

DX

logiRECORDER 3.5

Automotive HIL Video Logger

RECORD + PLAYBACK + ANALYSIS

All-in-One Solution



KEY FEATURES

- ✓ All-in-one solution for data logging in test cars and data playback in Hardware-in-the-Loop (HIL) simulators and tests
- ✓ Direct HIL Injection (Open-Loop) and Virtual Test Drive (Closed-Loop) HIL with road recorded or synthetically generated stimuli data and ECUs under test
- ✓ Best-in-class raw data interfacing (40+ direct interfaces) to the car's sensors with no additional MTU boxes (MTUs = Measurement Testing Units)
- ✓ Simultaneous connections of up to twelve (12) imaging sensors, up to twenty (20) automotive busses and multiple Gigabit Ethernet networks
- ✓ Multiple units stack into one logger with more interfaces, data bandwidth and storage space, e.g. >50 Gbps and 128 TB with four connected units
- ✓ Xylon's FPGA-based modular design enables quick customizations, central timestamping and precise data manipulation out of reach of PC-based data loggers
- ✓ The software stack includes an intuitive dashboard, plug-ins for popular simulation environments and a Software Development Kit (SDK) for custom applications developments
- ✓ Rugged and certified housing withstands use over a wide temperature and vibration range – already proven in some of the harshest places on the planet

Industry's best automotive interfacing



Enhanced Ethernet data logging and HIL capabilities



DATA PROCESSING

FPGA-based processing enables high performance and flexible customizations

AMD Zynq™ 7000 SoC and FPGA chipset

Sustained 12.8 Gbps (1.6 GB/s) logging bandwidth

Storage capacity up to 32 TB (4x SSD exFAT, off-the-shelf, data encryption TCG/Opal v2.0)

Intel® Atom® processor + FPGA accelerator board

100 ns timestamping; GPS, PPS and PTP synchronization

Stacked units multiply logging bandwidth and storage capacity

VIDEO & RADAR & LIDAR

6 video slots enable direct interfacing with up to 12 different cameras

Raw interfaces: TI FPD-Link III/IV, ADI GMSL1/GMSL2/GMSL3*, HDMI, Aurora over LVDS etc.

I2C tunneling for non-intrusive operation

Programmable Power-over-Coax

Data formats: MDF4 and ROS

Raw data visualization: Dashboard and HDMI display out

NETWORKS & INTERFACES

High-Speed Data Logging and HIL Ethernet links

2x 10 GbE or 1x 10 GbE TAP

2x 10 GbE HIL interfaces

12x 100B-T1/1000-T1/1000B-T through FPGA and CPU co-processing engine

(TAPI parsing, GigE Vision camera, XCP, Lidar data processing, etc.) – via 3 I/O slots

2 I/O slots for high-speed in-vehicle networks

3x 1 GbE Ethernet

4x 100BASE-T1 (OABR)

