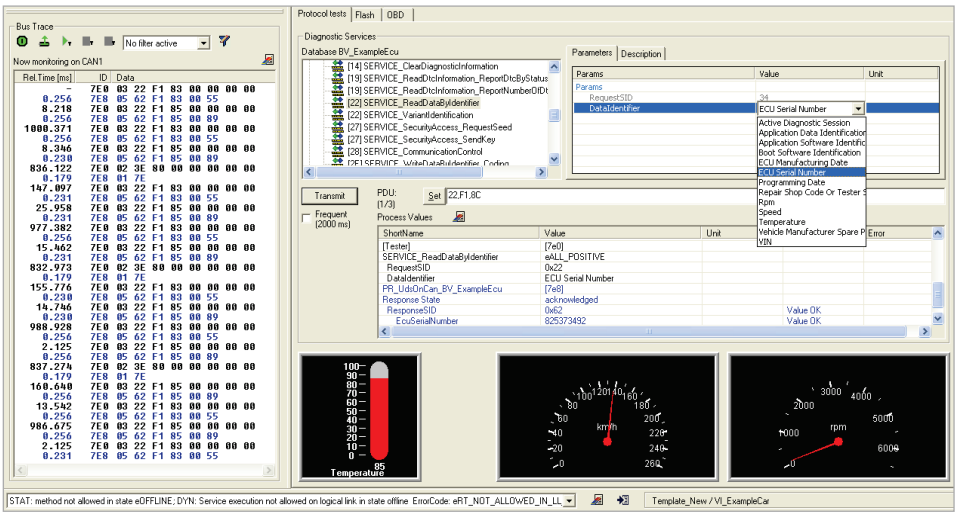
DTS 8 Monaco

All-in-one Engineering Tester: Enables to ensure that diagnostic communication and vehicle diagnostics work reliably.

DTS Monaco enables the comprehensive testing of diagnostic communication, diagnostic data and diagnostic sequences in the areas of engineering, testing and preparation of manufacturing tests. It can be adapted flexibly both for a whole range of different test tasks and for different user groups.



Areas of Application

- Development of diagnostic and control functions for ECUs
- Function test and validation
- Integration and system test
- Preparation of test sequences for Manufacturing and Service
- Analysis of returns and Quality Assurance

Benefits

- Reduced costs and familiarization time as DTS Monaco covers the functionality of several tools, previously separate: OBD scan tool, data and bus monitor etc.
- Fast results thanks to preconfigured templates
- Top quality thanks to early detection and remedy of communication problems and function errors
- Highly effective thanks to flexible adaptability to various tasks
- Communication data and test results can be fully documented

Flexibly Adaptable

DTS Monaco is part of the Diagnostic Tool Set product family and stands for Modular Analyzer for Vehicle Communication. A clearly laid out start page enables simple and fast access to the functions required most frequently. The actual workspace is divided into two: one area with a fixed layout and one with layouts that you can toggle between. A status display below shows communication server messages. The various functions are realized using special, configurable interface elements. These “HMI Controls” can be arranged freely in the layouts in configuration mode and comprehensively configured.

Early Detection of Problems

In execution mode, a configured workspace can be “started”. In doing so individual functions can be started automatically and communication can be established in advance if so required. Self-generated test sequences enable both simple and very complex function tests. This makes it possible to detect, and remedy, communication problems and function errors at an early stage. Communication data and test results can be documented in entirety in the process.

Fast Results

For typical use scenarios predefined templates including an universal database for the OBD self-diagnosis as well as various protocol templates (WWH-OBD, J1939-73 among others) are supplied. In Demonstration mode, all functions can be tested, even without an interface and a license, using a detailed example including simulation. Furthermore, the tool has a completely integrated OTX runtime for running complex test sequences in accordance with ISO 13209. An authoring tool for creating such OTX sequences can be started directly from DTS Monaco.

