

Completed for next major release:

Beta releases:

2017-12-02 - Released 3.0.50.23 for auto-update as beta.

Playback of HighSpeed & Ignition Logs.

Full Application playback of log files

Fixes to Log trace selector in Ultra integrate log viewer when using Night Shade L&F

Added Field Limits for X-Y Plot view on High Speed Logger

Updated Icons

Fix for burn sent when no writes

UDP_Stream High Speed logger now supported

Resizable tables now supported fully, with insert Column, Insert Row, Del Row, Del Column and interpolated resize.

MLVLG binary Logging format supported. This will be the preferred logging format going forward.

Fix saving restore points when no change occurred.

2017-07-27 - Ported MLV's Field Limit Editor to Ultra's integrated Log Viewer

2017-05-24 - Added Units to tool tips in Log Viewer read outs.

2017-05-16 - Auto index MS3 SD internalFields

2017-05-16 - Sort Restore points by date and filter to selected controller.

2017-05-08 - Support for CAN Controllers in Tuning Views

Completed for next release:

N/A

2017-07-20 - Released 3.0.28 for auto-update and download as beta.

2017-07-189 - Add timeout on autoupdate downloads.

2017-07-18 - Fix honoring controllerPriority flag on bit fields while loading msq.

2017-07-12 - Fix Power and Torque not generated from SD log file.

2017-07-10 - Released 3.0.27 for auto-update and download as beta.

2017-07-10 - Add workaround for JRE crash with Windows Creator Edition

2017-07-08 - Changed Difference Report difference detection for proper precision

2017-07-08 - Added titles for Tables and Curves on Difference Reports.

2017-06-26 - Released 3.0.26 for auto-update and download as beta.

2017-06-15 - Make sure controller all data is taken any time there is no changes sent on a difference report

2017-06-07 - insure data log field names are unique.

2017-06-06 - Difference Reports don't overlook std_injection dialog.

2017-05-31 - Released 3.0.23 for auto-update and download as beta.

2017-05-31 - TuneView Selector now shows children menus

2017-05-31 - Logging Profiles: Respect which ECU field is disabled in projects with CAN devices.

2017-05-31 - Triggered Logging: Set StopTrigger to not triggered when manually starting a log so the log will start even if the stop trigger condition is true. This way it will not stop logging until the stop trigger becomes false, then true again.

2017-05-31 - Fix Firmware loader not recognizing MShift as MS2..

2017-05-26 - Fix "No Time Column Found" error in loop..

2017-05-25 - Put Specific Component name in new component in Custom Channel editor.

2017-05-25 - Fill white spaces with _ for component names in Custom Channel editor.

2017-05-25 - Sort tree components by alphabet on Custom Channel editor.

2017-05-25 - Added Fuel Flow in cc/min and lph as data log fields.

2017-05-24 - Fix blockingFactor to consider command size on writes.

2017-05-24 - Fix blockingFactor writeChunk for remote controllers.

2017-05-16 - Fix userSpeedMPH not enabling tire size and gear ratio settings on MS2 and MS1 in Perf & Economy

2017-05-15 - Fix Signature Mis-Match Connect Anyway

2017-05-08 - Fix hang when changing GPS Connection settings

2017-04-28 - Released 3.0.22 for auto-update and download as beta and stable.

2017-04-28 - Fix Difference Report comparing 1 digit more than set precision on F32's.

2017-04-28 - Disabled parsed ini caching.

2017-04-26 - Released 3.0.21 for download as beta and stable. Autoupdate all platforms beta, Linux only on Stable.

Note: No code changes from 3.0.20. This release only impacts Linux users running a 1.7 JRE as 1.8 JRE's are bundled with the OS X and Windows installers.

2017-04-26 - Recompiled against 1.7 JRE libraries.

2017-04-25 - Released 3.0.20 for auto-update and download as beta and stable.

- 2017-04-25 - Increased timeout to 250ms after F Command as older firmwares require 200ms before responding.

- 2017-04-24 - Added Debug Package under Help menu.

- 2017-04-24 - MS2 and MS3 will accept TPS calibration changes when offline.

