

Centurion Software Change Log:

1.44	Build #0009 06/30/17	<ul style="list-style-type: none"> <input type="checkbox"/> Fixed bug catching Zero Counts and High SnMis counts with the Data Integrity check function and Raw (PerVehicle) Data. <input type="checkbox"/> Added a version number, type of Centurion, and what checks were applied to the Data Integrity Check function (at end if any errors were found). <input type="checkbox"/> Added some color and font style changes to the Data Integrity list. <input type="checkbox"/> Added check to see if Centurion is already running under a different user login (like the Auto-Polling system). If it is, a window appears asking what you want to do: <ul style="list-style-type: none"> - Run a second copy under current login. - Close other copy and just run it on current login. - Just exit and don't run Centurion. <input type="checkbox"/> Fixed bug on main link screen downloading files without opening the counter connect window. This happens when the "When Linked" option is set to anything other than "Just go to Setup/Monitor". <input type="checkbox"/> Fixed several "exception" error messages when closing link to a traffic counter.
	Build #0007 06/08/17	<ul style="list-style-type: none"> <input type="checkbox"/> Fixed some field issues with both PLSytem and DDSMonitor and SQL output (would sometimes not update existing records). <input type="checkbox"/> Made sure multiple calls to DDS Monitor doesn't open the window more than one time. <input type="checkbox"/> Updated to LiteDAC (SQLite) V3.0.1. <input type="checkbox"/> Added "CMA File Processing" to the telemetry function (comma delimited output format processing). <input type="checkbox"/> Added setting B-Filter and all Loop ID Strings for V5.02 firmware (and higher) along with loop board firmware V1.75 (and higher). Can also set VOUT and VOUTBaudRate (or leave unset) for vehicle signature output on the loop serial port. <input type="checkbox"/> Added "UPPHS" command line option to enable 115.2Kbps firmware updating (for V5.xx and higher counters). <input type="checkbox"/> Added current loop settings to UPP Setup Report. <input type="checkbox"/> Added "Reboot Counter" option on UPP Cold Restart screen for V5.02+ counters.
	Build #0006 05/10/17	<ul style="list-style-type: none"> <input type="checkbox"/> Added File->Preferences->General->PRN option to "Put '01' in PRN Export columns 1-2 and 4-5 when no other value is specified" option. This changes the PRN exports to use "01" or "01 01" instead of "00" and "00 00" as previous versions have been doing. <input type="checkbox"/> Added ability to set Omega X3, Omega-G, RR3 and TT-200 serial numbers from main link screen by double clicking on the "Serial #" value. Will only allow setting the last 5 characters, and preserves the first 10 as they are set from the factory (with spaces added as needed between the first 10 and last 5). <input type="checkbox"/> Fixed bug in "Simple" Omega X3 and Omega-G interfaces doing a firmware update (would lock at loading new program and not complete the update). <input type="checkbox"/> Changed Data File Wizard Class Report to do a new page for Length data if Axle & Speed bins are both enabled. <input type="checkbox"/> Added option to File->Preferences->General->Export to "Export Binary with 'Extended' site info". This defaults to enabled, but can be turned off for customers like Kansas who need the export format to not use this format. <input type="checkbox"/> Fixed bug that caused imports to stop when the data interval length is set to blank or zero on an existing database entry. <input type="checkbox"/> Added new "DDS Interval Data Monitor" function from the DDS menu. This new function allows DDS Interval data to be collected outside of the Parking Lot Monitor: <ul style="list-style-type: none"> o Link to the DDS under user specified account. o Download Interval Data files at user specified intervals. o Process the data in real time into both Centurion and SQLite database formats.
	Build #0005 04/30/17	<ul style="list-style-type: none"> <input type="checkbox"/> Added reading/setting Incident detection options for UPP (V2.80 and higher). Link to the counter and then go to Set System Configuration->Incident Detection to configure the various options.
	Build #0004 04/22/17	<ul style="list-style-type: none"> <input type="checkbox"/> Added new "LCM" style SQL or Text database output of all Interval data collected by Parking System + Interval counters. New "LCM" button at bottom of DDS setup screen allows setup of this feature. <input type="checkbox"/> Fixed bug in creating LCM Database Directories (when they don't exist). <input type="checkbox"/> Added ability to create SQL database that matches Centurion database when using LCM and Interval Data.

	Build #0003 04/12/17	<ul style="list-style-type: none"> ❑ Changed so that new Time/Date records inside of OX3 & OAG files are not treated as fixed values. They are instead used as a reference only to indicate minute change so that alterations to the clock from GPS does not change data flow. ❑ Added new flag fields 0x07 and 0xFF05 which is GPS with Time/Date. This is to store new time/dates without affecting current time/date settings in the file (leave it up to Centurion to handle later on).
