



Data Sheet

## CONiX HiL Solution

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High-precision hardware in combination with modular software for your individual HiL application

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### Scalable system

The CONiX HiL Solution is a scalable Open or Closed Loop ADAS/AD-HiL System. It consists of cutting edge hardware, designed for high precision raw and network data replay, combined with modular software building blocks. Coupled with highly expertised project teams we offer engineering services that ensure reliable customer solutions with early system availability

### Radar, Lidar and Camera

Out-of-the-box HiL Solution to cover a lot of common raw data interfaces e.g. CSI2, GMSSL2, FPD-III etc.

## Highlights

- Modular concept to adapt to customer requirements
  - Scalable setup
  - High performance hardware
  - Reliable software
  - Expert engineering teams
- Fast and easy integration in customer environment and constraints due to XTSS time sync
- Independent, generic validation concepts
- KPI determination at each interface
  - CSI2
  - GMSSL
  - CAN/FD
  - 100/1000BASE-T1
  - And more
- Synchronous playback of
  - Raw sensor data
  - Vehicle BUSs
  - And network information



## Features

	CONiX HiL Developer	CONiX HiL Integration	CONiX HiL Racksystem
Raw Data Replay (CSI2, GMSL2, FPD3)	✓	✓	✓
Network Replay (CAN/FD, 100/1000BASE-T1)	✓	✓	✓
DoIP/UDS Support	✓	✓	✓
XTSS Time Sync Service	✓	✓	✓
XCP Master Lib	✓	✓	✓
24/7 Operation	✓	✓	✓
Replay Station		✓	✓
Prepared for continuous integration		✓	✓
Re-Recording		✓	✓
Remote ECU Update		✓	✓
Automated Replay		✓	✓
Cloud-Connector (down- & upload)		✓	✓
3rd party integration (hard- & software)		✓	✓
Drawer		✓	✓
Rack (incl. power management)			✓
Ethernet Switch (optional)			✓
Replay Manager & Dashboard			✓
Operational Support			✓



## Package description

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### CONiX HiL Developer

Hardware in the loop for developer's desks

The developer system is designed for usage on the desk of software and algorithm developers. It contains a hardware platform (b-HiL), equipped with a standard SensorConnectorBoard (SCB), a bus replay license and the XTSS time sync service.

In combination with the compact design the system offers new possibilities in development of ADAS/AD sensors. By just plugging in some Ethernet cables and using the API or command line tools, a realistic environment for your sensor/ECU is created.

This enables an early stage testing of the developed algorithm for its usability in HiL mode. This initial tests in the system lead to the earliest possible detection of bugs.



### CONiX HiL Integrator

Standard HiL system for all ADAS/AD scenarios

The integrator system comes mounted in a compact tray: a powerful player hardware with an included raw data interface, network replay, power-on/off relays, 3rd party hard-/software integrations and a re-recording possibility. It provides a complete environment for integration and testing in a compact 19" tray.

This stand alone system is easy to integrate to CI / CD environments to work as an integration test station. Configurable workflows and sequences make it easy for the user to adapt the functionality to different ECU behaviours or cloud/data-center platforms.

A bunch of protocol stacks, importers and converters can be added on demand: e.g. XCP and DoIP/UDS stacks for highest flexibility, or MDF4 reader/writer for compatibility.

The CONiX HiL Integrator provides a highly flexible, adaptable test environment that enables easy integration and usage of the HiL Solution with minimum effort.



### CONiX HiL Rack System

HiL farm for high data throughput

Targeting the need of 24/7 systems with high data throughput, the CONiX HiL Rack System is the best choice for the usage of sensor or ECU validation.

By combining single rack trays with power supplies and high end network switches in large 19" racks, the required validation performance can be easily scaled.

Optional bundles, like a Replay Manager to orchestrate the clients or an Operational Support with a technical hotline for immediate problem resolutions complete the portfolio.

The CONiX HiL Rack System provides all the benefits of our HiL Integrator, scaled up into a 19" rack for fully automated replay. The scalable setup enables a comfortable usage and reduces user maintenance as well as system failures.

