

## catoolRT 20.6 Release Notes

Changes since 20.3:

- Show gripper in bottom right of windows that can be resized
- Fix missing carriage returns in CSV import help text
- Add "Upload Hardware Log"
- Move upload items to separate submenu in "Help"
- Fix crash whilst pausing XCP
- Stop crash when diagrams are very small
- Lighten marquee zoom box
- Allow real interpolated hardware to be simulated
- Dyno interface now resizes with window
- Fix bug where TDC Determination OK button did not work
- Fix FFT frequency
- Angular torque calculation works with differing abscissa
- Default SOC is now -20 degrees
- Add indicated power in kW
- Option to calculate IMEP at fixed 1 degree interval inline with AVL defaults
- Add AVL\_THERMO1 heat release method, also affects mean gas temperature calculation
- Add AVL\_THERM1\_FIXED and AVL\_THERM1\_A method for gamma calculation
- Fixes to positive HR SOC method
- Improved default motored pressure calculation defaults (calculated polytropic compression and begin calculation at end of polytropic compression window)
- Add 2 and 3 point polytropic offset methods
- Use better default values for 2-stroke valve timing
- New MATLAB file structure
- Parameters now available in diagrams and datalists
- Added CAN driver messages to status bar
- Better handling of CAN hardware being plugging in/out whilst catoolRT is open
- Improved valve timing estimation
- Improvements to what real time analysis is performed (Acquisition -> Configure Real Time Analysis)
- Cam and crank glitch filter can now be set up to 1000 microseconds, was 100.
- Add valve timing and polytropic coefficients to parameter list
- Update Vector CAN library error messages
- CANbus initialisation improvements
- Add difference pressure calculations
- Add calculation to extrapolate cylinder pressure past exhaust valve opening. IVO and EVC timing can now be specified for the engine.
- It is now possible to separate out cyclic and crank angle calculations for most analyses. Turning off crank angle calculations can save significant amounts of memory. "Acquisition" -> "Configure Real-Time Analysis" has been reworked to estimate how much memory is used whilst storing enabled analysis.
- Calculating tooth periods is now enabled via "Acquisition" -> "Configure Real-Time Analysis" rather than "Acquisition" -> "Advanced Config"
- Add "Help" -> "Upload" -> "All Settings"