MDA V8.7.2 – What's New

Functional Enhancements & Usability Improvements

Cumulated Slides for MDA V8.7.x Releases

MDA V8.7.2 – What's New

Overview

- **What's New for MDA V8.7.2 (September 2024)**
  - Functional Enhancements
  - Files, Formats & Data Types
  - Usability Improvements
  - Miscellaneous
- General Notes
  - Installed Components and System Requirements
- Candidates for Future Versions
- What's New of Former Versions of MDA V8.7.x

(Chapter names are hyperlinks)

MDA V8.7.2 – What's New

Version Overview for MDA V8.7.2 (September 2024)

- **Functional Enhancements (V8.7.2)**
  - Merging of ECU/Device groups in the Device Mapping dialog
  - Coloring of a GPS map track based on an indication signal's value
  - Logarithmic scale for value axes in the oscilloscope
  - Adapted handling of FMUs requiring samples at time stamp = 0

- **Miscellaneous (V8.7.2)**
  - Reworked component 'MDF Shell Extension'

- **Files, Formats & Data Types (V8.7.2)**
  - Support of CAN Bus trace files according to ETAS ASCII Format
  - Absolute Date and Time of a recording
  - Import of video instruments from an XDA file
  - MdfConvert.exe respects device information of LAB V1.3 file

- **Usability Improvements (V8.7.2)**
  - Customizable unit information in Battery instruments
  - Time Slider Bar allows to scroll when entering a time value

(Section names are hyperlinks)

MDA V8.7.2 – What's New

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- Files, Formats & Data Types (MDA V8.7.2)
- Usability Improvements (MDA V8.7.2)
- Miscellaneous (MDA V8.7.2)

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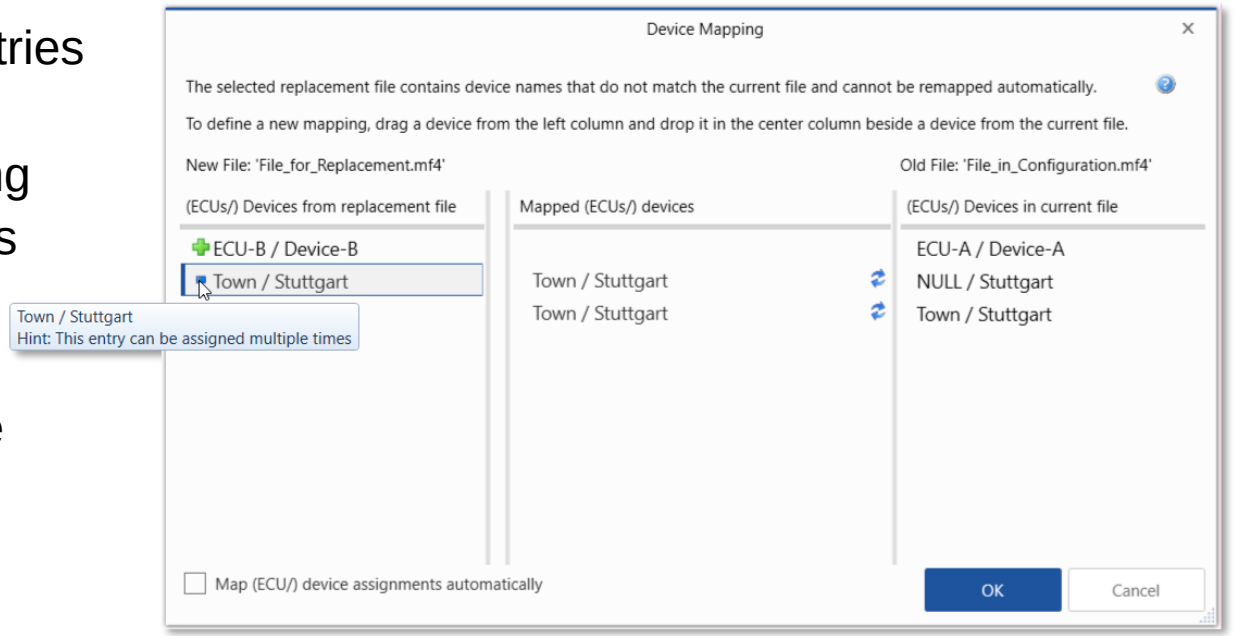
MDA V8.7.2 – What's New

Functional Enhancements: Merging of ECU/Device groups in the Device Mapping dialog (V8.7.2)

Better signal mapping after a file replacement

- When a measurement file is replaced, MDA tries to re-assign the signals from the new file
- First MDA checks whether the signal mapping can be done based on the pure signal names
- If not, the device mapping dialog opens
- Now in MDA V8.7.2 any ECU/Device group from the new file can be assigned to multiple ECU/Device groups in the configuration
- As a result, formerly separate groups will be merged into just one group



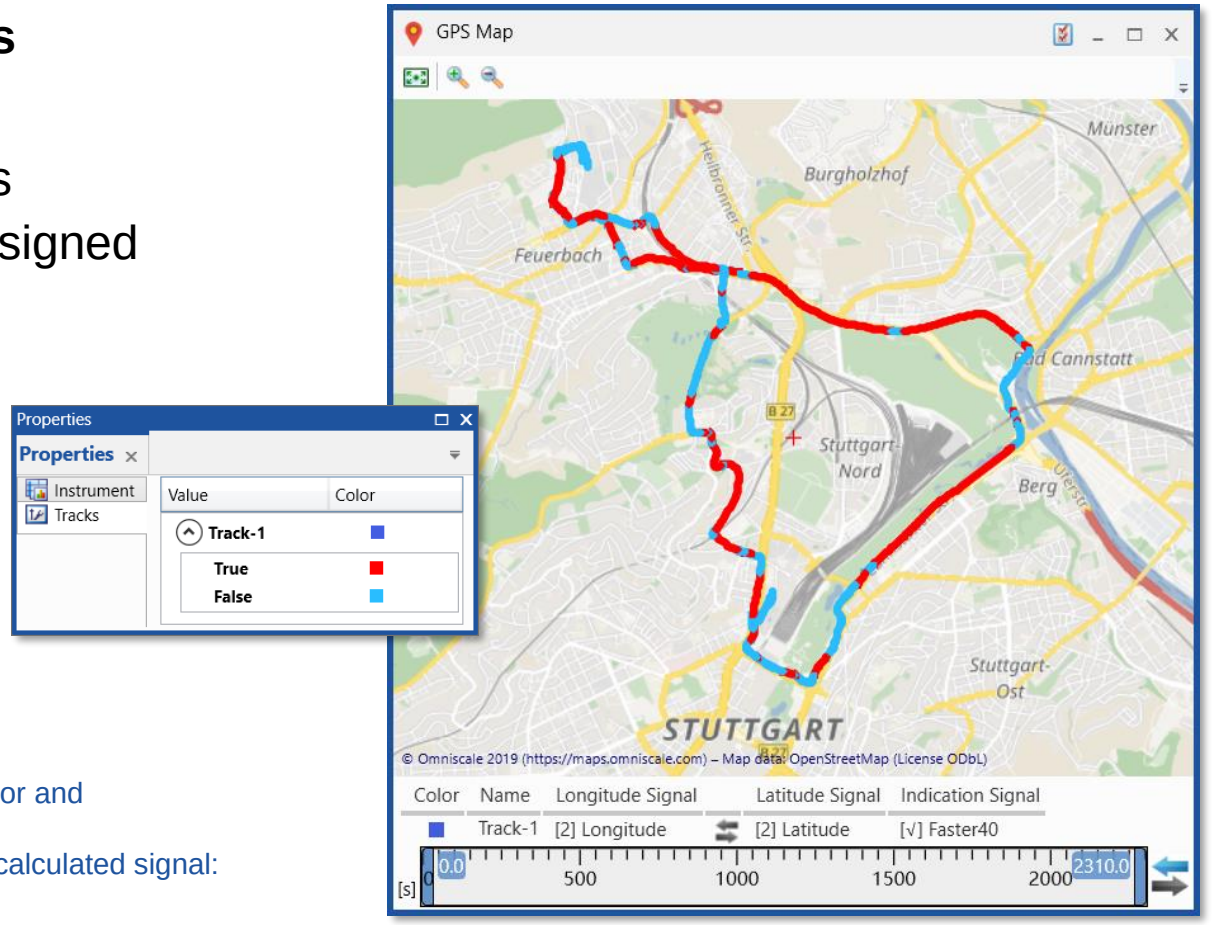
Notes:
- Assignment of ECU/Device combinations which are identical in the new file and in the configuration (so-called 'perfect matches') cannot be changed.
- If the mapping can be done on the pure signal names, signals which were formerly in the same ECU/Device group might be split into different groups. This is the same behavior as if the option 'Map (ECU/) Device assignments automatically' is activated and confirmed.

MDA V8.7.2 – What's New

Functional Enhancements: Coloring of a GPS map track based on an indication signal's value (V8.7.2)

Better identification of driving situations in a GPS map track

- Besides the longitude and latitude signals a third signal 'indication signal' can be assigned to a track in the GPS map instrument
- The value of the indication signal is used to color the track line *
- The color can be set by the user
  - For Boolean signals two fixed colors
  - For analog signals a color gradient



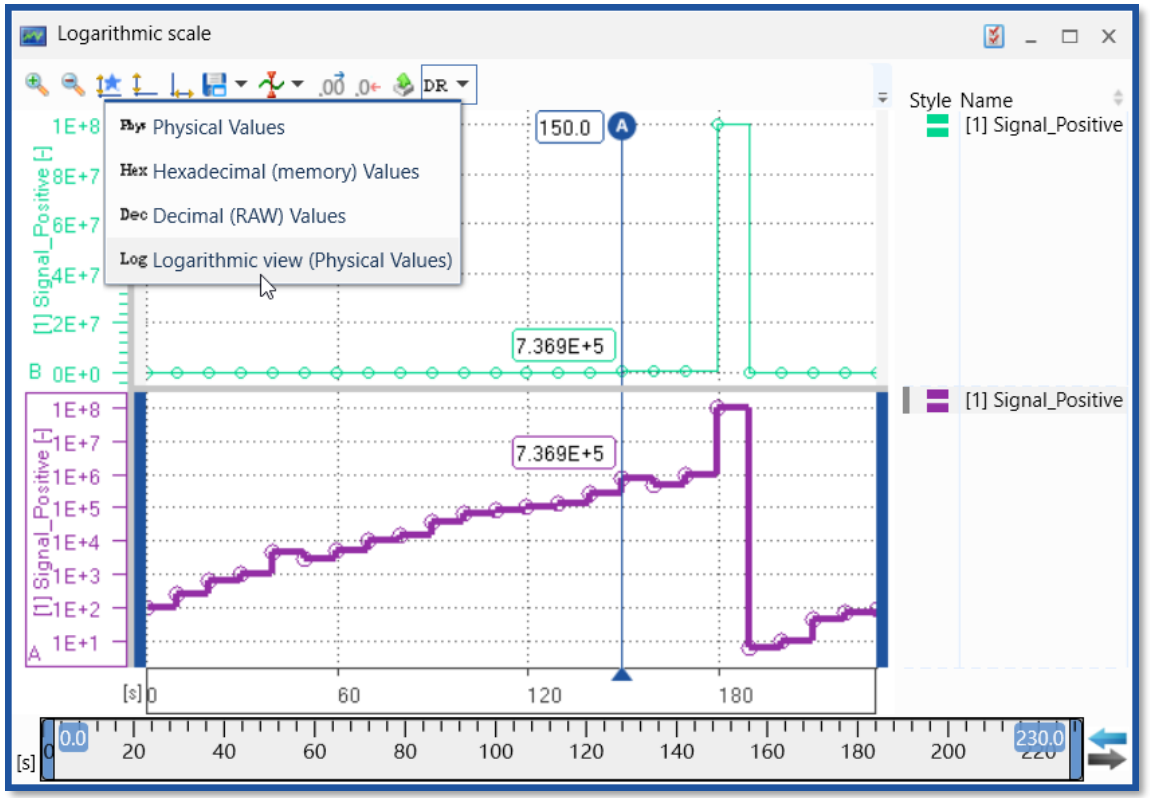
* Notes:
- The color defined by the indication signal will overrule the track color and a potential color definition for the measurement file.
- Enumerations signals can not be used directly, but by means of a calculated signal: Calculated Signal = Raw (Enumeration signal).

MDA V8.7.2 – What's New

Functional Enhancements: Logarithmic scale for value axes in the oscilloscope (V8.7.2)

Clearer representation of signal curves with values covering large magnitudes

- In case your signals have a large value range, and still smaller differences shall be identifiable, a logarithmic scale can help
- Simply switch the data representation for the desired signal to ‘Logarithmic View’ to change the axis scale from an equidistant scale to a logarithmic scale
- For the axis figures an exponential or a normal style can be set in the Properties



Notes:

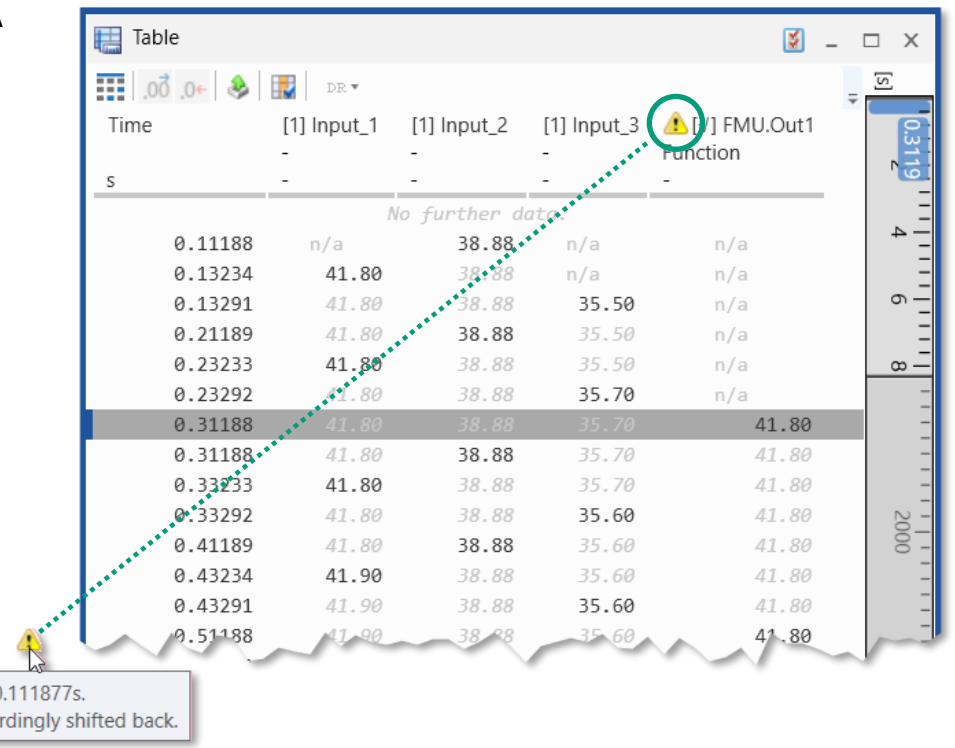
- Only value axes can be set to logarithmic scale. The time axis is always drawn with a usual equidistant scale.
- A logarithmic scale is supported for physical values only. Moreover, a logarithmic scale can not be assigned for enumerations.

