

RELEASEnotes

catman Easy / AP / PostProcess

V5.1.3

Legend:

FUN: functional enhancement

MOD: modification

FIX: bug fix

PRB: known problem

Fixes

FIX1006: Cursor synchronization with GPS data in maps

The cursor position in the map did not correspond to the cursor position in a graph or a video.

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RELEASEnotes

V5.1.2

Legend:

FUN: functional enhancement

MOD: modification

FIX: bug fix

PRB: known problem

Fixes

FIX1002: Excel parametrization

Attempting to load an Excel parameter file without hardware connected (e.g. in EasyPlan) crashed catman.

FIX1003: Analysis mode load single channel

Attempting to add a single channel from a test file to the analysis project crashed catman.

FIX1004: Analysis mode project containing measurement data - loss of data

Data included in the project file (option "Include data" in project save assistant) could become corrupt or inaccessible if the same project was stored again with the "Don't show again" option set.

FIX1005: Online computation does not show unit

In some cases (e.g. after project load) the STATUS column of the channel list did not show a unit for the formula. Editing an algebraic formula also did not show the unit.

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RELEASEnotes

V5.1.1

Legend:

FUN: functional enhancement

MOD: modification

FIX: bug fix

PRB: known problem

Overview about the most important new functions and modifications

New functions for lab testing

- Support of new MGCplus CP52 communication processor
- Password protection for sensors and TEDS
- Cable influence correction for 4-wire fullbridge transducers

New functions for vehicle testing

- Support for Kistler KiRoad Performance wheel force transducer system
- Support for CFC crash test filters in post process (CFC60, CFC180, CFC600 and CFC1000)
- GPS Auto-Detection and configuration

New general functions

- Data streaming to Microsoft Power BI for visualization of data in the web

Discontinued hardware and Windows support

- Spider8 and espressoDAQ are no longer supported
- Windows XP and Windows Vista are no longer supported

For more functions, details, modifications and fixes please read below.

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New functions

FUN419: Support of MGCplus CP52 communication processor

The CP52 is the successor of the CP42 communication processor. It retains all functionality of the CP42 but adds a couple of useful new functions:

- The CP52 supports the same device scan mechanism as QuantumX/SomatXR or PMX. That is you can use the HBM Device Manager to localize the connected devices and don't need to know the IP address of the device in advance. Using the device manager you can change IP addresses or set it to DHCP. DHCP was not supported by the CP42
- The firmware update mechanism for the CP52 is identical to the update mechanism of the QuantumX/SomatXR family. That is you can conduct a firmware update from within the HBM Device Manager or via the "Check firmware" function in the channel view of your DAQ project. Observe that the firmware update only applies to the CP52 communication processor itself! Amplifier modules MLxx cannot be updated in this manner - they still require the legacy MGCpload software.
- The CP52 supports local data recording on USB storage. The functionality is included in catman AP, to use it in catman Easy the add-on module EasyRoadload is necessary

Functionally the CP52 is 100% compatible to the CP42. You don't need to make specific distinctions when working with a CP52 in your catman project. If your project contains both CP42 and CP52 you can use the device manager to find the CP52 and then add the CP42 devices manually ("Additional device" button in the device manager).

FUN421: Support of Kistler KiRoad Performance wheel force transducer system

The KiRoad Performance will be supported in a seamless manner. Just select "Kistler RoaDyn/KiRoad" in the "Hardware options" (or add the device manually in the HBM device manager). The synchronization mechanism remains the same as with the RoaDyn system: a trigger and a clock line must be connected to a QuantumX module. Functionally you will not notice any difference between the KiRoad Performance and the older system in your catman DAQ project.

FUN422: Password protection for sensors and TEDS

A new password mechanism protects your sensors and TEDS against unintended changes. Under "Options/Sensors" you may activate the password mode and select the actions which should require a password:

- Sensor assignment
- Edit sensor database
- Adapt sensor
- Write TEDS content
- Zerobalancing

The password protection applies to the catman installation as a whole - i.e. it is not on a "per user" base! Please observe that the password will also be required to deactivate the password protection again. Contact the HBM Technical Support Center in case you do not remember your password.

FUN423: Cable influence correction for 4-wire fullbridge transducers

The former "Shunt calibration" functionality of the "Sensor adaptation" dialog has been completely reviewed. With the new cable resistance correction function you will now be able to eliminate cable influences immanent

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to a 4-wire connection. The "ideal" mV/V value from the calibration certificate can be corrected according to the cable resistance. See "Cable resistance correction for fullbridge transducers" for details.

FUN424: Sensor adaptation without sensor applied

For QuantumX/SomatXR you will now be able to fully configure the hardware (transducer type, scaling and all transducer properties) without a sensor (from the sensor database)! Just click "Adapt sensor", regardless if you have a sensor from the sensor database assigned or not. Hardware configuration changes done without a sensor assigned nevertheless become part of your project and will be reestablished once your project loads.

Note: You can prevent the hardware settings to be restored during project load by setting the registry entry HKEY_CURRENT_USER\Software\VB AND VBA Program Settings\catmanEasy\Defaults\RESTOREHARDWAREONPROJECTLOAD to 0.

FUN425: Streaming data to Microsoft Power BI

catman channel data can be displayed on Power BI dashboards. See "Streaming data to Power BI" for more details. See also an introduction under the following link:

<https://powerbi.microsoft.com/de-de/blog/using-power-bi-real-time-dashboards-to-display-iot-sensor-data-a-step-by-step-tutorial/>

FUN426: Support for CFC crash test filters

In analysis mode (post process computations) catman 5.1 offers 4 DCF filters: CFC60, CFC180, CFC600 and CFC1000.