Functions at a Glance

- Testing communication
- Analyzing data on bus
- Examining ODX data vs. ECU
- Reading/deleting error memory
- Programming flash memory
- Displaying measuring values
- Parameterizing ECUs
- Coding variants
- Executing ECU routines
- Testing OBD functions
- Creating/executing test sequences
- Identifying built-in ECUs

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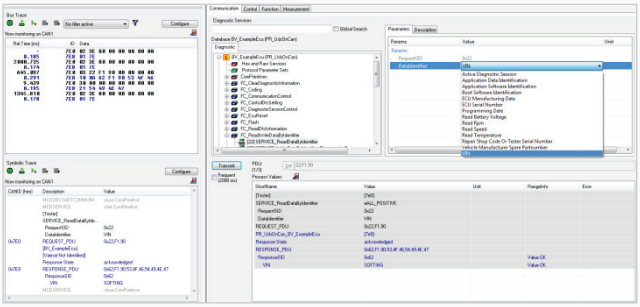
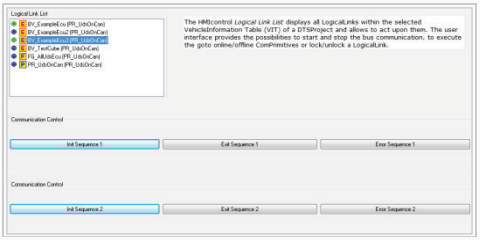
HMI Control Libraries

Communication



Bus Trace	Basic analysis of both diagnostic and on-board communication on the bus level with hex. representation
Diagnostic Services	Expert data verification and communication tests with full access to all Diagnostic Services
Symbolic Trace	Analysis of diagnostic communication on the application level with symbolic representation
OTX	Processing complex diagnostic sequences in accordance with ISO 13209

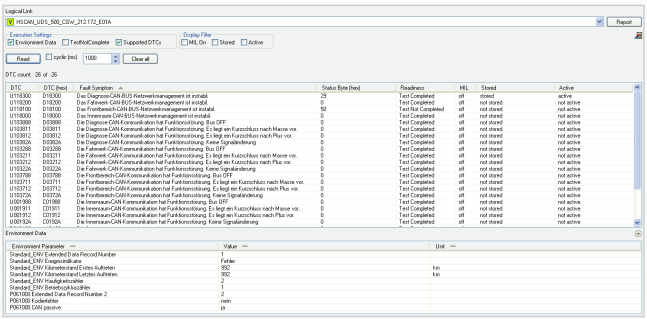
Control



Annotation	Visualizing tests with pictures, text or linked RTF/PDF/CHM files
Communication Control	Automatized connection establishment and clearing of ECU communication
Logical Link List	Monitoring and influencing the communication status of ECUs
Toggle Sequences	Starting of any desired service sequences incl. optional pre-/post-actions, e.g. changing the ECU state

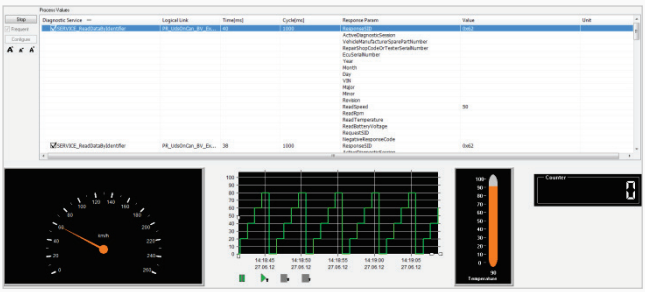
Function

** Configuration adaptation to the particular ODX Authoring Guideline required*



DTC*	Reading and deleting of the ECU fault memory
ECU Identification*	Reading of the identification information of single ECU or the whole vehicle
Flash	ECU programming - see next page
OBD	Validating and releasing the self-diagnosis - see next page
Soft Key	Execute sequences of services, jobs or sequences via buttons
Tool Quick Test*	Fast determination of the vehicle status regarding ECU identification and fault memory
Variant Coding*	Powerful expert tool for coding of single ECUs

