

## Race Studio 3 Release history

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Version	Date	Change/additions												
<b>3.23.01</b>	Jul, 20th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Management of MXm</li></ul>												
<b>3.22.00</b>	Jul, 17th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Management of MXG 1.2</li><li>▪ Introduced the possibility to manage icons in MXS 1.2 and MXG 1.2</li><li>▪ Bug fix, while exporting/importing configurations among PCs with different RS3 install paths, the imported configuration could result 'corrupted'</li><li>▪ Bug fix, RS3 is back working on Windows XP</li><li>▪ Minor fixes</li></ul>												
<b>3.21.00</b>	Jul, 5th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Managed new device: MXG 1.2</li><li>▪ New devices can manage icons</li></ul>												
<b>3.20.00</b>	Jun, 22nd 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Managed new devices: MXS 1.2 and MXS 1.2 Strada</li></ul>												
<b>3.19.01</b>	Jun, 7th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Added for Solo 2 DL device the possibility of enabling CAN bus 120 Ohm resistor</li><li>▪ Fixed bug about crash when loading ECU protocols in configuration for Solo 2</li><li>▪ Fixed bug about protocols web updating</li><li>▪ Fixed bug about user tracks management</li><li>▪ Status variables:<ul style="list-style-type: none"><li>▪ Fixed bug about enabling data memorization as logic channel</li><li>▪ Fixed bug about enabling/disabling status variable</li><li>▪ Fixed bug about 'Save As' feature that did not save status variables</li></ul></li></ul> <b>Analisis</b> <ul style="list-style-type: none"><li>▪ Fixed a couple of crashes in plot routines</li></ul> <ul style="list-style-type: none"><li>▪ Upgrade/Bug Fix:<table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>LINK</td><td>CAN_BUS_BASE_LCC</td><td>All</td><td></td></tr><tr><td>LINK</td><td>CAN_500k_BUS_BASE_LCC</td><td>All</td><td></td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	LINK	CAN_BUS_BASE_LCC	All		LINK	CAN_500k_BUS_BASE_LCC	All	
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<b>3.19.00</b>	May, 31st 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Can Output configuration for Solo 2 DL</li><li>▪ Managing of K-Line protocols for Solo 2 DL (requires firmware version 2.22.58)</li><li>▪ Automatic web-updating of ECU and CAN2 protocols</li></ul>																				
<b>3.18.04</b>	May, 18th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Fixed bug: transmitting locked features can corrupt device configuration</li><li>▪ Fixed bug about display configuration</li></ul>																				
<b>3.18.00</b>	Apr, 17th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Solo 2 DL management</li><li>▪ Fixed bug for which on Windows 7 RS3 might fail to start</li><li>▪ ECU stream released:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>ASTON MARTIN</td><td>DB 11 VANTAGE</td><td>All</td><td></td></tr><tr><td>ARCTIC CAT</td><td>ZR 6000</td><td>All</td><td></td></tr></tbody></table></li><li>▪ Upgrade/Bug Fix:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>MARELLI</td><td>SRA SRAE SRT</td><td>All</td><td>Fixed oil pressure and fuel pressure</td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	ASTON MARTIN	DB 11 VANTAGE	All		ARCTIC CAT	ZR 6000	All		Manufacturer	Model	Compatib.	Description	MARELLI	SRA SRAE SRT	All	Fixed oil pressure and fuel pressure
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<b>3.17.03</b>	Apr, 12th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Updated display configuration user interface for MXG, MXS, MXS Strada</li><li>▪ MXG, MXS can now add one dash expansion. Firmware update to version 1.26.28 is needed (sw enclosed)</li><li>▪ Added Status Variables configurations</li><li>▪ Tracks: updated and improved filter for user tracks and smart collections</li><li>▪ Minor bugfix</li></ul>																				
<b>3.16.34</b>	Mar, 6th 2018	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Minor fix to better manage devices that can show Wi-Fi properties in the device window</li></ul>																				