MDA V8.7.2 – What's New

Functional Enhancements: Adapted handling of FMUs requiring samples at time stamp = 0 (V8.7.2)

Use your own FMU model files for calculations in MDA

– Various tools allow to create FMU models which can be used to in MDA to calculate outputs based on input signals from a measurement file
– Some FMUs require that the input signals provide a value at time stamp 0 exactly, which is typically not the case for usual measurement files with recordings in different acquisition rates
– If needed, MDA handles the input signals in a special manner to enable the usage of such FMU models *



* Notes:
- Basically, all input signals are shifted as one group so that for at least one input signal a value can be given at exactly time stamp = 0. The outputs of the FMU model are shifted in opposite direction, and are eventually displayed in MDA.
- The raster for calculating the FMU outputs is defined in the model description by the ‘StepSize’, and is independent from the acquisition rates of the input signals.

MDA V8.7.2 – What's New

Version Overview for MDA V8.7.2 (September 2024)

- Functional Enhancements (MDA V8.7.2)
- **Files, Formats & Data Types (MDA V8.7.2)**
  - Support of CAN Bus trace files according to ETAS ASCII Format
  - New signal for the absolute Date and Time of a recording
  - Import of video instruments defined in an XDA file
  - MdfConvert.exe respects device information of LAB file V1.3 format
- Usability Improvements (MDA V8.7.2)
- Miscellaneous (MDA V8.7.2)

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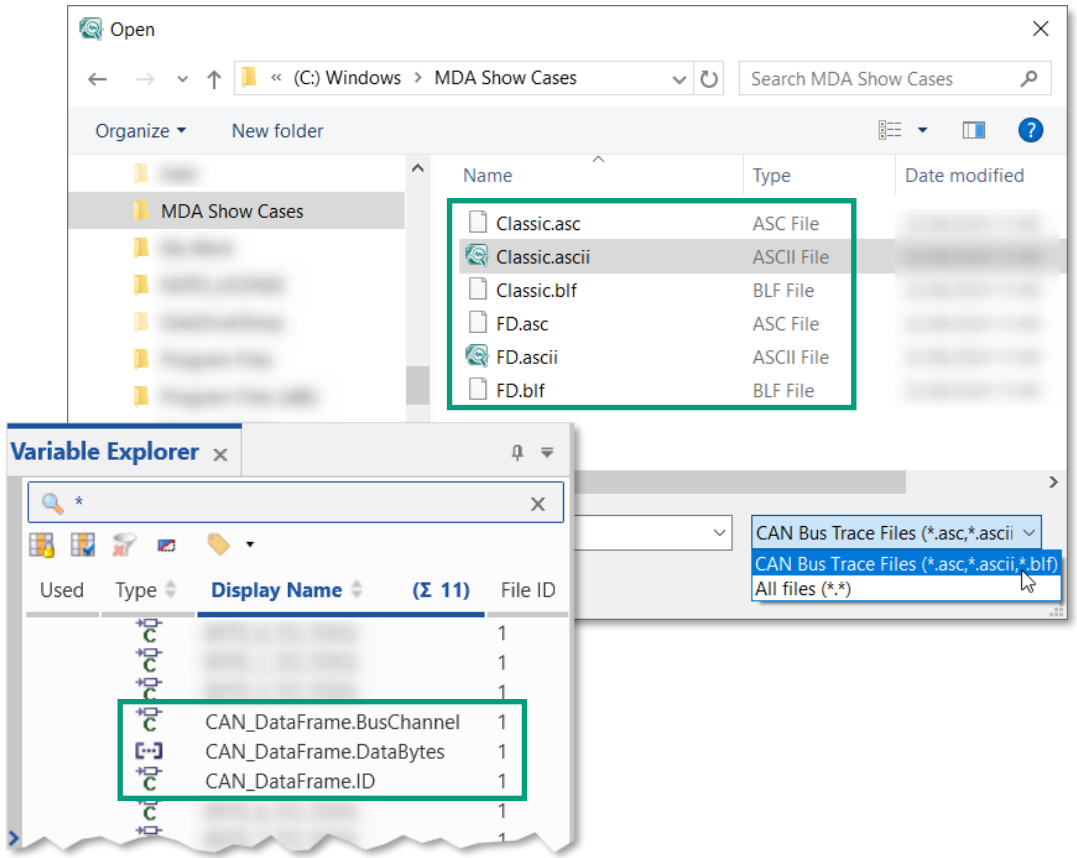
MDA V8.7.2 – What's New

Files, Formats & Data Types: Support of CAN Bus Trace files in ETAS ASCII format (V8.7.2)

Simply check the CAN Bus communication

- As another CAN bus trace file format ASCII files created with the INCA CAN Bus trace add-on are supported in MDA V8.7.2
- Both Classic CAN and CAN FD are supported
- For any trace file the three basic signals are provided, namely the CAN Bus ID, the Frame ID and the payload
- Additionally, a description file (DBC or ARXML) can be assigned for interpreting the trace data
- If a description file is assigned the derived signals are listed in MDA's Variable Explorer



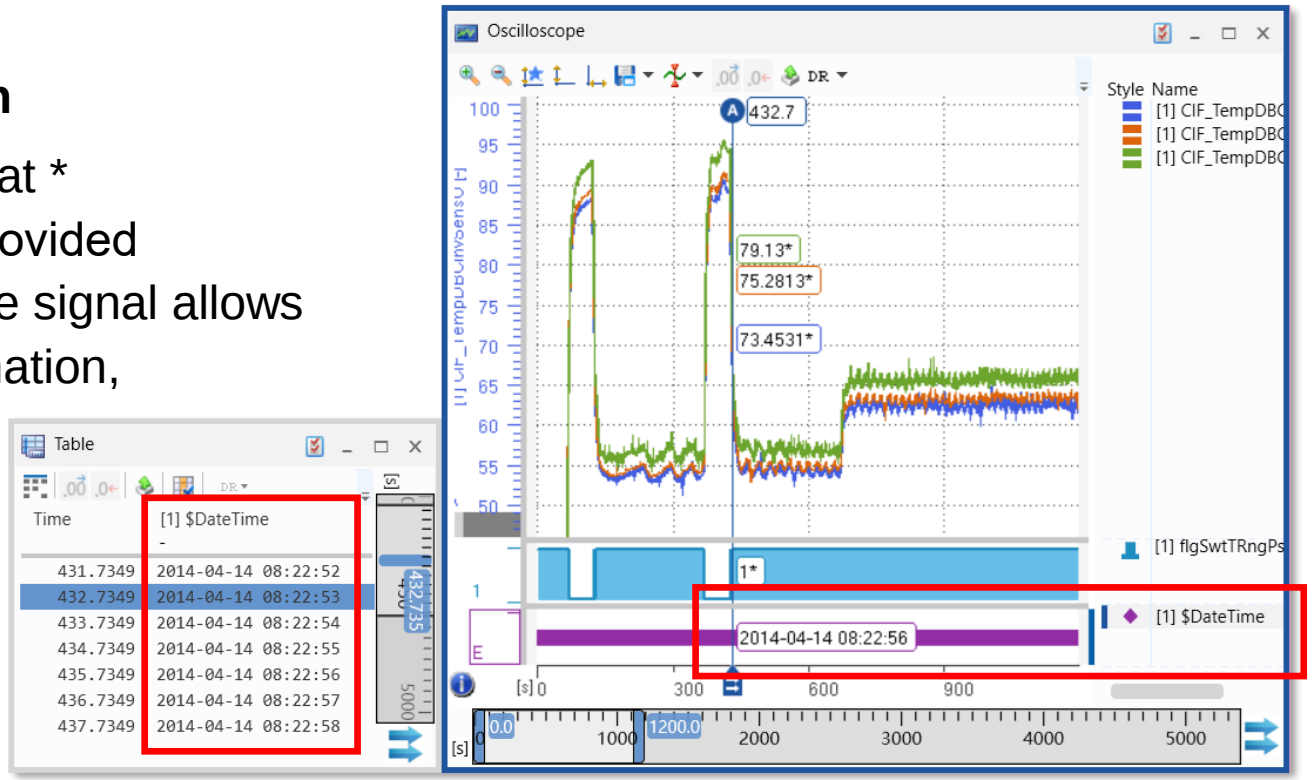
Notes:
- A license for the CAN Bus Trace add-on is required.
- To load a CAN Bus Trace file the icon for 'Add Bus Trace' must be used.

MDA V8.7.2 – What's New

Files, Formats & Data Types: New signal for the absolute Date and Time of a recording (V8.7.2)

Find easily an event based on the absolute Date and Time information

- For each measurement file in MDF format * one new signal named '$DateTime' is provided
- In an oscilloscope or table instrument the signal allows to see the absolute date and time information, e.g. "2014-04-14 08:22:56"
- If the signal does not already exist in the measurement file it will be calculated automatically, and listed and handled as if it is part of the file



* Notes:
- Date and Time are calculated from the 'Start Time' information of the header in the MDF measure file, and a conversion of the relative time stamps.
- If the recording includes Pause events, the value of the $DateTime signal after a Pause event is not accurate anymore.

MDA V8.7.2 – What's New

Files, Formats & Data Types: Import of video instruments defined in an XDA file (V8.7.2)

Reuse video instruments defined in an XDA file

– By importing an XDA file it is possible to include objects into an MDA V8 configuration which were defined and configured outside of MDA 8
– The XDA file format was used by MDA V7, but also INCA or EATB can create XDA files to provide configuration objects for MDA V8
– As enhancement in MDA V8.7.2 the import of Video instruments defined in an XDA file is supported