2017-04-06 - Released 3.0.19.00 Beta for auto-update and download

- 2017-04-19 - Proper description of MS3-Pro Ultimate in Firmware file list.
- 2017-04-19 - Fix Firmware loader selecting proper s19 for MS3-Pro Ultimate
- 2017-04-19 - Firmware Loader always checks Monitor Version if the M command is available.
- 2017-04-18 - Fix TS not finding MegaLogViewer on OS X.
- 2017-04-17 - Added Bluetooth Direct to Lite edition.
- 2017-04-17 - Check registration against alternate products upon failure.
- 2017-04-17 - Added D2XX to Lite edition.
- 2017-04-17 - Use JRE Base64 when available (1.8+) for faster inimage and font encode/decode .
- 2017-04-13 - Made mouse wheel increment/decrement on 3D tables.
- 2017-04-12 - Filter project backups from project backups.

2017-04-06 - Released 3.0.18.09 Beta for auto-update

- 2017-04-05 - Fixes to MS3 SD retry
- 2017-04-05 - Added cancel button for SD downloads
- 2017-04-05 - Cached Dashboards initialize VP monitors
- 2017-04-05 - No reset on ControllerInterface when downloading SD
- 2017-03-27 - Mouse Wheel adjusts table values.
- 2017-03-27 - On 2D Table added a reset to starting value on the right click menu.
- 2017-03-27 - Fix Fat Needle issue in Log Viewer
- 2017-03-27 - Fix Can't see navigation buttons on Ignition Log Viewer when using Night Shade Look & feel
- 2017-03-22 - Handle Stack Trace from VE Analyze panel

2017-03-15 - Released 3.0.18.08 Beta for auto-update and installer

- 2017-03-15 - Fix issue with configuration caching effecting MS1
- 2017-03-03 - Fix dashboard invalid when importing a fresh project.

2017-02-28 - Released 3.0.18.07 Beta for auto-update (Developer Edition only)

- Dashboard caching for faster project load
- Parsed ini caching for faster project load.
- Faster log start.

2017-01-16 - Released 3.0.18 for auto-update and download as beta and stable.

- 2017-01-30 - Fix Dashboard selector not painting correctly sometimes..
- 2017-01-30 - Fix for OS X, App window gone when leaving full screen dash.
- 2017-01-24 - Fix Unhandled exception on save current tune / Restore points on OS X and Linux
- 2017-01-24 - Fix Signature Mismatch dialog showing up very short on OS X
- 2017-01-17 - Firmware Loader properly selects MS3 Ultimate

2017-01-16 - Released 3.0.17 for auto-update and download as beta and stable. (MS3 SD Format disabled in stable)

- 2017-01-16 - Fix gauge Images not showing on OS X.
- 2017-01-16 - Select only new gauges on Copy/Paste in designer mode.

2017-01-12 - Released 3.0.16.06 for auto-update and download as beta

- 2017-01-12 - MS3 SD log transformation allows 3 Magic number or timestamp errors before ending.
- 2017-01-11 - Added support for ini attribute indicatorPanel
- 2017-01-11 - Added Format SD card for MS3.
- 2017-01-11 - Fix Connection Type changing in Manual Comm settings for firmware loader.
- 2017-01-09 - Fix Graph Panel not initialized on 1st SD log opening.
- 2017-01-03 - Prevent byte concatenation when timing out getting firmwareInfo.

2016-12-19 - Released 3.0.16 for auto-update and download as beta and stable

- 2016-12-19 - Fix Gauge Invalid cross out not showing when in layered paint mode.
- 2016-12-19 - Fix DAQ Updates with XCP protocol.
- 2016-12-17 - Apply translations to lower help pane.
- 2016-12-17 - Fix UnDo / Redo.

2016-12-14 - Released 3.0.15 for auto-update and download as beta and stable

- 2016-12-14 - Fix fullscreen on OS X 10.12.
- 2016-12-14 - Autoupdate now checks md5 checksum after download and will resume partially downloaded files..
- 2016-12-14 - Correct Port Editor offsets when they are set to an invalid value.
- 2016-12-13 - Updated Firmware loader to recognize MS3-Pro Ultimate
- 2016-12-02 - Cleanup .efianalytics folder on Linux, move contents to .efiAnalytics/.
- 2016-11-30 - Fix MS3 SD not including Time Field.
- 2016-11-30 - Fix MS3 Going offline when pressing Undo if runtime channels changed.