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<b>3.16.32</b>	Feb, 26th 2018	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>Fixed bugs creating or importing alarms</li><li>ECU stream released:</li></ul> <table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>HONDA</td><td>CIVIC_TYPE_R_FK2</td><td>All</td><td></td></tr></tbody></table> <ul style="list-style-type: none"><li>Upgrade/Bug Fix:</li></ul> <table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>LIFE</td><td>MYGALE_F4</td><td>All</td><td></td></tr></tbody></table>	Manufacturer	Model	Compatib.	Description	HONDA	CIVIC_TYPE_R_FK2	All		Manufacturer	Model	Compatib.	Description	LIFE	MYGALE_F4	All	
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<b>3.16.31</b>	Jan, 23rd 2018	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>Fixed crash while connecting SmartyCam HD</li><li>Fixed issue for which, at the startup, RS3 could be launching the RS2Analysis software</li></ul>																
<b>3.16.30</b>	Jan, 22th 2018	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>Added support for Solo 2 (live measures, data downloading, logo management)</li></ul>																
<b>3.16.28</b>	Jan, 12th 2018	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>Improved support for TQM Files</li><li>It is now possible to set ECU channel display precision</li><li>Fixed bug for which temperatures (only in F) showed a 25 F offset in CAN output</li><li>Fixed bug for which alarms import could generate inconsistencies in configuration (i.e. importing 5 LED alarms cfg on a 4 LED device)</li><li>Fixed minor bug for which, in MXL2 display cfg, a change in rpm/speed channels could not generate a refresh in display page</li><li>Fixed MXS Strada display pages that used to show a min rpm value of 1000 instead of 0</li></ul> <p><b>Firmware included</b></p> <ul style="list-style-type: none"><li>MX Series and EVO Series ver. 1.26.25</li><li>ECU stream released:</li></ul> <table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>HONDA</td><td>CAN CBR 2017</td><td>All</td><td></td></tr></tbody></table>	Manufacturer	Model	Compatib.	Description	HONDA	CAN CBR 2017	All									
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<b>3.16.26</b>	Dec, 20th 2017	<p><b>Configuration</b></p> <ul style="list-style-type: none"> <li>Improved channel association in case of ECU change inside a configuration:               <ul style="list-style-type: none"> <li>Whenever possible the enabled/disabled status of a channel is kept as is</li> <li>Bitfield configuration is kept as is</li> <li>Introduced the possibility to keep previously used channels' names</li> </ul> </li> <li>Up to 3 decimal figures enabled for 'gal' and 'gal/s'</li> <li>Fixed minor bug in alarms importing</li> <li>Fixed minor drawing bug when low resolution displays were used</li> <li>Fixed missing cases in which configuration could not be saved when closing software forgetting to click the proper save button</li> <li>Upgrade/Bug Fix:               <table border="1"> <thead> <tr> <th>Manufacturer</th> <th>Model</th> <th>Compatib.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>HALTECH</td> <td>CAN V2</td> <td>All</td> <td>Update to v2.16</td> </tr> </tbody> </table> </li> </ul>	Manufacturer	Model	Compatib.	Description	HALTECH	CAN V2	All	Update to v2.16																
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<b>3.16.22</b>	Nov, 17th 2017	<p><b>Configuration</b></p> <ul style="list-style-type: none"> <li>Improvement: linear corrector math channel lets you now arbitrarily choose function and units</li> <li>Improvement: new masks for MXG-MXS (and Strada) featuring requested scales and avoiding red zone</li> <li>Improvement: CAN Builder: protection key is automatically added opening an imported protocol</li> <li>Introduced new function 'speed limiter' (selectable also in CAN protocol)</li> <li>Changed name for 'velocity' function into 'speed (velocity)'</li> <li>Fixed bug in digital speed channels: there were (limited) cases in which wheel circumference value was erroneously converted when changing units</li> <li>Fixed bug in dashes overlay: measures were shown in default units if user choosed not to show units</li> <li>Fixed minor bug in CAN output static values management and number of bytes (these values could be wrong after several changes in their values)</li> <li>ECU stream released:               <table border="1"> <thead> <tr> <th>Manufacturer</th> <th>Model</th> <th>Compatib.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>SYVECS</td> <td>LR_F88_CAN_500k</td> <td>All</td> <td></td> </tr> </tbody> </table> </li> <li>Upgrade/Bug Fix:               <table border="1"> <thead> <tr> <th>Manufacturer</th> <th>Model</th> <th>Compatib.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ECU MASTER</td> <td>EMU</td> <td>All</td> <td>The ECU driver has been renamed from EMU "CAN_500k" to ECU MASTER "EMU". Fixed some channel conversion</td> </tr> <tr> <td>DUCATI</td> <td>1299</td> <td>All</td> <td>Added Front brake pressure and Switch Map channels</td> </tr> <tr> <td>AUDI</td> <td>AUDI_R8_LMS_GT3_038</td> <td>All</td> <td>Fixed Front Brake Press channel conversion</td> </tr> </tbody> </table> </li> </ul>	Manufacturer	Model	Compatib.	Description	SYVECS	LR_F88_CAN_500k	All		Manufacturer	Model	Compatib.	Description	ECU MASTER	EMU	All	The ECU driver has been renamed from EMU "CAN_500k" to ECU MASTER "EMU". Fixed some channel conversion	DUCATI	1299	All	Added Front brake pressure and Switch Map channels	AUDI	AUDI_R8_LMS_GT3_038	All	Fixed Front Brake Press channel conversion
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## Race Studio 3 Release history

Version      Date  
**3.16.20**      Oct, 24th 2017

### Change/additions

#### Configuration

- New Pages added for MXG/MXS
- Fuel level management in odometers (now 'counters') page (requires new firmware, provided with sw installer)
- "Off Road" track type has been added
- The RS3 installer can be launched in silent mode, for possible batch installations
- Bug fix for a couple of crashes that could occur in live view with SmartyCamHD, in live measures, and while closing software
- Minor improvements

#### ECU stream released:

Manufacturer	Model	Compatib.	Description
BOSCH	DALLARA_F3_08	All	
HOLLEY	EFI	All	
ASTON MARTIN	CAN_HS	All	
ASTON MARTIN	CAN_LS	All	
SIMTEK	01X19	All	
EFI EUROPE	EURO_12_F3	All	
MECTRONIK	MKE7_R6_WSS	All	
HONDA	CAN_CBR250RR	All	
RENAULT	CLIO_R4_CUP	All	
SKODA	OCTAVIA_CUP_MS6	All	
SCS	DELTA_GDI4	All	
SCS	DIESEL	All	
SCS	PETROL	All	
SYVECS	LR_F88_CAN	All	
KTM	X-BOW	All	
KTM	X-BOW_GT4	All	
ARTIC CAT	WILD CAT	All	
BRP	SkiDoo 600RS G4	All	
BRP	CanAm SSV	All	
YAMAHA	YZZ 2016	All	ECU driver for up to 2016 models
YAMAHA	YZZ 2017	All	

#### Upgrade/Bug Fix:

Manufacturer	Model	Compatib.	Description
BMW	M235i	All	Fixed Fuel Raw channel
FIAT_ABARTH	CAN_STANDARD	All	Added Vehicle speed channel (FA_VEH_SPEED_2) for FIAT PUNTO 2008
HONDA	CIVIC_TYPE_R_FD2	All	Fixed temperature offset

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**3.16.00** Jun, 20th 2017

### Configuration

- The download from the Memory Module is now managed
- Improved the user information window in case of errors that might occur while saving a configuration
- The speed channels configuration window, when channels are used as angular speed, feature now the possibility of "deg/s" and "rad/s"
- Fixed bug that could generate a mistake in the EVOx configuration while switching from a dash to another one

