ADU ADVANCED DISPLAY UNIT — CHANGE LOG

Client: 122.0.2-beta 2026-07-02
Firmware: (no changes)

Fix:

- Fixed an issue where upgrading from older versions could incorrectly change the CANBus Export transmit mode from “Triggered” to “Cyclic”.
  This issue was introduced in ADU Client 122.0-beta.

Client: 122.0.1-beta 2026-03-30
Firmware: (no changes)

Fixes:

- Fixed incorrect CANBus Export element content after upgrading firmware from versions lower than 122.0 to 122.0 (affecting ADU Client 122.0).

  If you upgraded firmware using ADU Client 122.0 (released 26 March 2026), your CANBus Export elements may be corrupted. To resolve this, reload your project using ADU Client 122.0.1.
  Your project was automatically saved during the upgrade and can be found at:
  C:\Users\<user>\Documents\ADU\<your_device_name_or_sn>\ yyyymmdd_hhmm_ss_FIRMWARE_UPGRADE.adu

- Analog Input: corrected pull-down/pull-up selection values from 10K to 4K7 to match actual hardware specifications

Client: 122.0-beta 2026-03-26
Firmware: 122.0-beta

Firmware:

New features:

- CANBus Export: Added "Checksum" module. This functionality allows creating custom checksum formulas for exported frames. (Refer to the separate "How-to..." document for details).
- CANBus Export: Added new "Conditional" transmit mode - sends frames like "Cycle" mode, but only when the activation channel is active (not zero).
- New CANbus Input data type: float. The PMU can now read 32-bit float values from the CAN bus.
  The number of decimal places can be specified; however, the range is limited to the int16 range.
  Example: -32,768 to 32,767 for 0 decimal places, and -32.768 to 32.767 for 3 decimal places.
- Gear Calculator: Automatic gear detection based on engine and vehicle speed
- Added new Number element operations: Get temp max/min/avg - allows retrieving maximum, minimum, or average temperature from ECUMaster CAN thermal cameras.
- New Tracks added:
  - Daytona International Speedway (Sports Car Course), ADU Name: Daytona
  - Watkins Glen International (Grand Prix Circuit Classic), ADU Name: Watkins Glen

- Circuit Paul Ricard (Grand Prix with chicane), ADU Name: Paul Ricard
- Circuito de Almeria (Main loop), ADU Name: Almeria
- Circuito de Cartagena (Main loop), ADU Name: Cartagena
- Rudskogen Motorsenter (Main Track), ADU Name: Rudskogen
- NAF Trafikksenter Vålerbanen (Racing Circuit), ADU Name: Valer
- Motorcenter Norway Sokndal (Main track), ADU Name: Sokndal
- Arctic Circle Raceway (Full circuit), ADU Name: ACR
- Sandown Motor Raceway (Supercars Circuit), ADU Name: Sandown

Improvements:

- Minor improvements in meters saving.
- General performance improvements.

Fixes:

- CANBus input fix for rare bug in decoding data with bit count greater than 16 and large multiplier values.

Client:

New features:

- Added DBC exporter for CANBus Message Objects and CANBus Export. Allows exporting single or multiple CANBus Message Objects, as well as full CANBus Export frames, into standard .DBC files

Improvements:

- Added "Merge Project" icon to toolbar between Open Project and Save Project.

Fixes:

- Fixed the "Merge Project" functionality — it now correctly updates channels on the tables axis.
- Fixed an issue in the Number element (lookup2/3/4/5 operations) that prevented setting negative values for Value[0] and Value[1].

Client: 121.0-beta 2025-07-29
Firmware: 121.0-beta

Firmware:

New features:

- Added Session Scheduler feature. Allows scheduling up to 5 sessions with defined start date, time, and duration. The ADU automatically detects the current session and starts countdown of the remaining session time.

  Introduced three new channels:

  - *adu.track.sessionRemainingTime* – remaining time of the session [s]
  - *adu.track.isScheduledSessionOngoing* – indicates whether a scheduled session is currently active
  - *adu.track.scheduledSessionIndex* – index of the current or closest scheduled session

- Added new Time Source in Time Control**:** *Session remaining time*
- Added support for Omex 600 ECU via serial protocol

Client:

New features:

- Added option to automatically update RTC time when ADU device is connected to the PC. *Tools->Options…->Update device time (RTC) on connect*

Client: 120.2.2 2025-07-28
Firmware: (no changes)

No changes

Client: 120.2.2 release candidate (RC) 2025-07-04
Firmware: (no changes)

Client:

Fixes:

- Page Editor window: Added a check to the Group command to ensure the page buffer does not exceed its capacity.
- CANbus Keyboard dialog: Fixed an issue where the “Save CANX file” button ignored the Base ID.
- Project Tree window: Fixed a crash that occurred when attempting to delete a category in Types view.
- Project Merge dialog: Added a check to ensure the page buffer does not exceed its capacity.

Client: 120.2.1-beta 2025-06-13
Firmware: (no changes)

Client:

Fixes:

- Fixed a bug that produced an incorrect “ADU device data differs from Client data” dialog.
- Fixed a crash related to the new Change View button introduced in Project Tree 120.2.
- Fixed a bug that prevented an enumeration with a long list of items from being saved correctly.
- Optimized Client operation when a device is ”DISCONNECTED”.

Improvements:

- Logged Channels window: groups are no longer expaded by default.

Client: 120.2-beta 2025-06-06
Firmware: 120.2-beta

Firmware:

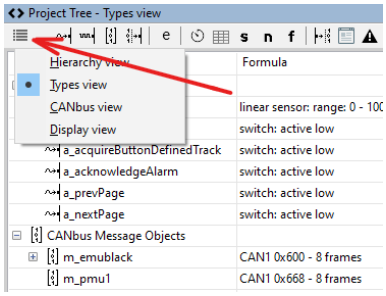
Improvements:

- Slightly corrected coordinates of the start/finish line in the built-in Donington Park track.

Client:

New features:

- Project Tree: Added 'Change View' button to the toolbar.



Fixes:

- Fixed an issue where bitfield channels - such as 'ecu.flags3.CANSwitchX' - were lost after reopening a project or upgrading the firmware.
  *This fixes a bug introduced in Client version **120.0***

CAN Streams:

New:

- Added new CANX file for the Emerald generic CAN protocol, revision 4.

Client: 120.1.1-beta 2025-05-23
Firmware: (no changes)

Client:

Fixes:

- DBC / CANX Importer, CANX Exporter: properly handle units and decimal places.
  *This fixes a bug introduced in Client version **120.0***

Client: 120.1-beta 2025-05-09
Firmware: 120.1-beta

Firmware:

Fixes:

- Minor fix for RacePad CAN keyboard support

Client:

Fixes:

- Loading project: Channels that reference a single bit of a user-defined bitfield (an *Enumeration* element marked as *Bitfield*) are now loaded correctly from a file.
  *This fixes a bug introduced in Client version **120.0***
- Channel Simulator now loads user-defined channels properly in all situations
- Fixed an issue with Dashboard Preview not displaying a single bit of a bitfield when *Display Unit* is checked

Client: 120.0-beta 2025-05-05
Firmware: 120.0-beta

Firmware:

New features:

- Support for RacePad CAN keyboard
- Units and decimal places of user-defined elements are now visible in Data Master *(requires Data Master 2025.4)*

Improvements:

- Increased the number of user-defined enumerations (to 20) and the number of items inside each of them, thanks to improved memory management
- Improved support for special characters (e.g., ą, é, ö) in Project Tree element names and enumerations (support for Unicode)

Client: 111.0 public release 2025-04-29
Firmware: (no changes)

No changes

Client: 111.0 release candidate (RC1) 2025-04-11
Firmware: 111.0 release candidate (RC1)

Client:

Fixes:

- Fixed an override issue for some ECU channels with signed values when using CANbus input.