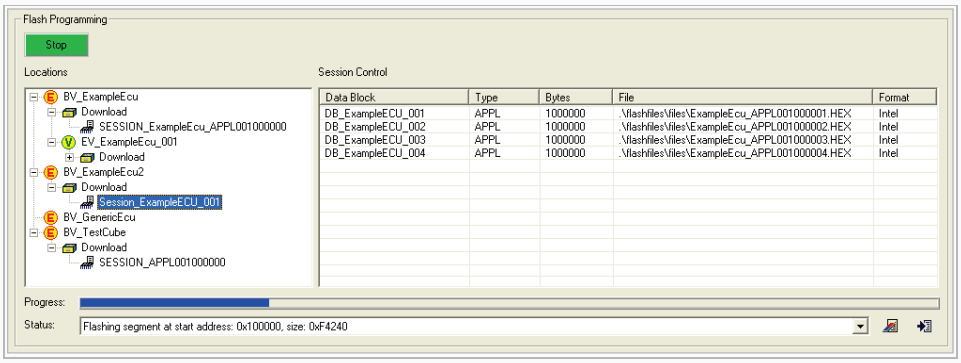
Measurement and Adaptation



Annotation	Readout of measured values and adaptation of parameters values within a service or parameter list
Communication Control	Record/store (list, gauges and scope views) and adapt (actuator view) ECU variables and parameters
Logical Link List	Visualize and adapt ECU variables and parameters using various graphic elements

Separately Available Solutions

DTS Flash



DTS Flash is an easy-to-use tool based on the ODX standard for flash programming of ECUs. It is possible to program one or more flash sessions of an ECU.

As a prerequisite you need ODX data: ODX-D incl. an OEM specific flash job and ODX-F, which contains either the flash programming data or a reference (possibly late-bound) to it. You can reference the data formats HEX, MOT, BIN, S3 and S19.

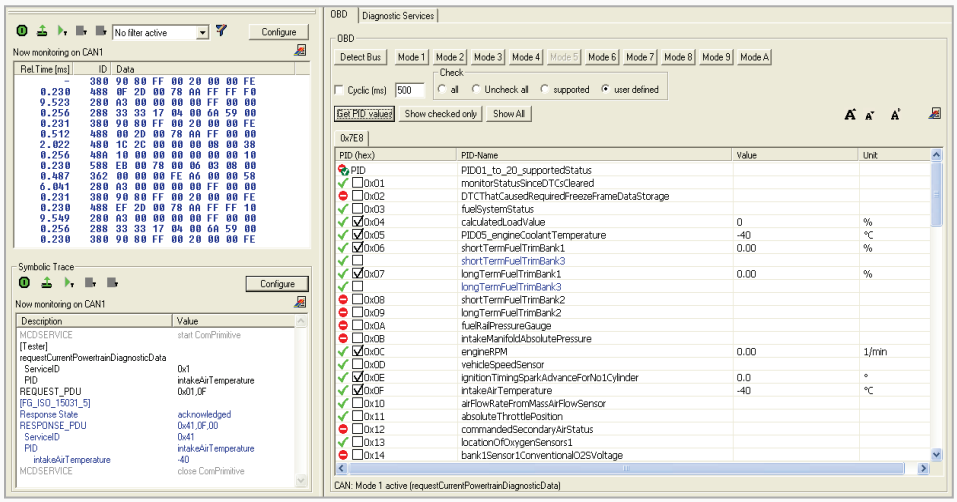
Areas of Application

- Test and execution of flash sequences
- Set an ECU to a defined software revision
- Analysis of returns

Benefits

- Fast results thanks to intuitive user interface, easy configuration and preconfigured template

DTS OBD



DTS OBD is a PC-based tool for validating and releasing the self-diagnosis of individual ECUs or an entire vehicle in vehicle engineering. It covers the entire scope of onboard diagnostics and combines the functionalities of an OBD scan tool with those of a data and bus monitor in a single tool.

