

MODULAR, POWERFUL AND FUTURE PROVEN

# Debugger & Trace Solutions for **NVIDIA** System-on-a-Chip (SoC)

NVIDIA offers a comprehensive portfolio of SoCs to address requirements across a wide set of industries and applications with a strong focus on Artificial Intelligence (AI). They implement several kinds of high performance Arm® cores as main CPUs. Lauterbach's market leading TRACE32® debug and trace development tools provide not only full insights into NVIDIA chips for the whole SoC lifecycle: Thanks to the long-standing close partnership with NVIDIA, future chip developments are also accompanied by Lauterbach from the very beginning ensuring a future proof investment.



DOWNLOAD OUR SOLUTIONS OVERVIEW



All information about Lauterbach's products for debugging and tracing.



## KEY FEATURES

### Unlimited Multicore Debugging

NVIDIA SoCs implement different kinds of Arm® CPUs of the Cortex-A/R and Neoverse families as well as custom Armv8-based CPU designs. No matter what kind of multicore system is used, Lauterbach's TRACE32® tools support them all.

### OS-Aware Debugging of Any Core

Lauterbach's TRACE32® OS-aware debugging provides key insights into applications and the operating systems they are running on, no matter if rich operating systems like Linux, real-time operating systems (RTOS), or a mixture of all is used. With this, engineers can better understand how they are behaving and utilizing chip resources.

### Ready for Software Defined Vehicles (SDV)

On virtualized SDV systems based on NVIDIA SoCs, where multiple OSES are controlled by a hypervisor, TRACE32® allows you to perform concurrent OS-aware debugging for each guest OS/virtual machine (VM) and display an overview of the overall system. This includes also any kind of AUTOSAR aware debugging and containerized workloads.

### Covering the Whole NVIDIA Chip Lifecycle

Besides to real silicon, TRACE32® tools can connect to various simulators, emulators, and virtual targets. Developers can reuse the scripts generated in this phase throughout the entire product life cycle because the user interface and scripting commands stay the same from simulations through use in the field by the customers.

LEARN MORE @  
[lauterbach.com](https://lauterbach.com)

# NVIDIA



# DEBUGGER and TRACE-Solutions for NVIDIA SoCs

| Chip-Family             | Architectures                                                | Debug                        | On-Chip Trace | Off-Chip Trace | XCP Debugging | Instruction Set Simulator |
|-------------------------|--------------------------------------------------------------|------------------------------|---------------|----------------|---------------|---------------------------|
| CHIPS                   |                                                              | AVAILABLE TRACE32® SOLUTIONS |               |                |               |                           |
| Drive™ Orin™            | Arm® Cortex-A, Arm® Cortex-R                                 | ✓ 1                          | ✓ 1           | ✓ 2            | ✓ 3           | ✓ 4                       |
| Drive™ Thor™*           | Arm® Neoverse™ V3, Arm® Cortex-R                             | ✓ 1                          | ✓ 1           | ✓ 2            | ✓ 3           | ✓ 4                       |
| Xavier™                 | NVIDIA Carmel Arm®v8.2.-A                                    | ✓ 1                          |               |                | ✓ 3           | ✓ 4                       |
| ...further NVIDIA Chips | Please search Lauterbach's chip database – see QR code below |                              |               |                |               |                           |

\* : Coming Soon



Find the Right TRACE32® Solution for Your Chip:  
[lauterbach.com/supported-platforms/nvidia](https://lauterbach.com/supported-platforms/nvidia)

## PowerDebug System



1 Powerful, modular, flexible debug system for 150+ microprocessor families

## PowerTrace System



2 Highest performance parallel and serial trace system

## XCP Debug & Trace



3 Software debugger via XCP measurement and calibration protocol

## Instruction Set Simulator



4 ISS for developing or testing application code without target hardware