XDA for Video Instrument Import.xda

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<CONFIGURATION>
  <APPLICATION>MDA</APPLICATION>
  <Version>6.2</Version>
  <MEASUREFILES>
    <FILE>
      <Name>measure_file_1.mf4</Name>
    </FILE>
  </MEASUREFILES>
  <WINDOWS>
  <VIDEO>
      <Top>50</Top>
      <Left>200</Left>
      <Width>500</Width>
      <Height>400</Height>
      <WindowTitle>Video Viewer 1</WindowTitle>
      <CHANNEL>
        <ChannelKey>measure_file_1.mf4:DG0:CG0:VIDEO_CAMERA_TIMECODE\Microso
        <ChannelName>VIDEO_CAMERA_TIMECODE\Microsoft LifeCam2</ChannelName>
        <ChannelGUID>{FB8AF14B-79C1-4455-A5DD-7547E7FEF8E4}</ChannelGUID>
        <CurrentTime>3.6</CurrentTime>
      </CHANNEL>
    </VIDEO>
```

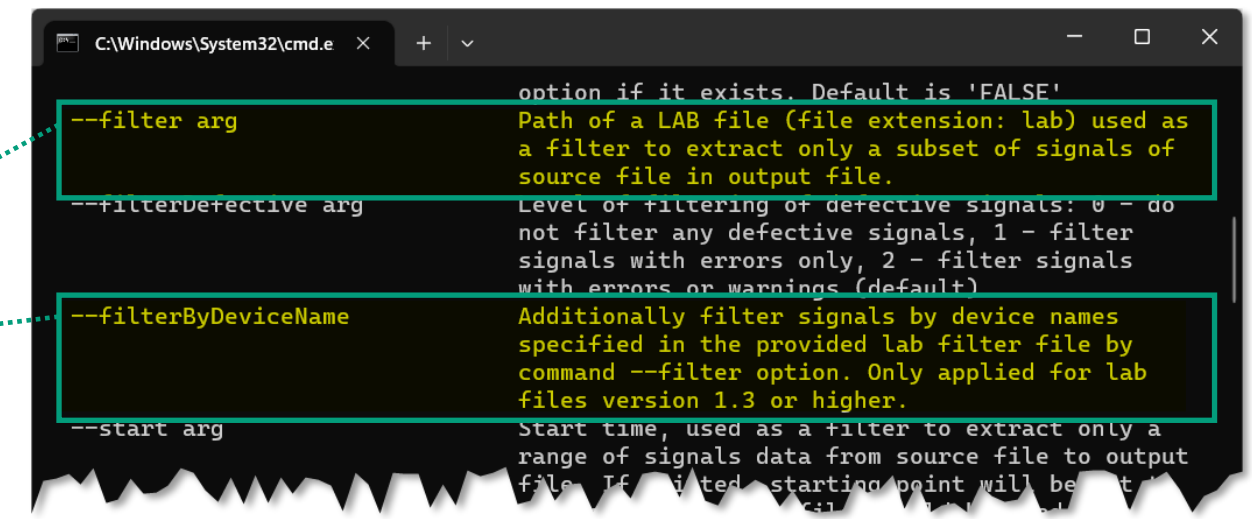
Note:
- Depending on the application named in the header of the XDA file for each instrument an own layer is created (if application = MDA), or the instruments are imported onto one layer (application = INCA).

MDA V8.7.2 – What's New

Files, Formats & Data Types: MdfConvert.exe respects device information of LAB V1.3 file (V8.7.2)

Reduce measurement files to the essentials

– If a measurement file is large in view of signals and file duration, you might want to reduce it to the relevant contents preferably independently from the MDA UI
– To extract relevant subsets of signals command line tool ‘MdfConvert.exe’ is provided together with MDA 8
– Via a LAB file the signals to be exported can be defined
– For LAB V1.3 format a new option exists to filter for signals AND device name



Notes:
- MdfConvert.exe can be found in the sub-folder of the MDA installation, namely *%Program Files% \ ETAS \ MDA8.7 \ McdCore*.
- Details of the supported options are listed using “MdfConvert.exe –help” in e.g. Windows Console.
- Signal name and device name given in the LAB V1.3 file are applied in case-sensitive manner, ECU information is not available in LAB files.
- If the LAB file used for filtering is not according to V1.3 format, the new option is ignored, i.e. just the signal name is applied for filtering.

MDA V8.7.2 – What's New

Version Overview for MDA V8.7.2 (September 2024)

- Functional Enhancements (MDA V8.7.2)
- Files, Formats & Data Types (MDA V8.7.2)
- **Usability Improvements (MDA V8.7.2)**
  - Customizable unit information in Battery instruments
  - Time Slider Bar allows to scroll when entering a time value
- Miscellaneous (MDA V8.7.2)

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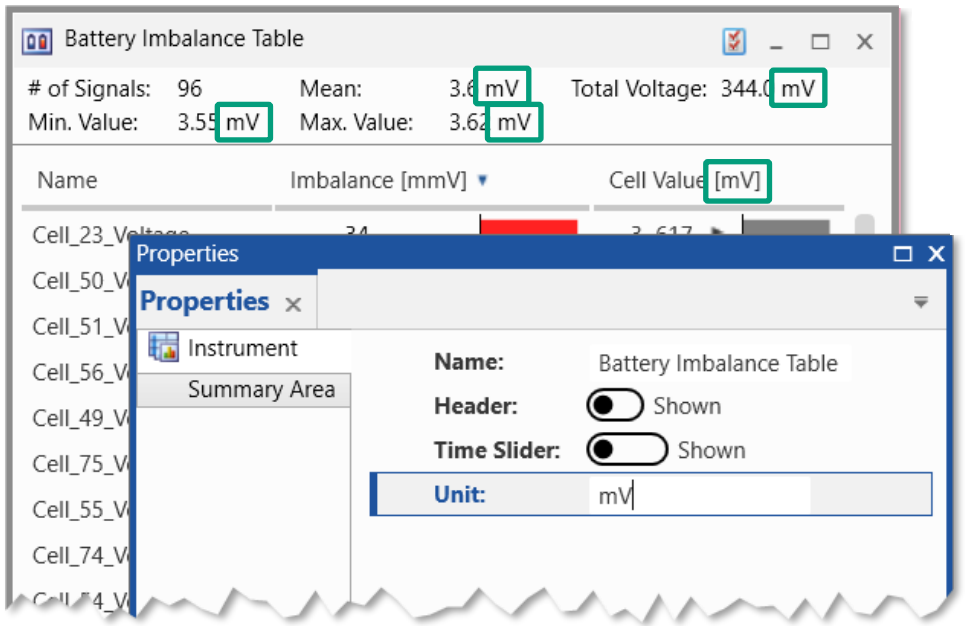
MDA V8.7.2 – What's New

Usability Improvements: Customizable unit information in Battery instruments (V8.7.2)

Better adaptation for wider usage of the Battery instruments

- For extending the usage of the ‘Battery’ instruments the user can now define a string for the signal unit
- The user-defined string is displayed
  - in the summary area of the instrument, and
  - optionally at the axis or in the column header according to the instruments capabilities
- The last user-defined unit string is used as default when a new instrument is created



Notes:
- The unit string should match to the values of the input signals, as MDA is using the values as these are in the measurement file.
- The imbalance values are calculated using a factor of 1,000. Accordingly, the prefix ‘milli’ is shown left from the user-defined unit string.
- In a future MDA release also the unit for the imbalance values and the conversion between signal values and imbalance will be definable.

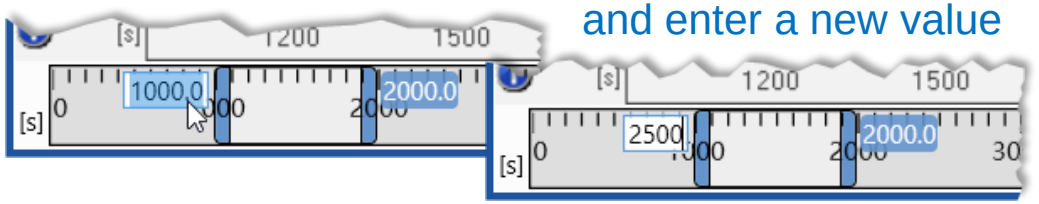
MDA V8.7.2 – What's New

Usability Improvements: Time Slider Bar allows to scroll when entering a time value (V8.7.2)

Easier navigation with the Time Slider Bar

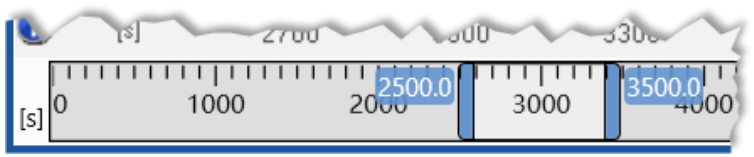
- Now you can navigate quickly to a specific point in time while keeping the current zoom level
  - If the left field for the time value is used, the visible time range is scrolled to the new time position while keeping the current zooming level
  - If the field at the right side is changed, a zoom operation with the new time value is conducted
- With the keyboard you can
  - Access the left time field by means of CTRL+B
  - Toggle between the time fields with TAB resp. SHIFT+TAB, or with CTRL+B

Click into the left field (or use CTRL+B)

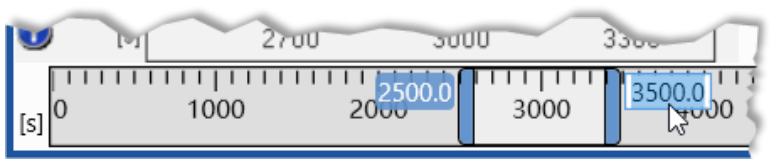


and enter a new value

Either press ENTER to scroll



Or press TAB to access the right time field



Notes:
- Scrolling is possible for any entered value, even values outside the available duration of the measurement file will be accepted.
- The value entered into the field at the right side must be higher than the value in the field at the left. A red frame indicates an invalid time value.

MDA V8.7.2 – What's New

Version Overview for MDA V8.7.2 (September 2024)

- Functional Enhancements (MDA V8.7.2)
- Files, Formats & Data Types (MDA V8.7.2)
- Usability Improvements (MDA V87.2)
- **Miscellaneous (MDA V8.7.2)**
  - Reworked component ‘MDF Shell Extension’

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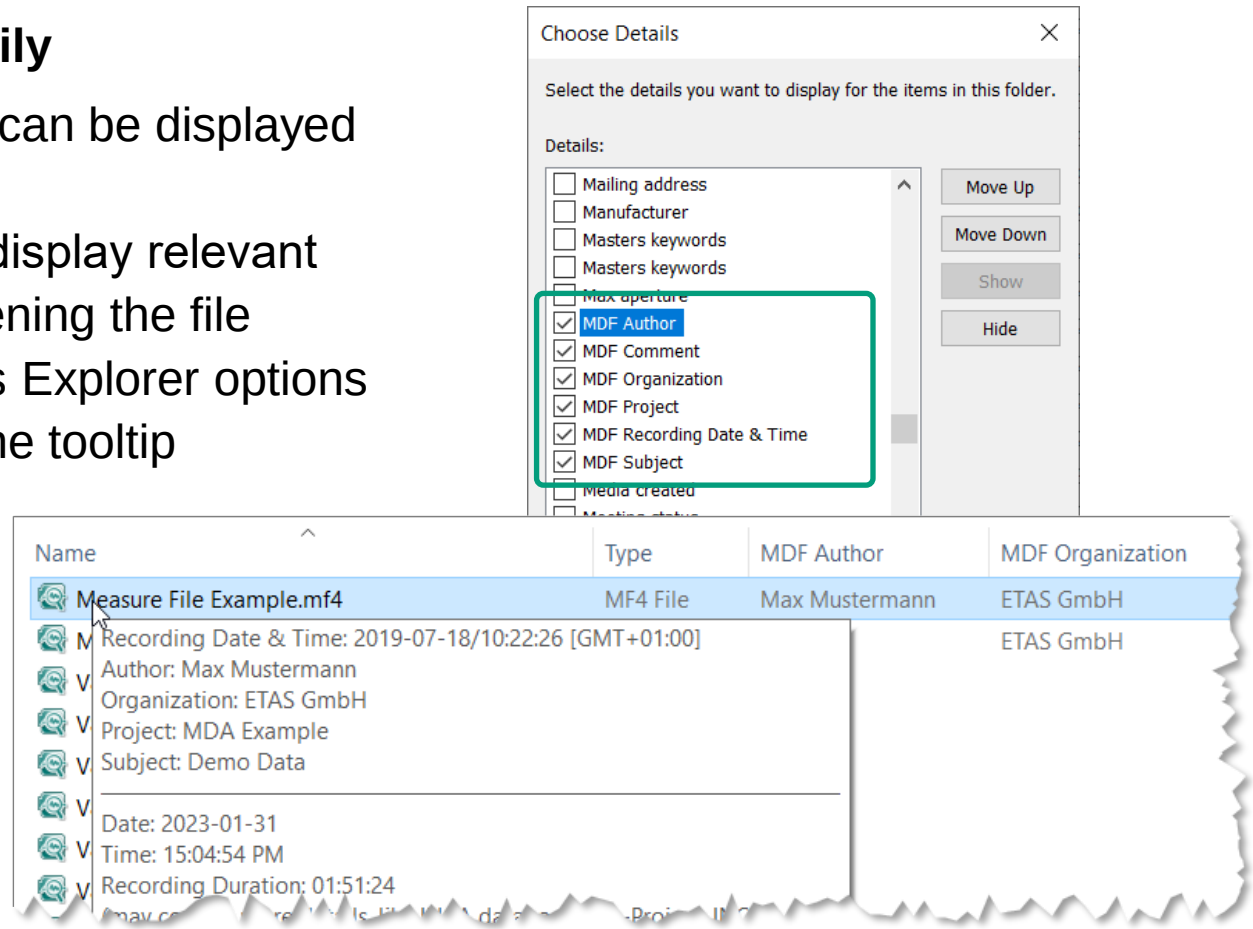
MDA V8.7.2 – What's New

Miscellaneous: Reworked component ‘MDF Shell Extension’ (shipped with INCA V7.5 SP2)

Find a requested measure file more easily

- In Windows Explorer additional columns can be displayed for measurement files in MDF format
- ETAS ‘MDF Shell Extension’ enables to display relevant meta-information quickly and without opening the file
- Desired columns can be set via Windows Explorer options
- MDF meta information is also visible in the tooltip for the selected measurement file
- The new ‘MDF Shell Extension‘ version was developed for better performance



Notes:
- New component is shipped with INCA V7.5 SP2.
- Installation is done independently from INCA and MDA.
- Usage of MDF Shell Extension is for free.
- A Windows® limit defines the amount of the shown information.

MDA V8.7.2 – What's New

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General Notes

MDA V8.7.2 – What's New

Additionally Installed Components	MDA V8.5.7	MDA V8.6.7	MDA V8.7.2
.Net-Runtime-Environment [1)]	V4.8	V4.8	V4.8
VCxRedist (V credist_x86 / V credist_x64)	VC15 + VC17 + VC19 [2)]	VC15 + VC19 [2)]	VC19 [2)]
ETAS Certificate	X	X	X
ETAS License Manager (x86 / x64) [3)]	V1.8.5	V1.8.11	V1.8.11
Direct X	V9	V9	V9
Others			
ETASShared (IPManager only)	13	14	14
System-Requirements			
Windows® 8.1 (64 bit)	X	X	-
Windows® 10 (64 bit) [4)]	X	X	X
Windows® 11	-	X	X
Windows® Server 2016 / 2019 / 2022	X [5)]	X [5)]	X [5)]

[1)] This component is installed only when no or just an older version is installed. This is checked by a Microsoft installation routine.
