

CalAmp iOn basic Bundle is a complete **all- inclusive** bundle used for tracking **Light Duty Cars, SUVs and Trucks**, with zero upfront cost and simple pricing per vehicle, per month. The system includes CalAmp's award winning iOn software with industry leading mapping, reporting, alerts and integration to most CAD systems and a host of law enforcement applications.

Benefits include improving deputy safety and reducing vehicle operating costs.

Highlights of our all-inclusive offers:

- Industry-leading LTE CalAmp AVL devices with diagnostic connections
- CalAmp iOn Telematics software platform
- Free on-site spare devices
- Free Unlimited live online training
- Life of contract hardware warranty
- Dedicated customer service and 24/7 support
- Easy plug- in self installation
- Integration with most law enforcement software included

Our Commitment

CalAmp has provided Automatic Vehicle Location (AVL) and telematics systems that work to the highest levels of performance, reliability, and scalability since 1990. We are one of the most experienced GPS vehicle tracking system providers in the industry and have manufactured millions of GPS units fielded throughout the world. **CalAmp has notable experience with government, almost every county in North Carolina currently uses CalAmp solutions in their school bus fleet and maintenance vehicles. One NC School district saves over one million per year using our solution.** CalAmp stands ready to continue to support our services and products for sophisticated government agencies with the high standards expected of the industry's leading manufacturer and provider of telematics technology.

CalAmp iOn Telematics Solution

CalAmp's iOn Telematics application incorporates mapping technology using Esri ArcGIS and is a hosted Web browser-based software as a service. Engineered and designed as an enterprise-level AVL solution, the CalAmp iOn Telematics system is a powerful tool for fleet managers and is uniquely effective for specific end-user departments (such as Public Safety). The CalAmp in-vehicle mobile units and CalAmp Telematics Cloud (CTC) are linked

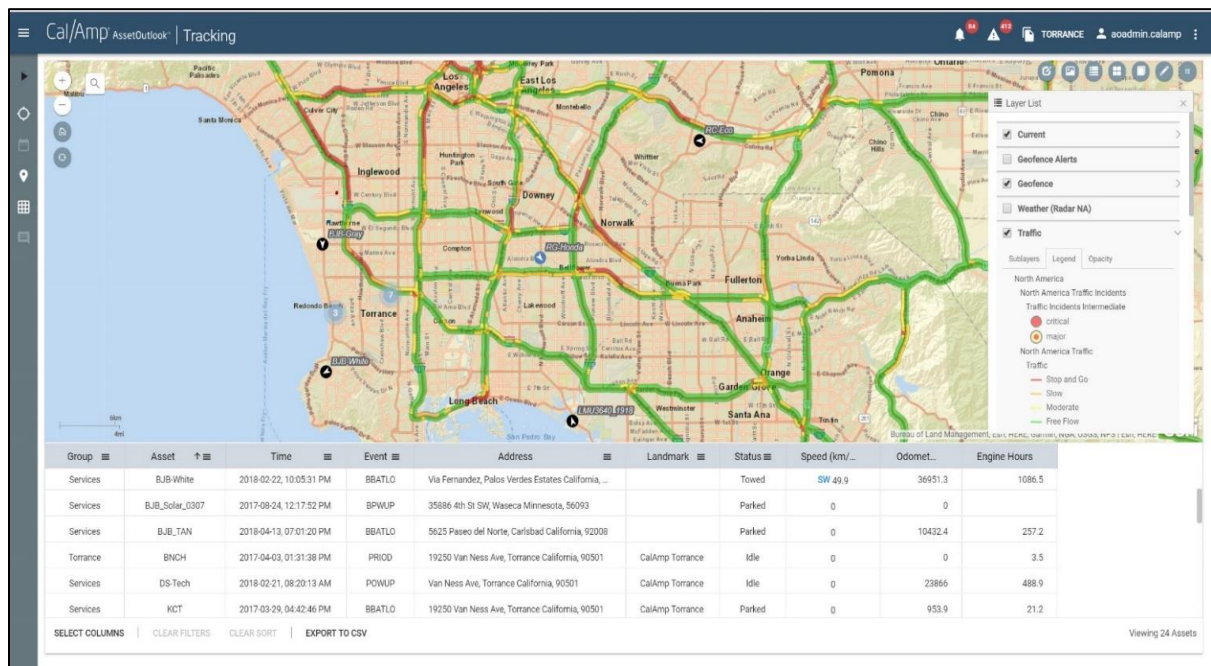
via two-way LTE wireless communications, allowing for timely data transmission between the field and software.

CalAmp Mobile Units

The CalAmp iOn Telematics solution provides valuable AVL Management tools:

- Vehicle Utilization
- Identifying Vehicle Misuse, Unit Tampering and Fraud
- Real-Time Vehicle Tracking (map-based)
- Custom Reporting (breadcrumbing, tabular, scheduled, exportable)
- Real-Time Alerts (e-mail and text)
- Dashboarding (KPIs and trends)

The assignment of user-permission levels allows access to appropriate sub-sets of the installed functionality.



Note: Your user interface may differ from screen shots provided.

Real-Time Vehicle Tracking

The CalAmp iOn Telematics application displays the current location and status of the vehicle fleet, along with address, landmark, and other attribute information, over your proprietary and publicly available Esri GIS map data. The use of a powerful Esri ArcGIS Server mapping along with the incorporation of vector map data allows for almost endless display and analysis possibilities.

The vehicle icons indicate (using colors, directional symbols, and labels) various vehicle attributes (such as ID, status, ignition, heading, etc.). All of the vehicle attribute data may be instantly queried and displayed in a pop-up box with a simple click. Further, collapsible information windows show in-depth data on the selected vehicle including usage, diagnostics, background info, and actionable tools.

