ETAS MDA V8

Next-generation Measure Data Analyzer

With the newly developed MDA V8 tool for the analysis of measurement data, users can efficiently evaluate measurements with a large volume of data. Measurement data files with a hundred thousand signals recorded in any given number of time rasters can be opened quickly and processed swiftly. To do this, the new MDA offers a clearly structured user interface and a sophisticated virtual oscilloscope with innovative operating concepts that were developed jointly with pilot users. For example, short periods in long measurement series can be easily zoomed out with an intuitive time slider and conveniently shifted along the measurement series.

AUTHORS

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User-centric

The completely redesigned user interface of the new MDA is a real eye-catcher. As with the current versions of the Microsoft Office tools, entries in the MDA menu are clearly arranged in a ribbon. The MDA V8 user interface is available in German, English, French, Japanese, and Chinese.

By default, on the left and right edges of the screen there are Explorer views for the management of configurations, measurement data files, and signals. The measurement data is evaluated in the central area of the screen with the aid of various instruments. For a better overview, the evaluation range can be divided into as many levels as desired. The levels, instruments, and signals can be stored together as an evaluation configuration that is linked to the measurement data files used. Once saved, an evaluation configuration can be simply reused by replacing the allocated measurement data file. As many evaluation configurations as desired can be open within an MDA session.

Tailored to applications

Both the Explorer views and the evaluation range or its individual levels can be flexibly rearranged by means of docking and floating mechanisms and thus distributed between several computer screens. The MDA currently offers two instruments: a virtual oscilloscope and a tabular view that displays time-related signals. The oscilloscope's measurement display can be subdivided into several strips in which signals can be shown separately from one another. If several oscilloscopes are used, the measurement displays can be simultaneously scrolled along the time axis and the same periods simultaneously zoomed out. Meanwhile, the tabular displays provide a detailed view of the individual measurements. When comparing signals that were sampled at different frequencies, users have the option of choosing whether to display only actually measured values or to fill in measurement gaps with interpolated data.

For fast navigation between the different instruments at one level, the tool shows thumbnails and previews of them in the task bar. The *Configuration Manager* shows the active evaluation configuration with its levels, instruments, and signals displayed in an Explorer-style interactive tree structure. Evaluation configurations can be modified simply through customary drag & drop operations. This enables users to place measurement signals from the *Configuration Manager* or the *Signal Explorer*, for example, or display instruments from the *Tool Box* onto working levels.

Based on the signals measured, users can enter formulas to calculate derived signals in just a few steps. To this end, there is an intuitive formula editor with which to freely define calculation rules that can be combined with any given functions.

MDF-compatible

MDA V8 reads and writes all the versions of the MDF (Measurement Data Format) file format. In particular, it supports the indication and compression of measurement data in line with ASAM specification MDF V4. Selected signals and time intervals can be easily extracted from the original measurement data and saved as a new MDF file. In addition, users can convert files between different versions of the MDF format. Configuration data files that were generated with MDA versions 7.2 and older can be imported and reused with MDA V8.

Version 8.1 of the new MDA was launched in September 2016. Installation is available free of charge for ETAS INCA users under www.etas.com in the Download Center.