2025-04-04
Client: 108.1-beta
Firmware: 108.1-beta

Firmware:

New features:

- Device serial number is now saved in the log file.
- New Australian tracks added:
  - Bathurst Mount Panorama
  - Winton Motor Raceway Original Club
  - Sydney Motorsport Park Grand Prix
  - Phillip Island Modern Grand Prix
  - The Bend International

Improvements:

- Improved robustness of lap time prediction

Client:

New features:

- Device serial number is now displayed in the Graph Log.

Improvements:

- Brake Bias: changed range of “Minimum pressure for calculating” from 0–5 bar to 0–25 bar.
- Enhanced consistency in lap handling.

Fixes:

- Fixed crash when removing a key in the “Edit Gradient” window.
- Fixed crash in the “New/Edit Switch window” when the "Press/Hold switch" type is selected and the "Hold time" parameter is modified.

2025-02-06

Client: 108.0.1-exp
Firmware: 108.0-exp

Firmware:

New features:

- Added support for J1939 Active Diagnostic Trouble Codes (DM1) with the ability to customize warning light behavior. A preset for the Polaris RZR Turbo R 2023 is included.
- Project Tree: Introduced a new “Rate of Change” operation for the Number element, which calculates the derivative of a given channel.
- Added “Master Brightness Channel” option to the CANbus Keyboard settings, enabling brightness control through any channel within the range of 0–100%

Improvements:

- Increased the maximum brightness adaptation rate to 100%/s.

Fixes:

- Resolved an issue where Bargraph Style 1 displayed negative values incorrectly in rare cases.

Client:

Fixes:

- Fixed a minor issue in the Select Channel window when accessed from the User Lights panel.
- Fixed a potential crash on the "Make Permanent (F2)" action after a Windows 11 update.

2024-11-20

Client: 106.2-exp
Firmware: 106.2-exp

Firmware:

Improvements:

- Improved brightness handling for Shift Lights LED and User Lights LED for low brightness level.

Fixes:

- Project Tree: Switch element now works correctly for both rising and falling edges.
- Minor fix to the behavior of outputs when disabling PWM.

Client:

Improvements:

- The number of maximum CAN User MOBs in the generated pinout has been increased from 8 to 50.

Fixes:

- Hidden unused parameters for the "Press/Hold" virtual switch type, and corrected the formula in the Project tree.
- Fixed the "Load Parameters" function in panes where saving parameters is possible, parameters are now correctly loaded and saved.
- Fixed scaling of the "Set Password" window.

2024-10-08

Client: 106.1-exp
Firmware: 106.1-exp

Firmware:

Fixes:

- Fixed an issue introduced in FW 106.0 that made it impossible to load projects containing user textures.

2024-10-08

Client: 106.0-exp
Firmware: 106.0-exp

Firmware:

New features:

- Added the ability to configure AUX 1 and AUX 2 outputs as PWM outputs. PWM configuration can be done in the "Outputs" panel.
- Added pause functionality for *adu.distanceMeter1* and *adu.distanceMeter2*. Pause channels can be set in the "Odometer / Distance Meter" group in the Configuration panel. When the pause channel value is non-zero, the distance meter stops counting until the pause channel returns to zero.

Improvements:

- Implemented a new watchdog mechanism.
- The maximum time shown in the lap timer has increased from 99 to 999 minutes. Once the timer reaches 100 minutes, precision is reduced from hundredths to tenths of a second to keep the display size consistent. For example, 99:59.99 will change to 100:00.0.

Fixes:

- Several fixes to CAN bus input, including correct value range (0-65535) for U16 type channels, proper handling of adu.userX channel override when bitcount is 32, and a few other minor fixes.
- The IMU pitch zeroing button now zeros also the G-force value in the G-Force indicator.

Client:

Improvements:

- Improved the sizing of newly added panels.
- Right-click on an empty desktop handled.
- Improved CSV export: Decimal places are now better suited for each exported channel, and a trailing column separator has been added after the last value in each row
- Adding a new element to the project tree:
  - If a group or an element within a group is selected, the new element will be added to that group. If no element is selected, or if the selected element doesn't belong to any group, the new element will be added to the root.
- Expanded the FW status bar in the client window.

Fixes:

- Added the missing option to set adu.distanceMeter2 from the client.
- Several fixes to the CAN bus input window, including correct handling of the "timeout value" and "default value" when the overridden channel type is U16, displaying the correct result value if the overridden channel is adu.userX, the bitcount is less than 32, and the selected data type is signed, and a few other minor fixes.
- The undo/redo operation after adding a new page now works correctly.

2024-09-03

Client: 105.1-exp
Firmware: 105.1-exp

Firmware:

Fixes:

- Fixed incorrect track recognition after resetting current track data via the button when the track was undefined

2024-09-03

Client: 105.0-exp
Firmware: 105.0-exp

Firmware:

New features:

- “Button defined track delete” button - Pressing this button deletes the currently button defined track from the device’s memory.
  After upgrading to FW105.0, the configuration of the “Button Defined Track Delete” button will be copied from the “Button Defined Track Start/Finish Line Set” button. In this case, the function of the “Button Defined Track Start/Finish Line Set” button will remain the same as before (a double-click of this button will cancel track acquisition and delete the previously defined track). However, if the “Button Defined Track Delete” button is configured separately from the “Button Defined Track Start/Finish Line Set” button, pressing the “Button Defined Track Start/Finish Line Set” button and pressing it again to cancel will no longer delete the current track data but will only cancel the new track acquisition

- “Flying start” option to the Hill Climb mode, allowing the use of Hill Climb mode without needing to stop at the start line to define the track and start timing the lap
- Added the option to choose the data source from the IMU, which will be used to calculate the G-forces for the “G-force” indicator and the 'adu.latG' and 'adu.longG' channels
- Automatic brake bias calculation along with a new channel, 'adu.brake.bias' measured in [%]. This feature can be configured in the Client window under 'Configuration → Brake Bias'
- Added channels 'adu.track.predictiveLapTime' and 'adu.track.lastLapTime' measured in [s]
- Support for the new “6x1 Ecumaster” keyboard
- New USA tracks added:
  - Eagles Canyon Raceway
  - Motorsport Ranch Cresson
  - Motorsport Ranch Houston
  - Hallett Motor Racing Circuit

Improvements:

- Shift Light: PIT Limit Indicator: added ”None” option for colour selection
- Added an option to change the functionality of the 'Reset track data' button. This can be configured in the Client window under 'Configuration → LapTiming → Reset track data button function:
  - Reset all track data - Pressing the button deletes the best times for all saved tracks (same functionality as before FW 105.0, default setting).
  - Reset current track data - Pressing the button deletes the best times only for the track on which the user is currently located.

2024-08-23

Client: 104.1 public release
Firmware: 104.1 public release

Client:

Improvements:

- Improved CSV export: Decimal places are now better suited for each exported channel, and a trailing column separator has been added after the last value in each row

Fixes:

- Resolved an issue that caused GPS channels to be inaccurately exported to CSV file
- Fixed loading of the logs saved in ADU software version 104.0 with firmware 92.x
- Fixed an issue that caused user channels to not be saved properly after loading a project file

Firmware:

Fixes:

- The version number of the logs recorded by the USB logger has been updated to V5. As a result, these files can no longer be incorrectly loaded in older client versions.