82146 Current Status

82146 Moving **N 11 mph**

Meter Services - Vehicle
 Operator: Morris, John
 April 29, 2019, 1:10 PM
 4224 Emperor Blvd, Durham North Carolina, 27703 Street View

Age 2min
 IGNITION: On
 Engine Hours: 1.1 Odometer: 4918.6 mi
 Vbat(Int/Ext): /12.628V

LOCATE VIEW HISTORY FIND NEAREST

Vehicle Utilization

Additional Info

| Asset | Name [ID] | Description | Type |
|-----------------|-------------------------|-------------|---------|
| | 82146 [196761] | | Vehicle |
| Category | | | |
| Status | Enabled | | |
| Install Date | 11/02/18 | | |
| License, State | 90320-T NC | | |
| Year/Make/Model | 2012 / Ford / F150 | | |
| VIN | D70078 | | |
| Device | | | |
| Name [ID] | com_4674325220 [392019] | | |
| Type | lrm2630 | | |
| ESN | 4674325220 | | |
| Status | Enabled | | |

| Group | Asset | Time | Event | Event Type | Address | Landmark | Status | Speed (mph) |
|-----------------|-------|-------------------------|--------------|------------|---|--------------------|---------|-------------|
| DWM Adm'n | 11104 | 2019-04-29, 10:48:59 AM | GPS Acquired | GPSY | 1600 Mist Lake Dr, Durham North Carolina, 27704 | | Parked | 0 |
| Water Cons... | 11200 | 2019-04-29, 09:27:52 AM | Stop | STOP | 1600 Mist Lake Dr, Durham North Carolina, 27704 | | Parked | 0 |
| Meter Serv... | 11207 | 2019-04-29, 01:09:54 PM | Long Idle | LONG_IDLE | 409 S Buchanan Blvd, Durham North Carolina, 27... | | Idle | 0 |
| Meter Serv... | 11208 | 2019-04-29, 12:07:29 PM | Ignition Off | IGOFF | 3407 3rd Fork Rd, Durham North Carolina, 27707 | PWOC | Parked | 0 |
| Meter Serv... | 11236 | 2019-04-29, 06:12:08 AM | GPS Acquired | GPSY | 3407 3rd Fork Rd, Durham North Carolina, 27707 | PWOC | Towed | N 1 |
| Outfall Main... | 42237 | 2019-04-29, 11:47:10 AM | Ignition Off | IGOFF | Unnamed Street, Durham North Carolina, 27707 | PWOC | Idle | 0 |
| Durham Dr... | 42230 | 2019-04-26, 09:13:35 AM | GPS Acquired | GPSY | Unwood Street, Durham North Carolina, 27707 | Public Works En... | On-w... | ^ |

SELECT COLUMNS | CLEAR FILTERS | CLEAR SORT | EXPORT TO CSV

Viewing 233 Assets

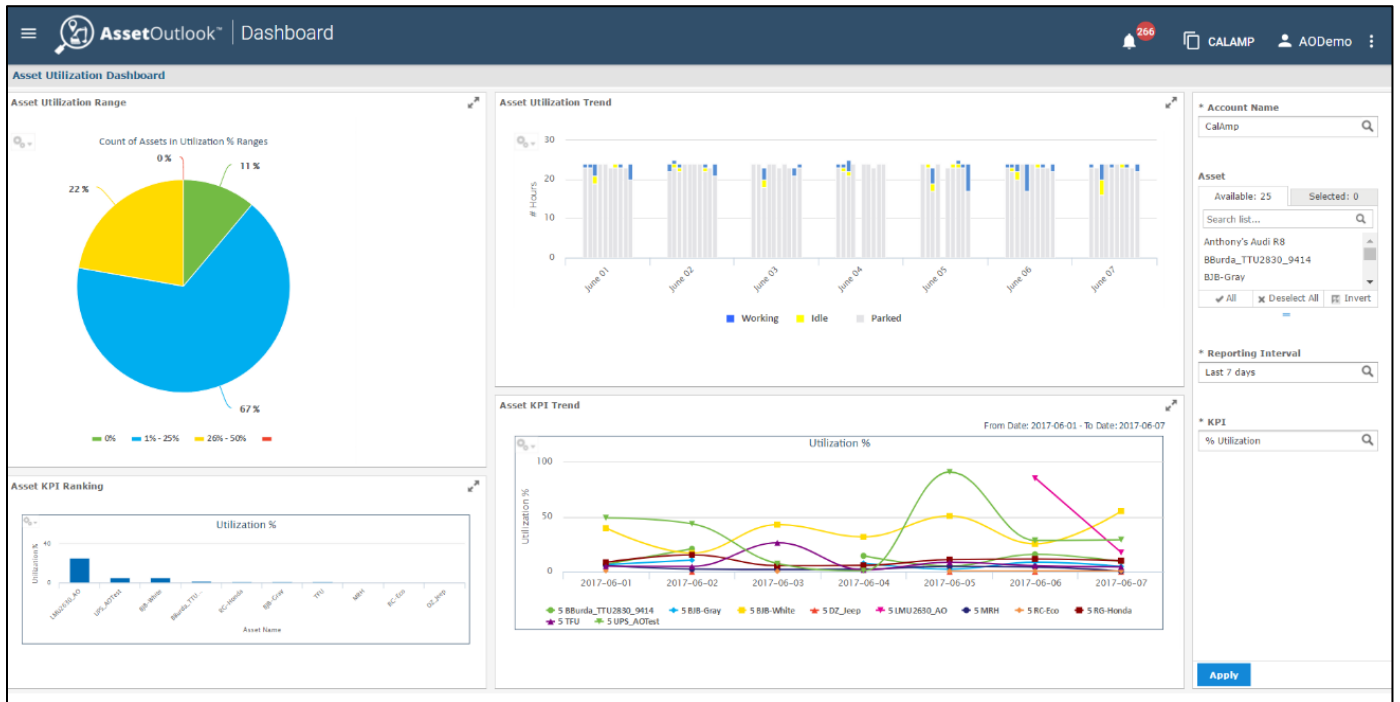
Map Viewing Features

The CalAmp iOn Telematics Application displays the vehicle data in a “map window.” The map window can be set to display a particular area, region, or address, or to track a specific sub-set of the entire fleet (from the entire fleet to an individual vehicle). In CalAmp iOn Telematics the map display window possesses a full set of map manipulation and query functionality. Map manipulation tools and buttons are available to zoom, pan, and center the display on a particular vehicle or address. Additional tools are available to enable or disable labeling, and to adjust the map display according to user needs or preferences. Map query options include the ability to locate an address, vehicle, or landmark.

