RTStand LV 124
HIL TEST AND SIMULATION

konrad ···technologies···

WKS Informatik
Continuous Innovation

RTStand is a fully automated testing system that ensures compliance with automotive norms across all application areas from development to production. All automotive ECUs can be tested on one common platform. Automated execution, datalogging, and reporting combine to accelerate testing and reduce the opportunity for human error.

System Highlights:

- Reduction in test times and costs by up to 50% vs. manual testing
- Define and configure new DUTs quickly and easily
- Support of various fieldbuses (CAN, LIN, automotive ethernet, *etc*.)
- Replicable testing environments and automated PDF reporting
- Native support for all short circuit, ground offset, and feedback tests
- Time synchronization between voltage and current measurements
- Continuous current measurement, from sleep to transmit
- Based on industry-standard NI tools: TestStand, VeriStand, LabVIEW

Originally designed to support LV 124 / LV 148 standards, the system can be customized to support the following norms:

GM: GMW3172   Ford: FMC1278   Stellantis/FCA: CS 00054   Hyundai/Kia: ES 95400-10
Tesla: TS-0000425-03   Lucid: EEDRCS   ISO 16750   ISO 21780

Technical Data

	RTStand LV 124 Pro F8	RTStand LV 124 Pro F24	RTStand LV 124 Pro F48	RTStand LV 124 Pro F96
Number of analog pins	8	24	48	96
Number of bus pins (can be expanded) Ethernet and GMSL	>14/20	>14/20	>14/20	>14/20
Number of ethernet 100xbase-T1 pins (optional, can be expanded)	20	20	20	20
Maximum current per pin	Up to 30A or 90A	Up to 30A or 90A	Up to 30A or 90A	Up to 30A or 90A
Generic DUT connector (for various kinds of ECU)	Yes			
Generic extension connector (for ECU specific loads, simulations)	Yes			
Automated climate chamber control	Yes			
Fully automated execution of supported tests	Yes			
Analog measurements for all voltage pins in parallel	Yes, 100kHz per pin			
Analog measurement for current (sleep to transmit)	Yes, 100kHz per pin			
Time-synchronized current and voltage measurements	Yes			
Easy definition of new products	Yes			
LV 124 / LV 148 norm library	Yes			
Fast definition of additional LV 124 / LV 148 tests	Yes			
Support of CANoe / CANape restbus integration	Yes			
Voltage measurement accuracy	< +/- 2%			
Current measurement accuracy	< +/- 2% for every range (+/- 1mA to +/- 150A)			

General Data

Layout	19" rack
Height	190.5 cm
Width	76 cm
Length	110 cm - 130 cm, depending on the system layout
Power Supply	400V / 16A
Temperature range	Should be used in air-conditioned environments. No liability for use in uncontrolled thermal environments.

Tool Chain

User Interaction

RTStand User Interface is an intuitive GUI that allows the automated test start of all tests and controls the whole toolchain of the RTStand LV 124 system.

DUT Definition, Activation, and Editing

VariantHandler enables the definition of any kind of DUT within the system limits. The user can set the pin name and type and the definition of the additional tests. All files necessary for the automated testing are generated based on these specifications. After the files are generated, the DUT can be activated for testing and edited for additional requirements.

Test Run Configuration

TemperatureControl enables the free test run configuration, with or without climate chamber control. The desired temperatures and soak times are preset before using the climate chamber. All configurations can be saved and reloaded at any time.

Pulse Generation

SignalGeneration generates signals according to an automotive norm. Can run a parallel data acquisition on 2 channels. The disturbance simulation pulse for output is loaded in a graph display and the current output value is marked correspondingly with a cursor. The device also controls the interruption generation (E10/E13 tests) and 4Q amplifier outputs.

Analog Measurement

Tube Analyzer enables time-synchronized measurement of all voltages and current pins with up to 100kHz per pin. The current measurement is done continuously and without interruptions on several ranges, from sleep to transmit modes, covering +/- 150 A.

Log File Visualization

LogViewer synchronizes display of Tube Analyzer measurement files and other RTStand TDMS files for a fast, visual check of the voltage and current signals.

Reporting

Automated PDF Reports for all tests sequences are generated based on the test results and user input.The reports can be customized per client and edited after generation.

Global Services and Deployment

Contact Us