

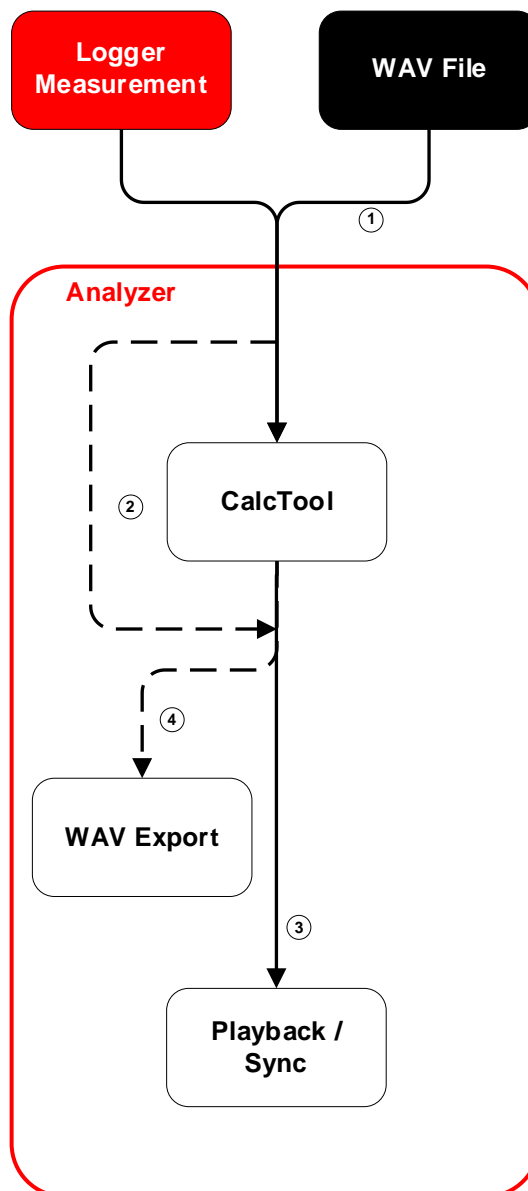
WinIt / Download

- **Support for 2D OneFile Recordings from USB-Stick Loggers**
The new OneFile Recording improves the data security/integrity when recording on the USB Stick if its unplugged or the system is powered off when writing data to it.
This is achieved by completely avoiding to write to the USB Sticks file system table. – Logger Settings and Measurement Data are written into the same container file.
- **Import and export of ASAM MDF Measurements and Vector ASC or BLF CAN Streams**
Analyze and Export Automotive Standard CAN Recording formats with 2D Software and Loggers.

Analyzer

- **Improvements for High-Res Screens**
Multimonitor support with different scaling setting per monitor
(e.g. FullHD Laptop + 4K External Monitor)
- **GoPro® AutoSync**
Automatic import and synchronization of GoPro Hero 7 Black / 8 Black / 9 Black and GoProMAX 360° Videos with the measurement. The videos can be played back synchronized with the measurement.
→ [Video Tutorial: GoPro AutoSync](#)
→ [Demo Video: GoPro MAX + DashWare with 2D Recording](#)
- **Improved DashWare Link**
One-Click DashWare export when the videos are imported and synchronized with the GoPro AutoSync function.
→ [2D Dashware Link Page](#)
- **Additional viewing Modes for High-Res RTK GPS Data in Multi Circuit View**
- **New GPS data processing**
Automatic driving radius/curvature calculation and improved lateral acceleration and banking calculation.
- **CSV Export option to generate Microsoft Power BI compatible .csv files**
- **Exports via phases**
Exports (.MES, .txt, .csv, .xlsx, etc.) can now be created and stored per freely definable phase condition.
→ LINK
- **Python Connector to access Measurement Data from Python scripts**
- **Converters for Dell 'Orto (DTD) and Marelli (BIN and ZTX) measurements**
- **Support for RTK GPS Systems and absolute GPS Time related recordings**

- **Audio file import (1)**
(multichannel) .wav files can be imported into the measurement as analog channels.
- **Audio data filtering (2)**
Recorded, converted or imported audio data can be filtered with the Analyzer / CalcTool
- **Audio Recordings / Playback (3)**
Imported Audio channels and recorded analog channels with audio content (e.g. comments from the test driver / engineer, exhaust noise, etc.) can be synchronized and played back within the analyzer.
- **Audio file conversion / export (4)**
Recorded analog channels can be converted into audio data and exported as .wav file.



CalcTool

- **GPS Tracks Toolchain**
User definable GPS Triggers can be combined to create measurement track channels between or inside trigger point, which are very convenient for further data analysis in the CalcTool as BOOL Channels for further calculations or as phases for Exports, Min/Max Tables, plots, etc.
- **New predefined and ready to use CAL Files**
which can be found in <USERDATA>\Race2021\CalFiles\2DCalFiles
 - **2D_DistanceAndTimeCH.CAL**
Creation of a distance (#Distance2D) and time (#Time2D) channels for the entire measurement
 - **2D_LapChannels.CAL**
Creation of lap-based channels for distance (#Lapmeter2D, #Lapmeter2D_Rel), time (#TimeInLap) and property markers (#InLap, #LapNr)
- **Lap / Segment based evaluation / analysis of data**
- **New CalcTool Functions**
 - **Calculation of values only while a BOOL channel (e.g. GPS Track, Lap, Segment,...) is true:**
MinWhileTrue, MaxWhileTrue, RMSWhileTrue, VDVWhileTrue and MOVWhileTrue
 - **Marking of values in Analyzer only while a BOOL channel is true**
PosMinWhileTrue, PosMaxWhileTrue
- **File Extension wildcard for includes in CAL files**
If no File Extension is specified in the Include, the CalcTool will first try to call the the .CAL file and then if not found the .CCF file
- **Path-inheritance for includes in CAL files (see CalcTool manual)**

Analyzer / CalcTool Extensions

- **IMU Toolchain**
Automated rotation, filtering for Accelerometers, Gyros and IMUs (up to 6 DoF)
- **Comfort Automation Toolchain**
Calculation of RMS / VDV / MOV, etc. from Accelerometers, Gyros and IMUs (up to 6 DoF) and automated Segments based reporting and export

Documentation / Tutorials

- Tutorial Videos for Various Functions of the 2D Hard- and Software
→ [2D Datarecording on YouTube](#)
- Manual for synchronization of Analyzer settings between multiple computers
- GPS Tracks Toolchain Manual
- GoPro AutoSync manual and video tutorial
- DashWare export video tutorial
- Completely new CalcTool manual with code examples and illustrations
- CalcTool Demo
Demo Data which showcases all functions and possibilities of the CalcTool