[2)] For Visual C++ 2019 Redistributable x64 only.
[3)] ETAS License Manager is installed only in case no or just an older version of the License Manager is installed.
[4)] Supported are Windows® 10 64bit (version 1803 or higher), and Windows® 10 64bit Enterprise (LTSC 2016 or higher).
[5)] Windows® Server 2016 / 2019 support given in V8.5.4; Windows® Server 2022 in V8.6.2. Usage of MDA is limited to one user at one time.

MDA V8.7.2 – What's New

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(Chapter names are hyperlinks)

Candidates for Future Versions of MDA

MDA V8.7.2 – What's New

– The following improvements are **candidates for future versions** of MDA8
  – Histogram for analyzing the samples of an individual signal
  – Statistical instrument supports enumerations
  – Statistical instrument can show the Median value of a signal
  – More information shown in the Configuration Manager (e.g. ECU, Device meta information)
  – Calibration VALUE from CDFX file as horizontal line in the oscilloscope
  – User-definable unit string for imbalance in ‘Battery’ instruments
  – Refreshing of a file listed in the File Explorer
  – Write index to file when a new MDF V4 is exported from MDA
  – New filter category in the Variable Explorer for signals showing an Error or a Warning
  – Synchronization of Statistics instrument to cursor time range

Note:
This is an early information about what **might come** in a future version of MDA.
It is **no commitment** for a specific improvement in a specific version.

MDA V8.7.2 – What's New

Overview

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(Chapter names are hyperlinks)

MDA V8.7.2 – What's New

Overview

- MDA V8.7.1 (June 2024)
- MDA V8.7.0 (March 2024)

(Version names are hyperlinks)

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MDA V8.7.1 – What's New

Functional Enhancements & Usability Improvements

Slides for MDA Release of June 2024

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MDA V8.7.1 – What's New

Version Overview for MDA V8.7.1 (June 2024)

- **Functional Enhancements (V8.7.1)**
  - Reassign files and/or devices after a Copy & Paste operation
  - Add a descriptive comment to a layer
  - Predefined Thermal Energy Flow Calculation based on a Curve for heat capacity
- **Files, Formats & Data Types (V8.7.1)**
  - Show CAN Bus raw data from a trace file
  - Support of CAN Bus trace files according to Vector's ASCII Format
  - Enhancement of XDA format to include a file time offset
- **Usability Improvements (V8.7.1)**
  - Usability improvements for the oscilloscope e.g. clearer representation of Pause events
  - Enhancements for Battery instruments
  - Additional case in which the Device Mapping dialog is suppressed

(Section names are hyperlinks)

MDA V8.7.1 – What's New

Version Overview for MDA V8.7.1 (June 2024)

- **Functional Enhancements (MDA V8.7.1)**
  - Reassign files and/or devices after a Copy & Paste operation
  - Add a descriptive comment to a layer
  - Predefined Thermal Energy Flow Calculation based on a Curve for heat capacity
- Files, Formats & Data Types (MDA V8.7.1)
- Usability Improvements (MDA V8.7.1)

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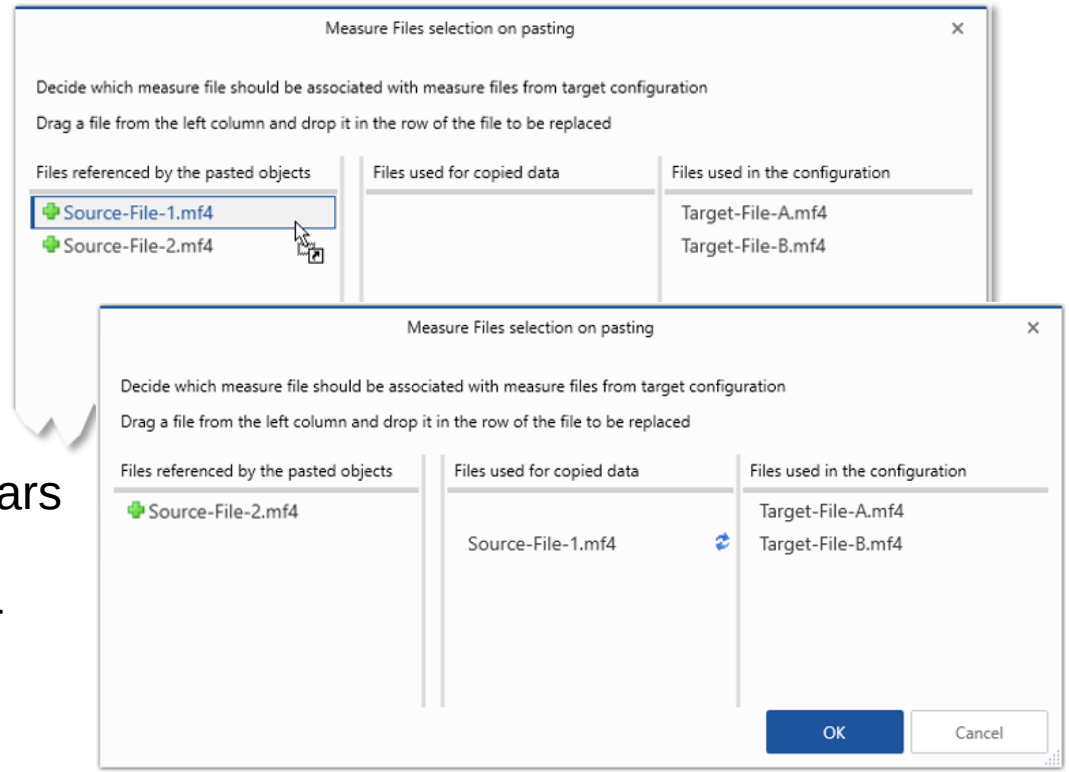
MDA V8.7.1 – What's New

Functional Enhancements: Reassign files and/or devices after a Copy & Paste operation (V8.7.1)

More control when pasting configuration objects from one configuration into another

- When instruments from a configuration are copied and pasted into another configuration, MDA tries to map the pasted signals automatically *
- If the mapping can not be conducted clearly, e.g. because of multiple file references, a dialog for file mapping, and optionally for device mapping appears
- References used by the pasted signals appear on the left and get assigned by drag & drop in the center



* Notes:
- An automatic mapping is done only if the pasted objects refer to one measure file, and the target configuration has just one measure file loaded.
- The file mapping dialog is used like the ‘Add or Replace’ dialog for measure files.
- The device mapping dialog looks and behaves the same as in case of replacing a measure file.

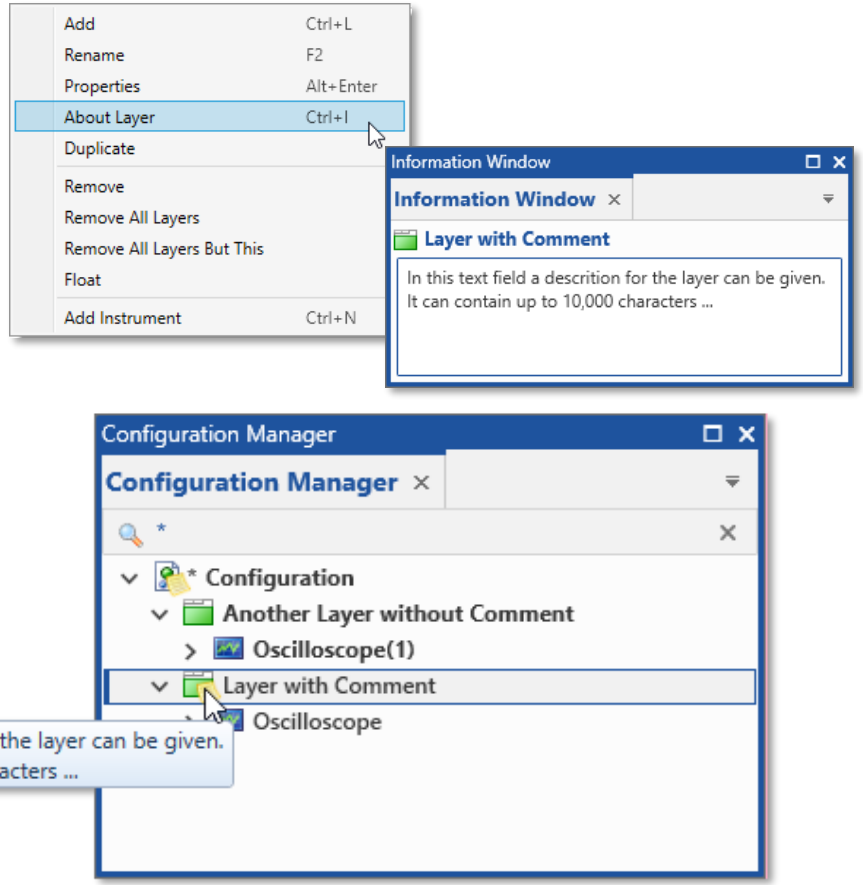
MDA V8.7.1 – What's New

Functional Enhancements: Add a descriptive comment to a layer (V8.7.1)

Document easily for what a layer is meant

– The Information Window allows to enter a comment per layer, e.g. to describe its meaning
– When a layer comment exists it is indicated by a symbol (📝) on the layer itself and in the Configuration Manager

– The same symbol is shown on configuration level for a configuration with a description
– In the tooltip of the symbol the comment for the layer or the configuration is shown



Note:
- The comment in the Information Window is limited to pure text and up to 10,000 characters.

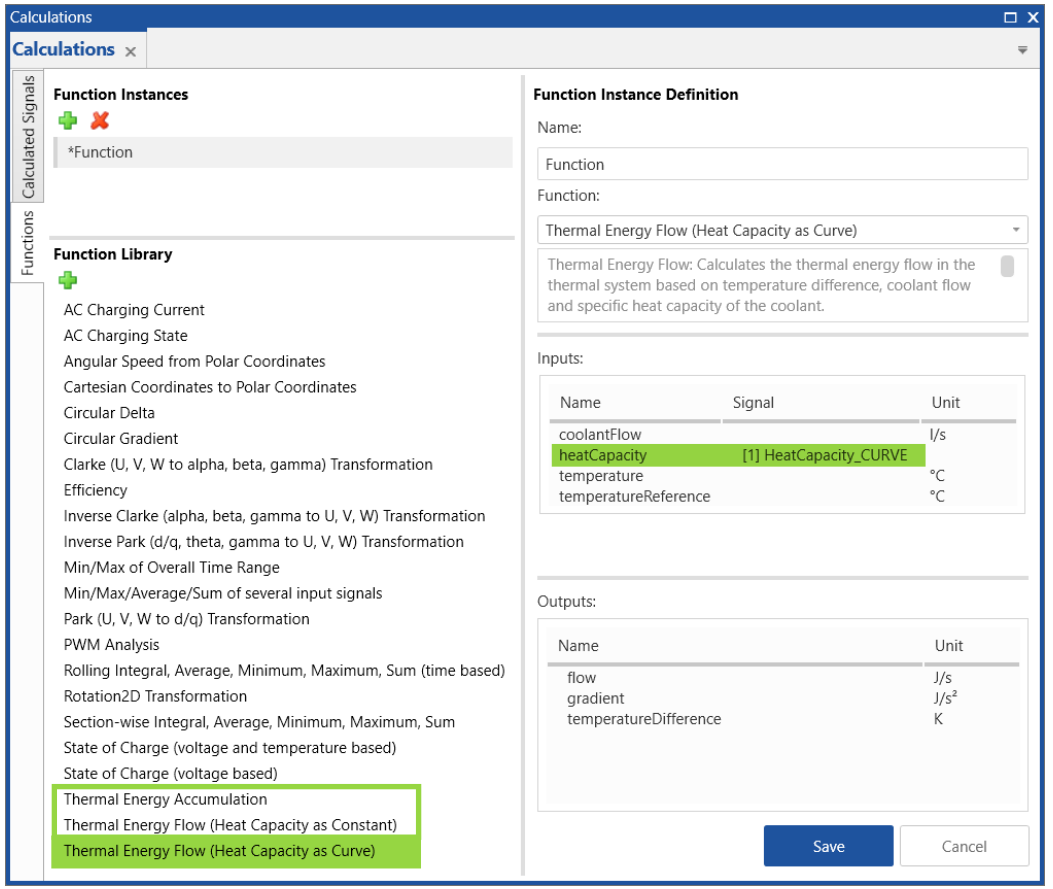
MDA V8.7.1 – What's New

Functional Enhancements: Another predefined Thermal Energy Calculation (V8.7.1)

Perform easily even complex calculations

– Predefined calculations in MDA require only to assign input signals and optionally to define parameter values
– The available predefined calculations for thermal energy considerations now include the Thermal Energy Flow using a curve for defining the heat capacity
– The curve can be read from a CDFX file

– To add the signals more easily to instruments drag & drop of output signals or the function instance itself is supported



MDA V8.7.1 – What's New

Version Overview for MDA V8.7.1 (June 2024)

- Functional Enhancements (MDA V8.7.1)
- **Files, Formats & Data Types (MDA V8.7.1)**
  - Show CAN Bus raw data from a trace file without description file
  - Support of CAN Bus trace files according to Vector’s ASCII format specification
  - Enhancement of XDA format to include a file time offset
- Usability Improvements (MDA V8.7.1)

Back to MDA V8.7.1 Overview

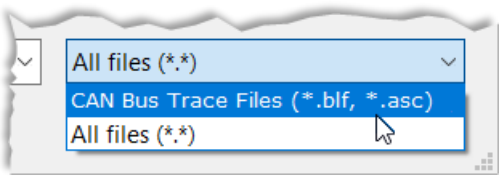
MDA V8.7.1 – What's New

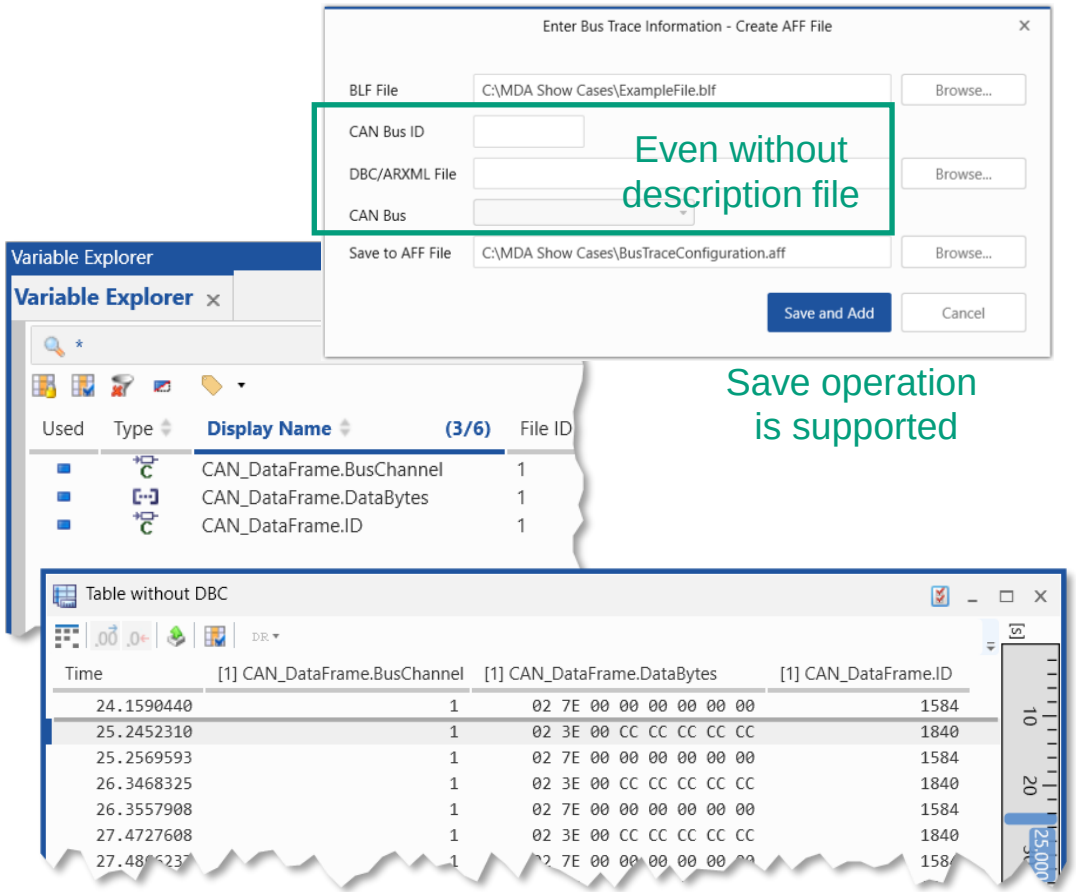
Files, Formats & Data Types: Show CAN Bus raw data from a BLF or ASCII trace file (V8.7.1)

Simply check basics of CAN Bus communication

- An enhancement of the add-on for CAN Bus Trace support allows to load raw CAN Bus data files without the assignment of a bus description file
- From the trace file three basic signals are derived, namely CAN Bus ID, Frame ID and payload
- Payload can be displayed in a table only

- Supported CAN Bus Trace file formats are BLF, and ASCII *





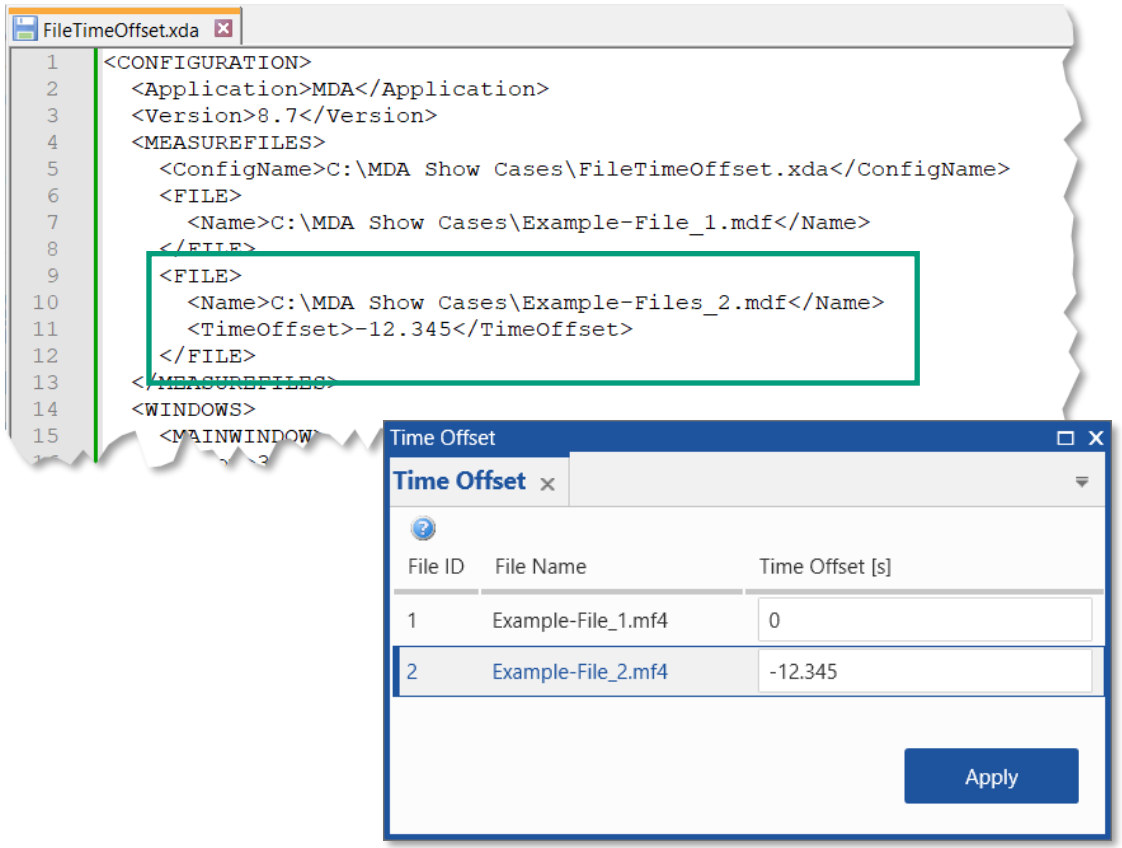
* Note:
- MDA V8.7.1 supports ASCII file format according to Vector format specification.

