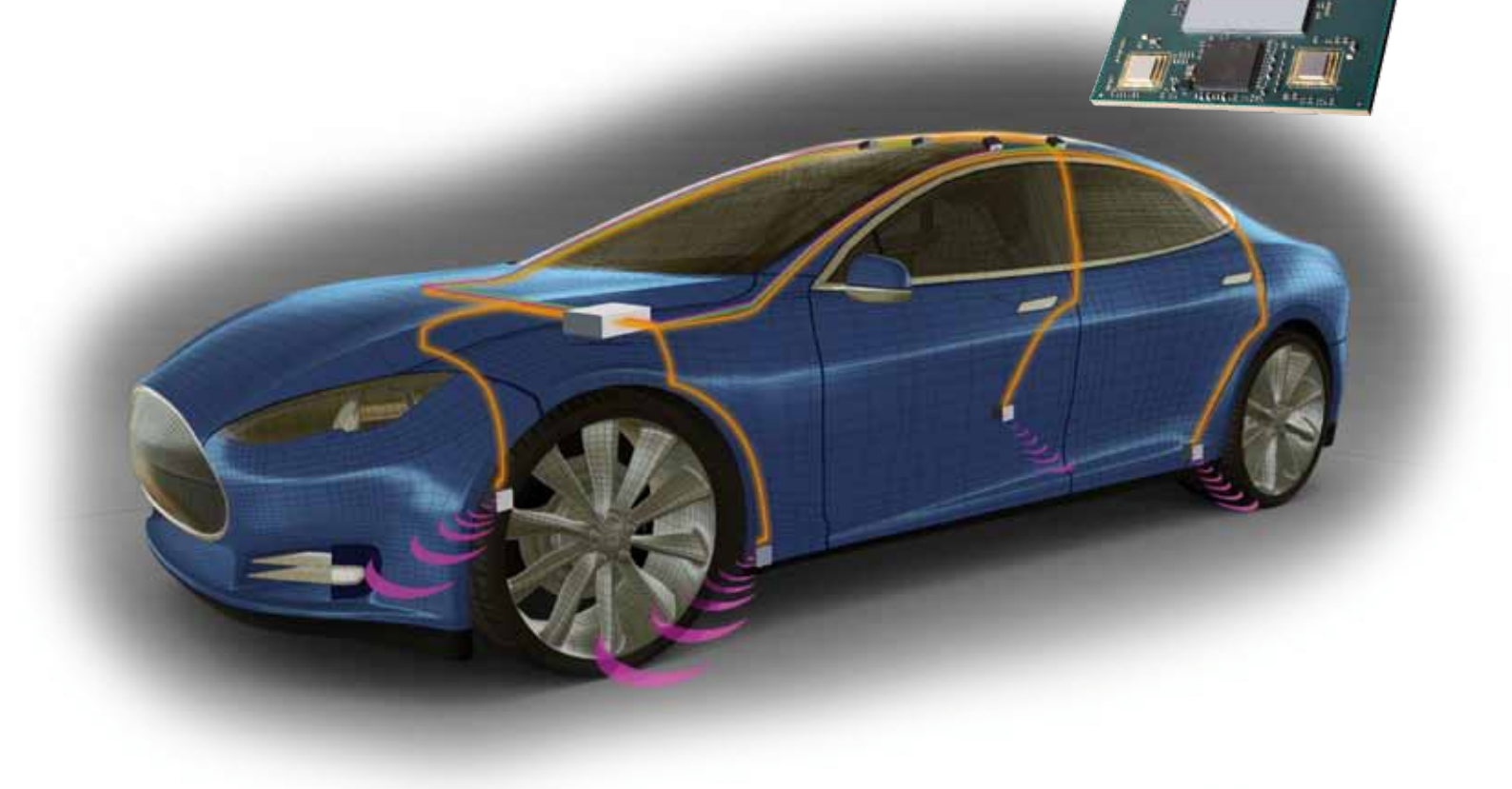
- FPGA based signal processing modules for camera, LiDAR or RADAR modules
- High-Density/High-Speed Embedded Storage
- Miniature and ruggedized packaging
- Advanced Interconnect





Applications

- Miniaturized, integrated camera and radar modules
- LiDAR or RADAR sensor processing platform
- Road noise cancellation modules
- Storage modules for infotainment or ADAS systems



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