	Build #0002 04/06/17	<ul style="list-style-type: none"> ❑ Added ability to handle "Interval Data" posted from the Iris Modem <ul style="list-style-type: none"> ○ Stand Alone product and collected from ROSIM devices. This includes: ○ New "DDS" button on the Parking Lot Monitor ○ New "DDS Setup" screen allowing configuration of DDS Sites (including MEID, Description, In Lanes, Out Lanes, Time Zone). ○ DDS Setup screen also allows user to enter: <ul style="list-style-type: none"> - Account - Remote Polling Interval - Password - Database Storage Interval ○ Default Time Zone ○ Advanced processing of input data to correctly populate a database.
	Build #0001 03/21/17	<p>First version with support for the Omega-G - both an Advanced and Simple interface. Link is similar to the Omega X3, except there is only two inputs and you cannot enable Bluetooth MAC Address scanning. It also contains these changes:</p> <ul style="list-style-type: none"> ❑ Fixed bug in TSProcess that allowed "Divide By Zero" in certain cases. ❑ Fixed not being able to "View Results" of TSProcess when doing Import data (instead of when manually processing). ❑ Added an automatic Lot Reset time (defaults to "Never") to reset the lot count automatically at a particular time of day. ❑ Changed the report generator so that as long as the user does not click the button to select specific lanes, the generator always reloads new selected lane defaults and date/time ranges between multiple reports.
1.43	Build #0007 03/09/17	<ul style="list-style-type: none"> ❑ Fixed bug handling Lat/Lon with starting zero. ❑ Fixed setting Sensor Spacing and Loop Length on Lanes 3 & 4 with TSProcess. ❑ Added a "Size" column to the DDS view. ❑ Added "Example Only" to display as background of DDS Files when no credentials have been specified.
	Build #0006 03/08/17	<ul style="list-style-type: none"> ❑ Added support for Omega X3 Iris Modem SMS/Texting Options (to go along with Omega X3 firmware V1.36). ❑ Changed to use the word "texting" instead of SMS so commonly (Ryan's suggestion to make it easier to understand) ❑ Added support for 0xFF0x04 (Text/SMS Message) inclusion in file. ❑ Added warning message if texting is enabled without setting at least one phone number.
	Build #0005 02/09/17	<ul style="list-style-type: none"> ❑ Fixed not handling the DDS stuff in the Omega X3 simple interface. ❑ Added selecting "/2" to the Omega X3 setup (simple and advanced screens) ❑ Added 4 tubes with directional to the TSProcess display screen. ❑ Fixed problem with Omega X3 retrieve Unretrieved when it is not the entire memory. ❑ Tweaked some of the Omega X3 simple and advanced start collecting stuff: <ul style="list-style-type: none"> ○ Added the "Hide Asking Storage Mode and Lane Configuration on keypad during Start Recording" option to the settings screen. ○ On volume views, the timestamps show up individually and the total count correctly handles if "/2" is turned on. ○ Completed implementation of Lane Subtract and Directional on the Total Count display during monitor mode and Volume data. ○ Fixed handling reversed lane overlap. Also updated display of sensor layouts in TSProcess to include channel labels. ❑ Fixed bug displaying error when New Reports button is clicked (was not handling Bluetooth vs. Non-Bluetooth data displays). ❑ Made DDS Files do 3 retries on all commands (including the login procedure).