MDA V8.7.1 – What's New

Files, Formats & Data Types: Enhancement of XDA format to include a file time offset (V8.7.1)

Import a file time offset from XDA format

- When analyzing different measurement files a file time offset might be needed
- The definition of the XDA format was enhanced to include file time offsets
- Now such a file time offset can be identified separately from MDA, and then be included into the XDA file
- During import of the XDA file the file time offset is applied by MDA to the measurement files



Note:
- Time offsets written by MDA V7 into an XDA file are ignored when importing the XDA file into MDA V8.

MDA V8.7.1 – What's New

Version Overview for MDA V8.7.1 (June 2024)

- Functional Enhancements (MDA V8.7.1)
- Files, Formats & Data Types (MDA V8.7.1)
- **Usability Improvements (MDA V8.7.1)**
  - Improvements for the usage of the oscilloscope:
    Clearer representation of Pause events, flexible zooming behavior,
    entering axis value in normal or in exponential notation, improved visibility of axis values,
    quick hiding of signals from the same file
  - Enhancements for Battery instruments:
    Customizable summary area, column handling and visibility in the Battery Table instrument
  - Additional case in which the Device Mapping dialog is suppressed

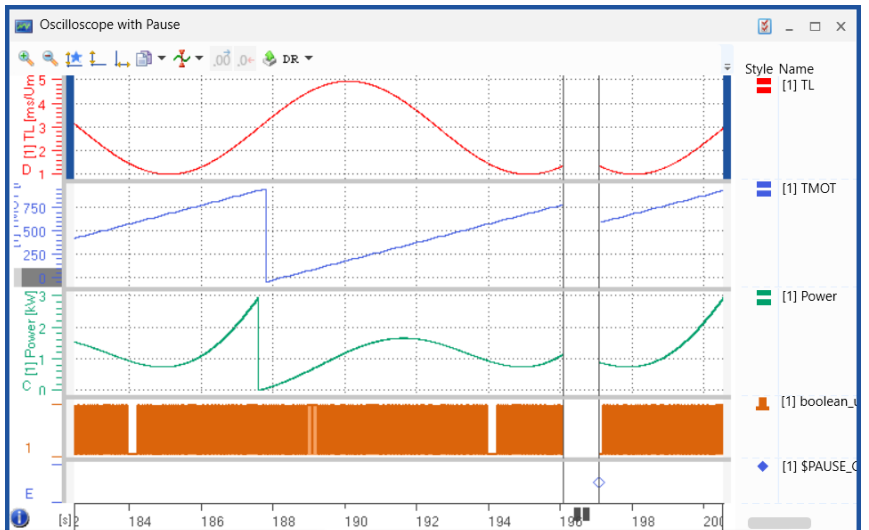
Back to MDA V8.7.1 Overview

MDA V8.7.1 – What's New

Usability Improvements for the oscilloscope 1/3 (V8.7.1)

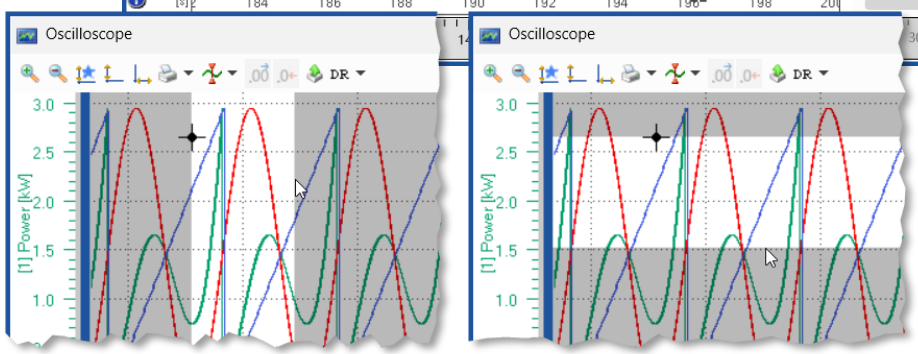
Easier identification of Pause events in the oscilloscope

– If a recording was interrupted by a Pause,
  it is important to clearly see the Pause events in MDA
– In the oscilloscope any Pause is indicated by a Pause icon
  on the time axis, and vertical lines in the graphical area
– Signal curves are interrupted during the Pause Event,
  even if the Pause signal is not assigned to the oscilloscope



Better control of the zooming behavior

– When zooming is done with the mouse
  the starting point and the current mouse position
  define whether zooming is done in x- or y-direction



More x- than y-direction

More y- than x-direction

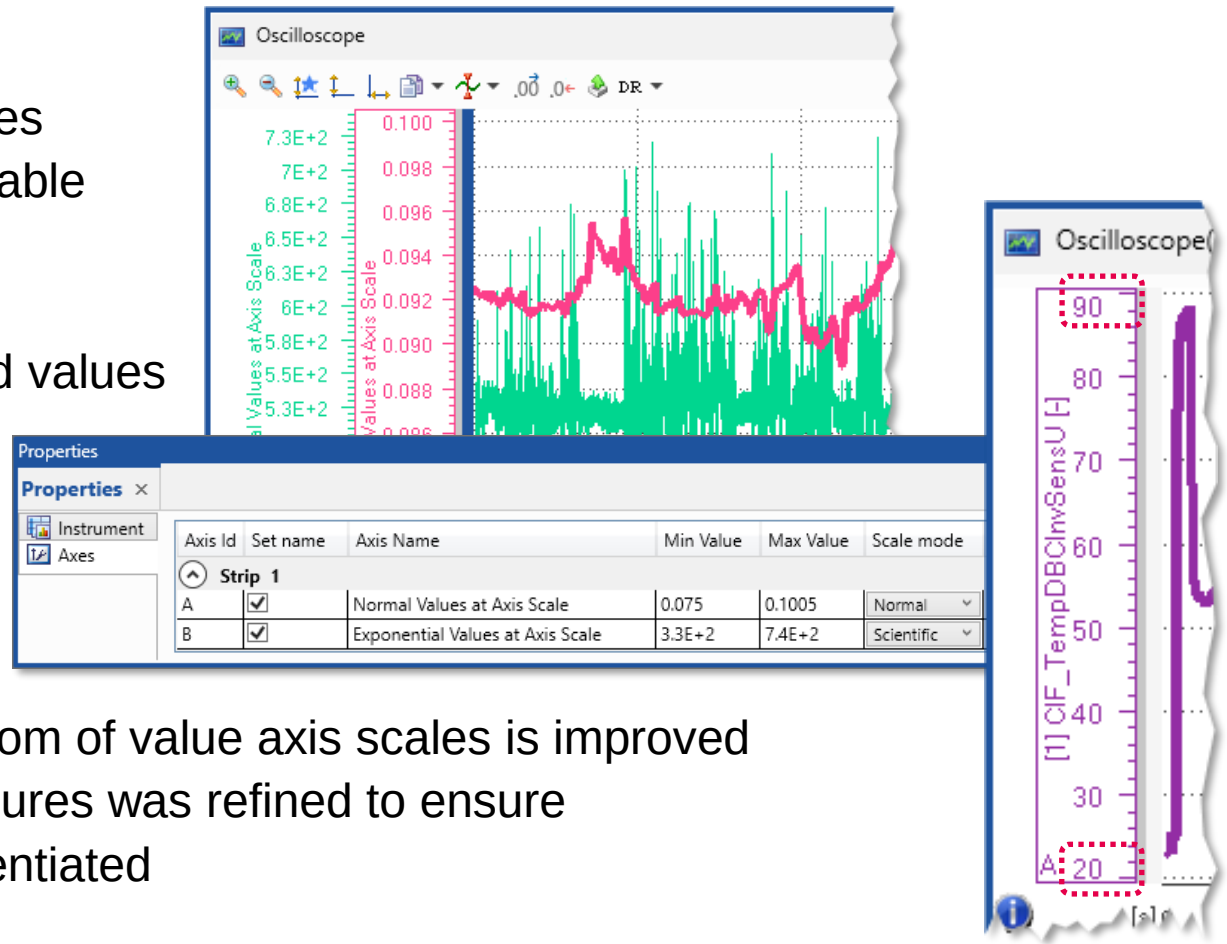
Note:
- The signal curves are drawn again from the first sample after the Pause.

MDA V8.7.1 – What's New

Usability Improvements for the oscilloscope 2/3 (V8.7.1)

Entering axis values more intuitively

– The style of the figures at the value scales in an oscilloscope or scatter plot is definable
– Axis values can be displayed in normal, or an exponential figure style
– To facilitate the definition of the expected values MDA V8.7.1 allows to enter normal and exponential values directly, if needed these are changed to match the chosen style



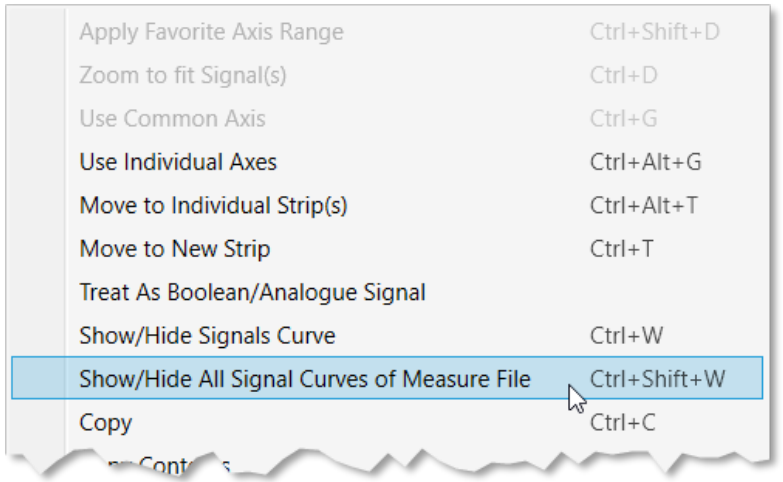
– Readability of figures at the top and bottom of value axis scales is improved
– Algorithm to display decimals for axis figures was refined to ensure that adjacent scale figures can be differentiated

MDA V8.7.1 – What's New

Usability Improvements for the oscilloscope 3/3 (V8.7.1)

Get quickly a clearer representation in the oscilloscope

– An oscilloscope can include signals from several measurement files which might cause that the individual signal curves are hard to be seen
– A new context menu entry allows to hide all signals from the same measure file in one step

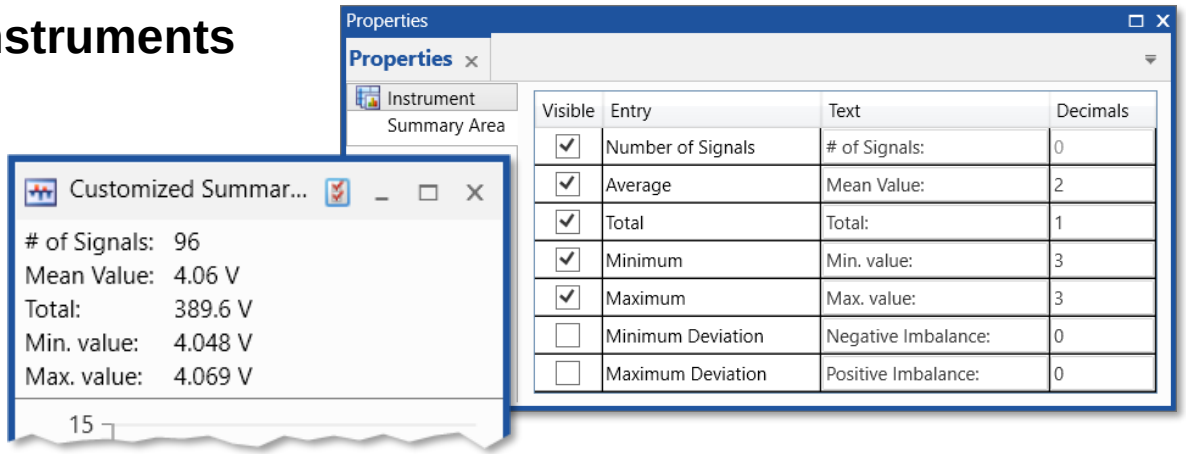


MDA V8.7.1 – What's New

Usability Improvements: Enhancements for Battery instruments (V8.7.1)

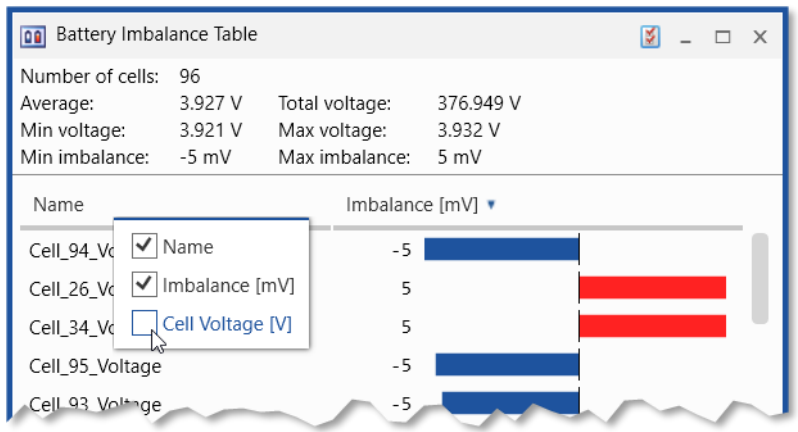
More flexibility in the summary area of the instruments

– All Battery instruments show at the top in the summary some general information of the assigned individual signals
– MDA V8.7.1 allows for each of the entries that it can be renamed, or be hidden *



Adapt the data display in the Battery Table

– In the Battery Table instrument now also the voltage values are shown graphically as bars
– The columns for imbalance and voltage can be resized, reordered and be shown or hidden *



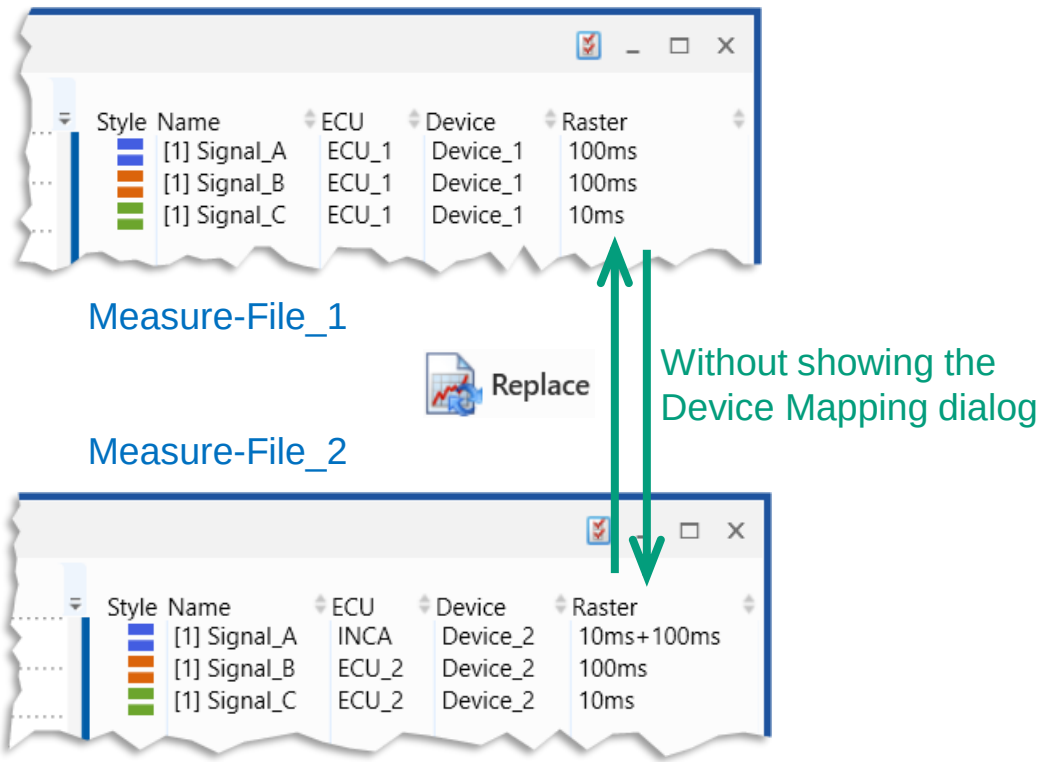
* Note:
- Last defined settings are used as default when a new instrument is created.

MDA V8.7.1 – What's New

Usability Improvements: Additional case in which the Device Mapping dialog is suppressed (V8.7.1)

Better signal mapping for specific ECU / Device combination

– Besides the signal name MDA is using internally the ECU/device reference for clear signal mapping *
– If a measurement file was recorded with INCA, and data acquisition of a signal was done in multiple rasters then the signal's ECU entry will be marked by the entry 'INCA'
– MDA detects the special 'INCA' entry and handles it gracefully: i.e. signal mapping is done although the ECU entry might differ, and the device mapping dialog does not appear



* Notes:
- The complete signal identification is based mainly on the ASAM MDF 4 standard.
- The marked ECU entry 'INCA' differs from the ECU information provided in the A2L file.

MDA V8.7.0 – What's New

Functional Enhancements & Usability Improvements

Slides for MDA Release of March 2024

Back to Version Selection

MDA V8.7.0 – What's New

Version Overview for MDA V8.7.0 (March 2024)

- **Functional Enhancements (V8.7.0)**
  - Export of configuration contents to XDA format for import in former MDA versions
  - Import of battery instruments from XDA file
  - New instrument: Battery Voltage Graph
  - Reworked ‘Signal Replace’ dialog
  - New filter categories for ECU and Raster
  - Additional predefined calculations
- **Files, Formats & Data Types (V8.7.0)**
  - LAB File Format V1.3 INCA dialect
  - Write source file into textual measure files
  - Header information for MDF files
  - Reduced list of formats in ‘File Open’ dialog
- **Usability Improvements (V8.7.0)**
  - Separate entries of file path and name in the export dialog
  - Adding signal(s) to multiple instruments
  - ‘File Open’ dialog appears when loading a configuration template (XDT)
  - Periodic creation of a backup configuration
- **Miscellaneous (V8.7.0)**
  - Files from /ProgramData folder get migrated

(Section names are hyperlinks)

Back to Version Selection

MDA V8.7.0 – What's New

Version Overview for MDA V8.7.0 (March 2024)

- **Functional Enhancements (MDA V8.7.0)**
  - Export of MDA V8.7 configuration contents to XDA format for the import in former MDA versions
  - Battery instruments used in INCA Experiment are imported via XDA files
  - New Battery Graph instrument to display battery cell voltage values
  - Better information and flexibility in the ‘Signal Replace’ dialog
  - Variable Explorer: Additional filter categories for ECU and Raster
  - Additional predefined calculations:
    Thermal Energy Flow, Thermal Energy Accumulation, Polar & Cartesian Transformation,
    Rolling calculation of Minimum, Maximum, Average, Integral and Sum
- Files, Formats & Data Types (MDA V8.7.0)
- Usability Improvements (MDA V8.7.0)
- Miscellaneous (MDA V8.7.0)

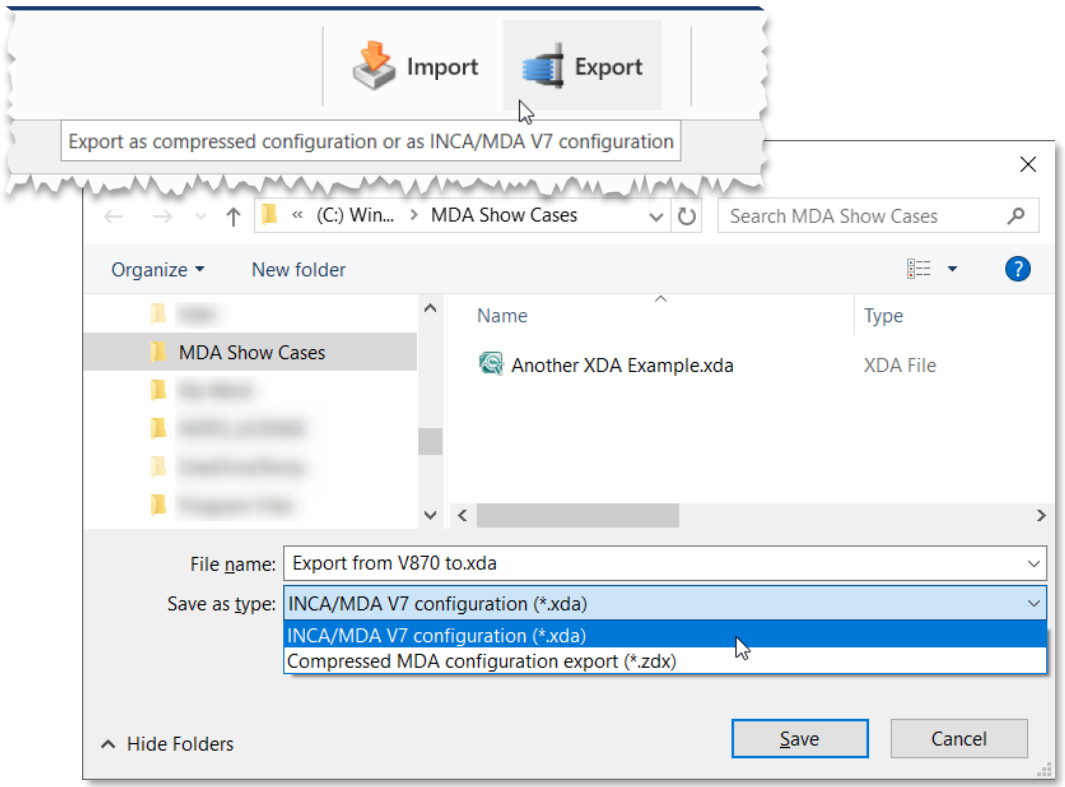
Back to MDA V8.7.0 Overview

MDA V8.7.0 – What's New

Functional Enhancements: Export of MDA V8.7 configuration contents to XDA format (V8.7.0)

Reuse main configuration contents in older MDA V8 software versions

- MDA V8.7 allows to export specific configuration contents into XDA file format
- Older MDA versions support import of XDA files
- Export can be triggered via the Export icon
- In the ‘Save As’ dialog the XDA file format can be selected
- Only instrument types oscilloscope, scatter plot, and table instruments are exported



Notes:
- For technical reasons other instruments, calculated signals, time offsets and layer information are excluded from the export to XDA format.
- When importing the XDA file, the importing MDA version will assign each instrument to a separate new layer.
- Import is possible with MDA V8.3.4 or higher, depending on the importing version some of the exported instruments or its settings might be skipped.

MDA V8.7.0 – What's New

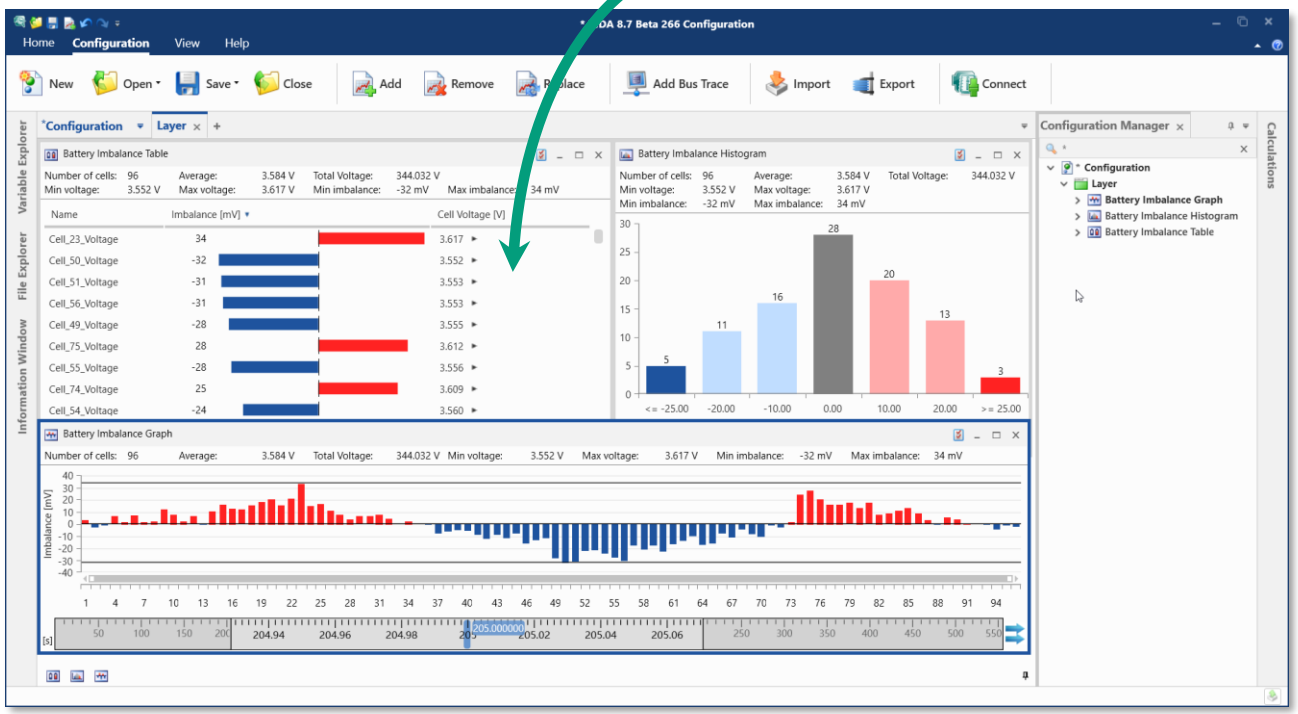
Functional Enhancements: Import of battery instruments used in INCA Experiment (V8.7.0)

Battery instruments defined in INCA Experiment can be re-used in MDA

– MDA V8.7.0 is prepared to import battery instruments from an INCA experiment environment via an XDA file format

– The instrument gets restored in MDA and displays the same signals which were shown in the INCA Experiment

Import of an XDA File incl. battery instruments



Note:

- Writing information about battery instruments into XDA files by INCA is planned and will be available with one of the next INCA releases.

MDA V8.7.0 – What's New

Functional Enhancements: Instrument to display battery cell voltage values (V8.7.0)

Get a complete overview of all cell voltage values of your battery system

- The new instrument ‘Battery Voltage Graph’ displays the voltage values of all assigned cell voltage signals for a specific point in time
- Horizontal threshold lines can be defined, accordingly the color of a column changes when a threshold is exceeded
- Synchronization with other instruments for displaying the same point in time is possible in the usual manner

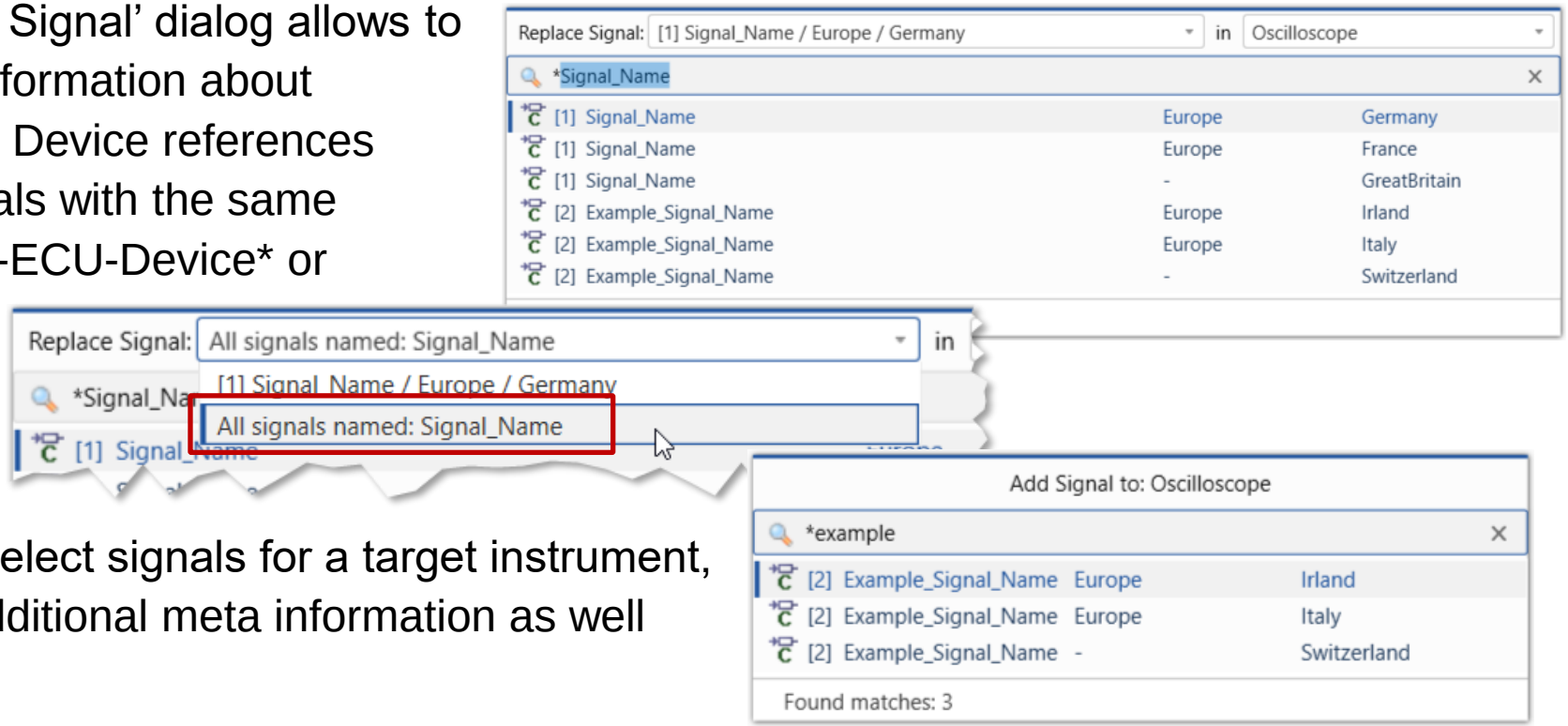
Note:
- “Upper Limit” and “Lower Limit” define horizontal threshold lines and have no effect for the axis range.

MDA V8.7.0 – What's New

Functional Enhancements: Better information and flexibility in the ‘Signal Replace’ dialog (V8.7.0)

‘Signal Replace’ operation gets clearer and more flexible

– The reworked ‘Replace Signal’ dialog allows to
  – Provide more meta information about File source, ECU and Device references
  – Replace just the signals with the same combination of signal-ECU-Device* or any signal with the same name



– When using ‘Insert’ to select signals for a target instrument, the dialog shows the additional meta information as well

* Note:
- According to ASAM MDF standard a signal is identified clearly in one file by the combination of Signal Name / ECU / Device / Raster / RasterECU / RasterDevice.

MDA V8.7.0 – What's New

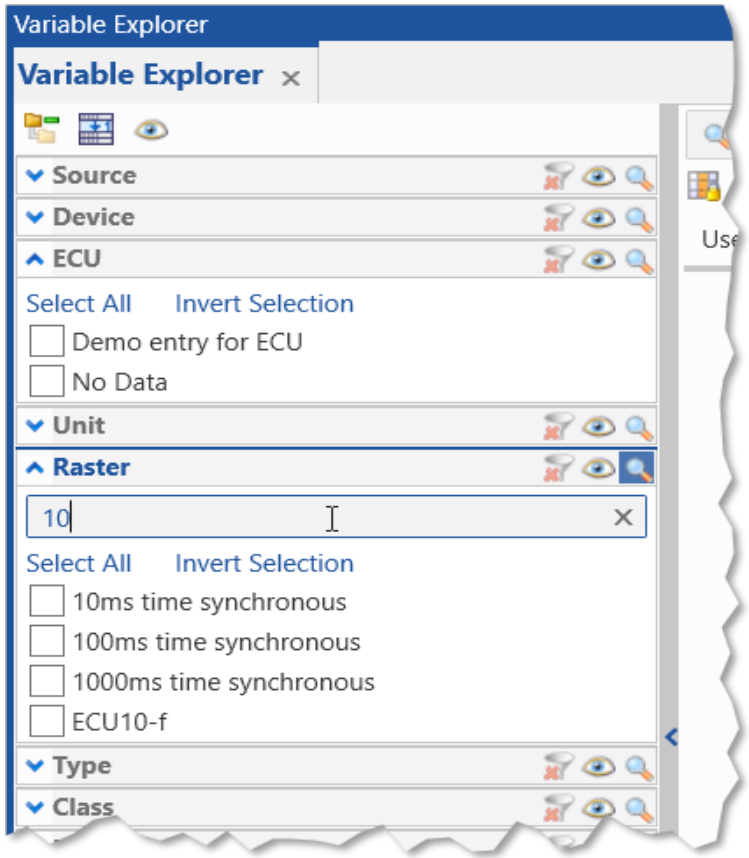
Functional Enhancements: Filter Categories for ECU and Raster (V8.7.0)

Find quickly the desired signals in the Variable Explorer

– Two new filter categories allow to define and apply easily filters for ECU and Raster meta information
– The list of displayed signals is reduced automatically after checking a filter category entry
– Multi-selection in one category (OR combined) or across different categories (AND combined) is supported

Hint:

– Searching in a category can reduce the entries effectively
– To exclude many entries: first filter for the undesired ones, use the ‘Select All’ option, then remove the category filter, and finally ‘Invert the Selection’

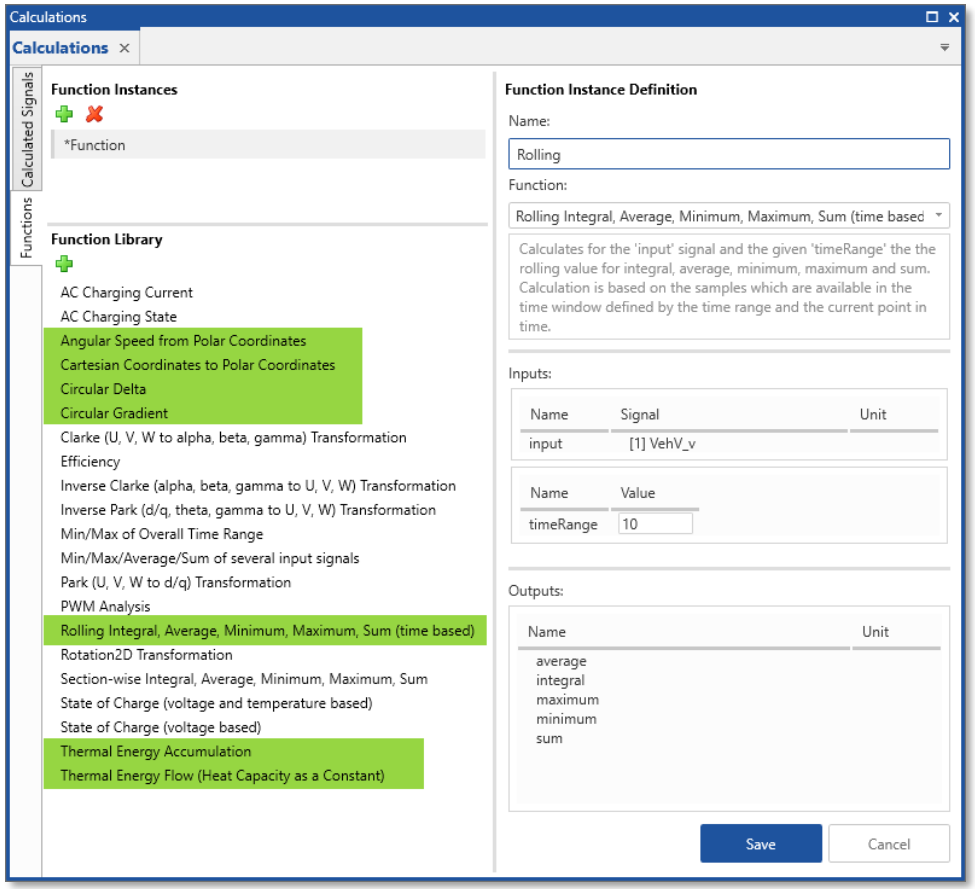


MDA V8.7.0 – What's New

Functional Enhancements: Additional predefined calculations (V8.7.0)

Perform easily even complex calculations

- Predefined calculations in MDA require only to assign input signals and optionally to define parameter values
- New predefined calculations in MDA V8.7.0 are
  - Thermal Energy Accumulation
  - Thermal Energy Flow
  - Several Polar & Cartesian transformations
  - Rolling calculation of the Minimum, Maximum, Average, Integral and Sum for a fixed time period



MDA V8.7.0 – What's New

Version Overview for MDA V8.7.0 (March 2024)

- Functional Enhancements (MDA V8.7.0)
- **Files, Formats & Data Types (MDA V8.7.0)**
  - Additional Label File Format ‘V1.3 INCA dialect’
  - Option to write source information into ASCII based textual measure files
  - Improved header information for MDF files written by MDA resp. MCD Core
  - Reduced list of supported formats in ‘File Open’ dialog
- Usability Improvements (MDA V8.7.0)
- Miscellaneous (MDA V8.7.0)

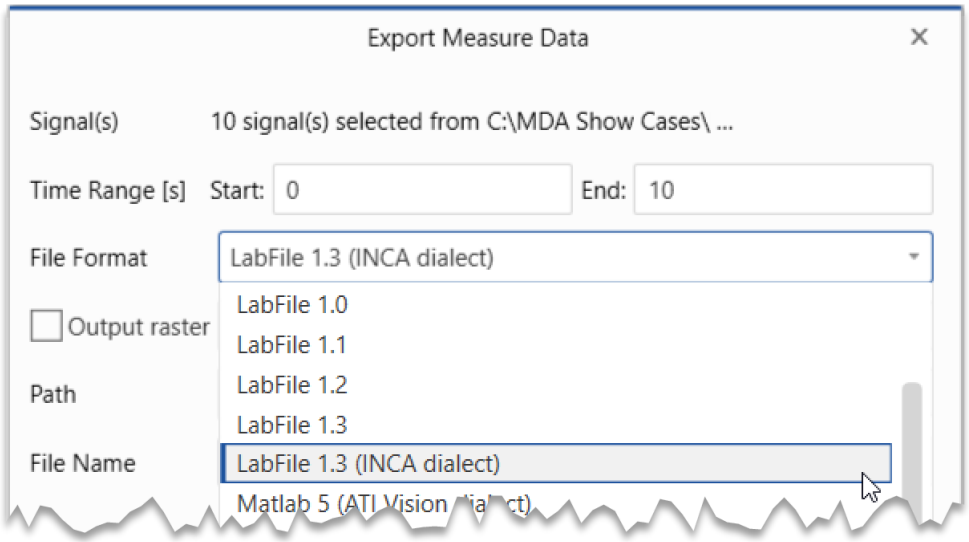
Back to MDA V8.7.0 Overview

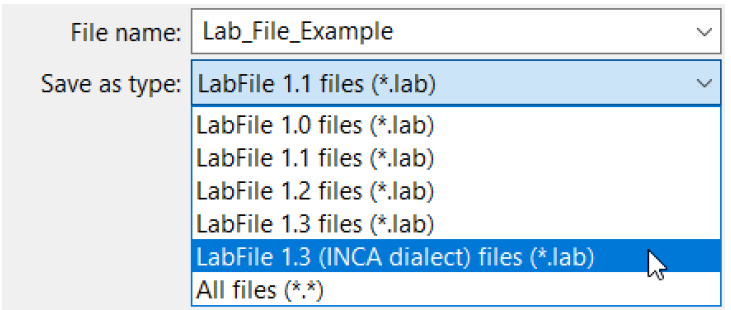
MDA V8.7.0 – What's New

Files, Formats & Data Types: LAB File Format V1.3 INCA dialect (V8.7.0)

Full support of the round-trip between INCA and MDA for signal selection

- A new Label file format variant named "LAB V1.3 INCA dialect" is supported
- In this format the device information for specific entries is modified to allow the direct identification of these variables in INCA's Variable Selection Dialog
- This applies in MDA to measurement signals which were defined in INCA as
  - Recorded calibration variables ("MeasureCals")
  - Recording of calibration changes





Note:
- Export into LAB file format can be triggered from the Export Dialog and selecting the LAB file format, and also from the Configuration Manager via the context menu entry "Create Label File…".

MDA V8.7.0 – What's New

Files, Formats & Data Types: Option to write source information into textual measure files (V8.7.0)

Clearly identify the source file even in textual measure files created after an export from multiple source files

– MDA allows to define the information and structure of ASCII based measure files exported from MDA
– By two new options the source file name and/or path can be included per signal into the exported measure file

time	TMOT	TMOT	CalculatedSignal
	Coldstart-1.dat	Coldstart-2.dat	VirtualTarget
	ETK-C:1	ETK-C:1	
s	grad C	grad C	grad_C
0.000	-24.0	-19.5	4.5
0.010	-23.9	-19.5	4.4
0.020	-23.9	-19.4	4.4

exampleAsciiFormat.ini