ETAS increases the scope of functions of the MDA V8 on a quarterly basis, taking account of user requirements through software updates in the form of service packs. This tool can be used to analyze the large volumes of data that can arise in measurements with the new ETAS FETK ECU interface, the ES89x ECU and Bus Interfaces Modules, ETAS INCA V7.2 or the new ES820 Drive Recorder Module.
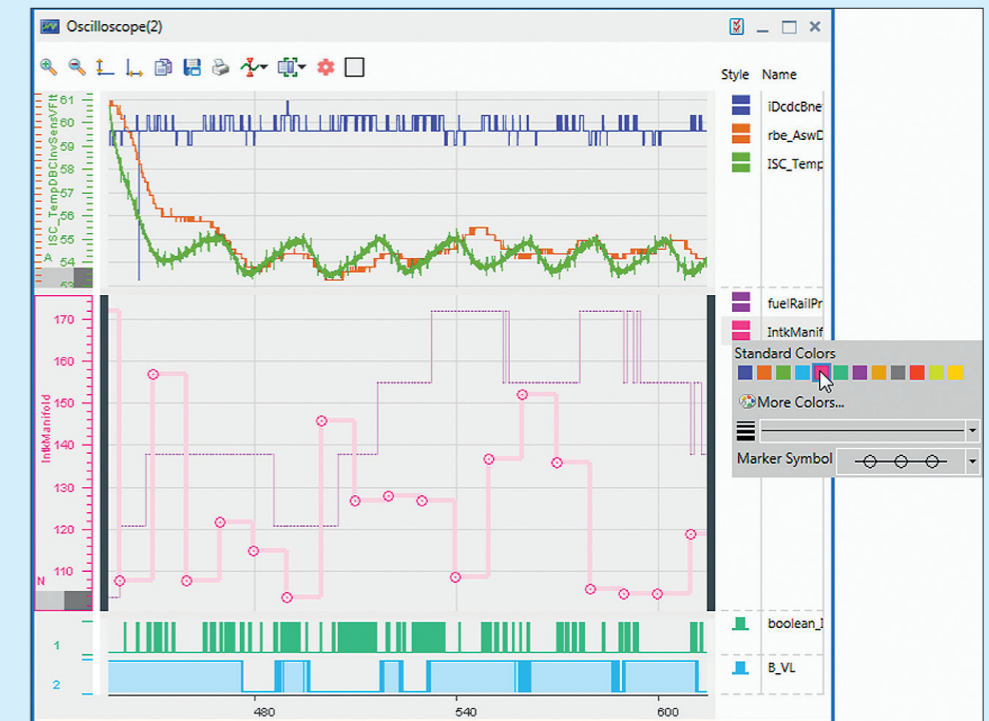
Virtual oscilloscope with display areas for analog and binary signals. The time axis can be shifted and scaled using the time slider (at the bottom of the image).
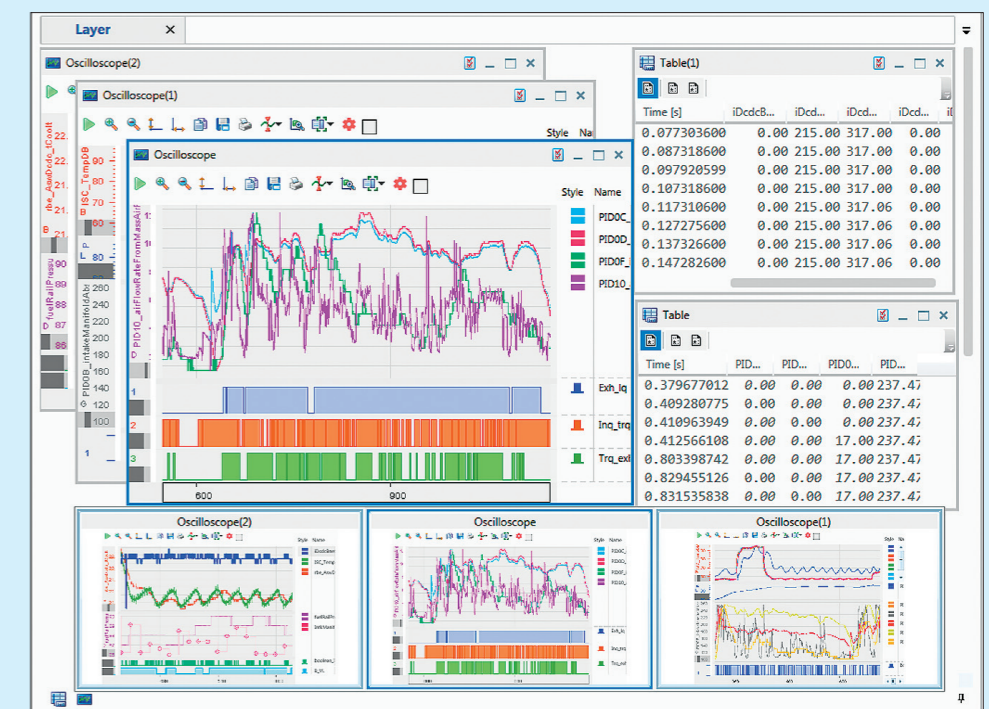
Preview of the instruments of a work level in the task bar.