| Asset | Time | Event | Odometer (VB... | Vbat(Int) | Vbat(Ext) | Speed (V... | IN1 | Odometer (mi) | Engine Hours |
|---------|-------------------------|--------------|-----------------|-----------|-----------|-------------|-----|---------------|--------------|
| 1154341 | 2019-04-28, 09:38:09 AM | GPS Acquired | 0 | 4.174 | 12.312 | 0 | OFF | 103559.1 | 8037.8 |
| 1511864 | 2019-04-27, 07:00:32 PM | Comm Up | 10559 | 4.080 | 12.433 | 0 | OFF | 10559 | 81.7 |
| 1621296 | 2019-04-27, 04:25:32 PM | Comm Up | 46784 | 4.048 | 12.372 | 0 | OFF | 46784 | 159 |
| 1621555 | 2019-04-28, 09:38:30 AM | Ignition Off | 53988.6 | 4.105 | 14.004 | 0 | OFF | 53988.6 | 534.9 |
| 1657005 | 2019-04-27, 02:49:26 PM | GPS Acquired | 24586.4 | 4.070 | 12.555 | 0 | OFF | 24586.4 | 4045 |
| 1711054 | 2019-04-27, 07:16:57 PM | GPS Acquired | 7568.2 | 4.044 | 12.464 | 0 | OFF | 7568.2 | 191 |
| 1721155 | 2019-04-28, 09:41:46 AM | Alive | 36117 | 4.120 | 13.488 | 0 | OFF | 36117 | 181 |
| 1721230 | 2019-04-28, 09:08:38 AM | Comm Down | 18225.5 | 4.040 | 12.312 | 0 | OFF | 18225.5 | 159 |
| 1721972 | 2019-04-28, 09:17:35 AM | GPS Acquired | 28126.7 | 4.102 | 12.068 | 0 | OFF | 28126.7 | 296.6 |

Dashboard

CalAmp iOn Telematics' Dashboard provides a quick view into the real-time status and trending of the utilization of your assets. The Dashboard presents Asset Utilization Range, Asset Utilization Trend, Asset Key Performance Indicator Ranking and Asset Key Performance Indicator Trend. The various dashboard charts can be configured to display data based on the user-defined criteria and updates automatically.



Reporting Functions

The Reporting module can generate both extensive tabular and detailed graphical map breadcrumb reports using archived vehicle location and status data. Reports may be produced for selected vehicles (or groups of vehicles) according to time, location, and status criteria. The **breadcrumb reports** allow users to visually display or re-trace a vehicle's route and status and include the same map manipulation and query functionality as the real-time vehicle tracking displays. **Tabular reports** display unit location and activity in configurable, sortable, and filterable tables. Reports can be configured, saved, scheduled, etc. Such reports may be exported into virtually any format including .CSV and MS Excel files as well as scheduled and sent to any recipients.

Reports

CalAmp iOn Telematics provides a highly customizable and flexible report module for generating reports to help you monitor asset operations and performance. The CalAmp iOn Telematics system comes with a suite of standard graphical and tabular reports that cover all the main vehicle activities that one would expect from an industry leading AVL system. After you generate a report, you can customize the look and feel, save, and schedule. You may want to filter or remove columns from the report, change the sort order or highlight actionable data. Once finalized, you may opt to display report data directly within CalAmp iOn Telematics or export to standard file formats such as PDF, Excel, or CSV.

We have spent years working with hundreds of fleet customers to refine our report offerings to encompass the most useful and important reports.

Some of the data in our standard reports are:

- Vehicle Activity, Travel & Stop
- Driver Performance, Over Speed
- Harsh braking/acceleration, Idle Reports
- Geo-fences Vehicle Inactivity
- Vehicle Usage (Mileage, Idle Time & Engine Hours)
- Sensor Reports (lights, sirens, emergency, etc.)
- Diagnostic Trouble Codes (if equipped)

Sample Report List

Asset Usage Reports ^

- Asset Daily View**
 - Basic utilization and usage data for selected assets for each day
- Asset Summary View**
 - Basic utilization and usage data for selected assets over a date range
- Idle Detail Report**
 - Details and duration of each idle event that occurred for assets over a date range
- Idle Summary Report**
 - Summary of all idle events over a date range for assets/operators
- Maintenance Management Interface**
 - Generate data for integration with maintenance management software
- Vehicle Daily View**
 - Basic vehicle usage data for selected vehicles for each day
- Vehicle Metrics Analytics View Report**
 - In-depth vehicle usage data for export to user pivot software
- Vehicle Metrics Detail Report**
 - In-depth vehicle usage data for each day
- Vehicle Metrics Summary Report**
 - In-depth vehicle usage data over a date range
- Vehicle Summary View**
 - Basic vehicle usage data over a date range

Dashboard Charts ^

- Asset KPI Ranking**
 - Asset KPI bar chart
- Asset KPI Trend**
 - Asset KPI trend line
- Asset Utilization Range**
 - Asset Utilization pie chart
- Asset Utilization Trend**
 - Asset Utilization grouped bar chart

Engine Diagnostic Reports ^

- J1939 DTC View**
 - DTC alerts for J1939 assets
- J1939 Fault Lamp View**
 - Fault lamp status for J1939 assets
- OBD-II DTC View**
 - DTC alerts for OBD-II assets
- OBD-II MIL View**
 - MIL status for OBD-II assets

Exception Reports ^

- Alert Notifications Report**
 - Overview of alert notifications received
- Device Communication**
 - Device details and communication status
- Device Input Report**
 - Device input event details
- Device Installation Report**
 - Installation/configuration details for devices and their associated assets
- Driver Vehicle History Report**
 - History of operator assignment to assets over a date range
- Invalid Keyfob Report**
 - Displays usage of unregistered key fobs over a date range
- Posted Speed Violation Detail View**
 - Details of each posted speed violation that occurred
- Posted Speed Violation Summary View**
 - Summary of all posted speed violations over a date range for assets/operators
- Tag Inventory Report**
 - Associations and status of iOn tags
- Towing Report**
 - Towing Report
- Unauthorized Usage Detail**
 - Details of asset usage events outside of scheduled hours
- Unauthorized Usage Summary**
 - Summary of asset events and usage outside of scheduled hours
- User Login Detail Report**
 - Each user login attempt by iOn users
- User Login Summary Report**
 - User login count and latest login for iOn users

Geofence Reports ^

- Geofence Detail Report**
 - Usage data for assets that passed through a geofence
- Geofence Equipment Count Report**
 - Snapshot of number of assets located in geofences by asset category/type
- Geofence Event Report**
 - Details of each geofence event
- Jobsite/Landmark Summary Report**
 - Usage data for assets that passed through a geofence over a date range and shown on a day-by-day basis

Maintenance Reports ^

- Maintenance History Report**
 - Record of logged maintenance
- Periodic Scheduled Maint Due Report**
 - Record of upcoming scheduled maintenance