2024-06-17

Client: 104.0.1-exp
Firmware: (no changes)

Client:

Fixes:

- The application now longer crashes when pressing OK button in the Merge Project window

2024-04-19

Client: 104.0-exp
Firmware: 104.0-exp

Firmware:

New features:

- Added the current page number in the new “adu.page” channel (first page has value “1”).
- Added buttons for freezing/unfreezing the adu.distanceMeters. New channels added:
  - “adu.distanceMeter.frozen”
  - “adu.distanceMeter2.frozen”
- Virtual Fuel Tank features:
  - The Fuel Tank Size can now be defined by a channel. New channel added:
    - “adu.vft.fuelTankSize”
  - Added support for Stage and Road modes. New channels added:
    - “adu.vft.stage.distanceFromLastReset”
    - “adu.vft.stage.usedFuelFromLastReset”
    - “adu.vft.road.distanceFromLastReset”
    - “adu.vft.road.usedFuelFromLastReset”
    - “adu.vft.isStageMode”
- New USA tracks added:
  - Buttonwillow

- Willow Springs
- Thunderhill
- Chuckwalla
- Thermal blue
- High Plains
- Pueblo Park
- Arizona Park
- APEX motor club

2024-02-27
Client: 101.0-exp
Firmware: 101.0-exp

Firmware:

New features:
- Support for the new “5x3MT Ecumaster with 2 encoders” keyboard

Fixes:
- Min/Max channel values are working correctly (fixed issue introduced in version 100.0-exp)

Client:

Fixes:
- Fixed inconsistent number handling for keyboard layouts requiring shift to input numbers (e.g. Czech or French)
- Resolved issue causing application to become stuck in full-screen mode

2024-01-19
Client: 100.0-exp
Firmware: 100.0-exp

Firmware:

New features:
- Support for PMU-24 CAN stream (new dedicated pmuX.* channels)
- Support for Autosaved Channels
- Timers: Start Behaviour parameter added
- Park letter “P” added to the Gear Indicator control (it uses -2)

Improvements:
- GPS can be located at ID=0x646 (the ID does not need to be a multiple of 0x8)

Fixes:
- Changing CAN2 speed now properly reinitializes custom Project Tree CANbus Message Objects

Client:

New features:
- “File / Merge Project...” (Ctrl+M) command added

Improvements:
- Application is now properly scaled on high DPI monitors
- The saving and loading of Analog Input and User Table dialogs is now functioning correctly.

- Axis channel for a table can now be changed without regenerating axis bins (use context menu: Modify Axes / X/Y Axis Properties... and set Generation Type to Change Channel Only)

CAN Streams:

New:
- PMU-24_#1_ID668.canx
- PMU-24_#2_ID678.canx
- PMU-24_#3_ID688.canx
- TPMS_WHP.canx

Renamed:
- PMU1.canx renamed to PMU-16_#1_ID668.canx
- PMU2.canx renamed to PMU-16_#2_ID670.canx
- PMU3.canx renamed to PMU-16_#3_ID678.canx

2023-08-25
Client: 94.0-exp
Firmware: 94.0-exp

Firmware:

New features:
- Hillclimb lap timing mode added.
- Shift Light: Pit Limiter Indicator added (white and blue LEDs can alternate when a PIT limiter is active)
- Timers: Reset functionality added.
- New channel 'adu.track.isBestTimeSet' added

Improvements:
- Permanent variables (such as an odometer) are now immune to disconnecting the battery during a write operation.
- Decreased the blue component contribution in the final LED color for user lights. Now the violet, cyan, and white colors are more distinguishable.

Fixes:
- An alarm '.active' channel: the “Delay time” is properly handled.

Client:

New features:
- Hillclimb mode added to Track visualization.

2023-08-22
Client: 92.2.1
Firmware: 92.2

Notes:
- The firmware 92.2-beta is now renamed to 92.2. It's exactly the same firmware.

Client:

Fixes:
- Fixed a bug that prevented the firmware from being upgraded on the first attempt.
- Fixed a bug with real-time logging that sometimes didn't start after a firmware upgrade.

2023-06-15

Client: 92.2-beta
Firmware: 92.2-beta

Firmware:

New features:
- ECUMASTER CANbus Keyboards:
  - Support for ECUMASTER 5x3 RGB keyboard
  - New channel 'kb_X.active' was added to CANbus Keyboards. It's '1' when a keyboard is connected to a device.

Fixes:
- RPM Bar:
  - The bar for Round/Bar type now displays correctly, regardless of whether the Max RPM is a multiple of 1000 or not.
- CANbus keyboards:
  - General:
    - 'Export keyboard buttons to CAN' is now correctly broadcast state '4'.
  - ECUMASTER CANbus keyboards:
    - LED lights are now working correctly, even with the keyboard firmware v2.23.
    - The correct color is now selected when 'First State' is set to '1'
  - Grayhill CANbus keyboards:
    - Fixed an inconsistent LEDs behavior:
      - 'Radiobutton' button type when 'Last state' was set to '2' or more.
      - 'Latching switch' button type when 'Last state' was set to '4'.

Client:

New features:
- An option 'Save a copy' of an image has been added after right-clicking on the user's icon/texture in the Texture Selector window.

Fixes:
- The application now longer crashes when 'Max RPM' is set to '0' for RPM Bar of type Round

2023-04-25

Client: 91.0-exp
Firmware: 91.0-exp

Firmware:

New features:
- Second distance meter (adu.distanceMeter2)
- Passive OBD2 (ADU can now listen to ODB2 frames, but does not send queries)
- Prefix for log file names recorded to USB Flash drive

Fixes:
- The board revision reported by the firmware is now consistent with the one reported by the bootloader for the Light Client.
- The shutdown procedure has been improved, ensuring that the dashboard consistently turns off as intended.

Client:

Improvements:
- Performance improvements of the CSV export

Fixes:

- Application now properly checks the Table Memory limit when duplicating a Table
- Fixed the issue with the preview of the CSV not generating properly
- Fixed the issue with the CSV export crashing in case of large files

2022-09-15
Client: 90.0-exp
Firmware: 90.0-exp

Firmware:

Improvements:

- ecu.user5 to ecu.eser8 channels added
- Motec M4/M45 Data Set 5 channel *Drive speed* assigned to ecu.user5
- Motec M4/M45 Data Set 5 channel *Auxiliary temperature* assigned to ecu.user6
- Motec M4/M45 Data Set 5 channel *Auxiliary voltage* assigned to ecu.user7

2022-09-09
Client: 89.0-exp
Firmware: 89.0-exp

Firmware:

New features:

- Added support for Motec M4/M48 Data Set 5 19200 Serial Protocol

2022-09-07
Client: 87.0.1
Firmware: 87.0

Notes:

- The firmware 87.0-exp is now renamed to 87.0. It's exactly the same firmware.

Client:

Improvements:

- Keyboard focus when editing a cell of a Table has been improved.
- USBtoCAN.DLL updated to version 15.3 with stability improvements

Fixes:

- Random program crash when editing a Table has been corrected.

2022-08-02
Client: 87.0 exp
Firmware: 87.0 exp

Firmware:

New features:

- Gear Indicator control: 'Visibility channel' added

Improvements:

- Better accuracy of Analog Output
- Distance Meter is now immediately synchronized to permanent memory after using the 'Reset Distance Meter' button.

Client:

Fixes:
- Axes of tables are no longer corrupted when deleting/moving some other channels of the same type
- Proper handling of deletion/movement of a bitfield enumeration channel – no more project corruptions.

