MicroNova
Software and Systems

NovaCarts at a Glance

High-performance solutions for demanding testing applications

- **Security of investment**
- **Flexible combination of testing phases**
- **Optimum capacity utilization**

NovaCarts

"NovaCarts" is one of the most powerful and advanced hardware-in-the-loop (HiL) platforms on the market. The entire family of products is characterized by maximum modularity and scalability, as well as enhanced networking options. It adapts to dynamic conditions easily and efficiently – enabling perfect inter-departmental and cross-project testing processes and outcomes.

With NovaCarts Real-Time Suite from MicroNova, manufacturers and suppliers can validate models, software and hardware. Using the X-in-the-Loop(XiL)-approach, NovaCarts is the ideal platform for all testing requirements.

Thanks to their high performance, NovaCarts systems are not only ideal for the classic automotive domains of powertrains, hybrid technology, comfort, and driving dynamics, but also for technologically sophisticated and innovative application fields like autonomous self-driving vehicles, connected car scenarios and electric mobility.

Benefits of NovaCarts

High Security of Investment

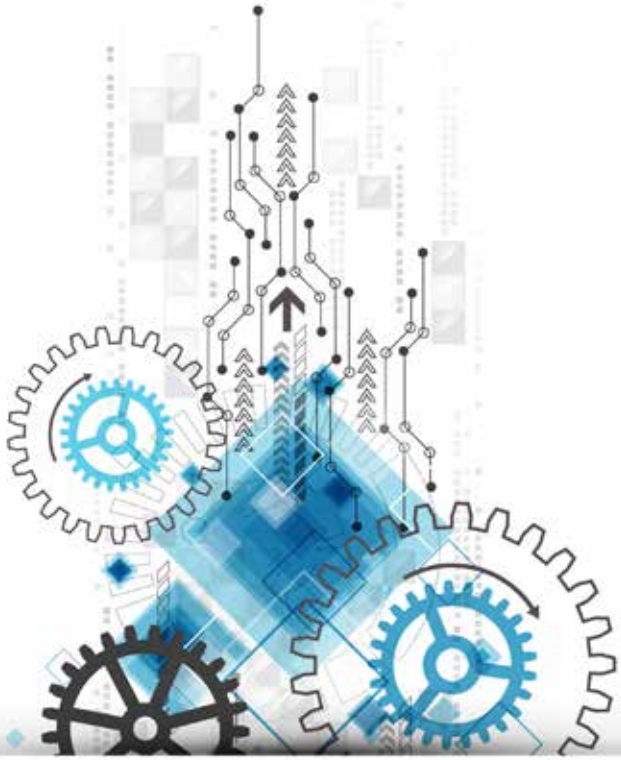
- **Low costs** through the use of standard components and technologies (e.g. powerful multi-core processors, PC platforms)
- **High cost-effectiveness:** Expandability, reuse and compatibility make NovaCarts solutions so versatile that they can be used in a wide range of projects – from small-scale software testing to the simulation of an entire vehicle
- **Maximum sustainability:** NovaCarts products can be adapted quickly and economically to meet new requirements – usually a software update is sufficient and no costly hardware replacement needed
- **Great potential for innovation:** Technologically sophisticated, application-specific solutions like simulation models for lidar and radar systems, simulation of inductive charging systems, high-voltage power emulation, etc.

Optimum Capacity Utilization

- **Maximum scalability:** A powerful Ethernet bus for maximum I/O performance and construction of any size of system – from individual testing stations to full-feature systems for the simulation of entire vehicles
- **High-level interoperability with best-in-class systems**: Open, standardized interfaces (e.g. XIL-API, ASAM, AUTOSAR) allow optimum integration with heterogeneous test environments as well as the integration of sub-systems from other manufacturers into NovaCarts environments
- **Greater spatial flexibility:** Signal generation close to the test objects allow distributed testing to be performed with almost any length of cabling
- **Support for dynamic test processes:** Fast switching from simulated to real electronic control units (ECUs) thanks to open and standardized interfaces, enabling real-time synchronization

Faster, More Efficient Testing

- **Shorter changeover and commissioning times:** Modular design and plug-and-play principle for I/O changes minimize downtimes
- **Flexible combinations of testing phases** enable extensive SiL-tests in an early development stage
- **Fast commissioning and short compile times** even for complex, high-resolution simulation models (e.g. in the field of “self-driving vehicles“) thanks to a modular model structure



The right solution for every vehicle domain:

Powertrain

Electric Mobility

Comfort / Body

Driving Dynamics

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