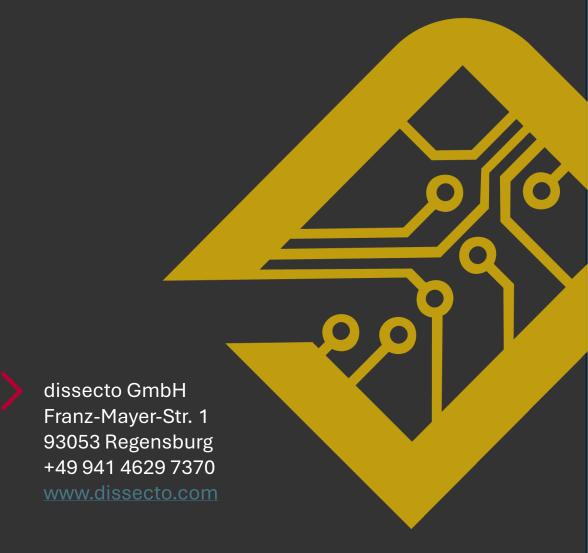


Security Testing, simplified.

As a deep-tech startup, dissecto is reshaping the cybersecurity landscape with its flagship product, dissecto HydraVision - an intuitive, scalable, and cost-effective solution that simplifies cybersecurity testing of embedded systems. We offer **PaaS**, **SaaS**, and on-premise solutions to cater to diverse industry needs.





Alexander Meisel



Dr. Nils Weiß



Dr. Enrico Pozzobon

CTO

- Over 20 years in cybersecurity, specializing in strategies for the automotive sector
- Former Co-founder of "art of defence" GmbH
- Two decades of innovation, leadership and engagement

- Over 8 years of experience in automotive security, specializing in penetration testing and vehicle system vulnerabilities
- Renowned expert, speaker and global advisor in automotive security
- Interdisciplinary expert from soldering-iron to cloud software

- Specialist in embedded penetration testing, focusing on automotive hardware
- Can hack almost every embedded system with an EMP
- Created some buzz within the cybersecurity landscape with his research in 2022















- dissecto was founded
- EXIST Transfer of Research
- attracted notable clients like CARIAD, KTM, Allianz Zentrum für Technik, and ADAC
- Launch of HydraScan

- Start of HydraVision development
- Launch of HydraHat
- ISO 9001 certification

- Launch of HydraLink
- Launch of HydraVision
- First ever ScapyCon Automotive
- ISO 27001 certification
- TISAX certification

business partners







Specializing in medical and IoT cybersecurity, BG Networks removes barriers to secure IoT devices.

Spatial Scope: **USA**

BG Networks Inc. 100 Robin Rd Weston, MA (02493) UNITED STATES

www.bgnetworks.com

Cybersecurity Experts based in Taiwan with a deep understanding of the local market.

Spatial Scope: Asia & PAC

Trinity Technologies Ltd No. 22, Ln. 583, Ruiguang Rd Taipei 114695 TAIWAN

https://www.trinitytec.net/en

Indian- and US- based company connecting engineers with local business opportunities.

Spatial Scope: India

Lexington Soft Old Madras Rd no. 3 Bangalore, Karnataka 560016 INDIA

www.lexingtonsoft.com



amag



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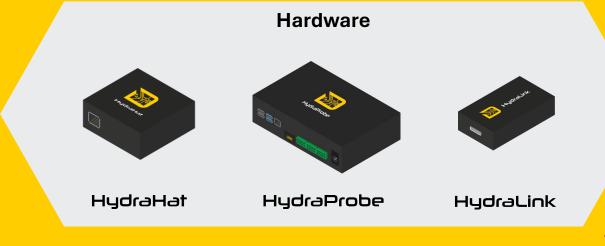


















industry challenges





Regulatory Compliance

Evolving regulations is no longer optional, it's a requirement!



Complex Systems

At the beginning of the century, vehicles averaged about 10 ECUs. By 2024, that number can reach up to 70, supporting around 600 million lines of code and driving up to 40% of production cost.