FUN427: EasyScript, analysis mode

A new function EA_Test.CompressChannel allows the compression of huge channels with many million samples. The compression is the same as catman uses for its graphical displays: a min/max pair is created for each block of samples. The size of this block is determined by the compression factor. See the EasyScript reference for details.

FUN428: EasyScript

Version 5.1 adds a script method EA_Graph.GetHistogramCounts to retrieve the counts in each class of a histogram display.

FUN429: EasyScript

Version 5.1 adds a script method EA.GetUTCTimeString to deliver UTC time in format yyyy-mm-ddThh:mm:ssZ

FUN430: GPS Auto-Detection and configuration

The "Add device" dialog features an auto detection function which scans all COM ports (COM1 to COM16) and all baudrates for receive of a valid NMEA sequence. If a valid response is detected the dialog will be automatically populated with these settings.

Modifications

MOD357: Discontinued support of DAQ hardware

With catman version 5.1 the following hardware is no longer supported:

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- HBM Spider8
- HBM espressoDAQ

MOD358: WINDOWS support

With catman version 5.1 support for WindowsXP and Windows Vista will be discontinued.

MOD359: SIE file Burst Mode

Cursor sync of data generated in "Burst mode" (i.e. non evenly spaced blocks of samples) e.g. with video or a map will now properly handle the burst separations. Formerly cursor sync treated all data as a contiguous block, ignoring the time gaps.

MOD360: User interface, channel list

The "Special" menu has been reorganized: all logging and diagnostic functions are now grouped under a single sub menu.

MOD361: CANHEADdirect

Removed 200 Hz from CANHEADdirect sample rate lists. The CANHEADdirect does not support this rate.

MOD362: Temperature compensation of strain gages

The compensated values are now also shown in the live channel display. In former versions the compensation only became effective with a running DAQ job. Also the effect of zero balancing will be shown in the live channel display. Formerly the zero balance became effective with a running DAQ job only.

MOD363: Analysis mode Test Explorer

The folder view features an additional context menu "Refresh folder view" which rebuilds the complete folder tree view. Normally this is not necessary since the TestExplorer automatically tracks changes in the Windows file system, but in case of network drives this auto update does not take place.

MOD364: Recorders

The normal process of a recording stores data in catman FastStream format. If the recording is terminated, this FastStream file is automatically converted to a catman standard format file. The actual conversion runs asynchronously in the background and does not block catman from continuing to collect data. There were however rare reports that launching the FS converter could take an abnormal long time (> 1s) and the DAQ job might abort with an error. Version 5.1 adds two modifications to address this issue:

- Abnormal long launch times are reported by the Event Log/system Log
- Automatic conversion can be suppressed via a registry key
HKEY_CURRENT_USER\Software\VB AND VBA Program
Settings\catmanEasy\Defaults\RECORDERNOAUTOFSCONVERT
Set this value to 1 to suppress automatic conversion. The resulting FastStream files must then be converted manually later on.

Fixes

FIX987: CX227 sub modules not found

Under the following circumstances the sub modules connected to a CX27 did not show up in the catman DAQ project:

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- In the HBM Device Manager select the CX27
- Select one or more other modules not belonging to this CX27

Only the other modules and the CX27 parent node appeared in the DAQ project.

FIX988: EasyScript EA.GetSelectedObjects method

In case of channel list, does no longer include hidden (by display filter) channels.

FIX989: Analysis project

Saving analysis project with the "Include data" option unintentionally cleared the Test Explorer (i.e. removed all tests).

FIX990: Polar diagram

In some cases activation of zoom mode failed in analysis project.

FIX991: CX22B gateway function

catman V 5.0.2 unintentionally connected all sub-modules of a CX22, regardless of the selection the user made in the Device Manager.

FIX992: QuantumX MX840 CANbus

For a module with connector 1 switched to CANbus, one channel too much could appear in the channel list (8 analog channels instead of 7).

FIX993: Channel check (wiring check)

Fixes a problem occurring if an external shunt was used. In this case the first value (without shunt) was measured in physical units (but interpreted as mV/V) resulting in a very large deviation of hundreds of mV/V.

FIX994: Visualization

Bar indicator: prevent empty caption area if the indicator title is empty.

FIX995: CX22B gateway function

CX22B children modules did not appear in the "Add devices manually" dialog (menu SPECIAL/ADD MODULE). It was thus not possible to add such modules to the DAQ project manually

FIX996: Graph color channel

Changing the color channel limits in plot (curve) configuration dialog could cause problems if the graph was currently in zoomed state. In this case the curve disappeared.

FIX997: Recorders

Fixed two problems occurring with the stop condition "Time interval at xx hours":

- 6 and 3 hour intervals incorrectly fired stop event at xx:59:00 instead of xx:59:59
- Depending on the start condition of the recorder (static edge or immediate) the next recording stopped immediately because MonitorStopTrigger still detected a valid storage time. This resulted in one or more very short files.

FIX998: Peak-Valley computation

Prevented specification of negative hysteresis value.

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FIX999: Graph region selector tool

Determining the point index of the region start and region end did not take into account the case that the region might extend beyond the starting or ending point of the plot (e.g. in case of manual x-axis scaling). This resulted into partially reading wrong data from the neighbour channel.

FIX1000: Time channels containing too few samples in case of very high sample rates

If a sample rate group was changed via the ribbon bar dialog it could then happen that the I/O buffer sizes of the time channels were not large enough (they kept the default size of 4000 samples which is too small for rates ≥ 40 kHz). In this case catman was not able to fill in timestamps for the whole DAQ transfer block if this block exceeded 4000 samples.

FIX1001: QuantumX CANbus (MX471 and MX840) unsynchronicity

Under rare conditions and depending on sample rate groups involved in the project the synchronicity of the upsampled CAN signals could be wrong. Comparing the CAN signals with analog signals showed a time shift of up to 100 ms.

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