#### ▪ ECU stream released:

Manufacturer	Model	Compatib.	Description
MAZDA	01L30MX5_ND_GEMS	All	Starting with 01L30 ECU firmware
MECTRONIK	MKE7_RACECAR_STD	All	

#### ▪ Upgrade/Bug Fix:

Manufacturer	Model	Compatib.	Description
MAZDA	MX5_ND_GEMS	All	Before 01L30 ECU firmware

**3.15.08** Jun, 16th 2017

### Configuration

- Fixed bug for which the CAN output feature couldn't be storing correct info about channels after closing the software

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Version	Date	Change/additions																
<b>3.15.07</b>	Jun, 15th 2017	<ul style="list-style-type: none"><li>▪ Fixed issues on devices not communicating, due to expired certificates</li></ul>																
<b>3.15.05</b>	Jun, 9th 2017	<ul style="list-style-type: none"><li>▪ <b>Digital signing with new Verisign certificates</b> On June 12th all our software and driver certificates will be no longer valid as all certificates have an expire date; hence, using previous installers, Windows may prompt you a warning message while installing or communicating. This installer contains a certificate valid for the next three years.</li><li>▪ Minor bug fixed</li><li>▪ ECU stream released:<table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>LOTUS</td><td>EXIGE_V6_CUP_R</td><td>All</td><td></td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	LOTUS	EXIGE_V6_CUP_R	All									
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<b>3.15.04</b>	Jun, 1st 2017	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>▪ Fix for avoiding possible crashed in download phase when CSV-MatLab-Diadem exports were enabled</li><li>▪ Fixed for all software windows the management of low resolution screens</li><li>▪ Fixed very long name erroneously given to a MXG-MXS page</li><li>▪ Fixed cases in which, managing a configuration, some warning icons could erroneously appear</li><li>▪ Fixed bad channels label management upon cfg save and reopen</li><li>▪ Fixed possible bad management of locked features for slave dashes</li><li>▪ Fixed crash while setting display color in MXL2 configuration</li><li>▪ Fixed bad management of number of elements in AiM and Smart collections</li></ul> <p><b>Analisis</b></p> <ul style="list-style-type: none"><li>▪ Fix in bad sorting algorithm applied to DB time and date columns only in english language</li><li>▪ Fixed bug for which, in time-distance plot, a channel could result in being with no Y scale and no trace plotted</li></ul> <ul style="list-style-type: none"><li>▪ ECU stream released:<table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>FERRARI</td><td>488_GT3</td><td>All</td><td></td></tr></tbody></table></li><li>▪ CAN2 stream released:<table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>TEVES</td><td>MK60_E5_1M</td><td>All</td><td></td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	FERRARI	488_GT3	All		Manufacturer	Model	Compatib.	Description	TEVES	MK60_E5_1M	All	
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<b>3.15.00</b>	May, 18th 2017	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>▪ New functionality to automatically update features that use ECU channels when you change or update the ECU protocol in configuration</li><li>▪ Upgraded warning management to better identify what features in configuration need to be checked</li><li>▪ Configuration Import: fixed bug when the imported configuration already exists on PC</li><li>▪ Fixed bug on Luminosity channel when used by CAN Output feature</li></ul> <p><b>Analisis</b></p> <ul style="list-style-type: none"><li>▪ Introduced the possibility to show the average values for the channels shown in distance plot and in delta. The possibility has to be enabled in time/distance view settings</li><li>▪ Introduced the possibility to show the date and time of the start of every lap in lap manager view</li><li>▪ Introduced the possibility, in the channels report, to compute the average value of a channel avoiding to include zero values in the computation of average values</li></ul>
<b>3.14.01</b>	Apr, 19th 2017	<ul style="list-style-type: none"><li>▪ New functionality:<ul style="list-style-type: none"><li>▪ Logo management for GS-Dash and Formula Steering Wheel 3 for EVO5 and EVO4S (firmware update is needed)</li><li>▪ The RS3 software warns users in case they add more alarms or math channels than the firmware can manage</li></ul></li><li>▪ Fixed bug in alarms import/export</li><li>▪ Fixed bug in AiM digital speed channels when 'Ang Velocity' is selected (i.e. RPM setting) for EVO5 and EVO4S. Firmware update is needed</li><li>▪ Minor bug fixed</li></ul>
<b>3.14.00</b>	Mar, 24th 2017	<ul style="list-style-type: none"><li>▪ Added management for GS-Dash and Formula Steering Wheel 3 for EVO5 and EVO4S</li><li>▪ Custom sensors now allow the management of 12V channels (up to 13V)</li><li>▪ Added new units for the creations of ECU protocols: Fuel Consumption and Fuel Efficiency</li><li>▪ Odometers now feature the possibility to be enabled/disabled and show a number of decimal figures that matches RS3 settings</li><li>▪ CAN Output channels now show the unit of measure of chosen channels</li><li>▪ Autocalibration of accelerometers now manages the following values: lateral acceleration 0.0, inline acceleration 0.0, vertical aceleration -1.0</li><li>▪ Accelerometers settings now match for all systems the SAE xyz vehicle axes. Existing configurations must be opened and accelerometers settings verified to see the improvements</li><li>▪ ECU protocols: some old protocols have been "revamped" to new ECU management</li><li>▪ New tracks have been added</li><li>▪ Fixed a bug for which, while editing a track or creating a new one upon recorded data, the beacon could be misplaced</li></ul>