- no type approval
- no production start
- 4 month delay of vehicle launch, 2 billion cost



Advancing Technology

By 2025, 90% of new vehicles will support OTA updates, enabling autonomous and software-defined features - and demanding continuous, proactive security adaptations. Expected costs for updates 2.7 billion per year



Development Cost

By 2025, the automotive cybersecurity market hits 5 billion dollars. Software makes up to 40% of a vehicle's cost. Security measures adding 20–30% to development expenses.



HydraVision - offering





Automation

HydraVision automates security testing for complex embedded systems, detecting new vulnerabilities while **ensuring compliance** with regulations. **Reduces manual effort by 70%** and improves efficiency.



Collaboration

HydraVision enables seamless collaboration with global teams and external partners, simplifying onboarding and eliminating shipping delays. Improves efficiency and testing speed.



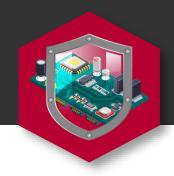
Scalability

HydraVision scales to secure entire portfolios, integrating compliance monitoring and continuous testing to meet evolving global standards. It adapts quickly, minimizing compliance risks as regulations change!



Affordability

HydraVision provides **cost-effective** security testing designed to keep up with the latest technological advancements, significantly lowering the investment needed for testing solutions. **Reduces costs by up to 75%.**





Open-Source Core

- Transparent and customizable foundation
- Continuous improvement from a global community
- Disruptive use of Open-Source technology in the automotive domain



Remote Work

- Fully web-based, no installations required
- Accessible from anywhere with a browser
- Rapid user on- & offboarding



Unique Test-Case Middlelayer

- Scales test cases across entire product portfolios
- Supports large-scale exploratory testing.
- Self-learning system



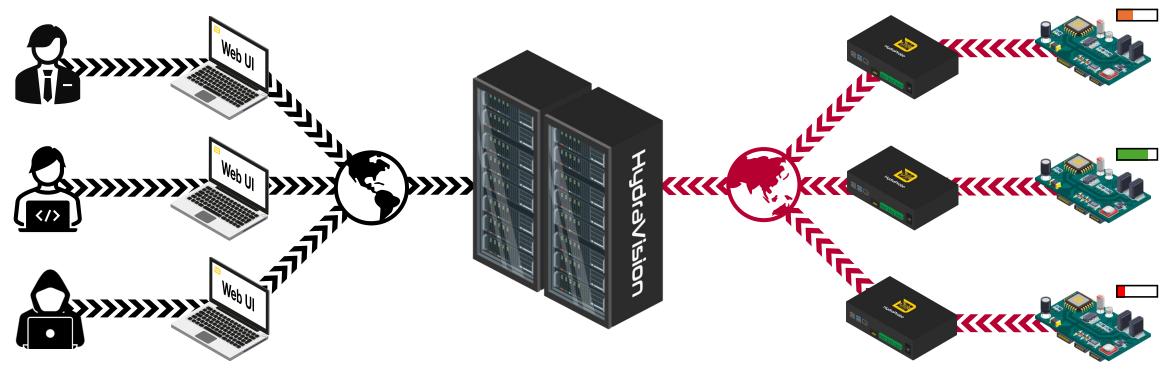
Collaboration

- Unified platform for OEMs, Tier 1s, and testers worldwide
- Consistent software stack for probes and test cases





Users remotely access HydraVision via **web browsers** to control test cases on distributed **DUTs** with **HydraProbes**.



