

ODXStudio

View and Edit ODX Diagnostic Data – Simply and Conveniently

What is ODXStudio?

ODXStudio is a user-oriented authoring tool for diagnostic data in ODX format. As the optimal platform for a native ODX process, it offers full support of ODX data of all categories:

- > ODX-D (diagnostic data)
- > ODX-C (communication parameter)
- > ODX-V (vehicle topology)
- > ODX-F (flash data container)
- > ODX-E (ECU coding data)
- > ODX-FD (mapping to functions)

Overview of Advantages

- > Processing of ODX 2.2.0 and 2.0.1 data in native format
- > Standard conformant loss-free "roundtrip" functionality by use of ODX as internal data format
- > Automated check of the described data by using the integrated ODX Checker

- > Quick work results thanks to user-oriented and easy to operate graphic user interface
- > Specialized views for ODX 2.2.0 and 2.0.1
- > Coverage of all ODX categories
- > Clear overview of the executed states for Services and DIDs
- > Easy import of tabular data for text tables and DTCs from files or the clipboard via an import wizard
- > Export of tabular data to Microsoft Excel
- > Import of signals, parameters and DTCs from A2L, DBC, FIBEX, AUTOSAR, XLSX, CSV, CDI
- > Fast loading, editing and saving of even large quantities of ODX data
- > Optimal scalability: from the individual ECU to the entire vehicle
- > Extensive features for support of OEM-specific authoring guidelines

The screenshot displays the Vector ODXStudio Pro (ODX 2.2.0) interface. The main workspace shows the 'Diagnostic Service' 'ReadDataByIdentifier' with a table of diagnostic data. The table includes columns for Order, Abs., By, Bit, Longname, Type, Shortname, and Data Type. The data is organized into a tree structure with 'Request' and 'Positive Response' sections. The 'Positive Response' section contains a 'Table' with 'DIDs DATA READ' and 'Response Service ID'. The bottom status window shows a 'Rule Violation Correction' dialog with a 'Set MatchingParameter's DiagnosticClass = 'VARIANTIDENTIFICATION'' button.

Order	Abs.	By	Bit	Longname	Type	Shortname	Data Type
1	1	1	0	Data Identifier	Value	DataIdentifier	ID DataIdentifierRequestField
0	0	0	0	Request Service ID	CodedConst	RequestServiceID	A_UINT32
1	1	1	0	DID And Data Record	Value	DIDAndDataRecord	ID DataIdentifierResponseField
1	1	1	0	Data Identifier Response Field	Value	DataIdentifierResponseField	ID DataIdentifierResponseStructure
1	1	1	0	Data Identifier Response Structure	Value	DataIdentifierResponseStructure	ID DataIdentifierResponseStructure
0	0	0	0	data Identifier	TableKey	dataIdentifier	SN DIDxDATA READ
1	1	1	0	data Record	TableStruct	dataRecord	ID dataIdentifier
1	1	1	0	DIDs DATA READ	Table	DIDxDATA READ	ID 2byteIDENTICALDINTHEX
0	0	0	0	Response Service ID	CodedConst	ResponseServiceID	A_UINT32

Highlighting of SHORT-NAME references in the PDU table and automatic correction of ISO ODX Checker rule violations

Highlights of Version 8

Content-Based Comparison

- > Clear visualization of changes in the ODX description and their effects on the diagnostic functionality of an ECU
- > Display of only diagnostic-relevant changes:
For example, when adding a DID to an ODX model the new content-based comparison function clearly displays exactly this one change. A purely ODX-based comparison would show significantly more changes. Advantage: Quick and easy interpretation of the changes even without ODX expert knowledge.

Automatic Correction of Violations of ISO-ODX Checker Rules

- > The standard view now provides quick access to the ODX Checker results
- > Auto-correction for multiple ISO-ODX rules:
 - > Suggestions for automatic correction for 41 rules.
 - > Selection by the user in case of several correction suggestions
 - > Corrections that do not require user selection can be easily applied in a single step

Enhancements to the ODX-D Expert View

- > Improvements in working with SHORT-NAME-references: For example, the reference type used is now displayed in the PDU table. This makes it easy for the user to see at which positions overwriting is possible.
- > Easier working with ODX-CATEGORY and LAYER elements:
 - > Easy moving of LAYER elements between CONTAINER elements using the context menu
 - > Quick copy and paste of ECU-VARIANTS within an ECU based tree
 - > Retain original references when copying and pasting linked elements

Functions

ODXStudio makes it easy for users to create new ODX data based on master projects that already offer a project framework including standard libraries and default settings of values. This significantly reduces initial effort in configuring new parameters.

ODXStudio offers a separate ODX view for each ODX category. This lets users focus on the category that they are currently editing. In addition, other process perspectives can be shown in a category-specific way. In these perspectives, it is possible, for example, to force conformance to authoring guidelines during input.

ODX Perspective:

- > For ODX experts, whose task is to examine and edit data elements with all details according to the ODX specification.

ECU Perspective:

- > For parameterizing UDS ECUs by simple entry of the supported DIDs and DTCs. It enables the user to parameterize ECU data without ODX knowledge.

Process Perspective:

- > For ECU developers without well-founded ODX expertise. The data is displayed and edited in reduced and process-oriented form.

Comparison Perspective:

- > Compare entire projects or PDX archives and obtain overview on file level as well as all details of the data model

With the integrated roles concept, the visibility of individual perspectives can be preconfigured for specific user groups.

More Functions

- > Automated check of the data described using the standardized rule set of the integrated ODX Checker. Identifying popular errors in the data by using additional rules. Optionally expandable to your own rules. Can also be used via the command line.
- > Convenient search function
- > Extensive filtering and sorting functionalities for table data
- > Report generation in HTML and RTF
- > Import of CANdelaStudio CDD data
- > Automated generation of Flash Containers, also via the command line
- > High level of practical usability due to fast response behavior when loading, editing and saving

Application Areas

ODXStudio was designed for use by all users who work in an ODX-based diagnostic process and view, edit, process or manage diagnostic data in ODX format. It supports the diagnostics development of individual ECUs up to the level of entire vehicle platforms. It is equally well suited for users working at automotive OEMs and those working at suppliers. ODXStudio processes the data of ODX versions 2.2.0 and 2.0.1, each in native format. This makes it easy to implement cross-version reuse of diagnostic data and a migration to "ISO-ODX" (ODX 2.2.0 = ISO 22901-1) for example.

More information: www.vector.com/odxstudio