

## Version 2.019, 26-11-2016

- Internal MAP could be used as BARO when external MAP is used
- VIPER V10 trigger added
- Device delayed off using virtual output as off condition
- Renault Clio CAN stream fixed
- Help updated

## Version 2.018, 18-11-2016

- DBW PWM control signal generation modified to decrease heat and lower the throttle noise
- Bug with initialization of DBW and FlexFuel input when there was CAN BUS error during startup
- Boost control solenoid can be disabled by switch / analog

## Version 2.017, 04-11-2016

- PC USB communication improved
- ECM CAN switch board support improved
- PMU CAN communication improved

## Version 2.016, 30-10-2016

- Support for CAN keyboard connected to PMU
- New temperature sensors added (gear box oil, differential oil, power steering fluid, pre IC)
- Default state for CAN keyboard can be defined
- Overrun fuel cut bug fixed (the cut was always performed above resume RPM)
- Tabs added for graph window to speed up switching between different log sets (shortcut keys from 1 to 6)

## Version 2.015, 17-10-2016

- 8 CAN analog inputs added (from PMU device)
- 8 CAN Switches added (16 total)
- CAN support for CAN switch board (8 switches + 2 analogs) (CAN ID 0x666)
- 3 momentary switches added (could be controlled via CAN switch board or CAN keyboard)
- CAN ID for EGT moved to 0x660 and 0x661
- CLT engine protection bug fixed
- Now all BLACK files (log, calibration, scope, DL1 logger files) are associated with application and could be opened just by mouse click,

- Fuel cut reason log group added
- Graph log window improved:
  - Zoom extent
  - Channel autoscale
  - Scaling center is at the cursor
  - Extended popup menu (mouse button right) allow fast channel change or setup
  - Different line style (thin, thick, dots)
  - Up to 16 channels on the log

## **Version 2.014, 08-10-2016**

- Bosch LSU 4.2/4.9 response speed improved
- Alternator control added
- When importing DL1 data logger data, log window refreshes correctly
- All files associated with BLACK (project, log, scope DL1 log) can be opened just by clicking the file