	Build #0003 02/01/17	<ul style="list-style-type: none"> ❑ Fixed not setting DDSFiles status labels to black on new function starts. ❑ Added setting the various Omega X3 configurations from the Start Collecting menu (in the Advanced Link Screen). ❑ Added support for V1.35 Omega X3 firmware that allows complete lane configuration

		<p>setup to be sent at start of Monitor.</p> <ul style="list-style-type: none"> <input type="checkbox"/> TSPProcess changes: <ul style="list-style-type: none"> o Fixed problem not handling overlapping lanes in PerVehicle data. o Fixed ordering of vehicles on PerVehicle output. o Fixed minimum speed to actually be 5mph (7.3ft/sec)
	<p>Build #0002 01/26/17</p>	<p>V1.43 Adds support for V5.00 of the UPP code (with support for the Iris Modem and the Diamond Data Server). It also has these changes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Added support for 115.2kbps firmware upload to UPP V5.00 counters that are direct link connected. <input type="checkbox"/> Fixed OX3 saying DDS transfer at midnight instead of 1am. <input type="checkbox"/> Fixed some left over references to the "Cascade" modem (changed to "Iris" Modem). <input type="checkbox"/> Added support for direct link to the Diamond Data Server for customers to access their uploaded data files: <ul style="list-style-type: none"> o New "DDS" Main Menu item with "DDS Configuration" and "DDS Files" options. o DDS Configuration allows programming the account number and password, and also allows the user to "Test" their configuration. o DDS Files is much more comprehensive and will go out and load a complete list of files that can be easily downloaded into Centurion with a variety of options. <input type="checkbox"/> Modified the GEOCOUNTS format to: <ul style="list-style-type: none"> o Changed to use feet instead of inches on all US formats. o Changed to use semicolons after each axle spacing on per-vehicle o Added auto-conversion of North, South, etc to numbers on the "SC" record. o Added new "SE" records for Station Equipment and Lane Configuration o Added new "SL" records for describing the bin tables o Added Bluetooth to the V; record output o Made time three decimal points (Bluetooth and PerVehicle) o Added a "SC 0" record for Bluetooth o Changed MAC Address to "long long" value (instead of separate hex numbers). o Changed Bluetooth "qc" tag to "rssi" tag. o Changed Bluetooth "btype" to a numeric 0-Standard, 1-LE Public, 2-LE Random o Fixed having two underlines at end of file name. o Tweaked the Volume/Binned formats to use non-zero for the period when interval is not 60 minutes. o Added the Axle and Length class (TC and TL) lines with per-vehicle output. <input type="checkbox"/> Fixed bug causing Violation Error when reopening database view and the default view page is on Bluetooth. <input type="checkbox"/> Added a new "Bluetooth -> Volume" Import function from DBView window. <input type="checkbox"/> Changed the Export dialog to only list the formats available for the particular type of data (Binned, PerVehicle, Volume). <input type="checkbox"/> Added new "TMG PerVehicle" export format. <input type="checkbox"/> Added a "Filter Command/Responses" from counters option.
<p>1.42</p>	<p>Build #0018 12/05/16</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Added new feature to set which class types to export during any Classification export. <input type="checkbox"/> Added "Diamond Data Server" button and dialog box of settings for controlling the Omega X3 Iris Modem connection. <input type="checkbox"/> Fixed bug with "Capture" mode not working when linking through Winsock connection. <input type="checkbox"/> Disabled the search for Excel (program just assumes Excel is installed always and leaves it up to the Windows API to handle opening files in this format). <input type="checkbox"/> Fixed "LoopLabel4" being hidden behind loop image (making it impossible to click the image and set loop values). <input type="checkbox"/> Changed the position of all Start Collecting Next/Prev buttons to be manually set locations (not relying on Windows positioning for different window sizes).
	<p>Build #0016 08/28/16</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Added ability to mark "Enhanced" mode data from Omega X3 as all bicycles. <input type="checkbox"/> Added a simple Hex Editor to program accessible from File->Hex Editor <input type="checkbox"/> Fixed bug in not allowing update of custom ILoopxxxx.bin firmware (where 'a' is the custom letter). <input type="checkbox"/> Changed the I-Loop Firmware upload function to handle Loop Boards that are still in Vehicle Output mode. <input type="checkbox"/> Fixed double buffering problem with Unicorn/Phoenix/Pegasus causing sensors to not display correctly in "Test Sensors".

	<p>Build #0015 07/27/16</p>	<ul style="list-style-type: none"> ❑ Added new "Data Integrity" check function. To start, it works only with newly downloaded data files (or existing files on the computer): <ul style="list-style-type: none"> • Settings controlled from a new Preferences->Data Integrity Checking dialog box. • Has a "Run Check Now" button run against any existing data file. • Supports finding periods with Zero Count and finding SnMis counts that exceed a fixed percentage of the total, or SnMis count that exceeds fixed amount in a lane over a specified period. • When Data Integrity violations occur, a pop-up window appears with functions to print, edit, and save the lists. Save format is Word compatible. ❑ Multiple changes to support new Omega X3 V1.30 firmware including changes to support the new Iris Modem installation: <ul style="list-style-type: none"> • Added new Modem Parameters setup screen. Multiple checks on the Diamond Account #, IP Address, all Firewall values to make sure they are valid before proceeding. • File directory now shows separate column next to the "Retrieved" column that indicates files that have been sent to the "DDS" (Diamond Data Server). This is shown only when Iris Modem installed. • Added "File Create" option box to Settings panel (Manual or Daily). • Added ability to call up Omega X3 traffic counters from the Direct Call Directory or the Centurion Map (to make SOIP links to Omega X3) • Added support for new firmware V1.30 "Enhanced" axle collection mode. This does A/D style input but stores just like "Normal" mode. • Fixed bug showing the secondary voltage level. ❑ Fixed tab order on TSProcess and fixed bug which caused infinite loop when selecting an end time of "23:59:59" and an end date that is less than the actual end of the data.