CAN Streams:

New:
- Microtech.canx
- Haltech_TMS.canx

Modified:
- Megasquirt2&3.canx – channels 'canout1' .. 'canout8' added

2022-02-21
Client: -
Firmware: 86.1

Firmware:

Hardware compatibility:
- Added support for second-generation display panels used by ADU7” Autosport (for devices with serial numbers 2169-xxxx or later)

2022-01-17
Client: 86.0
Firmware: 86.0

Notes:
– The firmware versions 86.0 and 86.0-exp are exactly the same firmware.

2021-12-29
Client: 86.0 exp
Firmware: 86.0 exp

Note:

Starting from 1st January 2022 all devices produced by ECUMASTER will have 12-digit serial numbers (until now 8-digit serial numbers have been used).

Firmware:

New features:
- **Added support for devices with 12-digit serial numbers**
- Added support for retrieving device board revision

Client:

New features:

- **Added support for devices with 12-digit serial numbers**
- Added board revision on Help / About screen

2021-09-29
Client: 85.1.2
Firmware: 85.1

Client:

Improvements:

- DBC Importer (v4-adu):
  - An additional space before the '@' character in the .DBC file is now handled correctly
  - The popup “Unit mapping file has been changed. Do you want to save it?” no longer appears if the unit mapping is not changed.

Fixes:

- A division by zero crash has been fixed (this bug could occur when the divider of CANbusInput has been set to zero by a previous version of DBC Importer).

2021-09-24
Client: 85.1.1
Firmware: 85.1

Firmware:

Improvements:

- Added support for the 10Hz GPS mode of the Ecumaster GPS. (Ecumaster GPS uses this mode when the option “Enable IMU fusion” is off in the Light Client configuration. Refer to the Ecumaster GPS user manual for details.)

Client:

Improvements:

- Keyboard Button Dialog: 'First value' / 'Last value' / 'Default value' is now disabled for buttons of type 'Non- latching switch'.

Fixes:

- Application no longer crashes when loading 1 pixel user texture.
- Popup “Texture buffer send fail!” no longer appears when working with user textures offline.
- Ranges of channels 'adu.track.startLine*' have been corrected.

2021-07-07
Client: 85.0.2 exp
Firmware: 85.0 exp

Client:

Improvements:

- Log files saved with Client has now proper Duration field in Download Log File dialog (Shift+F4)

Fixes:

- Reference track generation no longer crashes when GPS IMU is disabled. The process uses ADU accelerometer instead

CAN Streams:

Fixed:
- EvoX.canx – fixed c_gear channel

2021-06-07
Client: 85.0.1 exp
Firmware: 85.0 exp

Client:

New features:
- Graph Log: Added export to Racelogic VBOX .VBO file
- Graph Log: Added export of screenshot to PNG file

Changes:
- Graph Log: 'Export to CSV' icon changed to more general 'Export to Text File'

2021-05-21
Client: 85.0 exp
Firmware: 85.0 exp

Firmware:

New features:
- Detection of ADU Rev.2 hardware and reporting this information to the Client software.

Improvements:
- Increased number of Operations to 100 (up from 80)
- Increased number of logical Functions to 60 (up from 40)

Fixes:
- Fixed graphical glitch on Tire/Brake Temperature Graphs in Bar mode

Client:

New features:
- Added firmware upgrade prompt when opening the project file from newer firmware version
- Added “Offline firmware configuration selection” when loading project files from older firmware in offline mode (with CAN adapter not connected to PC)

Improvements:
- Firmware upgrade prompt when connecting to the device is displayed only once for each Client version
- Improved “Project conversion report” after opening the project file from a different firmware version.

Fixes:
- GPS channels 'gps.latitude' and 'gps.longitude' have now proper ranges (fixed for firmware

configuration 80.x and later)

2021-05-12

Client: 84.0 exp
Firmware: 84.0 exp

Firmware:

New features:

- Added support for Ecumaster family and Grayhill family keypads
- Added support for Brake Temperature Cameras (btc.* channels). It works as a builtin device (similar to GPS and Tire Temperature Cameras) and no additional CAN Inputs/Message Object are required
- Number 8 added to gear indicator big character set
- GPS base CAN ID can be changed (the base ID must be multiple of 8)
- Rotation of tire temperature bar graphs

Improvements:

- Switching the ignition switch back on when Delayed Turning Off is used causes ADU to restart (it is possible after 0.5 seconds after starting the Delayed Turning Off procedure)

Fixes:

- Vertical bar graph unit and value color bug fixed
- Corrupted characters when the user track name was 16 characters long bug fixed

Client:

New features:

- Added firmware upgrade prompt when connecting the device for the first time to client software
- Track preview shows the starting point recorded in the log file
- Track preview raw GPS data is now marked with colour depending on the GPS status
- Added “Internation style CSV export” (uses '.' and ',' characters)
- Added fixed frequency option for ADU CSV export

Fixes:

- Track preview doesn't show GPS points gathered before stable signal was recorded
- Hit test for tire temperature scale fixed
- References to some Enumerations was accidentally deleted when deleting an Enumeration

2021-03-29

Client: 82.0.2 exp
Firmware: 82.0 exp

Client:

Fixes:

- The Client software no longer crashes when trying to generate Reference Track from a very small set of GPS points
- The Client software no longer crashes when trying to compare laps with the Reference Track generated

2021-01-13

Client: 82.0 exp
Firmware: 82.0 exp

Firmware:

New features:

- Delayed turning off (requires separate Battery 12V and Ignition Switch 12V wiring)
  - Use the Configuration panel of the CONFIGURATION tab to setup. The following options can be specified:
    - Turn Off Minimal Time [seconds]
    - Turn Off Maximum Time [seconds]
    - Turn Off Channel (when this channel becomes high (non-zero) after Minimal Time the device will power off).
  - Channel 'adu.isTurningOff' has been added to do custom actions
- CANbus Export: DLC can be specified
- PULS oil level and temperature sensor support – can be wired to Digian Input D4 ('adu.puls.*' channels have been added)

Serial protocols:

- New serial protocol: Ecumaster Classic EDL protocol
- New serial protocol: Athena GET protocol

Improvements:

- USB logger: log files are now safely closed when ADU device is turned off by Ignition Switch low (requires separate Battery 12V and Ignition Switch 12V wiring)
- Fuel Level Filter: when using “Two fuel sensors (average)” mode the channel 'ecu.fuelLevel2' is now set to 0.0.
- ODB2 Refresh Rate can now be specified as low as 1Hz

Client:

New features:

- Histogram view added
- Lap Time Plot view (Lap time vs Lap number) added
- Section Times view has now View Sectors mode
- Finish/Start line is shown on the Track Preview window

Improvements:

- Section Times view: display performance has been improved

Fixes:

- The Client software no longer crashes when accessing a single bit of a channel created by Enumeration of type Bitfield

2020-10-14

Client: 81.8
Firmware: 81.8

Notes:

- Official version

2020-09-21

Client: 81.8 exp
Firmware: 81.8 exp

Firmware:

Fixes:
- USB logger: occasional data corruption has been fixed
- USB logger: fixed bug when the logger sometimes incorrectly created a series of small files (1kB)

Client:

Improvements:
- The client software is now able to load log files with occasional data corruption.

Fixes:
- Graph Log properly resume recording of the log data after the firmware upgrade even a log file was loaded right before this firmware upgrade
- Graph Log: maximum value of PMU outputs voltages increased to 16V

2020-08-13

Client: 81.0.1 exp
Firmware: 81.0 exp

Client:

Fixes:
- Editing tables (e.g. Calibrated Analog Sensors): pressing Tab or clicking outside the control now accepts the entered value

2020-08-11

Client: 81.0 exp
Firmware: 81.0 exp

Firmware:

New features:
- New operation for Numbers - Get Temperature Element - to access individual TireTempCam samples
- Possible to read normal and compound inputs from one CAN frame
- Toggle operation has now two new optional channels:
  - “Set channel” to set value to 1
  - “Reset channel” to reset value to 0

Fixes:
- Digital inputs are no longer incorrectly activated at startup. (Resolved bug with starting at the second page).