2016-11-18 - Released 3.0.14.02 for auto-update as beta

- 2016-11-18 - Attempt to fix random thread lock issue
- 2016-11-18 - Save project.properties only once. A double save was sometimes cause the back up not to save.
- 2016-11-17 - Dynamically sized tables do not require re-opening.
- 2016-11-16 - Dev edition Controller RAM Editor active, allows realtime editing and display of raw controller data..

2016-11-16 - Released 3.0.14.01 for auto-update as beta

- 2016-11-16 - Refresh controller data on PortEditor open.
- 2016-11-15 - Fix to PortEditor correcting invalid values on open.

2016-11-03 - Released 3.0.14 for auto-update and download as beta and stable

- 2016-11-10 - Fix: Table data not updating after getting a difference report.
- 2016-11-10 - Fix: Firmware loader not erasing top sector for MS3 1.5 firmware
- 2016-11-10 - Make label blink while detecting hardware in firmware loader.

2016-11-07 - Released 3.0.12.02 for auto-update as beta

- 2016-11-07 - Added Help bubble button to the Signature Mis-Match dialog.
- 2016-11-06 - Added Help text to bottom of settings dialogs.
- 2016-11-05 - Added Help bubble button to the Ignition Logger.

- 2016-11-05 - Added Table for Data View on ignition Logger.

2016-11-04 - Released 3.0.12.01 for auto-update as beta

- 2016-11-04 - Honor SD Card GPS interleaving flag.

2016-11-03 - Released 3.0.12 for auto-update and download as beta and stable

- 2016-11-03 - Fix for MS1 always read full page as commands do not support partial page read.

- 2016-11-03 - Firmware loader detect MS1 properly and notify not supported.

2016-10-31 - Released 3.0.11 for auto-update and download as beta

- 2016-10-31 - Made Quick trace select optional in TS Ultra log viewer

- 2016-10-31 - TS Ultra log viewer will open multiple files after SD Download

- 2016-10-31 - Dev Edition will not accept signatures over 40 characters long or starting with a null char.

- 2016-10-31 - Fix: Some conditions led to JSSC Com Port not being closed properly.

- 2016-10-30 - Made Quick Trace Selection optional for the Ultra graphing view.

- 2016-10-29 - Added Save Log Data button to Ignition Logger..
- 2016-10-28 - Added Odometer and TS Speed to data log.
- 2016-10-28 - Fix: Odometer & Trip Meter loses distance when data log started.
- 2016-10-28 - Fix: Difference Reports showing TS data for both Local and Controller data with tables nested in panels
- 2016-10-27 - Fix issue with CAN Device Properties hanging
- 2016-10-27 - Fill unallocated space in constants
- 2016-10-27 - CTRL key ends multi-select in 2D tables.
- 2016-10-26 - Integer ini parameters support using hex string inputs as opposed to only base 10.
- 2016-10-21 - Save backup of project.properties auto restore on corruption.
- 2016-10-17 - Fix Dashboard label painting when in layered paint mode.
- 2016-10-19 - Fix Project Properties labels missing on settings tab with night shade Look & Feel.

2016-010-14 - Released 3.0.10.08 for auto-update and download as beta

- 2016-10-13 - Read only portion of page needed instead of full page on dialog open.
- 2016-10-13 - Error checking with retries added to auto update.
- 2016-10-07 - Fix CurveGraph exception with no registration.
- 2016-10-07 - Added support for X & Y Label in TableEditors
- 2016-10-02 - Added Video Driver option to use Java default on Windows Use D3D

2016-09-14 - Released 3.0.10.03 for auto-update as beta

- 2016-09-26 - Enable Automatic update Check in non-registered version.
- 2016-09-26 - Altered Linux Hardware ID detections.
- 2016-09-26 - Fix to JSSC InputStream over-run handling
- 2016-09-24 - Select Gauge Component on add

2016-09-22 - Released 3.0.10 for auto-update and download as beta and stable

- 2016-09-22 - Added support for nested #define.
- 2016-09-21 - Fix in MS1Extra ini file, ignition settings were disabled.