	<p>Build #0012 06/08/16</p>	<ul style="list-style-type: none"> ❑ Added a "Length" bin export format for PRN files. ❑ Got rid of the extra blank page on Basic Volume Report - 15 min. ❑ Changed ADT calculation on Volume Summary to match other reports. ❑ Fixed bug when reading out Axle, Speed and Length bin table definitions for counters with V4.76 (or higher). ❑ Fixed clearing upper bits of Advanced Settings on Omega X3 link. ❑ Added support for Omega X3 V1.20 firmware changes: <ul style="list-style-type: none"> + New "Cell Modem/RS232 Baud Rate" setting ❑ Added command line option to run TSProcess and then exit. This is done by using "TSPROCESS" on command line followed by the input file(s) and then the output path. See Chapter 13b of Centurion manual for more information. ❑ Also added new "TSProcess Export" directory which defines the default output directory for TSProcess when run from the command line or when run from the File->Process Timestamp To Output File Only command. ❑ Added auto-display of the Data File Wizard for Omega X3 imports (can be enabled/disabled in General Pref->Import tab). ❑ Added new 'Simple' type interface for the Omega X3 traffic counter. ❑ Added window asking users if they want to use the 'simple' or 'advanced' link screen for the Omega X3 (window only appears once).
	<p>Build #0011 05/24/16</p>	<ul style="list-style-type: none"> ❑ Changed so that V1.15 Omega X3's label it as "Hide Asking Axle Collection Mode" for the bit .1 setting. Works with OX3 firmware V1.15.
	<p>Build #0010 05/19/16</p>	<ul style="list-style-type: none"> ❑ Fixed some bugs in linking to counters in the new Parking Lot monitor system when connecting by SOIP or by COM port. ❑ Completely changed the "Link" and the "Poll" functions of the Parking Lot Monitor. They now work with direct COM, SOIP, and they also bypass the older Centurion functions and use the telemetry functions instead. ❑ Fixed not showing error in Parking Lot when no connection is made. ❑ Added support for SDR Per-Vehicle input format (this is different from the previous 'Radar' format). Supports all the different modes. ❑ Added "Ignore Bike Indicator:" to TSProcess ❑ Fixed corrupted error from Omega X3 file (wasn't handling 0x06 import flag properly). ❑ Fixed multiple issues with Last Study that occurred when collecting volume only data. ❑ Now auto-calculates totals and ADT for Volume only data for Last Study (previously only

		<p>showed for PerVehicle collection).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Modified the Omega X3 link to go back to using the standard Airswitch circuit (now called Normal / O.C. Input). <input type="checkbox"/> Changed so that Free version will process TT-200-DL input files. <input type="checkbox"/> Made sure Free version doesn't import Peek, Geocount, TMG, or other kinds of files.
	Build #0007 05/07/16	<ul style="list-style-type: none"> <input type="checkbox"/> Increased the number of COM ports you can select in the Terminal Window (to a full COM1-COM255). <input type="checkbox"/> Added a "COM Ports (found)" bar to the Open Terminal window. This is linked to the "COM Ports (all)" bar so that user can select from either list box and have the Telemetry Window open to that port. <input type="checkbox"/> Modified all COM port selection bars that list found ports to now include the full name of the COM Port (instead of just the COM Number). <input type="checkbox"/> Increased to full 255 ports all COM Port selection boxes. <input type="checkbox"/> Changed CC & Parks to include the Telemetry->Open Terminal Window option. <input type="checkbox"/> Added a "Port Assign" page to the Preferences->Communication option page that allows setting up ports as fixed for all identical devices. <input type="checkbox"/> Fixed allowing right click on Piezo/Tube images showing the option for Signal Capture when it was not actually enabled in the counter. <input type="checkbox"/> Modified TSProcess to correctly identify "O.C. Input Data" from OmegaX3 counters when Axle Collection Type = 0 and firmware >= 1.11 (this is for counters with new O.C. Input port). <input type="checkbox"/> Added some analysis to Bluetooth Travel Time 1 Report. <input type="checkbox"/> Parking System Changes: <ul style="list-style-type: none"> • Completed support for the ROSIM WAP-348x device connected to multiple WVD devices for magnetometer based vehicle detection. • Added ability to select SOIP for all counter and sign connections (also added a new SOIP Address box for entering the IP address @ port). • Added new "Type of Device" selection for counters which includes: <ul style="list-style-type: none"> + Diamond (UPP) + ROSIM (WAP-348x) Also have a "Type of Device" select for signs. • System now opens unique COM and Winsock port for each device that has a unique address (not MAC addressable devices from common port) • Increased selectable "Outflow Lanes" from 8 to 16 • Added parsing for WAP-348x data flow