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		<ul style="list-style-type: none"> <li>▪ Fixed a bug for which the Wi-Fi password request could erroneously be shown while connecting to a device</li> <li>▪ Fixed a bug for which, while modifying an odometer name, the correct name could be reset to previous name (hence without sending it to the device)</li> <li>▪ Fixed a bug for which, in CAN Output feature and in Display settings, while choosing the channel to be used in a field, the 'not set' value couldn't be used any more</li> <li>▪ Fixed a bug for which, during download, some settings for stepped values could be disattended, hence generating interpolated values</li> </ul>																																																
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<b>3.13.00</b>	Jan, 18th 2017	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ New features added:<ul style="list-style-type: none"><li>▪ ECU driver Builder</li><li>▪ GSP_POS_Accuracy channel is available for display and CAN output (new firmware 1.22.99 for MX family and EVO family is required)</li><li>▪ New RPM scales for 'Rally Page'</li><li>▪ Tire temperature sensor</li></ul></li><li>▪ Minor bug fixed</li></ul>
<b>3.12.15</b>	Dec, 6th 2016	<b>Download</b> <ul style="list-style-type: none"><li>▪ Fixed bug that could generate data shift of some channels only in case of multiple download</li></ul> <b>Configuration</b> <ul style="list-style-type: none"><li>▪ Bug fix: GPS Speed could not be selected from channels expander dropout</li></ul>
<b>3.12.14</b>	Dec, 2nd 2016	<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Fixed bug for which in some cases the slaves configuration, upon transmission, could not be forwarded to slave units</li><li>▪ Fixed crash in settings window that could happen for all devices, improved also settings filter to avoid useless parameters repetitions</li></ul> <b>Download</b> <ul style="list-style-type: none"><li>▪ Fixed management of test types during download, now the software correctly keeps last user choice</li><li>▪ Minor fixes in download window tooltips and in error messages management (messages could be erroneously shown more than one time)</li><li>▪ Fixed bug for which the csv exports in RS3 download could offer a low precision in timing</li><li>▪ Improved csv exports to manage also GPS position accuracy</li><li>▪ Fixed bug for which there could be few bad samples at the end of the drk xrk/drk/csv files for high frequency sampled channels</li></ul> <b>Tracks</b> <ul style="list-style-type: none"><li>▪ Minor fixes in nations management (i.e. Aruba)</li><li>▪ Minor fix in track creation window to allow a name change referring only to letters case (i.e. monza -&gt; Monza)</li><li>▪ Fixed bug for which tracks filter could not be saved and tracks list could not be correctly updated after a change in nations settings</li></ul>

## Race Studio 3 Release history

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<b>3.12.10</b>	Nov, 22nd 2016	<p><b>Configuration</b></p> <ul style="list-style-type: none"><li>▪ Improvement: in the download window the error message that is prompted in case of problems has been made more meaningful for determining what happened</li><li>▪ Fixed bug in download that could lead to crashes when exporting to MatLab format</li><li>▪ Fixed bug for which, during download, in case of big ".xrk" files, the conversion to ".drk" could lead to bad values in logged channels</li><li>▪ Some minor fixes (tooltips and drawing imperfections) in the download window in case of mov files download from SD or SmartyCam</li></ul> <p><b>Analisis</b></p> <ul style="list-style-type: none"><li>▪ Fixed bug for which the satellites number in analysis saturated to a maximum number of 20, while GPS08 receivers can go over that number due to the use of more constellations (GPS-Glonass) than the GPS05 (GPS only)</li></ul>
<b>3.12.06</b>	Nov, 11th 2016	<p><b>Download</b></p> <ul style="list-style-type: none"><li>▪ Fixed bug for which RS3 could show a warning message on max 100 MB download in wrong cases and other improvements</li></ul> <p><b>Tracks</b></p> <ul style="list-style-type: none"><li>▪ Faster tracks download from web</li></ul> <p><b>Configuration</b></p> <ul style="list-style-type: none"><li>▪ Fixed bug in alarm settings: it wasn't possible to manage colored measures</li></ul>
<b>3.12.00</b>	Oct, 25th 2016	<p><b>Download</b></p> <ul style="list-style-type: none"><li>▪ Improved data download speed: USB comm speed, data conversion from xrk (logged by devices) to drk (for RS2Analysis)</li><li>▪ Added possibility to merge several xrk files into one single drk file</li><li>▪ In download window now it's possible to skip automatic selection of sessions made of one single lap, like it was in RS2</li><li>▪ Fixed bugs that could lead to crashes in case some different output format (eg. MatLab or NI) was selected in download phase</li><li>▪ Automatic naming for downloaded xrk files now let users avoid automatic insertion of original file name and logger ID into file name</li></ul> <p><b>Tracks</b></p> <ul style="list-style-type: none"><li>▪ Fixed bug for which it was impossible to save a new track when it was open shaped and very long (longer than 16 km)</li></ul>