2016-09-20 - Released 3.0.09 for auto-update and download as beta and stable

- 2016-09-19 - increased time between connection attempts to 400ms for JSSC and D2XX
- 2016-09-19 - Renamed "Recent Car Projects" to "Recent Vehicle Projects"
- 2016-09-19 - Fix: Supplemental channels not loaded in dashonly mode.

2016-09-14 - Released 3.0.08 for auto-update and download as beta

- 2016-09-14 - If ini is encrypted, the msq will always be encrypted as well.
- 2016-09-12 - Ignore page attribute in menu definition if not there..

- 2016-09-12 - Added filter Restore Points to Create Project Backup.
- 2016-09-11 - Fix Data Log Field Editor allowing empty field name.
- 2016-09-11 - Fix Data Log Field Name not updating on tree when edited.

2016-09-09 - Released 3.0.07 for auto-update and download as beta

- 2016-09-08 - Fix High CPU usage in Comms.
- 2016-09-08 - Handle MS3 going offline after a controller powercycle with highspeed runtime enabled.
- 2016-09-08 - Altered Delay of reads with small blockingFactor.
- 2016-09-01 - Fix Error when invalid connector assigned in port editor.
- 2016-09-01 - Add Disable D3D video driver work around
- 2016-09-01 - Add support for #define lists to be used with bit fields.
- 2016-09-01 - Add support for read only oddArray ParamClass.
- 2016-08-29 - Fix Cluster Demo in Load Gauge Cluster dialog.

2016-08-26 - Released 3.0.06 for auto-update and download as beta

- 2016-08-22 - Fix Config Error dialog repeatedly comes up.
- 2016-08-16 - Fix library reference in manifest for CurveGraph fitting.
- 2016-08-16 - Fix Custom Filter not working in VE Analyze.
- 2016-08-10 - Force proper digits on Lambda Delay and TS internal AFR table.
- 2016-08-09 - Prevent file signature detection from finding corrupt msq firmwareInfo as signature.

2016-08-08 - Released 3.0.05 for auto-update and download as beta and stable

- 2016-08-08 - Altered offline Trial Registration rollback logic.

2016-08-04 - Released 3.0.04 for auto-update and download as beta

- 2016-08-04 - Added Deadlock monitor.
- 2016-08-04 - Fix small font on MS3 MAF Curve.
- 2016-08-04 - Support BluetoothMode in JSSC driver on Windows (Already supported on OSX and Linux).
- 2016-08-04 - Fix Linux Browser not launching
- 2016-08-04 - Added abs function to Expression edito list.
- 2016-08-04 - Added min() and max() function support.
- 2016-08-04 - Fix issue with exponential scalar on F32 data type.

2016-07-28 - Released 3.0.03 for auto-update and download as beta and stable

- 2016-07-26 - Fix, Difference report showing disabled dialogs.

2016-07-21 - Released 3.0.02 for auto-update and download as beta

- 2016-07-20 - Adjust font sizing smaller on 1D and 2D tables to prevent ...
- 2016-07-20 - Added support for OutputChannel and full expressions on LogFieldSelector
- 2016-07-18 - Fix to Avg MPG Gauge

2016-07-13 - Released 3.0.01 for auto-update and download as beta and stable.

- 2016-07-12 - Removed Persist Channel from Channel editor. It was not implemented that way, you use the persistAccumulate() function.

- 2016-07-12 - Support paste email into registration dialog.
- 2016-07-12 - Make paste into 2D table skip empty cells for data copied from MLV Histograms.
- 2016-07-11 - Improved GPS reconnect on unexpected connection loss.
- 2016-07-11 - Changed GPS Active Indicator off verbiage to "GPS No Fix"

2016-07-09 - 3.0.00 Released to Stable - Download only

- No Changes from 2.9.129

2016-07-05 - 2.9.129 Released as Release Candidate 5 - Download and Auto Update to beta users

- 2016-07-05 - Prevent inactive 1D arrays from validating limits against inactive remapped Constants. (IOx Generic PWM Issue)
- 2016-07-05 - Fix: SD Card Field changes not showing up on Difference Reports.