```
25
26  ; Source Row
27  ; Optional. No default value.
28  ; Zero-based row index where the signals' source file name (and path) specifications starts.
29  sourceRow=4
30
31  ; Source Format
32  ; Optional. Default "fileNameOnly".
33  ; 1) fileNameOnly - only file name of source will be written
34  ; 2) fileNameAndPath - file name and full path will be written
35  sourceFormat="fileNameOnly"
36
```

Notes:
- In the INI file for the MRF file format delivered with MDA the option is listed, but set to inactive by default.
- The option can be set to write source path and file, or to source file only.
- For calculated signals created in MDA the source information is ‘VirtualTarget’.

MDA V8.7.0 – What's New

Files, Formats & Data Types: Improved header information for MDF files written by MDA (V8.7.0)

Easier identification of MDF files created by MDA and MCD Core

- MDF header information is included when a new file is created from
  - MDA UI
  - MCD Core
  - mdfConvert.exe
  - mdfCombine.exe
- The header information allows to identify clearly the application used to create the measure file

```
</TX><common_properties><e name="author">Max Mustermann</
<TX>Initial create</TX>
<tool_id>McdCore</tool_id>
<tool_vendor>ETAS GmbH</tool_vendor>
<tool_version>1.3.0.129</tool_version>
<user_name>McdCore</user_name>