HydraVision Web UI HydraVision Backend SaaS / On-Prem

HydraProbe laaS / On-Prem



HydraVision - V-Cycle





MAN 7 **Cybersecurity Risk Management**

OEM Requirements

SEC 1 Cybersecurity Requirements Elicitation

SYS₁ **Requirements Elicitation**

> SYS 2 **System Requirements Analysis**

SEC 2 Cybersecurity **Implementation**

SYS 3 **System Architectural** Design

SEC 1 Cybersecurity Requirements Elicitation

SWE 1 Software Requirements Analysis

SWE 2



Software Architectural Design SWE 3 Software Detailed Design

Software Integration & Test SWE 6 **Software Qualification** Test

SWE 5 Software Integration & Test SWE 4 Software Unit

Verification

Unit Construction



SYS 5

Test

SYS 4

Cybersecurity Management in Serial Support



SEC 4 **Software Qualification Risk Treatment Validation**

> SEC 3 **Risk Treatment** Verification

SEC 4 **Risk Treatment** Validation



SEC 3 **Risk Treatment** Verification



Basic V-Cycle

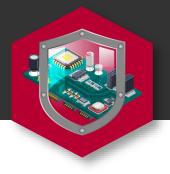
HydraVision impact

HydraVision influence

SEC 2 Cybersecurity **Implementation**



HydraVision - target audience







Tier I System Supplier

- Test cases scale across multiple components and product lines
- Early issue detection reduces development delays and -cost
- Ensures compliance with UNECE R155 and ISO/SAE 21434
- Consistent environments and automated reporting



Pentesters

- Unified platform and scalable test cases
- Consistent environments and automated reporting
- Real-time teamwork, web-based global access
- Intuitive WebUI and centralized management





- End-to-end testing across all suppliers / systems
- Reusable test cases for consistent results
- Seamless integration with Tier 1s/ 2s
- Simplifies adherence to regulations / standards
- Early detection reduces costs
- Continuous monitoring and updates to address new threats proactively



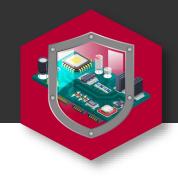


Tier 2 Software Supplier

- Scalable, reusable test cases streamline testing.
- Simplifies UNECE R155 and ISO/SAE 21434 adherence.
- Enhances coordination with OEM / Tier 1
- Early vulnerability detection ensures reliable software.



HydraVision - applications





Automotive



Maritime



Industrial



Insurance



Medical



Defense



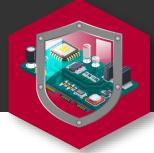
IoT



Aviation



HydraVision - global collaboration





HIL



ECU



External Pentester



Pentester



Serial Support



CS Manager





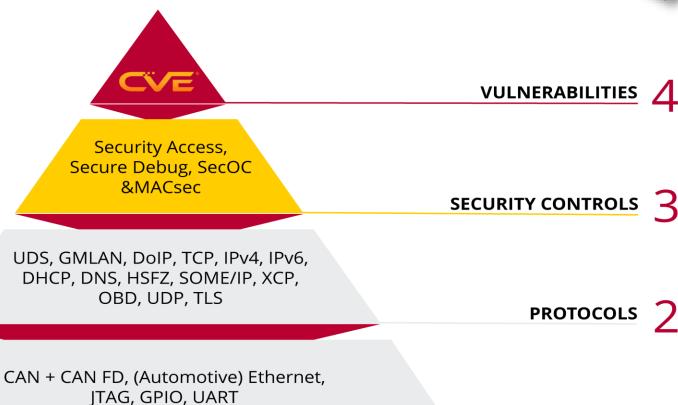
HydraVision - validation & testing



INTERFACES

HydraVision is a robust security validation and testing solution, comprising four integral layers to fortify digital defenses

We proactively develop test cases for new threats (CVEs) reported by developers, dissecto Research or third parties. This allows attack vectors against your system to be verified and validated in a timely manner.





HydraVision - standard tests

1010

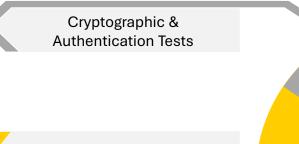
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dissecto

Hydra

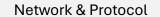


- Cipher verification
- Security scans of TLS
- Security tests of IPSEC
- Test for protocol vulnerabilities
- Overflow check
- State-based fuzzing
- Flag manipulation
- Security tests for SOME/IP
- OBD information leakage



Application Level Tests

Protocol Verification & Fuzzing



Protocol-specific

DoS & Firewall Tests

- Security scans of UDS
- Security scans of ISOTP
- Service scans on CAN
- Memory leak tests
- BAF & BAM attacks
- Certificate management
- Firewall security & DoS tests
- Flooding / DoS checks
- Attach surface evaluation







Compliant



Transparent



Cost-effective

Each industry has its own standards. As new vulnerabilities emerge, our testing system enables you to instantly adapt to the latest CVEs. Our automated, traceable tests ensure your embedded systems remain compliant with current regulations, providing comprehensive security coverage that scales with your needs.