Trip, Stop, Location Reports ^

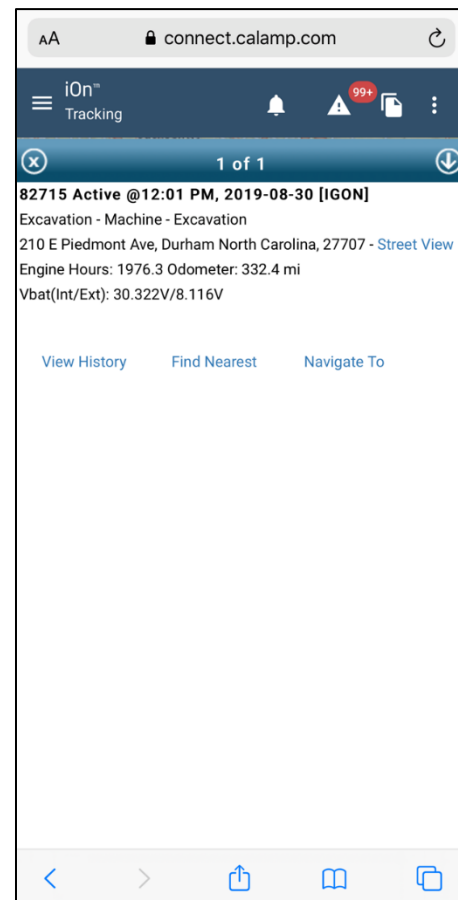
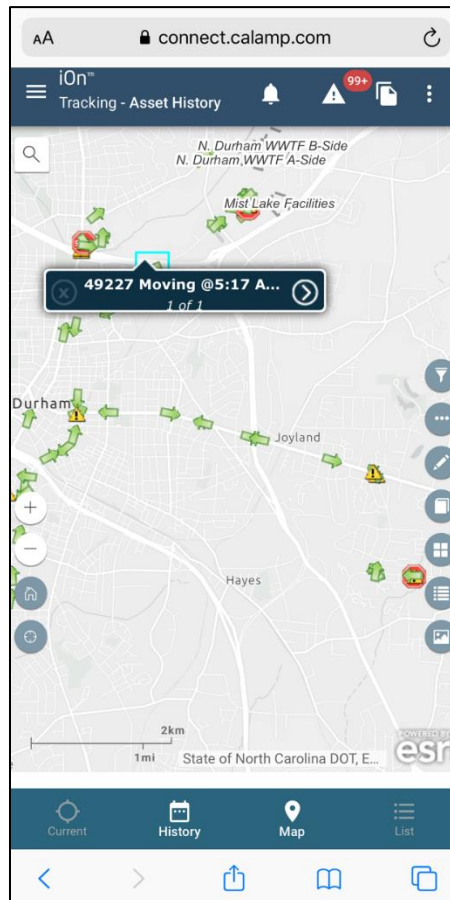
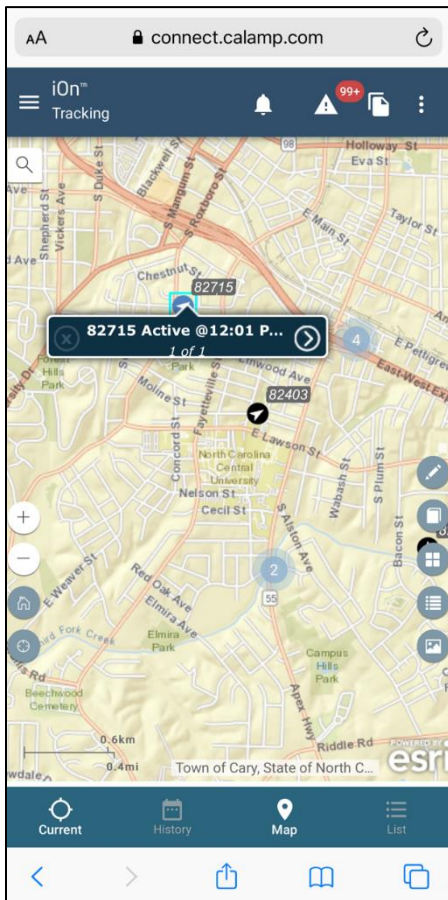
- Asset History Report**
 - Details of each event that occurred for assets over a date range
- Driver Scorecard Detail Report**
 - Driver Scorecard Detail Report over a date range
- Driver Scorecard Summary Report**
 - Driver Scorecard Summary Report over a date range
- Fuel Efficiency Detail View**
 - Fuel efficiency over a date range by asset
- Fuel Efficiency Summary View**
 - Fuel efficiency over a date range by group
- Input Usage Detail**
 - Details for each instance of input usage over a date range
- Input Usage Summary**
 - Input usage data aggregated over a date range
- Location Activity Asset List**
 - Vehicles that have been to a location during a date range
- Location Activity Event Details**
 - Events that occurred in a location during a date range
- Operator Performance Detail View**
 - Operator performance metrics for each day
- Operator Performance Summary View**
 - Operator performance metrics over a date range
- State Mileage Detail View**
 - Distance traveled in each state by asset
- State Mileage State Summary View**
 - Distance traveled in each state for all assets in group
- State Mileage Vehicle Summary Report**
 - Distance traveled by each asset by state over a date range
- Stop Detail View**
 - Data for each stop event by assets/operators/routes
- Stop Summary View**
 - Stop event data for each asset/operator/route over a date range
- Trip Detail View**
 - Data for each trip by assets/operators

Mobile App- Mobile Device Compatible

The standard CalAmp iOn Telematics application can be accessed in any web browser including mobile phones and tablets.

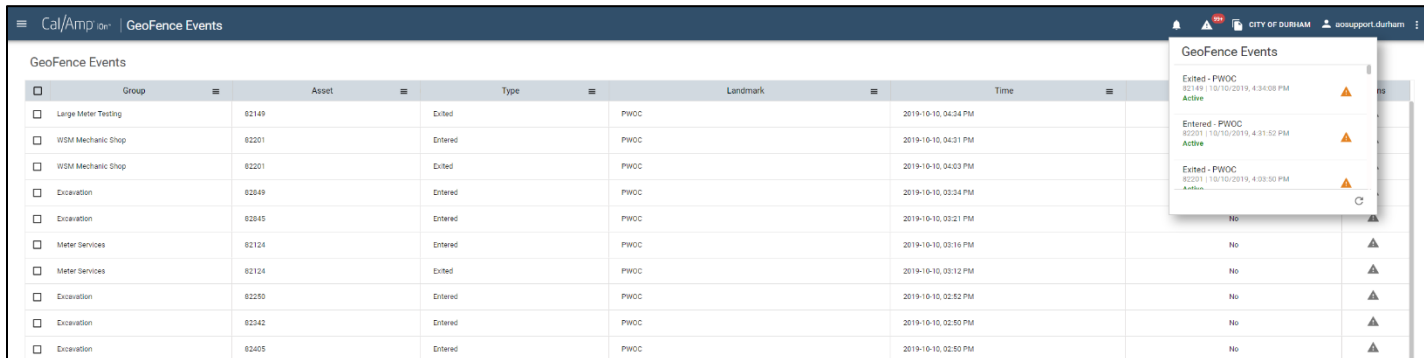
Using the latest web programming technology (HTML5 Javascript) allows the application to automatically configure its menus, buttons, orientation, and font size to be user-friendly and navigated with any mobile device, screen size, or operating system.