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		<ul style="list-style-type: none"><li>▪ Added possibility to modify an AiM track into a user track in case anyone would want to modify the track shape</li><li>▪ During track creation/modification now the RS3 better checks if the beacon position is compatible with the track shape loaded, and coordinates edit boxed better allow for decimal figures</li><li>▪ During track creation, upon request to users to share data with AiM, now the shape of all laps (instead of the shape of one single lap) is shared. This for AiM labs to have more data to release a better map</li></ul>																																																																
		<b>Configuration</b> <ul style="list-style-type: none"><li>▪ Fixed bug for which it was possible for users to enter channel names using non ASCII fonts</li><li>▪ Minor bug fixes in configuration management</li><li>▪ Added alert window to inform the user that replacement of original instrumentation cluster may disable some of the bike functions</li><li>▪ In channel settings window it is now possible to set also the short name</li></ul>																																																																
		<b>Analysis</b> <ul style="list-style-type: none"><li>▪ Bugfix in RS2Analysis to avoid the measure units change in potentiometer channels, that sporadically occurred to some customers</li></ul>																																																																
		<b>General</b> <ul style="list-style-type: none"><li>▪ Fixed some bugs for which the software could crash while closing and prevent a new instance from being run</li><li>▪ While closing the software the main window is kept open untill all internal memory cleanup is finished</li><li>▪ ECU stream released:</li></ul>																																																																
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<b>3.11.08</b>	Sep, 15th 2016	<ul style="list-style-type: none"> <li>■ Fixed bug about importing configuration: bitfield channels are now correctly imported</li> </ul>																																
<b>3.11.03</b>	Jul, 22nd 2016	<ul style="list-style-type: none"> <li>■ Wi-Fi: - Communication is now more reliable - Updated icon and menu</li> <li>■ Minor bugfix</li> </ul>																																
<b>3.11.01</b>	Jul, 1st 2016	<ul style="list-style-type: none"> <li>■ Supporting EVO4S</li> <li>■ Added automatic track updates from web</li> <li>■ Added tooltip that explains how to use quick filter search editbox</li> <li>■ Added new tracks</li> <li>■ Fixed minor bugs: a name previously used for a configuration erased from disk, can now be reused</li> <li>■ Fixed minor bugs: after deleting expansions in a configuration, is now asked to save before close</li> <li>■ Fixed minor bugs: clicking 'Save As' configuration, also CAN output data is now saved</li> </ul>																																

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<b>3.10.12</b>	Jun, 17th 2016	<ul style="list-style-type: none"><li>▪ Minor improvement to better message the user that tries to launch two instances of Race Studio 3</li><li>▪ In case a device is connected both via USB and via WiFi the connection name is reflected also in tab name</li><li>▪ Bugfixes in custom sensor import to correctly manage the update button and (eventually) deprecated sensors</li><li>▪ Bugfix in management of WiFi password</li><li>▪ Bugfix in shown date/time of configuration</li><li>▪ Improvement, in the configurations DB, of the "cloned on..." "cloned on..." "received on..." notes</li><li>▪ Bugfix in sending tracks to devices (via USB an error in transmission was possible, resulting in no tracks sent to devices)</li></ul>																																												
<b>3.10.10</b>	Jun, 9th 2016	<ul style="list-style-type: none"><li>▪ New track management enabled for all devices, with software recognizing if a single device can receive new tracks or not</li><li>▪ User interface fixes for windows in which it was impossible to scroll (hence possibly hiding parts of the window)</li><li>▪ Fixes to avoid wrong settings, like inserting an empty channel name</li><li>▪ Improvements in potentiometers calibration interface</li><li>▪ Improvements and fixes in importing custom sensors from a configuration</li><li>▪ Minor fixes in web updates feature</li><li>▪ Fixes to avoid bad configurations while disabling/clearing/substituting alarms</li><li>▪ New tracks and ECU protocols</li><li>▪ WiFi communication fixes on both native Windows and virtualized Windows (i.e. MacOS with Parallels/VirtualBox/VMWare)</li><li>▪ ECU stream released:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>MOTEC</td><td>M1_500k</td><td>All</td><td></td></tr><tr><td>MOTEC</td><td>M130_TRIUMPH675R_BSS</td><td>All</td><td></td></tr><tr><td>POLARIS</td><td>RZR</td><td>All</td><td></td></tr><tr><td>BOSCH</td><td>MS 5.8 F3 2014</td><td>All</td><td></td></tr><tr><td>MECTRONIK</td><td>MV_ECU_KIT_476_1Mbit</td><td>All</td><td></td></tr><tr><td>BMW</td><td>MINI_CHALLENGE_2016</td><td>All</td><td></td></tr></tbody></table></li><li>▪ CAN2 stream released:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>WIRELESS_MOTORSPORT</td><td>BIOTELEMETRY_CANO</td><td>All</td><td></td></tr></tbody></table></li><li>▪ Upgrade/Bug Fix:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>NISSAN</td><td>350Z</td><td>All</td><td>Corrected Steering Wheel angle channel</td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	MOTEC	M1_500k	All		MOTEC	M130_TRIUMPH675R_BSS	All		POLARIS	RZR	All		BOSCH	MS 5.8 F3 2014	All		MECTRONIK	MV_ECU_KIT_476_1Mbit	All		BMW	MINI_CHALLENGE_2016	All		Manufacturer	Model	Compatib.	Description	WIRELESS_MOTORSPORT	BIOTELEMETRY_CANO	All		Manufacturer	Model	Compatib.	Description	NISSAN	350Z	All	Corrected Steering Wheel angle channel
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<b>3.10.00</b>	May, 9th 2016	<ul style="list-style-type: none"><li>▪ New device added: MXS Strada</li><li>▪ New tracks added</li></ul>												
<b>3.09.01</b>	Apr, 28th 2016	<p><b>Race Studio Analysis</b></p> <ul style="list-style-type: none"><li>▪ Minor fixes in Data Export functionality</li></ul> <p><b>Race Studio 3</b></p> <ul style="list-style-type: none"><li>▪ Fix: some pixelation problems that could happen to icons on some PCs (depending on graphic hardware)</li><li>▪ Fix: bug in Configuration Parameters: GPS Beacon 'Track Width' value could not be updated</li><li>▪ Fix: CanOutput: Expansions Channels were lost when using Import/Clone</li><li>▪ Fix while downloading data in order to prevent cases in which lap type was bad in drk files, generating a bad best lap time in analysis</li><li>▪ New tracks added</li></ul>												
<b>3.09.00</b>	Apr, 20th 2016	<ul style="list-style-type: none"><li>▪ RS3 Startup has been made quicker, also through the introduction of a new start screen picture, that doesn't bring users to configurations database. The start screen picture is user customizable</li><li>▪ CAN Output feature has been introduced into configuration</li><li>▪ Tracks (and configuration) database "Quick filter" behaviour has been improved</li><li>▪ Measure Units in downloaded files now are coherent with units used in live measures functionality</li><li>▪ After opening a configuration, if it features some custom sensors that are missing in RS3 custom sensors list, RS3 enables the users to add them to the list</li><li>▪ New tracks added</li></ul> <p>PLEASE PAY ATTENTION that minimum firmware needed to use the CAN Output feature is:</p> <ul style="list-style-type: none"><li>▪ 1.18.21 for MXG-MXL2-MXS</li><li>▪ 1.20.64 for EVO5</li></ul> <p>Such firmware is included into this RaceStudio3 release, just to be sure that users get it also without specifically downloading it.</p> <ul style="list-style-type: none"><li>▪ ECU stream released:</li></ul> <table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>OPEL</td><td>Astra_OPC_TCR_2016</td><td>All</td><td></td></tr><tr><td>ALFA ROMEO</td><td>GIULIETTA_TCR_Life</td><td>All</td><td></td></tr></tbody></table>	Manufacturer	Model	Compatib.	Description	OPEL	Astra_OPC_TCR_2016	All		ALFA ROMEO	GIULIETTA_TCR_Life	All	
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### ■ Upgrade/Bug Fix:

Manufacturer	Model	Compatib.	Description
SEAT_Sport	Leon_TCR	All	Add channels
MERCURY	PORT_OUTER_ENGINE	All	Change CAN bus setting
MERCURY	STARBOARD_OUTER_ENGINE	All	Change CAN bus setting
BOSCH	MS4_SP_T_40CSTX20	All	Change CAN bus setting
BOSCH	MS4_SP_T_40CSTX30	All	Change CAN bus setting
BOSCH	MS44_SP_T_44CSTX20	All	Change CAN bus setting

### 3.08.11

Mar, 23rd 2016

- Fix on potentiometers management, the travels of which could result zeroed upon software or firmware updates
- Fix on user interface: previously it was possible to delete AiM tracks
- Fix on user interface: RS3 prompts a message box when trying to export a configuration being modified
- Fix on custom sensors: after renaming a custom sensor a RS3 restart was needed before being able to open the sensor again
- New tracks added
- Minor improvements



## Race Studio 3 Release history

Version	Date	Change/additions
<b>3.08.10</b>	Mar, 15th 2016	<ul style="list-style-type: none"> <li>Fixed bug in configuration when changed ECU protocol</li> </ul>
<b>3.08.09</b>	Mar, 14th 2016	<ul style="list-style-type: none"> <li>Fixed problem in Race Studio 3 executable file downloading from various browsers, using a new certificate</li> </ul>
<b>3.08.06</b>	Mar 3rd 2016	<ul style="list-style-type: none"> <li>New ECU drivers added (detailed separately)</li> <li>Fixed cases in which, after receiving a track from MyChron5, modifying it on the PC and transmitting it back to the MyChron5, the track was shown twice into the MyChron5 tracks menu</li> <li>Changed the interface of the "Upload to AiM" user dialog window</li> <li>In device configuration the numbering of bitfield values has been modified (from "0 -&gt; 7" to "1 -&gt; 8")</li> <li>Minor fixes into the track editing window in case of small tracks</li> <li>New tracks added or modified</li> <li>Bugfix: if one of the fields used for creating xrk file path included a trailing whitespace the download would abort without notifying user about possible reasons</li> <li>Changed UI name in RS3 for SD cards from SmartyCams, in order to avoid possible confusion with EVO5 SD cards</li> <li>RS3 startup speed has been improved</li> </ul>

ECU stream released:

Manufacturer	Model	Compatib.	Description
KMS	MD35_ETC	All	
EMS	EM_TECH	All	
HONDA	Civic_2006_2011	All	
HONDA	Civic_2012	All	
MOTEC	M130_BIKE	All	
MAZDA	MX5_ND	All	
LIFE	WOLF_CAN	All	
MERCURY	FCR12	All	
MOTEC	VCS_TransCompound_Full_500k	All	
AUDI	TT_Cup_TCR	All	
SEAT_Sport	Leon_TCR	All	

CAN2 stream released:

Manufacturer	Model	Compatib.	Description
KMP	GCU2	All	
KMP	PADDELSHIFT	All	
MEGALINE	PADDELSHIFT	All	

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<b>3.08.02</b>	Feb 19th 2016	<ul style="list-style-type: none"><li>Bitfields ECU channels management, user can now set alarms on single bit of channel. It requires firmware version 1.18.12 or later.</li><li>Fixed bug receiving-importing-cloning a configuration with math channels</li><li>Bugfix in web updates window, that could create random crashes</li><li>Bug fix for track length measure units while editing tracks</li><li>Track creation window: fixed difference between the GPS Manager and the RS3 software that used to introduce in RS3 difficulties in case of small kart tracks</li><li>RS3 now asks if the user wants to share new tracks also while downloading data, and warns that RS3 behaviour for sharing data with AiM can be modified using settings-&gt;upload icon menu</li><li>Modified the maximum number of decimal places for Lambda, milliSec and angle degree</li><li>Small issue fix for Wi-Fi communication in case of connection to existing network. For this issue it could happen that devices disappeared from the network to reappear few seconds later</li><li>Wi-Fi settings for virtualized Windows (MacOS case) have been made more visible to users</li><li>RS3 now warns users in case of a bad configuration in the device, and advises to send a new one</li><li>Modified call to system dialogs for file open in order to avoid gif format and have gif instead</li><li>New tracks added</li></ul>																												
<b>3.08.00</b>	Feb 11th 2016	<ul style="list-style-type: none"><li>EVO5 configuration</li><li>Possibility to insert custom text in download fields (for file name and path) and to customize "venue types" strings</li><li>Possibility to save data in matlab and csv and kml format while downloading</li><li>Improvements in Wi-Fi reliability for MyChron5</li><li>Improvements in tracks management</li></ul>																												