Years of R&D have enabled us to create a testing system that delivers consistent and reliable results. Our standardized approach ensures transparency, giving you full visibility and control over your security testing. With global collaboration features and seamless on-/offboarding, your team can easily collaborate from anywhere in the world.

Our Security Test Environment is a Platform as a Service (PaaS) that merges decades of expertise with advanced technology to deliver costeffective and efficient embedded system security testing. Trusted by companies globally, our automated solution maintains high quality while keeping costs lower than expected.



HydraVision - further benefits



Reviewable and Assessable

Automated Testing

Scalable, automated tests adapting to evolving security threats

On-the-fly execution on HIL ECUs

Compliant with standards like A-SPICE

Reusable
Testing Scripts

Scripts reusable across providers, optimizing efficiency

Centralized Hub

Manage and execute tests with online result access

Free & unlimited Re-Testing

Blind Spot Identification

Focuses on uncovering hidden vulnerabilities

Long-term ECU Monitoring

Continuous monitoring to maintain ECU security over time

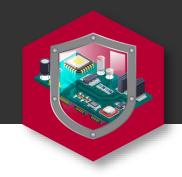
Intuitive User Management

User-friendly interface, easy on-/offboarding of external testers

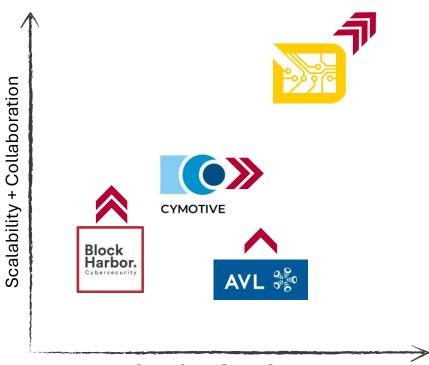
Fast test creation via Web-UI



competitor overview



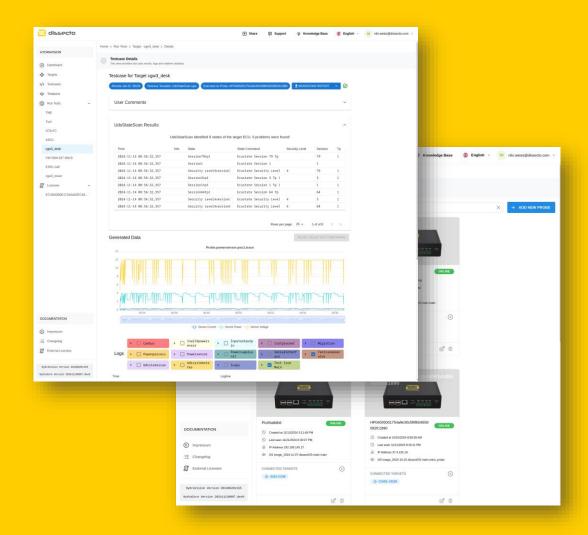
	HydraVision	Cymotive	AVL	BlockHarbor
Open Source	✓	×	×	×
Remote Work	✓	×	×	×
Compliance (UNECE etc.)	✓	✓	✓	✓
Test-Case Scalability	✓	✓	×	×
Explorative Testing	✓	×	×	✓
Collaboration	✓	×	×	×
Real Vehicle Testing	✓	✓	×	✓
Automated Reporting	✓	✓	✓	✓
Integration into CI/CD	✓	✓	~	×





Besides HydraVision, we are offering Hardware solutions, penetration testing services and cybersecurity workshops







ECU Security Test Tool

The dissecto HydraProbe is an essential component of our Hydra environment, acting as a critical interface between HydraVision and the device under test (DUT), ensuring smooth data flow and control. It supports **dual CAN FD**, advanced power management, and **data encryption** for **reliable cybersecurity testing**. With extended functionalities like High-Speed UART and JTAG, the interface is designed for high-performance applications. The HydraProbe can operate within the HydraVision environment or your on-site location.