2016-07-01 - 2.9.128 Released as Auto Update to beta users

- 2016-07-01 - Handle UnsatisfiedLinkError for off beat RasPi Linux Distros.

- 2016-06-30 - Fixes to odometer.

- 2016-06-30 - Fix Datalog indicator going out when going offline.

2016-06-24 - 2.9.127 Released as Release Candidate 4 - Download and Auto Update to beta users

- 2016-06-24 - Fix incorrect Lambda sensor reference on Trim Table Analyze

- 2016-06-21 - Fix font scaling issue with CurveGraph on high dpi screens.

2016-06-16 - 2.9.126 Released as Release Candidate 3 - Download and Auto Update to beta users

- 2016-06-16 - Fix OS X opening wrong right click menu on Gauge Clusters in TuneView Designer mode.

- 2016-06-16 - Fix Fail-over Persistent Channel persistor Thread gone wild.. High CPU Usage.
- 2016-06-15 - Added missing MS2e Dashboards

2016-06-14 - 2.9.124 Released as Release Candidate 2 - Download and Auto Update to beta users

- 2016-06-14 - Handle Detection error when on platform no supporting D2XX
- 2016-06-14 - Fix non-fullscreen window placement on newer OS X
- 2016-06-13 - Fix black screen when full screen on newer OS X
- 2016-06-13 - Fix not prompting on dirty secondary dashboards
- 2016-06-13 - Fixed error using userSpeedMph with MS3
- 2016-06-10 - Added Odometer, and trip meters remember last value until reset.
- 2016-06-10 - Simple Linear Channel editor assumes input of volts that are converted to ADC.
- 2016-06-10 - Fixed numerous UI issues with Custom ini editor
- 2016-06-10 - Fixed inc file copy error in Custom Channel inc file Editor

2016-06-08 - 2.9.123 Released as Release Candidate 1b - Auto Update to beta users

- 2016-06-08 - Fix for inverted table Y Axis.

2016-06-08 - 2.9.122 Released as Release Candidate 1a - Auto Update to beta users

- 2016-06-08 - Load main controllers custom.ini after CAN devices so expressions in custom.ini can reference CAN Devices.
- 2016-06-07 - Burn Button always enabled, when burn is needed a burn ICON becomes enabled on the button.
- 2016-06-07 - Insure tune gets saved when accepting an Auto-Update.
- 2016-06-07 - Search box includes results from CAN devices.

2016-06-06 - 2.9.121 Released as Release Candidate 1 - Download and Auto Update to beta users

- 2016-06-06 - Created OS X app and DMG installer
- 2016-06-06 - Updated bundled ini files
- 2016-06-06 - Updated OS X Restart to use bundled JRE if available.
- 2016-06-06 - updated splash screen.
- 2016-06-02 - Added additional Error Reporting if the project thermfactor.inc file is not writable.
- 2016-06-02 - Fix Signature mis-match and Comm settings initially incorrect on new project creation.
- 2016-05-31 - Correct CAN device going online when maincontroller unavailable
- 2016-05-31 - Error showing Ultra Graph View with unknown firmware.
- 2016-05-31 - Fix Indicators not always toggling in Demo mode.

2016-05-27 - 2.9.120 Released as Beta - Download and Auto Update

- 2016-05-24 - Exit Edit mode on vertical 1D tables when pressing tab or enter
- 2016-05-24 - Fix not selecting cell when clicking another cell while in direct edit mode on 1D table.

- 2016-05-20 - Added Bluetooth over RS232 driver for OS X and Linux. This is the standard RS232 driver but with timings to improve Bluetooth.