	Build #0006 04/12/16	<ul style="list-style-type: none"> <input type="checkbox"/> Changed to support Omega X3 V1.11 firmware and always using the A/D system to process road tube axle strikes (AxleCollectMode=0 is now for O.C. Input). <input type="checkbox"/> Changed the sampling rate to 1140hz for Omega X3 (shows "0.88ms" per sample)
	Build #0005 04/06/16	<ul style="list-style-type: none"> <input type="checkbox"/> Added "Bluetooth Travel Time 1 Report" which analyzes up to 100 different sites and creates a travel time report. <input type="checkbox"/> Added new suite of counter connection options to "TT-200-DL" device (which is a RR3 with "TT-200-DL" firmware attached to a TT-200 Loop Detector). This includes a new 'simple' style interface and adjustments to the advanced interface to handle Loop-Loop style inputs. <input type="checkbox"/> Fixed handling 7 character response from IFA command with older V3.10 firmware UPP counters (has an extra '0' at the end for some reason). <input type="checkbox"/> Added new functionality to TSProcess for handling Loop-Loop configurations from TT-200 counters, or any data with sensor mode "4" for Pres (OC-Pres) style of input). <input type="checkbox"/> Changed PerVehicle reports to use the following for Pres-Pres Axle class: <ul style="list-style-type: none"> < 20' long - Class #2 < 50' long - Class #4 All others - Class #9
	Build #0004 03/18/16	<ul style="list-style-type: none"> <input type="checkbox"/> Added "Has Bike" to the individual imports. <input type="checkbox"/> Added TSProcess ability to parse out and create a new binary file (for importing or viewing) that contains just the Bluetooth data from a file. <input type="checkbox"/> Modified the database to support type "8" data (Bluetooth only), plus the ability to add Bluetooth to all other types (Datatype bit 8 set). <input type="checkbox"/> Added "Bluetooth Data" directory option to the File Directories preference dialog box. <input type="checkbox"/> Updated following functions to support Bluetooth dataset: <ul style="list-style-type: none"> - Site Copy Dialog - Site Delete Dialog

		<ul style="list-style-type: none"> <input type="checkbox"/> Added new Bluetooth data editor window. <input type="checkbox"/> Added new Bluetooth Export function with following formats: <ul style="list-style-type: none"> + New ASCII Format + Binary Format + CSV Format + Direct to Excel <input type="checkbox"/> Fixed "Site Delete Import" when deleting data from Bluetooth file. <input type="checkbox"/> Added Bluetooth data display during the Omega X3 Start Collecting process. <input type="checkbox"/> Fixed some issues not displaying Bluetooth during normal link. <input type="checkbox"/> Moved Bluetooth addresses to separate tab during Omega X3 Monitor Traffic. <input type="checkbox"/> Fixed bug not seeing Bluetooth values in Start Collecting window. <input type="checkbox"/> Multiple changes to handle mixed sites (with both Bluetooth and regular PerVehicle/Classification/Volume data). <input type="checkbox"/> Fixed bug creating initial Per-Vehicle directories for database. <input type="checkbox"/> Fixed bug selecting Per-Vehicle database from DBView (was using '==' instead of '='). <input type="checkbox"/> Added Report Generation for Bluetooth data (new Bluetooth Data Dump Report) <input type="checkbox"/> Added Report Export Generation for Bluetooth (exports Bluetooth Data Dump). Includes some simple total calculations at end of export. <input type="checkbox"/> Fixed a bug in not importing stored GPS Addresses. <input type="checkbox"/> Added new Flag Field type 0x06 (GPS Location in standard file type). When this flag is found in the import file, it auto-sets the station to this location. <input type="checkbox"/> Fixed bug with New Reports not displaying correctly when Bluetooth data is brought into the database.