2020-04-09

Client: 80.0 exp

Firmware: 80.0 exp

Firmware:

New features:
- More CANbus Message Objects - 50 shared by CAN1 and CAN2 (up from 8+8)
- Support for CAN Inputs located across 3 bytes (e.g. endian=little, bitCount=13, bitPosition=13)
- Custom multiplexer for compound CAN frames - any bitPosition and bitCount up to 16 bits
- Button Defined Track (tab CONFIGURATION / pane Buttons / Button defined track start line set) - press the button at the new start/finish line and then do the one lap to define the custom track

Improvements:
- CAN frame with wrong DLC (e.g. 15) is now treated as DLC=8 (solution for GET_H4FSAE ecu)
- Serial stream can work in parallel with CAN stream. No need to remove the EMU BLACK stream if you use data from serial connection.

Changes:
- CANbus Message Objects timeout works for all frames at once, not for individual frames like before

Client:

New features:
- DBC Importer: support for compound streams (firmware version 80.0 is recommended)

Improvements:
- DBC Importer: signal multiplier and divider calculation has been improved

Fixes:
- Proper CAN ID displayed on CANbus Message Object Dialog when PMU1/2/3 is selected
- Import CANX dialog: red background of ID control no longer appears when importing Holley_HEFI.canx
- Fixed the bug that sometimes stopped a firmware upgrade process in the bootloader phase.

Changes:
- Project files created with this ADU client version cannot be loaded to an older version of the software. Please backup your projects before installing.

Default project pg_page1.adu:

Added:
- overlay page ov_buttonDefinedTrack added (requires firmware 80.0 or later)

Analog switches to ground have been added to control ADU functionality:
- A3 - fuel level sensor
- A4 - zero IMU pitch
- A5 - acquire Button Defined Track
- A6 - acknowledge alarm
- A7 - previous page
- A8 - next page

Ecumaster USBtoCAN:

- Internal software updated to v15.1 (automatic update offered when starting the ADU Client)

CAN Streams:

New:

- BoschMotorsport_MS4Sport.canx

2020-01-29
Client: 65.0.2
Firmware: 65.0

Client:

Fixes:

- The Client software works again on Windows XP (fixed regression from version 65.0)

2020-01-20
Client: 65.0.1 RC1
Firmware: 65.0

Notes:

- The firmware 65.0 and 65.0-beta are exactly the same firmware.

Client:

Fixes:

- Proper CAN ID displayed on CANbus Message Object Dialog when PMU1/2/3 is selected
- DBC Importer: Proper importing of big-endian signals when bitPosition/bitCount is not multiple of 8 bits.
- Fixed device crashes after firmware upgrade when too many logged channels were used.
- The name of an icon for gauges/bar-graphs is now properly loaded from the .ADU file.

CAN Streams:

Updated:

- Motec_M1.canx: channels c_Driver_Switch1..6 and c_Driver_Rotary_Switch1..8 added
- VAG_MED91.canx: channel ecu.usedFuel added

2019-12-19
Client: 65.0 beta
Firmware: 65.0 beta

Firmware:

New features:

- Zeroing of IMU pitch added - panel 'Buttons' / 'IMU pitch zeroing...'
- Virtual fuel tank
- Fuel level filter can be disabled (default) when there is no RPM (useful in tank zone)
- Visibility channel added to Lines, Rectangles, and Circles.
- Channel 'adu.anyAlarmActive' added

Improvements:

- Increased CANbus Export bandwidth to 500 Hz on CAN1 + 500 Hz on CAN2 (up from 500 Hz total for both CAN1 and CAN2)

Fixes:

- Shift Light: Table3D mode - 'Flash when all LEDs on' with 'Flash colour' = 'Use default colors' is now working as expected

Client:

Improvements:

- CANbus ID=0x000 is now allowed for CANbus Message Object and CANbus Export
- DBC Importer: improved signal importing for factors 0.2, 0.5 and similar.
- Alarm dialog: proper handling of decimal places in qualifier condition

Fixes:

- Expanding/collapsing the CANbus Message Object in ProjectTree no longer resets every CAN Input in the device
- Log channel frequency is always written to the .ADU document file.
- Pressure Wizard in Analog Input dialog has been fixed (regression in version 63.0)

CAN Streams:

New:

- Electronics_Limited_ME1_2.canx
- M11_Korvet.canx
- VAG_MED91.canx
- GET_H4FSAE.canx

Updated:

- Motec M1: CAN Input c_Fuel_Used_M1 changed to ecu.usedFuel
- Pectel SQ 6: CAN Input c_Fuel_Used_ecu changed to ecu.usedFuel
- EMU Black: CAN Input ecu.usedFuel added

2019-10-14

Client: 63.0 beta
Firmware: 63.0 beta

Firmware:

New features:

- New Session Results control
- Pages can be changed directly from CAN Input or rotary switch (Configuration / Changing Pages)
- Predictive time graph: Time Range parameter added

Improvements:

- Performance optimizations
- 15 alarms (up from 10)

Fixes:

- Alarms: alarms are now disappearing properly even the Retrigger Time or Min Show Time parameters are greater than 5 seconds.

Client:

New features:

- DBC file importer (ProjectTree / Add / Import .CANX/DBC file)

Fixes:

- Alarms: changing the Unit parameter in the alarm dialog works as expected.
- Alarms: previewing the alarm on PC now takes into account the Decimal Places parameter.
- Alarms: the alarm dialog fits correctly even on small screens.

2019-08-27

Client: 60.3.2 beta
Firmware: 60.3 beta

Client:

New features:

- Support for Peak PCAN-Ethernet Gateway.

Improvements:

- Default texture size after resizing is now 200x200
- Improved image preview when adding new texture/icon

2019-08-01

Client: 60.3 beta
Firmware: 60.3 beta

Firmware:

Fixes:

- Improper serial number no longer causes connection problems with the Client software.

2019-07-29

Client: 60.2 beta
Firmware: 60.2 beta

Firmware:

Improvements:

- Gauge control: Angle Span and Angle Offset parameters are now implemented
- RoundGauge control: Angle Offset parameter work correctly when the value is over 90 degrees
- CAN ID 0x7E8 can be used with CANbusMob / CANbusInput when OBD2 Enable is off

Client:

Fixes:

- Import .CANX file dialog: Show Frames checkbox now properly shows all the frames (corrected bug with multiple mobs in one file)

2019-07-29

Client: 60.0
Firmware: 60.0

Notes:

- The firmware 60.0 and 60.0-beta are exactly the same firmware.

2019-06-07

Client: 60.0 beta
Firmware: 60.0 beta

Firmware:

New features:

- Added BracketRacing lap timing mode (Configuration pane / Lap timing)
- Added triggered transmit mode for CANbusExport
- Added Speed Source for ecu.speed - CAN, GPS or custom channels such as Digital Inputs (Configuration pane / Speed source for ecu.speed).
- Added list of additional circuits
- Increased number of Tables to 20 (up from 10)

Improvements:

- ResetSession button is now resetting also the CurrentLapTime, LastLapTime, PredictiveLapTime, adu.track.lap, adu.track.gainLoss, adu.track.lapTime, adu.track.lapDistance
- PredictiveLapTime and adu.track.gainLoss is now calculated after the first crossing of the start/finish line
- Visibility Channel is now working for UITime

Changes:

- The adu.track.lapTime channel can now be negative (in some cases in the Bracket Racing)

Client:

New features:

- GraphLog: Shift+S toggles between lines and points+lines

Improvements:

- Widths of columns are preserved: ProjectTree, TextLog, VariablesInspector

CAN streams:

- LinkECU_GenericDash.canx - divider for oil pressure changed

Ecumaster USBtoCAN:

- Internal software updated to v14.0 (automatic update offered when starting the ADU Client). This software improves compatibility with an older version of PMU/ADU Client.