## Race Studio 3 Release history

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Version	Date	Change/additions
<b>3.07.03</b>	Jan 7th 2016	<ul style="list-style-type: none"><li>Some more new race tracks: Guangdong, Shanghai kart, Lockarp</li><li>Bugfix: for MyChron5 RS3 features the new integrated GPSManager, for all other devices it runs the old GPSManager, while before the MyChron5 view was called for all devices</li><li>Bugfix: problems could arise with custom sensors (blank lines into the sensors database) while updating from 3.06.xx to 3.07.xx, now everything is correctly managed</li><li>Bugfix: while inserting ratios in "Precalculated Gear" math channel the resulting value could be wrong</li></ul>
<b>3.07.00</b>	Dec 23rd 2015	<ul style="list-style-type: none"><li>Track management for MyChron5</li></ul>
<b>3.06.20</b>	Dec 4th 2015	<ul style="list-style-type: none"><li>New WiFi support</li><li>Customizable logo</li><li>Revised menu system:<ul style="list-style-type: none"><li>Track display via menu</li><li>WiFi status</li></ul></li><li>System parameters editable via RS3 and menu</li><li>Improved and faster test list handling</li><li>Autorecording (standard conditions) will not be triggered by GPS speed alone, RPM or another speed required (avoid false positives)</li></ul>

- Released the following ECUs:

Manufacturer	Model	Compatib.	Description
LOTUS	Clusters 11 _ Exige Cup R	All	
MCLAREN	650S	All	
HELFTTEC	ECU 4.1	All	
PEUGEOT	RCZ_CUP	All	
ALFA ROMEO	4C	All	
HONDA	HDS_TAB_10	All	
HONDA	HDS_TAB_11	All	
BRP	SKI_DOO_MXZ_600RS	All	
YAMAHA	R6_MS_Retail	All	
GM	E67_PERF_ECU	All	
PROEFI	128	All	
MECTRONIK	MV_ECU_KIT_476	All	
MARELLI	SRT_CN2	All	
MARELLI	CAN_LMP3	All	
EMTRON	PAVLOTECH	All	

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▪ Upgrade/Bug Fix ECUs:

Manufacturer	Model	Compatib.	Description
TOMS	DOME_FIA_F4	All	
MOTEC	M84	All	Add USER 2 channel defined as oil temperature
HALTECH	CAN_V2	All	Fix Bug related on Engine state channel
MARELLI	PROTO_V8	All	Update all channels list
SC	TYPHOON_TORNADO_V3	All	Fix Bug related on speeds channels

**3.05.02** May 27th 2015

- MXG/MXS display pages improvements:
  - New Rally Page
  - Added possibility to show odometers and different time fields
- Minor bug fixed

▪ Released the following ECUs:

Manufacturer	Model	Compatib.	Description
MICROTEC	TM	All	
BOSCH	Tuner MS4 E46 M3	All	
FAST	XFI	All	
GM	C7_STINGRAY	All	
MECTRONIK	MK_E7	All	
FUEL_TECH	CAN	All	
MARELLI	FORMULA_MASTERS_CHINA_SERIES	All	
TEVES	MK60_ABS_MS	CAN2	
TEVES	MK60_ABS_STD	CAN2	

▪ Upgrade/Bug Fix ECUs:

Manufacturer	Model	Compatib.	Description
TOYOTA	GT86/SCION_FRS	All	Correction bug related to Water temperature offset
AUDI	CAN_PQ35_P5	All	Added oil temperature 2 channel
MARELLI	SRA_SRAE_SRT	All	Fixed bug related to ECU channels management

## Race Studio 3 Release history

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Version	Date	Change/additions
<b>3.05.00</b>	May 11th 2015	<ul style="list-style-type: none"><li>▪ New web updates management: now it is possible to download device firmware even if no device is connected. Devices will be updatable once connected</li><li>▪ Now it is possible to show odometers and lap times information on the display and to remove undesired fields</li><li>▪ Improved start data recording management in order to avoid possible recording failure conditions due to lap channels and odometers</li><li>▪ New encryption management for the configuration of CAN2 and CAN1</li><li>▪ Added math channel to use precalculated gearings</li><li>▪ Introduced 'Clone' possibilities for configurations</li><li>▪ Fixed decimal figures management in analysis of drks from MXG-MXL2: now all places in which a channel is shown are coherent</li><li>▪ Improved autoselection management of xrk files in download window</li><li>▪ Improved test properties and forced values management in RS3 download window</li><li>▪ Improvements and fixes in management of deletion of alarms and math channels</li><li>▪ Minor improvements in user interface</li><li>▪ Minor improvements in the configuration of MXL2 display</li></ul>

- Released the following ECUs:

Manufacturer	Model	Compatib.	Description
ALFA ROMEO	4C	MXL2 MXS MXG	
TOMS	DOME_FIA_F4	MXL2 MXS MXG	

- Upgrade/Bug Fix ECUs:

Manufacturer	Model	Compatib.	Description
MBE	9A8998CAN	MXL2 MXS MXG	Correction bug related to 6th gear management
MBE	9A9CAN	MXL2 MXS MXG	Correction bug related to 6th gear management