	<p style="text-align: center;">Build #0001 03/07/16</p>	<p>Completed support at the database level for Bicycle data. This is a major update that effected all reports, exports, editors, and other functions of the software. Some changes have also been made for Bluetooth data (but full support will be in V1.42 Build #0002).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Multiple changes to Binary file format to support Bicycle data collection in the binned data storage. <input type="checkbox"/> New database type "Bicycle" (like Axle, Speed, Length, etc) which is processed in the same way. <input type="checkbox"/> Changed the Data Wizard "PerVehicle" Report to switch to showing Bicycles / Vehicles (instead of Cars / Trucks) when Bicycle data is present. <input type="checkbox"/> Modified the Data Wizard "Classification" Report to have a new section for Bicycle binned data. <input type="checkbox"/> Fixed "Site Copy" to include everything in the Station, Lanes, and Imports databases (was missing some values) <input type="checkbox"/> Added Bicycles to the DBView Report. <input type="checkbox"/> Added the following to the Report Excel Generator: <ul style="list-style-type: none"> - Support for Classification Data Dump Report - Support for Classification Summary Report - Updated the PerVehicle Summary Report to show Bicycles - Added "Bike" to the PerVehicle Dump <input type="checkbox"/> Added the following to the Report Generator: <ul style="list-style-type: none"> - New "Bicycle Class" option to Class Data Dump and Basic Class Report - Added support for Bicycle class data to Class Data Dump - Added support for Bicycle class data to Class Summary Report - Added support for Bicycle Class data to Basic Class Report - Changed background color for bicycles on PerVehicle Data Dump <input type="checkbox"/> Fixed bug with Lane Label position when switching from Together/Separate. <input type="checkbox"/> Changed color of Bicycle data in the database editor to be green when showing bike data (either PerVehicle or Class table). <input type="checkbox"/> Added Bicycle data (both PerVehicle and Classification) exporting to: <ul style="list-style-type: none"> - Binary - CSV - New ASCII <input type="checkbox"/> Fixed issues exporting Bicycle data (no SVM, import problems) <input type="checkbox"/> Fixed issue when exporting "New Ascii" format not clearing out upper bin values. <input type="checkbox"/> Updated the CSV formats to support PerVehicle "Bike" record and the Classification "Bicycle" type class. <input type="checkbox"/> Fixed "Direct To Excel" not always putting the number in front of the datatype. <input type="checkbox"/> Changes for Omega X3:

		<ul style="list-style-type: none"> ▪ Added support for A/D Input Signature in files. ▪ Multiple changes to the OX3 interface for bicycle detection. ▪ Changed colors for any vehicle and/or axle that is a bicycle during monitoring. ▪ TSProcess extensively changed to handle distinction between bike and vehicle axles. Can import Bike Only, Vehicle Only, Bike and Vehicle into two separate sites, or Bike and Vehicle combined into a single site. ▪ TSProcess implemented a "Min Axle Spacing" value for both Vehicles and Bicycles. ▪ Added viewing the signal capture graphs (both in Start Collecting menu and while collection is active) ▪ Changed colors so that: <ul style="list-style-type: none"> - Vehicles are White/Black - Bicycles are White/Green - Bluetooth are White/Blue ▪ Changed the calculation for vehicles that are "bikes" to be any vehicle with a Bike Axle Count >= Axle Count. ▪ Added the "Ask Bluetooth Scanning" question. ▪ Added setting Axle Collection Mode and USB/BT/GPS options to the MO command. <input type="checkbox"/> Added text file capture (Start & Stop) popup option to the Telemetry Terminal Mode. <input type="checkbox"/> Added new "Bicycle" tab to the Preferences dialog box. This new tab contains options for handling the import of bicycle data. <input type="checkbox"/> Fixed problem handling some Omega import data with a seconds value of "60". <input type="checkbox"/> Fixed moving GPS Lon/Lat over from some kinds of Omega Import files. <input type="checkbox"/> Added setting the Number Format in the counter for the RR3 and the Omega X3. <input type="checkbox"/> Fixed bug not allowing saving of Axle Class tables and then being able to reload them. Also fixed issue with not being able to load certain older tables.
1.41	Build #0018 02/09/16	<ul style="list-style-type: none"> <input type="checkbox"/> Fixed auto display of map view when system first starts (was not seeing a manually closed map view). <input type="checkbox"/> Added ability to use TSProcess with Omega data files. Note that the Omega does not record the system setup (other than Volume vs PerVehicle), so the default values displayed are not always going to be correct. <input type="checkbox"/> Added Preferences option to use TSProcess to handle Omega data files during a standard import. <input type="checkbox"/> Fixed a bug that caused invalid time/date error to appear when exporting to the "New ASCII Format" and the date format set to "DD-MM-YY". <input type="checkbox"/> Lined up the tops of the bin tables in the Bin Table Editor. <input type="checkbox"/> Changed the bin table version numbers to be editable. <input type="checkbox"/> Fixed not importing TSDP processed files that are Titan II as "Titan II". <input type="checkbox"/> Fixed width of lane numbers on Data File Wizard Classification report so that lanes > 9 display correctly. <input type="checkbox"/> Added a "Swap A/B" and "Swap C/D" check box to the TSProcess function to handle if the sensors have been reversed. <input type="checkbox"/> Major changes to Omega X3 to support new Bicycle and Axle Detection functionality of V1.10 firmware: <ul style="list-style-type: none"> + New "Collection Opt..." button on Settings screen during link with three separate option boxes: <ul style="list-style-type: none"> - Axle Collection Options - Axle Detection Options - Bicycle Detection Options <input type="checkbox"/> Added ability to set the Font Name, Size, Color, and Background color on the DCD entries. <input type="checkbox"/> Changed TMG 3/4/C export to use new File Naming convention of the 2013format if this is enabled and "Individual Files" is checked. <input type="checkbox"/> Changed the TMG 3 format to include partial days (before and after) if doing 2013 format. <input type="checkbox"/> Deleted left over Doing Length in Class C function which accidentally was set to use Length bins instead of Class bins for TMG Card 4/C export.