2019-04-22

Client: 55.2 beta3
Firmware: 55.2 beta3

Impovements:

- Rendering the TrackRecordTable and Grid controls has been optimized.

Fixes:

- Fixed bug when best time appears multiple times on the Track Record Table.
- Rendering of empty group with SyncRendering=1 no longer causes corruptions.

2019-04-15

Client: 55.1.1 beta2.1
Firmware: 55.1 beta2

Fixes:

- The dimensions of the *Shift light table* is now always 9 LEDs x 7 gears. The project needs to be saved and opened from the disk or the firmware upgrade needs to be performed.
- Using the menu command *Restore to default* more than 50 times no longer leads to the Client software crash.

2019-04-04

Client: 55.1 beta2
Firmware: 55.1 beta2

New features:

- New Memory Report window (Tools/Memort report...)

Improvements:

- Support of Default Text and Default Color in Enumeration is finally working.
- BarGraph: Edit Gradient window - “Remove gradient” button added
- BarGraph: Color from Gradient is no longer multiplied by Bar Color.
- BarGraph: When the alarm is active, the gradient bar is displayed using a solid color (Alarm color).
- Ecumaster USBtoCAN adapter - improved firmware upgrade on Windows XP
- Peak PCAN adapter - added support for Windows XP

Fixes:

- First value of the Calibrated Analog Sensor after startup is consistent with later values.
- Analog Inputs with decimal places can be properly sent to CAN
- Duplicating element with the name containing 30 characters no longer leads to the project corruption.
- Group control: proper arrangement of controls with zero width or height (such an empty Text control)
- Bug with start/finish line introduced in version 55.0 beta1 fixed
- Bargraph gradients: proper refresh on device after change in the Client software

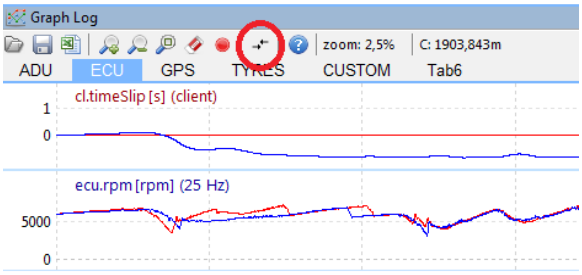
2019-03-22

Client: 55.0 beta1
Firmware: 55.0 beta1

New features:

- Channel Simulator offline and online (press F9 and type “simulator”)
- New page backgrounds
- Ctrl+K pressed on the Preview window, saves the current page image (800x480) to a png file
- ADU builtin accelerometer calibration - new channels adu.latG/adu.longG
- Gradients for bargraph
- Channels gps.longitude / gps.latitude can be exported to CAN (32bit values)
- Switch element can now count downwards using channel “Input channel down” / “Trigger edge down”
- Now the ADU is visible in the Light Client
- Detection of Autosport ADU version
- Active alarms are written to log. Each alarm channel has *.active* property
- Another log can be appended after the loaded log file.
- Compare laps - use the Compare laps icon on the Graphlog toolbar. Use cl.timeSlip channel to show the

difference in seconds between two laps. The x-axis of the log can be selected between distance or time.



New CAN, serial streams

- AEM serial stream,
- GEMS serial stream,
- ABIT M1 CAN stream,

Improvements:

- Support for Kvaser CAN adapter was improved
- New Ecumaster USB2CAN firmware (0.12)
- Added SaveAs prompt when connecting the ADU with different firmware to prevent project loss in the Client.
- Larger Preview window
- Widths of columns in the Project Tree are properly restored
- New image blend mode (Multiply)
- Bar graph:
  - New Bar type - Horizontal bi-directional and Vertical bi-directional
  - New Bar style - Simple without decoration
- RPM Bar:
  - Nonlinear scale
  - Different tick configuration
  - Numbers describing RPMs can be centered under tick marks
  - RPM Bar can use texture as a gradient

Fixes:

- Channels gps.longitude / gps.latitude are properly displayed by Text control.
- Text cropping issues fixed in Texture Selector (high DPI).
- Graphical glitches for RPM round gauge fixed
- Changing the speed of the CAN2 no longer causes Bit Stuffing Errors.
- Enumeration of type Bitfield used inside the Grid control: when the textual representation of such Enumeration exceeds 64 characters the ADU device no longer freezes. **Firmware upgrade is recommended.**

Changes:

- Tire temperature cameras base adress changed to 0x420
- Tire temperature cameras range increased to 255C
- There are 30 icons or textures available for the user

Important:

- ADU project created with this ADU client version cannot be loaded to the older version of the software

2019-04-04

Client: 52.6 (MASTER)
Firmware: 52.6 (MASTER)

New features:

- Detection of an Autosport ADU version in the Client software

Improvements:

- Support of Default Text and Default Color in Enumeration is finally working.

Fixes:

- Text cropping issues fixed in Texture Selector (high DPI).
- Size of Texture Selector window fits properly small screens.
- Size of Load Page Template window fits properly small screens.
- Duplicating element with the name containing 30 characters no longer leads to the project corruption.
- Changing the speed of the CAN2 no longer causes Bit Stuffing Errors.
- Enumeration of type Bitfield used inside the Grid control: when the textual representation of such Enumeration exceeds 64 characters the ADU device no longer freezes. **Firmware upgrade is recommended.**

2019-02-11

Client: 52.5 (MASTER)
Firmware: 52.1 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

Fixes:

- BaseID of the PMU1/PMU2/PMU3 Mob is now properly validated.

2019-02-08

Client: 52.4 (MASTER)
Firmware: 52.1 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

New CAN streams:

- Holley_HEFI.canx (Base ID need to be changed according to serial number of the Holley HEFI ecu).

Fixes:

- Switching access to the CAN between ADU / PMU / LightClient works in all cases.
- Enumeration dialog has now proper size on high DPI monitors.
- Display Size in the Specification page of the Help file has now proper values.

2018-11-26

Client: 52.2 (MASTER)
Firmware: 52.1 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

Changes in default project (Documents\ADU\pg_page1.adu):

- GPS CANbus changed to CAN2.
- Tire temperatures camera CANbus changed to CAN2.
- CAN2 speed changed to 500 kbps.

- Tire temperature camera range changed to 40-100 °C.
- X axis of the “Auto brightness” table changed to “adu.lightSensor”.

Fixes:
- Client now properly resaves the log file loaded from the USB stick.
- Missing channels have been fixed in “pg_rallyRoad” and “pg_racingTrack” templates.

2018-10-11
Client: 52.1 (MASTER)
Firmware: 52.1 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

New features:
- Scatter Plots. (press F9 and type “scatter”)
- New Report Channels window.

Fixes:
- Proper use of channel gear in the Parametric mode of the Shift light.
- Classic gauge alarm condition bugfix.
- Fuel level filter is working correctly for value 100%. The precision of the filter was also improved.

2018-10-11
Client: 51.2 (MASTER)
Firmware: 51.0 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

Fixes:
- Client program can work with Firmware 45.0 or earlier without any problems.
- Colors of the classic RPM bar can be customized.