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<b>3.04.08</b>	Mar 24th 2015	<ul style="list-style-type: none"><li>▪ Improvement: colors for devices icon in the upper part of the main window</li><li>▪ Improvement: in download window it is now possible to choose if to automatically select for download all files that still have to be downloaded</li><li>▪ Improvement: import/export management for custom sensors</li><li>▪ Improvement: better management of MXG page "Driver page 5 V2"</li><li>▪ Minor bugs fixing</li></ul>																								
<b>3.04.07</b>	Mar 12th 2015	<ul style="list-style-type: none"><li>▪ Improvement: on MXG (and coming MXS) it's now possible to use measure colors as an alarm</li><li>▪ Improvement: download page has been revisited to better manage fields like driver name, vehicle name, track name, etc... it's now possible to force their values to values different from those previously inserted</li><li>▪ Fix/improvement: it's now possible to configure units for GPS Speed, seen as a channel of the device</li><li>▪ Fix: channel names in math channels definition are now correctly matching</li><li>▪ Fix: "select folder" window is now working also in Windows XP</li><li>▪ Fix: upon selecting a sensor, then selecting a new sensor, then going back to the previous it could happen that some parameters were not properly managed</li><li>▪ Fix: upon creating a "calculated gear" math channel, the display part of the configuration could be missing it's presence</li><li>▪ Fix: coordinates channels can't now be used any more to create alarms</li><li>▪ Fix: total potentiometer travel is now better managed for angular potentiometers</li><li>▪ Fix: in some cases, selecting "no ECU" in a configuration created with an ECU, the new set was missed</li><li>▪ Released the following ECUs:<table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>STACK</td><td>TPMS_CONTROL_UNIT</td><td>All</td><td>Add this driver in can2 page selection</td></tr></tbody></table></li><li>▪ Upgrade/Bug Fix ECUs:<table><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>FIAT_ABARTH</td><td>CAN_STANDARD</td><td>All</td><td>Change ECU model name the last was: CAN</td></tr><tr><td>EFI_EUROPE</td><td>EURO_8</td><td>All</td><td>Update protocol for new EFI EURO8 firmware</td></tr><tr><td>BMW</td><td>BMW_MINI</td><td>All</td><td>Correct bug related to Steering angle channel and add gear and 2nd steer angle channels</td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	STACK	TPMS_CONTROL_UNIT	All	Add this driver in can2 page selection	Manufacturer	Model	Compatib.	Description	FIAT_ABARTH	CAN_STANDARD	All	Change ECU model name the last was: CAN	EFI_EUROPE	EURO_8	All	Update protocol for new EFI EURO8 firmware	BMW	BMW_MINI	All	Correct bug related to Steering angle channel and add gear and 2nd steer angle channels
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<b>3.03.17</b>	Jan 14th 2015	<ul style="list-style-type: none"><li>Fixed crash on sending and receiving configuration</li><li>Minor improvements</li><li>PRS sensors curves corrected</li><li>Upgrade/Bug Fix ECUs:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>SUZUKI</td><td>SDS_Protocol</td><td>MXL2/MXG</td><td>Correction bug related to k-line start up communication</td></tr><tr><td>SUZUKI</td><td>RMZ</td><td>MXL2/MXG</td><td>Correction bug related to k-line start up communication</td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	SUZUKI	SDS_Protocol	MXL2/MXG	Correction bug related to k-line start up communication	SUZUKI	RMZ	MXL2/MXG	Correction bug related to k-line start up communication																				
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<b>3.03.14</b>	Dec 23rd 2014	<ul style="list-style-type: none"><li>Fixed crash that appears when you try to use RS3 on a Surface computer with Windows 8 and touch screen enabled</li><li>Updated user strings</li><li>Improvement in window of measure position settings</li><li>Released the following ECUs:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>SCCA Enterprises</td><td>Formula Enterprises</td><td>All</td><td></td></tr><tr><td>SCCA Enterprises</td><td>Spec Racer Ford, GEN3A</td><td>All</td><td></td></tr><tr><td>BLACK_BOX</td><td>M3</td><td>All</td><td></td></tr><tr><td>OLSBERGS</td><td>MSE</td><td>All</td><td></td></tr><tr><td>PERFORMANCE_EL</td><td>ECU_PE3</td><td>All</td><td>Renamed old ECU_EDGE</td></tr></tbody></table></li><li>Upgrade/Bug Fix ECUs:<table border="1"><thead><tr><th>Manufacturer</th><th>Model</th><th>Compatib.</th><th>Description</th></tr></thead><tbody><tr><td>MARELLI</td><td>SRA_SRAE_SRT</td><td>All</td><td>Changed gear channel measure</td></tr></tbody></table></li></ul>	Manufacturer	Model	Compatib.	Description	SCCA Enterprises	Formula Enterprises	All		SCCA Enterprises	Spec Racer Ford, GEN3A	All		BLACK_BOX	M3	All		OLSBERGS	MSE	All		PERFORMANCE_EL	ECU_PE3	All	Renamed old ECU_EDGE	Manufacturer	Model	Compatib.	Description	MARELLI	SRA_SRAE_SRT	All	Changed gear channel measure
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<b>3.03.12</b>	Dec 16th 2014	<ul style="list-style-type: none"><li>Minor improvements on ECU channels, gear calibration, custom sensors and odometers</li><li>Fixed PT100 management issue</li><li>Fixed crash while opening software and opening configurations</li></ul>																																
<b>3.03.10</b>	Dec 9th 2014	<ul style="list-style-type: none"><li>General improvements and minor bugs fixed</li></ul>																																

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<b>3.03.09</b>	Nov 28th 2014	<ul style="list-style-type: none"><li>▪ Editbox, bug fixed: now, if you type ".361" you get "0.361" and not 361.0</li><li>▪ It is possible to execute a download from more than one device in parallel</li><li>▪ Editbox: custom sensors names now are 26 character max</li><li>▪ Bug fixed in Channel Expansion udm</li><li>▪ Set Parameters: balloon tooltip now is available</li><li>▪ Internal gyro and acc frequency from 20Hz to 50Hz</li><li>▪ Bug fixed in speed pulses "not set" in channel choices now only when it makes sense</li><li>▪ New math channels management</li><li>▪ New parameters management for angular speed</li><li>▪ ECUS: lambda fid bug fixed</li><li>▪ MXG calculated gear now available in the display</li></ul>