- 2016-05-19 - Fix for Invalid Indicator cross out color. It was showing an XOR color too easy.
- 2016-05-19 - Fixed read timeout issue when loading firmware over TCP/IP
- 2016-05-19 - Fixed Firmware Version Info getting updated on signature mis-match

2016-05-18 - 2.9.118 Released as Beta - Download and Auto Update

- Added MS1 HiRes Tuning Views
- Support for MS3 1.5+ Firmware loader full erase

From TunerStudio 2.6 to the 2.9 releases there was approximately 80k lines of code added, so as you can imagine there is too much to detail here. Thus this high level list of changes is provided and now moving toward a stable release, detailed changes will be tracked.

Key new features since 2.6.x:

- [Integrated Firmware Loader](#)
- [Direct Bluetooth Connections](#)

- [Dashboard Enhancements](#)
- New Default Dashboard Skin
- Unlimited size Difference Reports
- [Designer Mode Improvements](#)
- Scaling for high DPI Screens
- Support 128 Byte MS3 SD Logs
- [Curve Graph Editing Tools](#)
- [New 1d Array Editor](#)
- [Multi-select Curve Graph](#)
- [Add Custom Channel Wizard](#)
- [Custom Channel Editor](#)
- Simplified Comm Settings
- [Trim Table Auto Tune*](#)
- [Integrated LogViewer*](#)
- [Tuning and Dyno Views*](#)
- [X-Y Plotting on Curve Graphs*](#)

*Available in TunerStudio MS Ultra

2015-04-21 - 2.6.19 Promoted stable - no Auto Update for stable, only beta.

- back ported a fix to ensure JRE exits on auto update, this will only work going forward, so when you update from 2.6.19 or higher to a yet newer version. If on older version and you have trouble with the JRE existing, do update checks without a project open.

2015-04-14 - 2.6.18 Digitally signed and Promoted stable - no Auto Update for this

release.

2015-03-18 - 2.6.18 Released to Beta

- Fix to handle find the bundled JRE when double clicking an msq.

2015-03-06 - 2.6.16 Released to Beta

- Fix to retain activation on Raspberry Pi when no network.

2015-01-21 □ 2.6.14 Promoted to Stable and Beta

2015-01-21 - Fix Burn Timeout with old protocol firmwares.

2015-01-13 2.6.12 Promoted to Stable

- Bundled JRE so no JRE installation is required and Java Updates will not break app.
- Changed CAN Timeout reaction with new protocol to immediately retry instead of waiting.
- Use minimum blocking factors from protocol on remote CAN devices if available.
- Always Retry on CAN_TIMEOUT protocol errors.
- Support Reference Table writing to secondary CAN Devices
- Updated PDF Viewer so images display in help files on 1.7+ OpenJDK. (Primarily affects Linux)
- updated verbiage in Project Properties dialog when controller not found. ("Please click the 'Other' checkbox and browse")
- Fixed GPS data lag with high speed GPS devices.
- updated French Translations

2014-08-26 2.6.05 Promoted to beta

2014-08-26 - Fix for VE Analyze while the project contains additional CAN devices.

2014-08-19 2.6.04 Promoted to Stable

2014-08-18 2.6.04 Promoted to Beta

2014-08-18 - Fix JSSC bug that can effect MS2 extra with CAN_COMMANDS, causing dropouts.

2014-08-18 - Apply Translations to Command Buttons

2014-08-15 2.6.03 Promoted to Beta

2014-08-15 - Updated French Translations

2014-08-15 - Updated ini files.

2014-08-15 - Fix Porteditor not updating when value change less than 0.5

2014-07-04 - Correct Analog Gauge major tick placement when min values is not an int.

2014-07-01 2.6.02 Promoted to Beta

2014-07-01 - Force msq error stack clear when starting an msq load.

2014-07-01 - Synchronize Math parser

2014-05-22 - Fix to prevent filtering data in WUE Analyze when using an MS1 on B&G firmware with a Wideband

2014-05-22 - Fix reported error when loading MS3 1.0 and 1.1 firmwares.

2014-05-09 2.6.01 Promoted to Stable and Beta

2014-05-09 - Maintain indicator order from ini file.

2014-05-08 - Fix problem loading a temp project with Help references.

2014-05-07 - Corrected ini error in MS1 Extra 29y ini bundled.

2014-04-28 2.5.20 Promoted to Stable and Beta as 2.6.0

[Previous versions](#)

