# Embedded Success dSPACE

# SCALEXIO The new HIL Platform



Dr. Hagen Haupt

dSPACE GmbH · Paderborn · Germany

Germany ·September 25, 2012

### **Challenges for HIL Simulation**

- Complex mechatronic devices, combined to networks
- Various interface and bus types
- Spatial separation
- Protection of test system and DUT
- Software environment for configuration
- Integration of plant models
- Support of test automation systems
- Adaptability to changing requirements
- Reusability of the HIL System





#### **SCALEXIO** – a new HIL specific hardware and software concept

- Real-time processor with the latest processor technology
- QNX based real-time kernel
- **IOCNET:** High speed serial network with synchronized I/O communication
- HighFlex intelligent I/O boards
- Complete galvanic isolation

- Easy-to-use configuration software
- HIL API support for experiment software
  ASAM



**dSPACE** 





## SCALEXIO – New HIL Technology

## **dSPACE**



## **SCALEXIO** for Space Projects



### ConfigurationDesk

- Separation of I/O configuration from plant model
- HIL specific workflow

### PC technology & QNX operating system

- Integration of 3rd party hardware
- Integration of non-Simulink models (perspective)

### IOCNET

- Flexible system topology
- Separation of I/O and processing unit
- High bandwidth, galvanic isolation