2018-09-25
Client: 51.1 (MASTER)
Firmware: 51.0 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

Fixes:
- Application no longer crashes when editing a page with a lot of details.

2018-09-24
Client: 51.0 (MASTER)
Firmware: 51.0 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

New features:
- New “Vertical” style added to RPMBar.
- New background theme “Theme 3” added to page.

Fixes:
- Bitfields such as ecu.errorFlags can be used to control color again.

- Loading page from template no longer moves this page to random group in the ProjectTree.

2018-09-20
Client: 50.1 (MASTER)
Firmware: 50.0 (MASTER)

MASTER RELEASE (please see MASTER RELEASE note in version 50.0).

New features:
- Switching CAN adapter between ADU and PMU. You can work with two clients at the same time and switch adapter between them. PMU Client .42.8 or newer is required.

Fixes:
- When switching to TRACK desktop client program no longer crashes.

2018-09-18
Client: 50.1 (MASTER)
Firmware: 50.0 (MASTER)

MASTER RELEASE.
- Some graphical elements like Gear Indicator or RPM classic indicator has been changed. Please check your pages after upgrade

New features:
- Redesigned page layout
- New Gear Indicator font
- New RPM round indicator
- New style for bar graphs
- Themes for page background
- Enumerations - channel to text functionality. Use it by choosing Quantity=Enumeration.
- Builtin support for PMU1 (0x668) / PMU2 (0x670) / PMU3 (0x678). Every PMU has its own 87 channels and does not consume any CANbus inputs.
- Analog output
- USB status and USB buffer usage is displayed on the Status bar.
- Odometer/Distance meter can use gps.speed as the speed source.
- Fuel level 2nd sensor support added + ecu.fuelLevel2 channel added
- Grid page element added

New/updated CAN streams:
- Syvecs / LifeRacing
- Emtron
- Megasquirt (temperatures and pressures bug fixed)
- EMU BLACK ecu.errorFlags.FPR added
- Autronic user channels support added

Improvements:
- Simplified definition for tables such as rotary switch calibration and analog gear sensor. Mathematical rounding is performed. No need to move the axis value by half of the period. Old tables will be upgraded.
- Increased element count:
  - Numbers up to 40.
  - Functions up to 40.
  - CANbus inputs up to 150.
- Page templates moved to TEMPLATES folder and user templates to TEMPLATES/USER

- .CANX files moved to CANX folder and user .CANX files to CANX/USER
- Added *Guard time* to alarms. Alarm will appear after condition is satisfied for this time.
- Fixed bug with LCD screen reset when voltage drops under 5V
- Shift light table - swapped axis
- Serial receiving status (adu.diag.serial.state channel)
- adu.lap.time and adu.lap.distance channels added
- Button can be assigned to reset min/max data of the ecu.* channels.
- Displayed text and value (text object) can be divided into two lines

Fixes:
- (Client) Proper precision for exporting gps.longitude/gps.latitude to .CSV
- Fixed ADU freeze when changing CAN2 speed when CAN bus line has different speed.
- Value offsets are properly saved when exporting CANX files.
- Diagnostics channels adu.diag.can1/2.rxErrors/txErrors work as expected

2018-08-22
Client: 0.049.4 (RC1.4)
Firmware: 0.049.4 (RC1.4)

Fixes:
- (Client) Exporting log data to .cvs no longer causes a crash.
- (Client) Using Temperature Wizard in Analog input no longer causes a crash.
- (Client) Closing the last panel on a desktop no longer causes a crash.
- (Firmware/Client) Image tiling (Tile X, Tile Y) now works as expected.

2018-08-01
Client: 0.049.3 (RC1.3)
Firmware: 0.049 (RC1)

Fixes:
- Encoding issue no longer causes a crash when working with some non-English version of Windows.
- Panels from inactive tabs are properly refreshed after editing an element.
- Setting Decimal places to 0 in Alarm dialog no longer causes a crash.

2018-07-27
Client: 0.049 (RC1)
Firmware: 0.049 (RC1)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 49. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to the Client.

New features:
- Startup screen with custom texture. Import your texture, click *Startup Screen / Enable* and that's it.
- New element 'Timers' - count up / down, up to 200 hours, 0.01s precision. Can be displayed with Text control (use h:mm:ss unit to format).
- New operation 'Changed' - detecting the change of the target channel (e.g. displaying overlay when calpot changes)
- Image control: Mirroring textures added
- Text control: *Italic* font style added

Improvements:

- All textures can be scaled, even non power of two (e.g. 99x99)
- Alarms improved - displaying value, unit, qualifier, custom height
- Multiple alarms mode - cycle and only highest priority
- BarGraph: Text is displayed rotated verticaly when Vertical type selected
- Ecumaster USBtoCAN: improved device detection
- ShiftLight: 3D table option

Updated CAN streams:

- Motec_M1.canx updated

Fixes:

- adu.accX/Y/Z is now of type “Acceleration”
- Two graphical corruption has been fixed - white text bug and displaying only the upper half of the text.

2018-07-18

Client: 0.048.1 (Beta8.1)
Firmware: 0.048 (Beta8)

Fixes:

- (Client) Analog input: Typing the values in the Linear sensor possible again.
- (Client) Preview window: Fixed unit conversion and unit display for Analog inputs.

2018-07-16

Client: 0.048 (Beta8)
Firmware: 0.048 (Beta8)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 48. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

New CAN/serials streams:

- Autronic serial protocol SM4 V1.01-1.07, SM4 v1.08, SM4 v1.09
- DTA S Series
- Maxx ECU
- LinkECU G4 (Generic Dash)
- Ecumaster PMU2/PMU3 for easier multi-pmu integration

Updated CAN streams:

- EMU_BLACK.canx - flags1-flags5 mapped correctly
- Motec_M1.canx updated
- PMU.canx changed to match PMU2/PMU3.canx

New features:

- Units support (miles, psi, °F, etc)
- Duplicate elements in Project tree (Ctrl+D)
- Support for CAN compound streams (4, 8, 16 bits)
- Setting odometer, distanceMeter, engineHours and hoursAtLaod (menu Tools/Set meters...)
- Support for Calibrated analog sensors (with Wizard for predefined sensors like in EMU software)
- Decimal places support in Analog inputs, Tables and Numbers.
- “Reset min/max mode” can be set to “Every power off” (like firmware 0.46 and earlier)
- gps.latitude/gps.longitude can be displayed by Text control (6 decimal places possible)

- Overlays: “Overlay” and “Overlay with background” page type

Improvements:
- Tires temperature monitoring - new display type (4 bars)
- adu.engineHours and adu.hoursAtLaod can be displayed as hh:mm or hh:mm:ss (use Unit to change)
- Ecumaster USBtoCAN device: reliability and performance improvements (USBtoCAN software update to v0.10 is offered automatically when starting ADU Client).
- Faster Delete in Project tree

2018-06-22
Client: 0.047.3 (Beta7.3)
Firmware: 0.047 (Beta7)

Improvements:
- Ecumaster USBtoCAN device: reliability and performance improvements (USBtoCAN software update to v0.9 is offered automatically when starting ADU Client).

Fixes:
- Kvaser CAN interface is working again (regression from version Beta6)

2018-06-14
Client: 0.047.1 (Beta7.1)
Firmware: 0.047 (Beta7)

Fixes:
- CANbus Input channels are now visible in Logged Channels window after connecting to a device / loading the project.
- ECU channels properly sorted in Log window (ecu.errorFlags vs ecu.flags1)
- Fixed rare crash when clicking on Page from Project Tree window.