- No cumbersome apps to download and constantly update.
- No compatibility or functionality issues between operating systems or device types.
- Major tracking functions of the system on any mobile device.



Geo-Fencing

The CalAmp iOn Telematics Solution allows the user to set geo-fences on the map display. The geo-fences will create an alert and/or exception report when breached and will appear as another item of status data with each vehicle position report. Geo-fences can be created as polygons or a configurable radius from a specific point, as well as created from existing boundaries, landmarks or zones within your GIS.

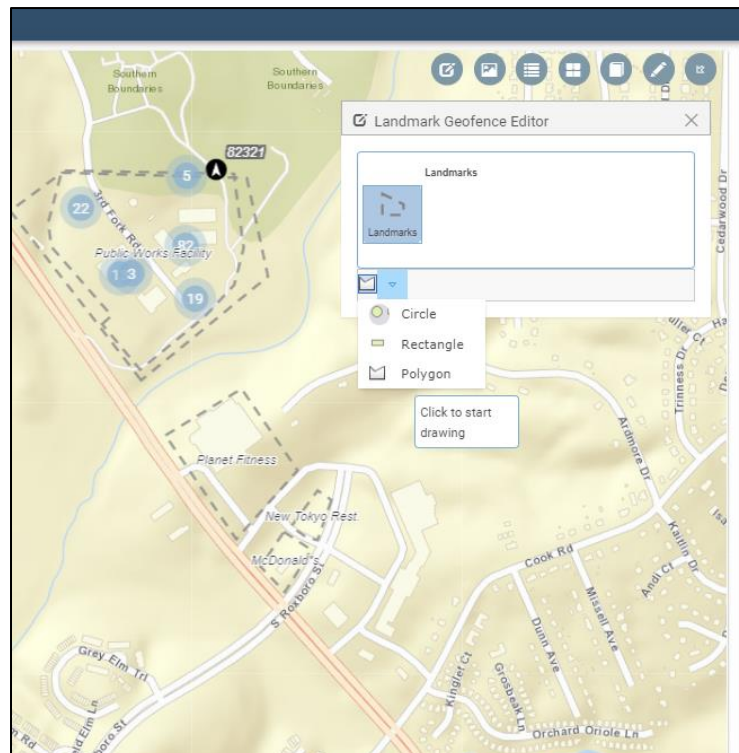


The screenshot shows the CalAmp iOn GeoFence Events interface. The main window displays a table of GeoFence Events with columns for Group, Asset, Type, Landmark, and Time. A pop-up window titled 'GeoFence Events' is visible in the top right corner, showing details for a specific event.

| Group | Asset | Type | Landmark | Time |
|---------------------|-------|---------|----------|----------------------|
| Large Meter Testing | 82149 | Exited | PWOC | 2019-10-10, 04:34 PM |
| WDM Mechanical Shop | 82201 | Entered | PWOC | 2019-10-10, 04:31 PM |
| WDM Mechanical Shop | 82201 | Exited | PWOC | 2019-10-10, 04:03 PM |
| Excavation | 82849 | Entered | PWOC | 2019-10-10, 03:34 PM |
| Excavation | 82849 | Entered | PWOC | 2019-10-10, 03:21 PM |
| Meter Services | 82124 | Entered | PWOC | 2019-10-10, 02:16 PM |
| Meter Services | 82124 | Exited | PWOC | 2019-10-10, 02:12 PM |
| Excavation | 82250 | Entered | PWOC | 2019-10-10, 02:52 PM |
| Excavation | 82342 | Entered | PWOC | 2019-10-10, 02:50 PM |
| Excavation | 82405 | Entered | PWOC | 2019-10-10, 02:50 PM |

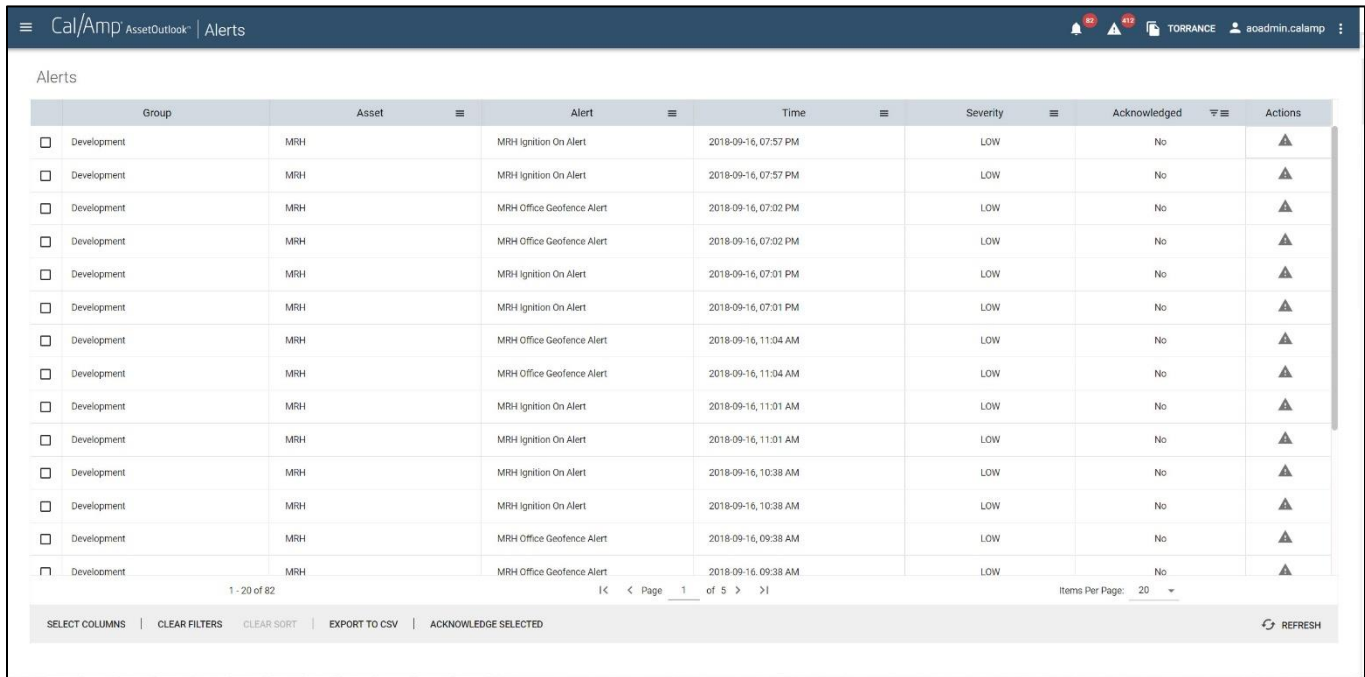
GeoFence Events pop-up window details:

- Exited - PWOC 82149 | 10/10/2019, 4:34:08 PM Active
- Entered - PWOC 82201 | 10/10/2019, 4:31:52 PM Active
- Exited - PWOC 82201 | 10/10/2019, 4:03:30 PM Active



Real-Time Alerts

The CalAmp iOn Telematics system allows authorized administrators extensive control over system features including alerts and alarms. The system can be configured to notify selected users when specific events occur with any of the vehicles. This includes geofences, idle, panic buttons, speeding, harsh driving, etc. Notifications can be sent as an e-mail, SMS, or to the alert screen on the software.



The screenshot displays the 'Alerts' section of the Cal/Amp AssetOutlook interface. The page header includes the Cal/Amp logo, 'AssetOutlook | Alerts', and user information for 'TORRANCE' and 'soadmin.calamp'. The main content is a table listing 15 alerts. Each row includes a checkbox, a 'Group' (all 'Development'), an 'Asset' (all 'MRH'), an 'Alert' description, a 'Time' stamp, a 'Severity' (all 'LOW'), an 'Acknowledged' status (all 'No'), and an 'Actions' column with an upward-pointing triangle icon. The table is paginated, showing '1 - 20 of 82' items, with the current page being 'Page 1 of 5'. At the bottom, there are utility buttons: 'SELECT COLUMNS', 'CLEAR FILTERS', 'CLEAR SORT', 'EXPORT TO CSV', 'ACKNOWLEDGE SELECTED', and a 'REFRESH' button.

| | Group | Asset | Alert | Time | Severity | Acknowledged | Actions |
|--------------------------|-------------|-------|---------------------------|----------------------|----------|--------------|---------|
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 07:57 PM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 07:57 PM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Office Geofence Alert | 2018-09-16, 07:02 PM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Office Geofence Alert | 2018-09-16, 07:02 PM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 07:01 PM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 07:01 PM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Office Geofence Alert | 2018-09-16, 11:04 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Office Geofence Alert | 2018-09-16, 11:04 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 11:01 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 11:01 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 10:38 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Ignition On Alert | 2018-09-16, 10:38 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Office Geofence Alert | 2018-09-16, 09:38 AM | LOW | No | ▲ |
| <input type="checkbox"/> | Development | MRH | MRH Office Geofence Alert | 2018-09-16, 09:38 AM | LOW | No | ▲ |

Esri GIS Mapping

The CalAmp iOn Telematics mapping application is compatible with Esri ArcGIS Server, the mapping and GIS engine from Esri, the largest GIS software vendor in the world, and a pioneer of the technology. Their systems are in use throughout the world by utilities, governments, and large companies, in thousands of applications, which rely on analysis of spatially referenced data.



Using YOUR Map Data

The CalAmp iOn Telematics system can use virtually any type of map data, and we provide updated worldwide maps, but our software can overlay our AVL information on your own Esri GIS maps WITHIN our application. CalAmp allows you to utilize your existing investment of time and labor that went into your Esri map data. The CalAmp iOn Telematics system displays real-time vehicle location and status data in relation to the infrastructure, assets, boundaries, updates, routes, parcels, landmarks, and other critical elements of your constantly changing GIS map data. CalAmp has extensive experience working with Esri data and environments in all forms (.shp files, SDE, etc.). As an option,

The screenshot displays the CalAmp AssetOutlook Tracking interface. The main map area shows a residential street grid with red route overlays. A sidebar on the right contains a 'Layer List' with various map layers like 'Geofence Alerts', 'Weather (Radar NA)', and 'Torrance Sweeper Routes'. Below the map is a data table with columns for Group, Asset, Time, Event, Event Type, Address, Landmark, Status, and Speed (GPS...).

| Group | Asset | Time | Event | Event Type | Address | Landmark | Status | Speed (GPS...) |
|-------|------------|-------------------------|-------------------|------------|---|----------|--------|----------------|
| A001 | 9999987651 | 2018-11-09, 11:13:50 PM | Ignition Off | IGOFF | Unnamed Street, Brockton Massachusetts, 02302 | Brockton | Parked | 0 |
| A001 | 9999987652 | 2018-08-30, 07:17:13 PM | Ignition On | IGON | 7 Via Antonio da Recanate, Milano Lombardia, 2... | MILANO | Idle | 0 |
| CSC | 9999987671 | 2018-06-13, 10:34:59 PM | Begin Speeding | SPEED | VA-267, Vienna Virginia, 22182 | | Towed | W 80 |
| CSC | 9999987672 | 2018-06-13, 10:34:40 PM | Begin Speeding | SPEED | VA-267, Vienna Virginia, 22182 | | Towed | W 58 |
| CSC | 9999987673 | 2018-06-13, 10:34:20 PM | Battery Power ... | BPWUP | 603 N Elmwood St, Anaheim California, 92805 | | Parked | 0 |
| CSC | 9999987674 | 2018-06-13, 10:34:06 PM | Ignition Off | IGOFF | Unnamed Street, Brockton Massachusetts, 02302 | | Towed | 0 |
| CSC | 9999987675 | 2018-06-13, 10:33:45 PM | Ignition On | IGON | 7 Via Antonio da Recanate, Milano Lombardia, 2... | | Idle | 0 |

Below the table are options for 'SELECT COLUMNS', 'CLEAR FILTERS', 'CLEAR SORT', and 'EXPORT TO CSV'. The bottom right corner indicates 'Viewing 77 Assets'.