	Build #0017 01/26/16	<ul style="list-style-type: none"> <input type="checkbox"/> Added ability of Uni-Lim, Apollo, and CSprite imports to have their lanes auto-renumbered from 1/3 - 2/4 to 1/2 - 3/4 when directional is found and when "Auto renumber directional" is enabled in Preferences->Import.

	<ul style="list-style-type: none"> <input type="checkbox"/> Added new dialog box which asks "Direction?" and choice between North/South and East/West when importing new site. If choose North/South, Info line is auto-loaded with "20xxxxx", East/West loaded with "13xxxxx". This option is enabled in Preferences->Import Options <input type="checkbox"/> Fixed bug that caused the Data File Wizard to not always appear when first opening a new report (especially from Volume data side). This also showed up as the Start Date being "2222". <input type="checkbox"/> Cleaned up some possible cases where Divide By Zero could occur on PerVehicleFlowReport and PerVehicleSummaryReport. 	2
Build #0016 01/19/16	<ul style="list-style-type: none"> <input type="checkbox"/> Fixed spelling on Checksum on Communication setup. <input type="checkbox"/> Changed to not allow changing "Do High Speed Downloading" to affect the current download. <input type="checkbox"/> Also modified the Live Counter Monitor function to set the DoingRemote value to prevent high speed downloading during a link. <input type="checkbox"/> Added reporting the MAC Address to the registration file. <input type="checkbox"/> Added a "Delay between Links" value to the Parking Lot monitor. Turning this on greatly slows down the scanning process. Note than when system is delaying, a little clock icon appears on the top of the monitor window. <input type="checkbox"/> Added new "In Count/Out Count" as a pop-up to the parking lot monitor system. Also has a "Reset" function. These are accessed by right clicking the Lot Capacity, Spaces Used, or Free spaces values. 	
Build #0015 01/08/16	<ul style="list-style-type: none"> <input type="checkbox"/> Added "SL" output record to Geocount format (SiteID and Lane Info lines). <input type="checkbox"/> Fixed tab order on UPP Battery screen. <input type="checkbox"/> Fixed problem not allowing you to re-click on the Report Preview and then be able to scroll up/down with the mouse. <input type="checkbox"/> Added the MMC/SD card size to the UPP Counter Setup Report. <input type="checkbox"/> Changed the "Yearly Site Summary" to auto-sync to the first or last year of data if the selected year is outside the data range for a site. <input type="checkbox"/> Fixed Divide by Zero error on "Yearly Site Summary" with any report that has no count in it. 	
Build #0014 01/03/16	<ul style="list-style-type: none"> <input type="checkbox"/> Changed the "FactoryFunction" to Ctrl+Alt+A to keep it from interfering with Ctrl+Alt+F for Firmware Update. <input type="checkbox"/> Added ability of UPP V4.92 with Piezo Firmware V1.50 (for hardware V4.00 & V4.01) and V2.50 (for hardware V4.10) to do signal capture display during "Test Sensors". 	
Build #0013 12/30/15	<ul style="list-style-type: none"> <input type="checkbox"/> Updated the TGMMMap (Google Maps Library: http://sourceforge.net/projects/gmlibrary/) to the latest version which fixed issues with scrolling and moving location. <input type="checkbox"/> Changed the wait time on file directory retrieves to auto-extend the time with each new character. 	
Build #0012 12/20/15	<ul style="list-style-type: none"> <input type="checkbox"/> Added "UN_Weather" as a field in the GEOCOUNTS Export Format <input type="checkbox"/> Added Tailgating Detect to the TSProcess function. <input type="checkbox"/> Fixed bug in TSProcess which does not move the start time of data when "Only use" is modified but Adjust Start time to is not. 	
Build #0011 12/08/15	<ul style="list-style-type: none"> <input type="checkbox"/> Fixed "script error" on the Google Maps GPS Editor <input type="checkbox"/> Added check for RR3 issue with daylight savings fall-back and getting stuck in a continous loop on 11/01/15. <input type="checkbox"/> Modified the export function to always use "59.99" as the seconds on the end time calculation. <input type="checkbox"/> Added GEOCOUNTS export format. 	
Build #0010 12/03/15	<ul style="list-style-type: none"> <input type="checkbox"/> Added multiple new warning messages during importing that pops up during the import process (including not finding 0x01 modules and other errors) <input type="checkbox"/> Added support for file explorer drag & drop into Centurion: <ul style="list-style-type: none"> ▪ Dropping a file(s) onto the DBView window will import the data into the database. ▪ Dropping a file(s) onto any other part of the program will cause the file to be opened (text view). <input type="checkbox"/> TSProcess changes: <ul style="list-style-type: none"> ▪ Now allows importing of data after processing (in all but Field). ▪ Will also just run one file at a time. ▪ Added preferences setting to specify using TSProcess (instead of TSDP) for processing RR3 data imports. 	