2018-06-13
Client: 0.047 (Beta7)
Firmware: 0.047 (Beta7)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 47. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

New features:
- Permanent meters added: odometer, distance meter, engine hours, hours at load
- Ecu channels min / max don't reset at power off. It is reset when firmware is upgraded.
- Fuel level sensor filter module
- Tires temperature cameras support added (separate channels, visualization)
- Export to canx icon added to CANbus Message Object dialog
- AEM v2 canx file added
- Megasquirt 2 & 3 canx file added
- Hondatata K Pro serial protocol support added (needs an signal inverter!)
- Track data (records) for give track can be reset with the button
- Auto-refresh of page preview (all channel data on PC is the same as on device)

Improvements:

- GPS data real time processing improved (accuracy)
- Tires temperature monitoring indicator improved

2018-05-17

Client: 0.046 (Beta6)
Firmware: 0.046 (Beta6)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 46. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

New features:

- User defined tracks
- OBD2 support
- Lap section times window
- Track Preview: Reference Lap Wizard and Editor, single lap support
- Tracking GPS position of cursor in GraphLog on Track Preview window.
- Browse Log Window (Shift+F4) - counting ecu.errorFlags errors
- Channel “ecu.boost [bar]” added (calculated from ecu.map if not available in CAN stream)
- Texts update frequency added (BarGraph/Gauge/ClassicGauge/Text controls)

Improvements:

- Password protection is fully functional
- GearIndicator and ecu.gear works as expected (-1 – Reverse, 0 – neutral, 1 - 1st gear, etc).
- Added 3rd LED color for User LEDs.
- GearIndicator font has been improved

Fixes:

- Autoscale works properly for gps.latitude / gps.longitude channels

Auto detection track list:

BE: Zolder, Circuit de Spa
CZ: Automotodrom Brno
LV: Bikernieki
NL: Zandvoort, Assen circuit
PL: Tor Poznań, Tor Slomczyn
SK: Slovakiaring
UK: Cadwell park, Silverstone natl., Anglesey Intern., Brands Hatch GP

2018-04-20

Client: 0.043.2 (Beta4.2)
Firmware: 0.043.1 (Beta4.1)

Fixes:

- Changing “Decimal places” of the Bar Graph is working properly.

Improvements:

- Improvements of UI for high DPI displays.

2018-04-19

Client: 0.043.1 (Beta4.1)
Firmware: 0.043.1 (Beta4.1)

Fixes:

- Image control is now working properly when alpha=255 is used
- Alarm icon has been fixed.
- Fixed reconnection bug in Ecumaster USBtoCAN.

2018-04-18

Client: 0.043 (Beta4)
Firmware: 0.043 (Beta4)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 43. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

Changes:

- CAN2 terminator work correctly (in previous versions it worked backward)

New features:

- Custom textures and icons
- Motec M800 Set1 stream
- Reporting CANbus status on status bar (requires firmware upgrade of USBtoCAN adapter)

Improvements:

- GPS lap timing improved
- RPM Bar improved
- ecu.errorFlags added (supported by EMU/BLACK/M800)
- New operations added to Page Editor (also in popup menu):
    - Attach to group (Alt+Left)
    - Detach from group (Alt+Right)
    - Rename group (Alt+R)

Fixes:

- Channel ecu.tps fixed in EMU / BLACK serial stream
- Fixed page switch on startup when analog input was used as Next page switch
- Fixed CLT Max / IAT Max / CAN status on Download Log Window (Shift+F4)

Known issues:

- Password protection is not working in any ADU firmware

2018-03-23
Client: 0.042.3 (Beta3.3)
Firmware: 0.042.0 (Beta3)

Improvements:

- Page Editor: icons added
- Page Editor: texture selector added

Fixes:

- Fixed crash when adding Dashboard Preview window to empty desktop.

2018-03-23
Client: 0.042.2 (Beta3.2)
Firmware: 0.042.0 (Beta3)

Improvements:

- Updated Preview DLL for Windows Client. The client will start properly every time and Preview window is always properly displayed.

2018-03-22
Client: 0.042.1 (Beta3.1)
Firmware: 0.042.0 (Beta3)

Fixes:

- Fixed crash when using Load template button of the Page Editor on empty project.

Changes:

- ECUMASTER serial protocol is set as default in the example project

2018-03-21
Client: 0.042.0 (Beta3)
Firmware: 0.042.0 (Beta3)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 42. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

New features:

- **ECUMASTER serial protocol** (exposed by **ecu.*** channels)
- **AIM serial protocol** (exposed by **ecu.*** channels)
- EMU/BLACK/Pectel/Link/Vi-Pec CAN streams now always overrides the same "**ecu.*"** channels. It's now possible to easily change the ECU streams (CAN and serial). CAN stream has priority over serial.
- **New user interface** - press F9 to add new window
- **ECUMASTER GPS support**

- **Automatic brightness control**
- Support for **Aux1/Aux2 low side outputs**
- **ecu.* channels** now have Min value/Max value (available in Text control).
- Delays in IsTrue/IsFalse/comparision operations (e.g. channel is 1, when ecu.rpm > 2000 for 5s)
- Pulse operation - retrigger (retriggering pulse in the middle of active pulse)

Improvements:

- Dashboard Preview window is now resizable

Fixes:

- Fixed crash when grouping elements inside existing group.
- Page background color is working as expected

Changes:

- Channel adu.batteryVoltage changed to adu.battery
- Flex Fuel channels changed from ff.* to adu.ff.*

Known issues:

- Password protection is not working in any ADU firmware
- Sometimes Client is unable to start and the following message appears "FT8XXEMU.DLL not responding". Please press OK button and try to re-launch the Client program.
- Sometimes Dashboard Preview window is blank. Please Exit and try to re-launch the Client program.

2018-02-26

Client: 0.041.1 (Beta2.1)
Firmware: 0.041.0 (Beta2)

Please backup your project before upgrading from version 40.

This Client is fully functional only with Firmware 41. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

Fixes:

- Fixed crash when “Min” equals “Max” in BarGraph
- Fixed positioning issues, when setting X/Y direcly from property grid

2018-02-23

Client: 0.041.0 (Beta2)
Firmware: 0.041.0 (Beta2)

Please backup your project before upgrading.

This Client is fully functional only with Firmware 41. An automatic upgrade will be proposed when connecting. Projects from the older version will be automatically converted to the new firmware when loaded to Client.

New features:

- Support for **Motec M1 CAN stream** (Use Import CANX from Project Tree)
- Support for Ecumaster **EGTtoCAN CAN streams** (Use Import CANX from Project Tree)
- Added "**Alternating fill color**" for Group control. (Also: Arrangement=Vertical and Filled=[x] need to be set)

Improvements:

- RPM channel can be used with Gauge, BarGraph, and ClassicGauge.
- LED1 can be used to show the status of data logging to USB memory (like in firmware 40.0, but is off by default). Use "User lights" to activate this option.
- Removed ten 500 Hz test channels from "Debug2" log section. These channels have consumed half of the log bandwidth.

Fixes:

- Several crash bugs have been fixed.
- Fixed some precision issues in BarGraph (-1.00 was incorrectly displayed as -0.99).
- Replaced EMU / BLACK CAN Stream in example project to the recent CANX (some channels such as c_ecu_lambda was incorrect)

Changes:

- You will not be able to downgrade project saved with firmware 41 to an older version.

2018-02-13
Firmware: 0.040.1 (Beta1.1)

This is firmware only update. Please download and unpack provided ZIP file. Next please use "File/Ugrade fimware" menu command.

Fixes:

- Small LED below 3 user LEDs on left side is no longer blink.
- LED1 is no longer showing status of data logging to USB memory.