On the right side of the interface, there is a 'Vehicle Utilization' section for 'BJB-Gray Parked', showing details like 'March 17, 2018, 2:40 PM', '3633 N Sepulveda Blvd, Manhattan Beach California, 90266 - Street View', 'Age > 1 Month', 'IGNITION: Off', and 'Engine Hours: 378.1 Odometer: 67204.4 mi'. Below this is a 'Vehicle Utilization' section with 'Additional info' including 'Asset Name [ID]: BJB-Gray [3639]', 'Description', 'Type: Vehicle', 'Status: Enabled', 'Install Date: 03/03/17', 'License, State', 'Year/Make/Model', 'VIN', 'Device Name [ID]: AOTest_06 [30391]', 'Type: Imu3030', 'ESN: 4562175148', and 'Status: Enabled'.

CalAmp can actually access your GIS map data in real time via Map Services.

Example Zone and Turn by Turn Route Overlays

Exchanging Data with GIS

In addition to bringing your GIS data into our AVL application in real-time, we can also provide AVL data outward to your GIS, or any Esri GIS based application using a variety of interface protocols such as Map Services and Esri GeoEvent Server.

External Data Overlays

Because of our powerful universally used Esri GIS mapping technology, we can display external data from other map data sources as an option. Data can come from your own GIS sources or external sources and used as a layer in our AVL mapping. Some examples of these sources/feeds are:

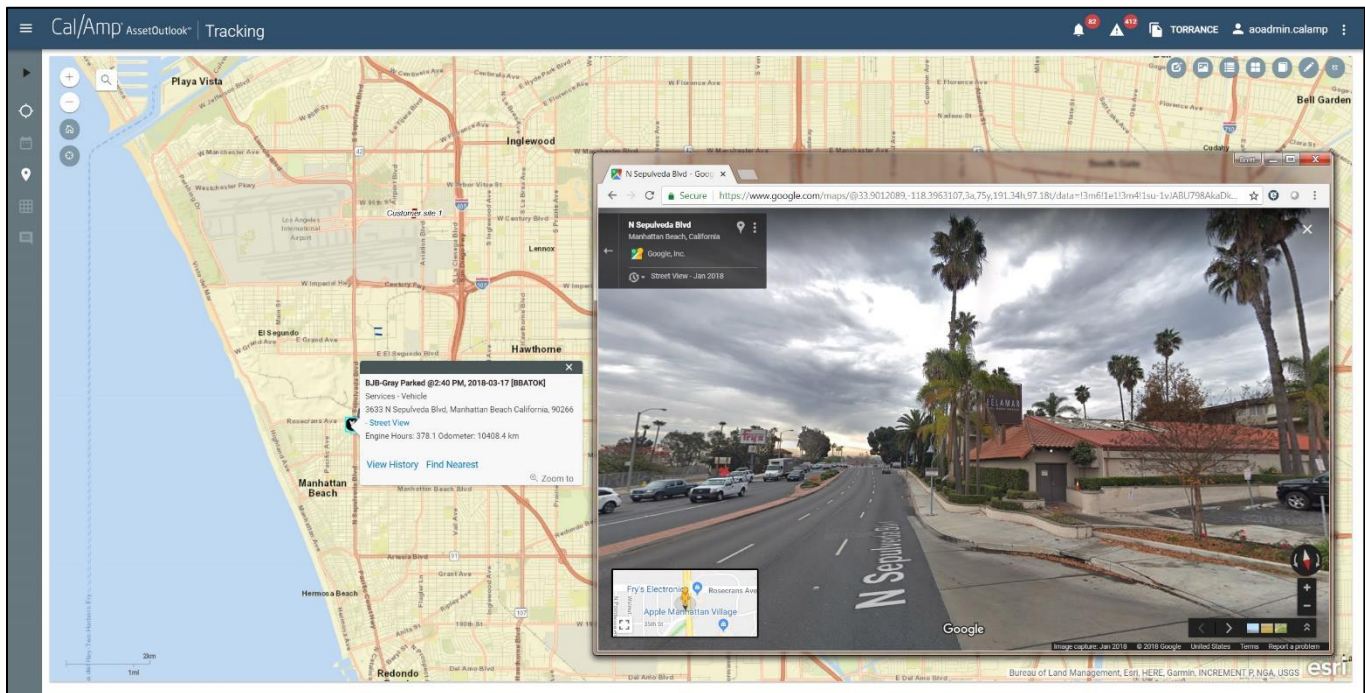
- Real-Time Weather
- Real-Time Radar
- Real-Time Traffic

The screenshot displays the Cal/Amp AssetOutlook Tracking interface. The top navigation bar includes the Cal/Amp logo, 'AssetOutlook™ Tracking', and user information 'CALAMP' and 'aoadmin.calamp'. The main area features a map with various overlays, including a weather radar overlay showing precipitation intensity. A 'Layer List' panel on the right side of the map shows the following layers: Current (checked), Geofence Alerts (unchecked), Geofence (checked), Weather (Radar NA) (checked), and Traffic (unchecked). Below the map is a table with columns: Group, Asset, Time, Event, Address, Landmark, Status, Speed (km/h), and Odr. The table contains several rows of asset data, including Torrance, A001, A001, CSC, CSC, and CSC. At the bottom of the interface, there are options for 'SELECT COLUMNS', 'CLEAR FILTERS', 'CLEAR SORT', and 'EXPORT TO CSV', along with the text 'Viewing 71 Assets'. On the right side, there is a sidebar for 'LMU_QA_3990 Current Status' showing the vehicle's location, status (Parked), and other details.

| Group | Asset | Time | Event | Address | Landmark | Status | Speed (km/h) | Odr |
|----------|-----------------|-------------------------|-------|---|-----------------|--------|--------------|-----|
| Torrance | 4674029857_2630 | 2017-12-19, 03:31:42 PM | IGOFF | Torrance California, 90501 | CalAmp Torrance | Parked | 0 | |
| A001 | 9999987651 | 2018-08-31, 01:31:45 AM | IGOFF | Unnamed Street, Brockton Massachusetts, 02302 | Brockton | Parked | 0 | |
| A001 | 9999987652 | 2018-08-30, 07:17:13 PM | IGON | 7 Via Antonio da Recanate, Milano Lombardia, 2... | MILANO | Idle | 0 | |
| CSC | 9999987671 | 2018-06-13, 10:34:59 PM | SPEED | VA-267, Vienna Virginia, 22182 | | Towed | W 128.7 | |
| CSC | 9999987672 | 2018-06-13, 10:34:40 PM | SPEED | VA-267, Vienna Virginia, 22182 | | Towed | W 93.3 | |
| CSC | 9999987673 | 2018-06-13, 10:34:20 PM | ROWIP | 603 N Elmwood St, Anaheim California, 92805 | | Parked | n | |

