

## catoolRT 20.3 Release Notes

Changes since 19.12:

- [catool] Heat release now calculated IVC to EVO
- [catool] Added WoschniGT heat transfer model
- [catool] Added Chang gamma calculation
- [catool] Improved IFile import
- Enabled estimated EVO and IVC calculations
- About box info contains Kvaser CANdb library version
- Dialog box geometry auto calculated. This improves compatibility with different screen DPI settings and Linux. Many dialogs can now be resized by the user.
- AK robustness improvements
- CANdb files included enumerations for STATUS parameter
- Crash dumps can now be completely disabled. There is no point on collecting when the filesystem does not persist, i.e. WES7 with EWF enabled
- Added support for low speed analogue output for cyclic channels
- Support for Linux operating system
- Don't lose engine name if an empty choice is selected
- Improvements to CSV import dialog
- Waterfall spacing and number of cycles is now configurable
- Waterfall can now be "Solid" or "Wireframe"
- Plotting all cycles can now be "One Colour" or "Multicoloured"
- CAN hardware can now initialise if it is plugged in after DAQ has begun
- Alarm configuration show relevant alarms to reset more robustly
- Low speed logging configuration remembers previous log directory
- Enabled digital edge filtering for NI X-Series hardware
- Supports NI cDAQ 9136/9137 hardware:
  - USER1 LED
    - Off                      catoolRT not running
    - Yellow                    catoolRT initialising
    - Green                     catoolRT loaded
  - USER2 LED
    - Off                      catoolRT not running
    - Yellow                    catoolRT online but no sync
    - Flashing Yellow        catoolRT recording but no sync
    - Green                     catoolRT online and in sync
    - Flashing Green        catoolRT recording and in sync
  - USER1 Button
    - Press to start/stop recording
- Add "Analysis Delay" option to DAQ information
- Improved support for remote control
- XCP transmit zero values when DAQ is either offline or not in sync for cyclic and crank angle data
- "Configure Channels" shows IFile parameter values
- Fix bug where default simulated configuration did not have start of combustion set for SPARKx channels
- "Edit Channel" now uses a property grid for channel configuration

- Hide "Plot Mean/Envelope/Std Dev" for scatter plots
- Markers now scaled correctly when printing diagrams
- Fix bug with MATLAB style plots with only a right-hand axis and a colourmap visible
- Ensure final plot tick mark is aligned with edge of diagram
- Draw ticks on MATLAB colourmaps correctly
- Show cycle channel sorted when DAQ online
- Enable print preview when DAQ online
- Enable eight cylinder simulated engine
- Fix renaming a datalist from crashing
- Engine speed/Fuel rail pressure and unknown channels can have FFT and min/max/mean calculations
- Prevent assertion when changing CAN bitrate in "Configure CANbus"