

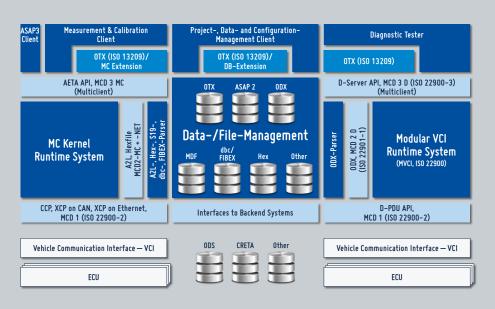
RA[®]Automotive Products



DiagRA® X Modern and User-Friendly Measurement

and Calibration Tool

- Supports XCP on Ethernet, XCP on CAN, CCP and CAN
- Based on ASAM and ISO standards
- Integrated ASAP 3 client for connection to test benches and automation systems
- $\cdot\,$ Adjustable grid-based layout with pre-configured templates
- Optimized setup from program launch to measurement
- $\cdot\,$ Day and night color schemes, scientific color concept
- Customizable gauges, bars, numbers, oscilloscopes etc.
- Includes basic analyzer tool DiagRA[®] X Viewer
- $\cdot\,$ Clear and simple program configuration
- Import and export layouts along with project data
- · Software functions optimized for maximum user friendliness
- Developed in cooperation with calibration engineers
- Project, data and configuration management client with integrated database management system, file management and search engine
- Support for backend systems and third-party products



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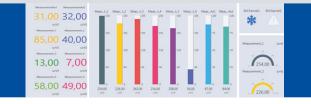




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Our software products are used by more than 500 leading auto makers and their suppliers worldwide.



DiagRA® X combines a modern usability concept, powerful measurement and calibration functionality and future-proof technology. The user is greeted by a well-organized, customizable user interface based on strict design rules and color concepts developed to work in different light conditions.

The design is based on the latest scientific research on data representation. All functions to record measurement data and perform calibration are compliant with relevant ASAM and ISO standards. Summarized, DiagRA® X provides a professional, calibration-oriented and intuitively usable solution.

Real-time calibration of control systems (ECUs)

Acquisition, visualization, recording and analysis of measurement data from measurement devices and ECUs

· Supported hardware

- ECUs using calibration protocols XCP on Ethernet, XCP on CAN and CCP $% \left(\mathcal{A}^{\prime}\right) =\left(\mathcal{A$
- Measurement devices on CAN and XCP data description file formats CANdb or A2L $% \left(\mathcal{A}^{\prime}_{A}\right) =0$
- Wide range of CAN interfaces most relevant interfaces in the market supported

· Design and Control Concept

- The state-of-the-art design and control concept for DiagRA® X was developed according to the latest research in this area
- · Clearly structured user interface without overlapping windows
- \cdot Grid-based layout simplifies the use on several devices with
- various monitor resolutions
- \cdot Fly-out menus only when required
- Color concept with predefined colors for light and dark designs for optimal visibility
- · Keyboard operation using predefined and customizable shortcuts
- Tidy user interface (Data Rich Design) with focus on data
- · Context sensitive display of control elements
- · Colors and icons to indicate program status

· General features

- Workspaces and experiments can be combined freely, as long as the label names match
- · Workspaces and experiments can be imported and exported
- · Fast experiment setup
- · Workspace export optionally including description and/or binary files
- · Customizable and pre-configured worksheets
- · Customizable display objects gauges, bars, numbers, oscilloscopes
- · Zoom display objects to full screen
- · Undocking of worksheets for working with multiple screens
- Variables manager overviews of the whole experiment with powerful filter functionality
- · Assign variables to display objects using drag & drop
- Bookmark favorite variables
- · Export or import LAB, DCM and ELI files
- \cdot Support for custom ECU unlocking via seed & key

Measurement features

- · Measurement data preview
- \cdot Measurement data can be analyzed while online
- \cdot Snapshot function writes current measurement buffer to MDF file
- · Custom signals/calculated channels
- $\boldsymbol{\cdot}$ High-speed data recording
- MDF 4.0 format
- \cdot Up to 800kHz sample rate



Calibration features

Display/change characteristics in visualizers

- Characteristic map with operating point and histogram
- 2D cross-sections in X/Y directions
- · 3D map
- · Characteristic table for scalars

· Binary data manager

- Import/export/unloading of HEX/S19 files
- · Validation of HEX/S19 files Check of EPK, monotony, limits
- Checksum comparison
- Copying of memory pages
- Lock write-access to ECU

· Compare pages function

- Memory page comparison
- · Import/export function supports DCM file format

System Requirements

	Minimum	Recommended
Operating System	Windows 7 or newer (64-bit), 4.5 \leq .NET Framework	
Processor	Quad-Core Processor Intel Core i5	Quad-Core Processor Intel Core i7
Memory	8 GB RAM	16 GB RAM
Graphic Card	Fast Graphic Card with DirectX 11	
Monitor Resolution	1280 x 800	1920 x 1080 (Full HD)
Hard Disk	20 GB Free Space	>20 GB Free Space, Fast SSD Hard Disk