		<ul style="list-style-type: none"> ▪ New command line switch "INCLUDETIMEOUTS" will include the timeout discarded values in the total timestamps count (by default it now excludes these values)
Build #0009 11/18/15		<ul style="list-style-type: none"> ❑ Modified the Caltrans TMG Export Format according to latest changes. This adds to the Setup->General->Export tab a new option "CalTrans TMG Format Mode" a combobox with new item "New (2015)" ❑ Added checkbox to support the "TMG September, 2013, Format" as a base format for TMG outputs. This adds the following: <ul style="list-style-type: none"> ▪ All - Year is now four digit ▪ Card C - Adds new 'Classification Data Time Interval' character Adds new 'Restrictions' character (aka Footnotes) after total. ▪ Card D - Adds new 'Speed Data Time Interval' character Adds new 'Definition of First Speed Bin' character ▪ Card L - Adds new 'Length Data Time Interval' character
Build #0008 11/05/15		<ul style="list-style-type: none"> ❑ Added support for the AUSTRROADS style of vehicle classification for data imports (does not work inside of counters). Editor for this format is the standard text editor. It is auto-selected whenever a file with extension of ".VCLS" is specified in the Site (or general) setup. ❑ Fixed a bug in the report generator (and Data Wizard) when switching from reports with single line versus dual line axle class headers causing the values to be overwritten.
Build #0007 10/26/15		<ul style="list-style-type: none"> ❑ Added check for ERR#12 message from RR3's (indicating no data in file). ❑ Added RR3 check for current Date/Time matching the Release Date/Time which indicates a unit that has just been \RESET. When this is detected, system displays a warning message (which can be disabled).
Build #0006 10/22/15		<ul style="list-style-type: none"> ❑ Rebuilt with new LiteDAC V2.6.19 to try and fix problem with installation on some Windows machines. ❑ Also moved the "LCMSystem_DatabaseSetup" form to not auto-create on startup. This form will be created automatically by "LCMSystem" instead.
Build #0005 10/08/15		<ul style="list-style-type: none"> ❑ Omega X3 Changes: <ul style="list-style-type: none"> ▪ Added support for OX3 style GPS coordinates. ▪ Fixed bug in setting Bluetooth power options for OX3 ▪ Added support for seconds value in Bluetooth timestamp record. ▪ Fixed bug in setting the temp offset. ❑ Added new Timestamp record formats: <ul style="list-style-type: none"> ▪ Advanced Timestamp Format (with two extra bytes per record) ▪ New GPS Location (0xFF 0x02), BT Address (0xF4), & A/D Input (0xF5) ❑ Added new options for V0.70 OX3 (saving GPS in file, Flash file write options, etc). ❑ Added "Clear Window" and "Send String ..." to the Terminal Window. ❑ Added "4K,8K,16K,32K,& 64K" for download block sizes in a new preferences question for Omega X3 Downloading ❑ Added "Type of BT Address" and "RSSI" value to the Timestamp Bluetooth address value. ❑ Added 1MHz, 2MHz, and 4Mhz to baud rate selection on terminal window
Build #0004 07/31/15		<ul style="list-style-type: none"> ❑ Added display of actual primary & secondary battery voltages with V0.60 OX3 PCB.
Build #0003 07/23/15		<ul style="list-style-type: none"> ❑ Fixed some issues with OX3/RR3 Timestamp processor as follows: <ul style="list-style-type: none"> ▪ Fixed setting hour on SnMis wrong. ▪ Added a SnMis Clear function to require 0.5sec of clear sensor time before doing a new vehicle. Also requires this time after a 16 axle count sequence. ▪ Fixed issue with setting start time of vehicle (sometimes would use second hit of first sensor as time of vehicle). ▪ Issue with multiple vehicles right at the end of a day criss-crossing the date line
Build #0002 07/19/15		<ul style="list-style-type: none"> ❑ Added support for Bluetooth and USB firmware version in Omega X3. ❑ Changed the TT-2/4/6/8-BT file processing so the original binary file is left in a root Centurion directory named "TT2468BT.ORG".
Build #0001 06/25/15		<ul style="list-style-type: none"> ❑ Added built in support for Timestamp data processing of Omega X3 data. All functions previously in external TSDP executable are now part of Centurion (for OX3 to start, other counters down the line). ❑ First release for HLE with TSDP built in for Omega X3 files.

	<input type="checkbox"/> Changed all "fopen" to "_fsopen".
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