Features:

- Dual CAN interface up to 5 Mbps (dual CAN FD
- Power Monitoring
- Power Switching
- Voltage regulation (6V to 24V DC)
- Programmable co-processor for extended functions
- DUT power supply via PoE or external power supply



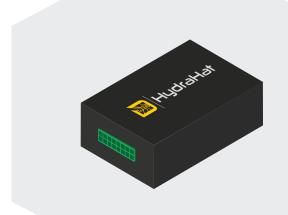


Dual CAN FD to Ethernet Interface

Powerful dual CAN FD to Ethernet gateway, designed for **fast, reliable, and secure** data communication. Supporting CAN FD with bitrates up to 8 Mbps and equipped with a 100 Mbps Ethernet interface, this device enables seamless data transfer **for demanding applications**. HydraHat is ideal for **time-critical** and secure industrial or automotive environments. Its robust design and user-friendly interface make integration and configuration effortless, bridging your CAN and Ethernet networks with ease.

Features:

- Dual Can FD support
- High-Speed Ethernet (100 Mbps)
- Versatile Power Options (6V-24V, optional PoE)
- Precise Timestamps (1µs resolution)
- Reliable and Secure Data Transmission





USB to Automotive Ethernet Interface

The automotive sector is undergoing a paradigm shift from (CAN)-based systems to advance Automotive Ethernet networks like **BroadR-Reach**. HydraLink, a high-performance USB to Automotive Ethernet Interface, is engineered to support this transition seamlessly. With compatibility for **100BASE-T1** and **1000BASE-T1** standards, HydraLink provides a **cost-effective** solution for reliable diagnostics, testing, and efficient prototyping.

Features:

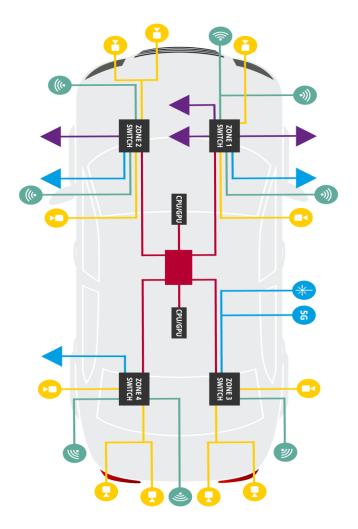
- Supports 100BASE-T1/1000BASE-T1 over single twisted pair
- No need for additional media converters
- USB 3.0 Gen 1 to Gigabit Ethernet (100/1000)
- Driver Support for Windows and Linux
- Commercial Temperature Range (0°C to +70°C)
- Hacker-friendly thanks to 2.54 mm Pin Header



A penetration test, or pentest, simulates cyberattacks to assess a system's, networks's or application's security. It reveals weaknesses and strengths, aiding in **risk assessment**. Results inform the client of vulnerabilities and recommend **mitigation strategies**. Penetration tests can be tailored to meet your **individual requirements**.

Our portfolio:

- Security tests of entire vehicles
- From internal communication to backend systems
- Penetration tests of ECUs and embedded systems
- Hardware-security analysis
- Proof of concept attacks and showcases
- Bughunting (e.g. Audi-Bughunting-Event)



We actively engage in the cybersecurity community by giving talks at conferences, hosting workshops for entire company departments, by collaborating in several public projects and by sharing our knowledge online. Some examples:

- "Automotive Networks-, Controllers- and Systems-Security"
 Course for Automotive- and Security-Engineers
- Hardware Security (Beginners/ Advanced) at IHK Regensburg and bbw (Bildungswerk der bay. Wirtschaft)
- Conferences: escar, embedded world, ELIV, NullCon, Hardwear.io
- Automotive- and Embedded Security Course for OTH Regensburg
- B.Y.ECU (Bring your ECU)
- CYEQT Knowledge-Base
- ScapyCon Automotive





ScapyCon provides participants with an opportunity to deepen their skills and knowledge in using Scapy, the leading Python tool for packet manipulation. The conference offers a blend of **traditional presentations** and hands-on **cybersecurity workshops.** While the focus included automotive cybersecurity applications, ScapyCon spanned a wide range of industries, **from aviation to IoT**.

Join us for this years's conference from September 23 – September 25 2025!

ScapyCon Automotive

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Thank you for your attention!

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www.dissecto.com