1 I/O slot for mid-speed in-vehicle networks

4x FlexRay

8 I/O slots for low-speed networks enable up to 16 ch. to match any application

CAN HS, CAN LS, CAN FD, LIN, UART, GPS, Digital I/O, Analog I, Microphone

2x USB 3.2

Vehicle databases: CAN XML DBC and ARXML, LIN LDF, FlexRay FIBEX XML

Data formats: PCAP, MDF4, ASC

BUILD - READY FOR HARSH ENVIRONMENTS

Certifications: CE, FCC, RoHS, automotive vibration and shock-proof

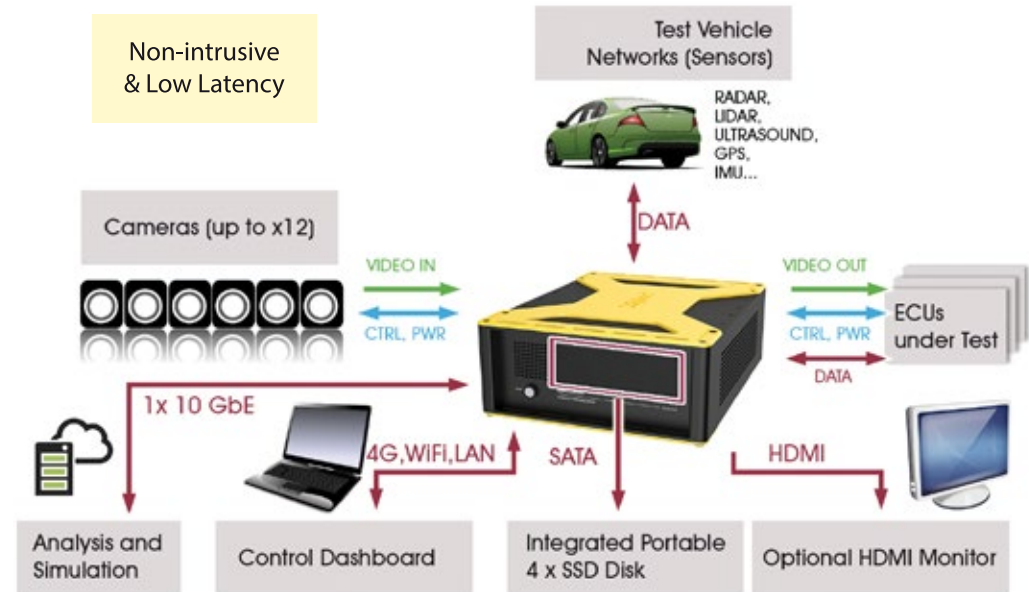
12 VDC nominal, 9-24 VDC range, 100 W

µCTRL-controlled graceful shutdown, etc.

Size: 281 x 350 x 135 mm; Weight: 7 kg; Ambient temperature: -20 – 60 °C

TECH SPECS

System Connections - Data Logging

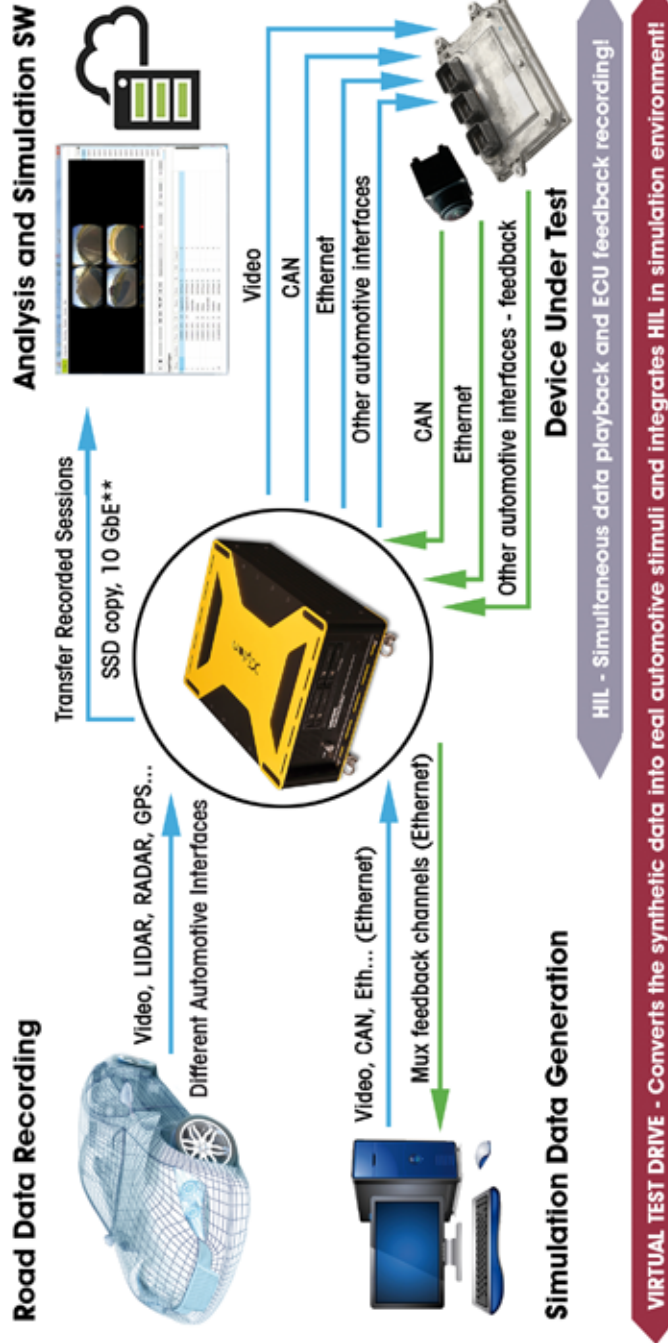


Enhanced Ethernet Logging Capabilities

Combine easily accessible I/O modules and set an optimal configuration



12 Ethernet ports implemented on 3 individual add-on modules enable various Ethernet and Automotive Ethernet combinations. Each module supports either 4 ports in data logging mode or 2 TAP ports; each configurable as PTP/gPTP master or slave. Additional 2 10 GbE ports enable data logging and TAP of multiplexed sensory data from popular automotive AI platforms and drive computers.