You can detect the type of the connected bus either automatically or select it manually. For the current available OBD modes there are various analysis functions. Measured values are updated either manually or cyclically and can be logged for the purposes of documentation or external analysis (e.g. Excel spreadsheets). Parameters can be modified via symbolic names and sent to the relevant ECU for response analysis. All communication can be analyzed down to the very last detail and if necessary be recorded both at bus level (hexadecimal raw data) and at the application layer (in symbolic representation). When used on a notebook during a test drive, the font can be enlarged in several stages on the screen.

Areas of Application

- Onboard diagnostics engineering for individual ECUs or entire vehicles
- Function test and validation
- ECU integration and system test
- Test drives

Benefits

- Fast results thanks to intuitive operation and preconfigured templates
- Top quality thanks to early detection and remedy of functional errors

Technical Data

MVCI server and OTX runtime system	See data sheet Diagnostic Tool Set 8 – System Overview
Standard compliance (selection)	ISO 22901-1/ASAM MCD-2D (ODX) V2.2.0 and 2.0.1 (Open Diagnostic Data Exchange), ISO 22900-2 (D-PDU API) via CAN, K-line and Ethernet (ISO 13400 DoIP/Tester – Gateway: DoIP_Vehicle/single MVCI), ISO 22900-3/ASAM MCD-3D version 3.0.0 – application interface, ISO 13209 (OTX) version 1.0 (Open Test Sequence Exchange), ISO 14229 (UDS), ISO 15765, ISO 14230; ISO 15031, SAE J1979 and SAE J2012 (all OBD), ISO 27145 (WWH-OBD), SAE J1939
Special PC requirements	Screen resolution ≥ 1024x768 (XGA) – depend. on the number of HMI Controls to be displayed in parallel
Templates within delivery scope	Communication and Analysis, Error Memory, Measuring and Parameterizing, Onboard Diagnostics, Programming, Quick test, Test Sequences, Variant coding
Example workspaces	Extensive Monaco example workspace as introduction into the main features based on the sample database within delivery scope

Order Numbers

DTS8L+MONACO	Engineering tester DTS 8 Monaco for testing of diagnostic communication, data and sequences. Comprises the basic scope of functionality with regard to both, editing and high level diagnostic functions. High application security as workspaces/layouts/controls CANNOT be modified/configured/saved. The diagnostic functionality is limited to the controls of the library Communication.
DTS8L+MON-MIND	Option: Creating and configuring of workspaces in DTS 8 Monaco. Combines the unrestricted configuration of layouts and controls as well as the possibility to save workspaces (DTS8L-MON-CONF) with the Interface Designer (DTS8L-MIND), which enables to create/delete/rename workspace layouts as well as to create workspace templates.
DTS8L-HMI-LIBS	Option: All other diagnostic functions (i.e. HMI Controls) of DTS 8 Mona co, which are not included in the basic scope of functionality.
DTS8L+FLASH	DTS Flash tool for the flexible flash programming of ECUs based on DTS Monaco. The diagnostic functionality is limited to the HMI controls Flash, Bus Trace, Symbolic Trace as well as Toggle Sequences.
DTS8L+OBD	DTS OBD tool for the comprehensive validation and release of the onboard diagnostics of individual ECUs or an entire vehicle based on DTS Monaco. The diagnostic functionality is limited to the HMI controls of the library Communication as well as the HMI control OBD.
DTS8L-MON-MSP	Maintenance and Support Package incl. support by telephone and e-mail with regard to installation, setup and operation; minor and medium software upgrades free of charge as well as major software upgrades at a reduced rate

Supplementary Products and Services

S-DONGLE	Micro USB license dongle, as an alternative to licensing on a hardware interface
Other cross-product options	*See data sheet: Diagnostic Tool Set 8 – System Overview*

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