<common_properties><tree name=ETAS GmbH>
<e name="calling_tool_id">MDFConvert</e><e name="calling
</tree></common_properties>
```

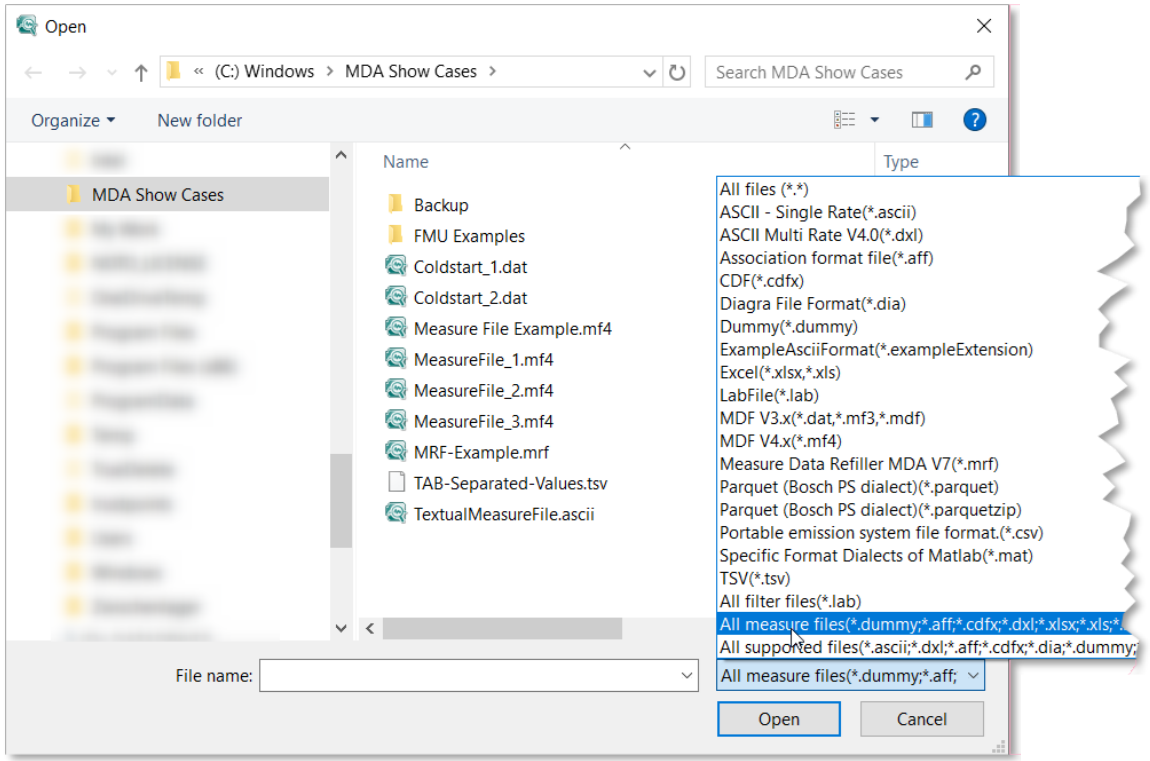
Note:
- Supported are ASAM standardized MDF V4.x format variants only.

MDA V8.7.0 – What's New

Files, Formats & Data Types: Reduced list of supported formats in ‘File Open’ dialog (V8.7.0)

Better guidance which files can be loaded into MDA

– File formats listed in the ‘File Open’ dialog are filtered more user-friendly
– By default only file formats are listed which can be added to MDA
– This prevents to select unintentionally files which are not supported by MDA



Note:
- To load a CAN Bus Trace file in BLF format use the respective Bus Trace icon.

MDA V8.7.0 – What's New

Version Overview for MDA V8.7.0 (March 2024)

- Functional Enhancements (MDA V8.7.0)
- Files, Formats & Data Types (MDA V8.7.0)
- **Usability Improvements (MDA V8.7.0)**
  - Separate fields for file path and file name in the export dialog
  - Allow signal(s) to be added to multiple instruments
  - ‘File Open’ dialog appears when loading a configuration template (XDT)
  - Periodic creation of a backup configuration
- Miscellaneous (MDA V8.7.0)

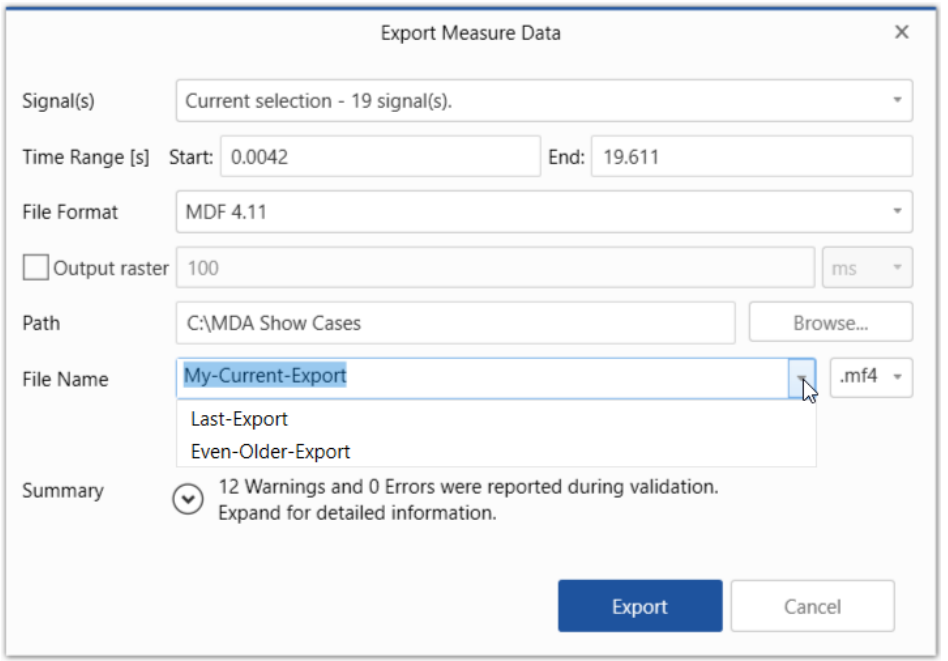
Back to MDA V8.7.0 Overview

MDA V8.7.0 – What's New

Usability Improvements: Separate fields for file path and file name in the export dialog (V8.7.0)

Easier definition of File Path and File Name in the Export dialog

– The export dialog includes separate fields for the file path and the file name
– The file extension is set automatically by MDA
– If multiple files extensions are possible, a drop-down menu allows to select the desired one
– Additionally, the last used 10 export file names are persisted and can be re-selected

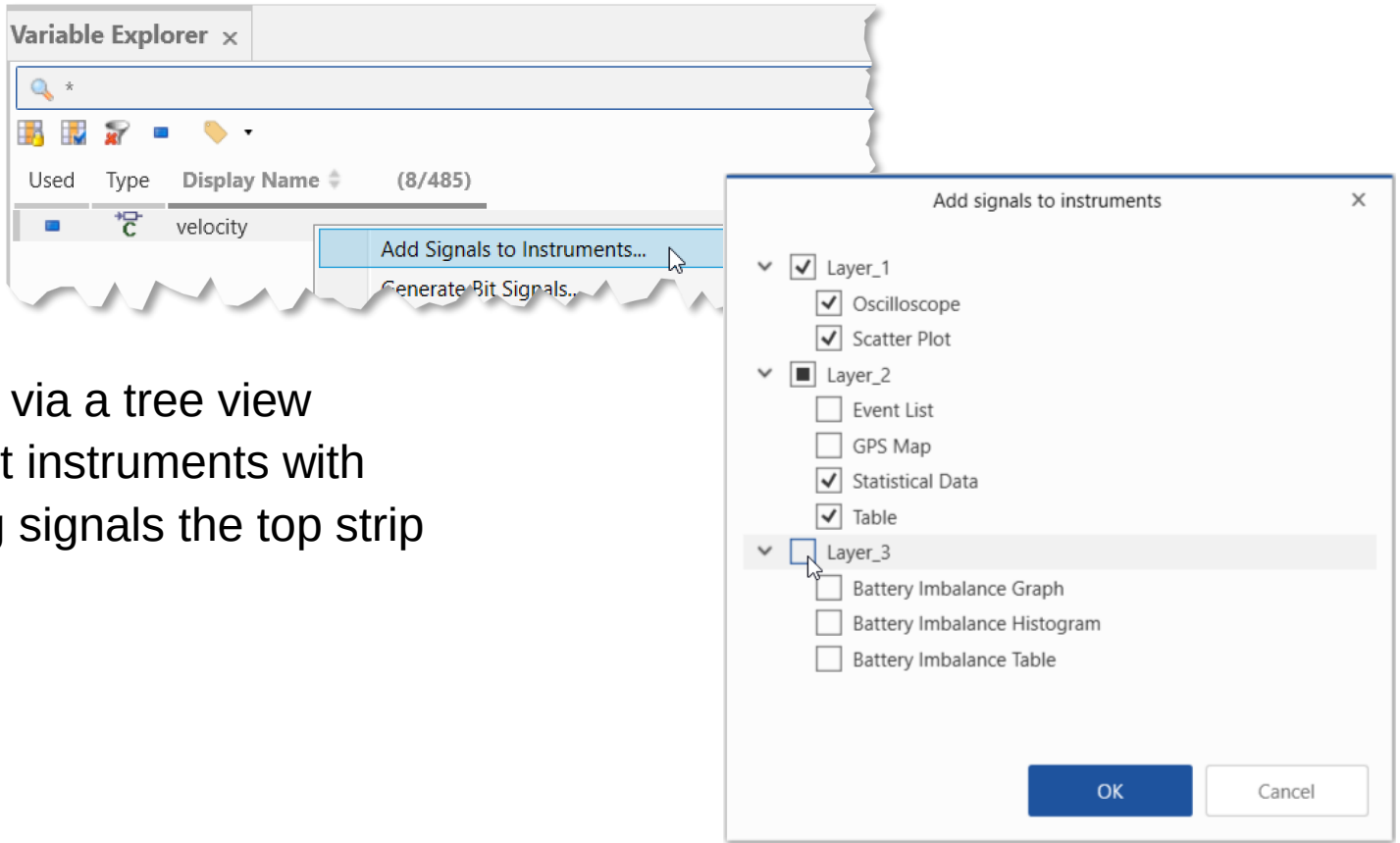


MDA V8.7.0 – What's New

Usability Improvements: Allow signal(s) to be added to multiple instruments (V8.7.0)

Faster assignment of a signal to multiple instruments

- A new context menu entry in the Variable Explorer allows to add signals to multiple instruments
- User can select target instruments via a tree view
- The signals are added to the target instruments with the default settings, e.g. for analog signals the top strip in any oscilloscope

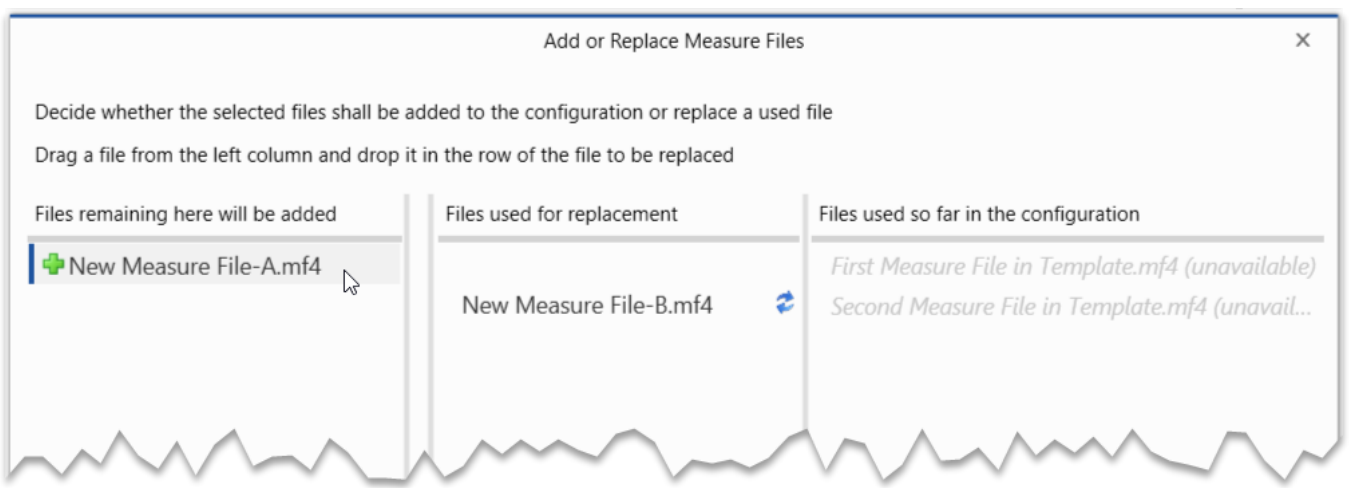


MDA V8.7.0 – What's New

Usability Improvements: ‘File Open’ dialog appears when loading a configuration template (V8.7.0)

Be more quickly ready-to-work when using a configuration template

- When a configuration template is used MDA shows only placeholders for the measure files
- This avoids waiting time for loading the measure files which will be usually replaced anyway
- To select the desired measure files the ‘File Open’ dialog appears automatically
- After the file selection is done, the ‘Add or Replace’ dialog allows to assign the new files to the placeholder entries referenced in the template



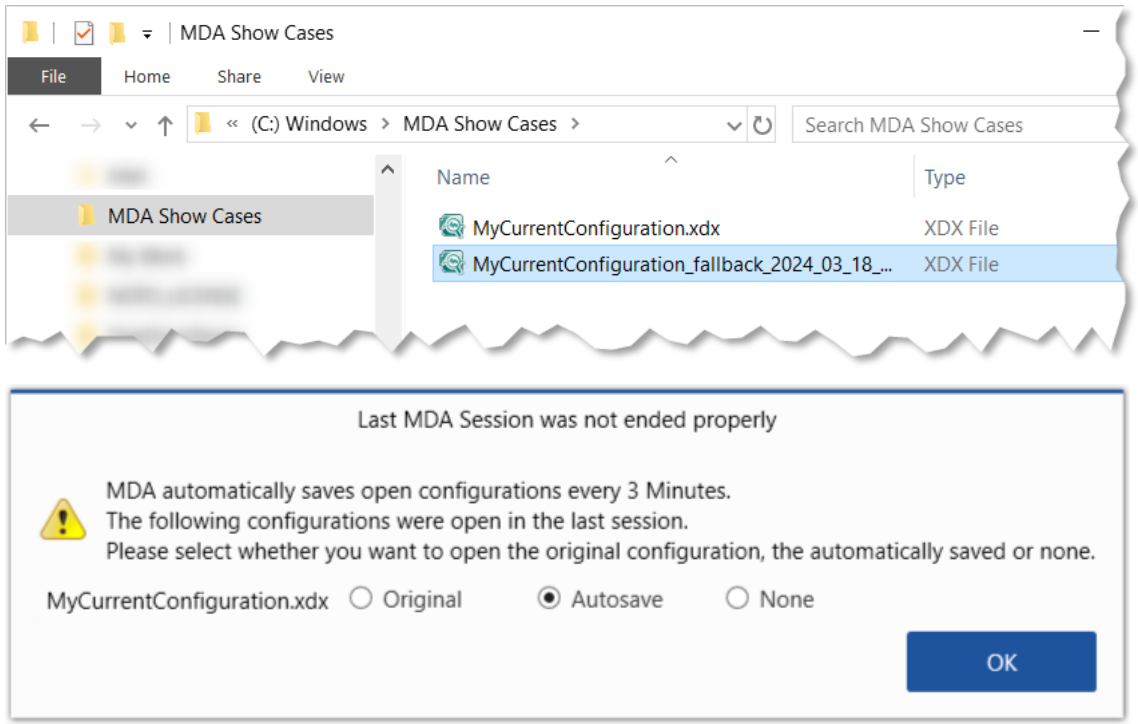
Note:
- If a measure file remains unassigned in the left column, it is just added and its signals are not mapped to signals used in the configuration.

MDA V8.7.0 – What's New

Usability Improvements: Periodic creation of a backup configuration (V8.7.0)

Potential loss of a configuration is reduced by automatic backups

- MDA creates periodically a copy of the currently loaded configuration(s)
- If MDA is terminated in an uncontrolled manner, the user can choose after a restart whether the original configuration or the backup configuration shall be loaded
- When closing MDA in a controlled manner all backup configurations are removed



Notes:
- If the backup configuration is opened, it represents an own configuration instance, and can be handled independently from the original configuration.
- If the original configuration or 'none' is chosen, the file of the backup configuration is removed.

MDA V8.7.0 – What's New

Version Overview for MDA V8.7.0 (March 2024)

- Functional Enhancements (MDA V8.7.0)
- Files, Formats & Data Types (MDA V8.7.0)
- Usability Improvements (MDA V8.7.0)
- **Miscellaneous (MDA V8.7.0)**
  - Automatic migration of specific files from ProgramData folder

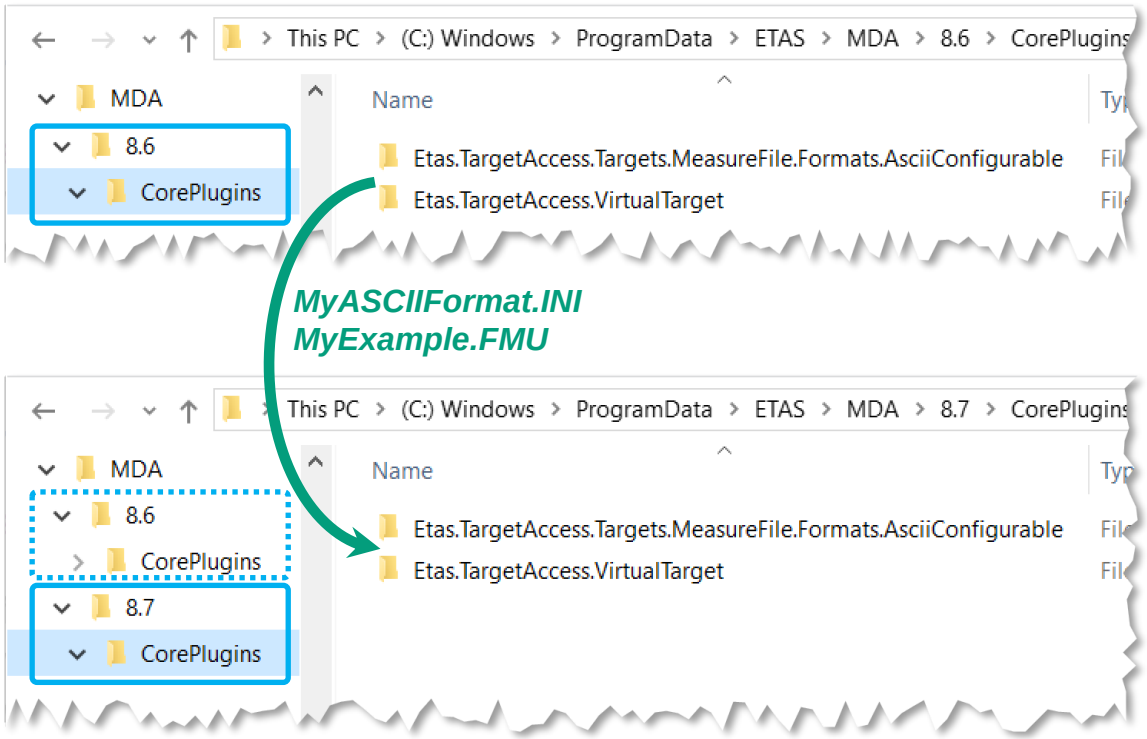
Back to MDA V8.7.0 Overview

MDA V8.7.0 – What's New

Miscellaneous: Automatic migration of specific files from ProgramData folder (V8.7.0)

Reduced migration effort for customer specific files

– MDA supports some special files, like INI files for ASCII file formats or FMU files for calculations
– At the very first start of a new ‘minor version’ MDA checks whether there exist such files in the folder of an older version
– If so, these files are copied into the folders of the new version under *\ProgramData\ETAS\MDA\8.x*



Notes:
- Operation is done only once at the very first start of the new minor version.
- ASCII files are copied from / to …\ETAS\MDA\8.x\CorePlugins\Etas.TargetAccess.Targets.MeasureFile.Formats.AsciiConfigurable.
- FMU files are copied from / to …\ETAS\MDA\8.6\CorePlugins\Etas.TargetAccess.VirtualTarget.

Thank you
for using MDA V8.7