Visit our video library!



VEHICLE NETWORK AND UTILITY I/O MODULES

| TYPE | NAME |
|--------------------|-------------|
| CAN | logiR-CANSW |
| CAN | logiR-CANFD |
| CAN | logiR-CANLS |
| LIN | logiR-LIN |
| UART | logiR-UART |
| FlexRay | logiR-FLEX2 |
| Interconnection | logiR-CONN1 |
| Interconnection | logiR-CONN2 |
| Analog/Digital I/O | logiR-ADIO |
| Time Synch | logiR-SYNC |

VIDEO I/O MODULES

| TYPE | NAME |
|--------------|---------------------------|
| FPD Link-III | logiR-FPD3C-953-954-V2 |
| FPD Link-III | logiR-FPD3C-933-934 |
| FPD Link-IV | logiR-FPD4-971-9702 |
| GMSL | logiR-GMSLC-705-706 |
| GMSL2 | logiR-GMSL2C-295A-296A-V2 |
| GMSL2 | logiR-GMSL2C-295A-296A-V3 |
| GMSL2 | logiR-GMSL2C-717F-716F |
| GMSL2 | logiR-GMSL2C-717-716A |
| HDMI | logiR-HDMI-511-613 |
| Aurora | logiR-AURORA-DS25BR110 |

HIGH-SPEED NETWORK I/O MODULES

| TYPE | NAME |
|--------------|-----------------------|
| Ethernet | logiR-1GETH3 |
| Ethernet | logiR-SMARTE-1000B-T |
| Ethernet | logiR-SMARTE-1000B-T1 |
| BroadR-Reach | logiR-OABR4 |

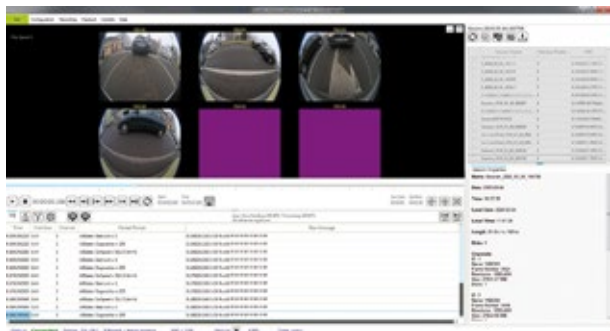
SMART ACCELERATOR I/O MODULE

| TYPE | NAME |
|----------|------------------|
| Ethernet | logiR-SMARTE-CPU |

Select the right I/O modules and modify the logiRECORDER to perfectly suit your project needs – no external adapter boxes required!

Xylon offers customizations, and can quickly design new I/O modules to tune the logiRECORDER for your current and future projects.

SOFTWARE STACK AND HIL PLUG-INS



logiRECORDER Dashboard

Intuitive PC application enables configuration, setup of advanced triggers and filters for continuous and event-triggered recordings, parallel playback of video and network data, recorded data manipulation and offline analysis. The dashboard enables remote controls through Wi-Fi and 4G mobile networks.

logiRECORDER Software Development Kit (SDK)

Microsoft® .NET Core based SDK enables cross-platform custom applications developments: log file analysis and file format conversions, CLI control scripts, live video and network data streaming, and more.

TAPI Parser and Validator

Enabled through collaboration with an industry leading provider of vision technology, this software allows for thorough testing and validation of smart cameras for ADAS and automated driving.

HIL Plug-Ins

Xylon collaborates with the most prominent experts in driving simulation software to enable closed loop HIL with synthetic data. To convert simulated data into real ECU stimuli, and vice versa, Xylon has developed SW plug-ins for different simulation platforms.

Visit us online at
www.xylon-lab.com

XYLON HEADQUARTERS

Xylon d.o.o.
Fallerovo šetalište 22
10 000 Zagreb, Croatia-Europe

tel: +385-1-368-0026
e-mail: info@logicBRICKS.com

XYLON JAPAN

Nishi-Shinjuku
Mizuma Building 6F
3-3-13 Nishi-Shinjuku, Shinjuku-ku
160-0023 Tokyo, Japan

e-mail: info@logicBRICKS.jp



Copyright © 2023 Xylon d.o.o.
All rights reserved.
Subject to change without notice.
Version 1.0, 7/2023.

Xylon and logicBRICKS by Xylon are registered trademarks of Xylon.

All other trademarks and registered trademarks are the property of their respective owners.