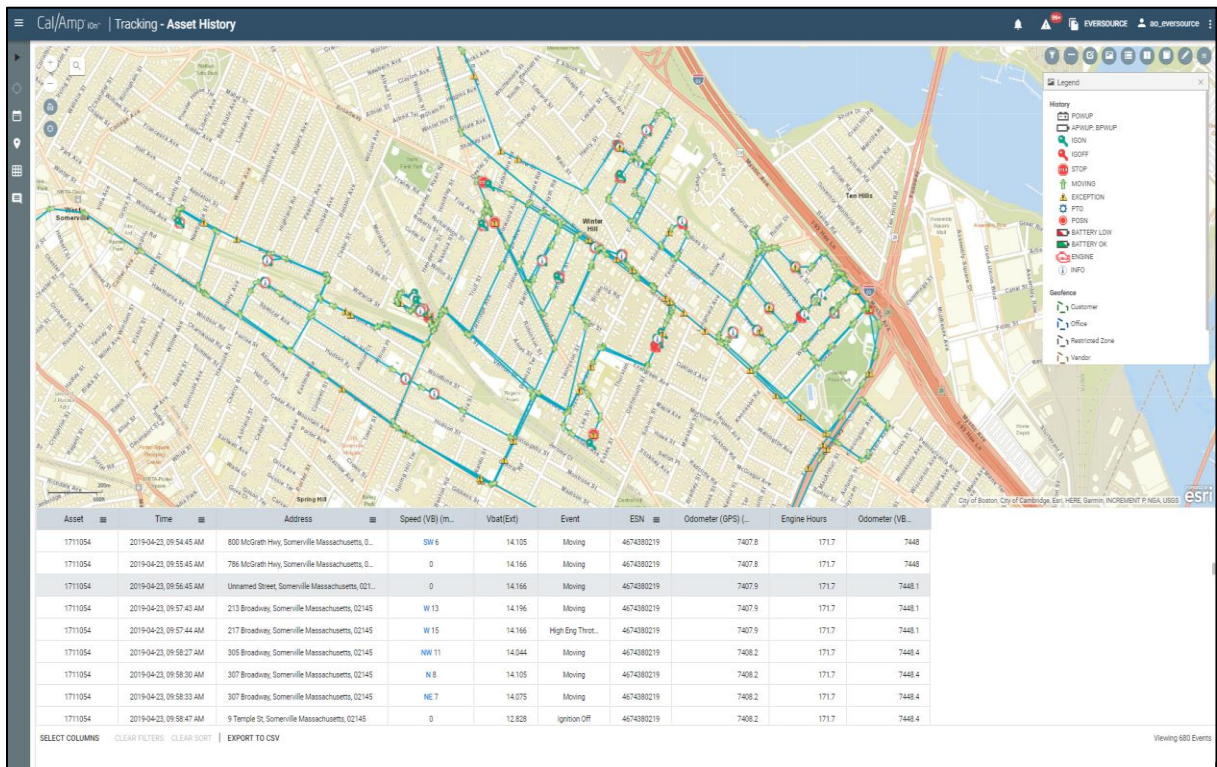
Google Maps Street View Tool

The CalAmp iOn Telematics system has a feature that leverages the highly useful Google Maps Street View tool from the CalAmp iOn Telematics system interface. This CalAmp Google Street View Tool allows the user to click anywhere on the GIS map data within the CalAmp iOn Telematics Map window, and CalAmp iOn Telematics will hyperlink that location to a new pop-up window showing the Google Maps Street View of that exact location. This function allows the CalAmp iOn Telematics user to see the typical real world surroundings of a specific place from their GIS. The Google Maps Street View shows images of the area recently captured (not real-time) by Google's mobile cameras. It allows the users to see things like buildings, road signs, lanes, businesses and other permanent structures that exist at that location that their GIS data does not have.



Historical Breadcrumb Replay Feature

The CalAmp iOn Telematics system allows you to see a historical breadcrumb and replay of any portion of a vehicle, or group of vehicles, activity history. Controls let you play, pause, rewind, and fast forward the replay allowing you to watch the vehicles' movement and behavior including location, device activities, alerts, status changes, events, etc. Each breadcrumb icon represents a vehicle position/event and all its underlying data including address, direction, speed, and status. Breadcrumb icons can represent various statuses and events, such as ignition off/on, or a device is activated (broom, plow, armature, PTO, etc.).



Report Examples

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Options: Available: 10 Selected: 1

Vehicle Daily View

Data refreshed 2018-09-17 at 19:25:47

From Date: 2018-09-10 00:00:00 To Date: 2018-09-16 23:59:59

| Group Name | Date | Asset Name | Asset Type | Asset Category | Distance Driven (Miles) | Total Stops | Engine On Time (Hrs) | Total Idle Time (Hrs) | Idle % of Engine Time | Initial On Time Stamp | Last Off Time Stamp | Asset Time Zone |
|-------------|------------|------------|------------|----------------|-------------------------|-------------|----------------------|-----------------------|-----------------------|------------------------|------------------------|---------------------|
| Development | 2018-09-10 | MRH | Vehicle | | 0.0 | 0 | 0.0 | 0.0 | 0.0 | | | America/Los_Angeles |
| Development | 2018-09-11 | MRH | Vehicle | | 4.2 | 4 | 0.2 | 0.1 | 30.7 | 2018-09-11 12:24:50 PM | 2018-09-11 09:22:01 PM | America/Los_Angeles |
| Development | 2018-09-12 | MRH | Vehicle | | 87.6 | 4 | 2.5 | 0.5 | 19.1 | 2018-09-12 11:58:44 AM | 2018-09-12 08:50:40 PM | America/Los_Angeles |
| Development | 2018-09-13 | MRH | Vehicle | | 91.7 | 4 | 1.8 | 0.3 | 14.1 | 2018-09-13 11:23:59 AM | 2018-09-13 09:29:57 PM | America/Los_Angeles |
| Development | 2018-09-14 | MRH | Vehicle | | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 2018-09-14 07:34:01 AM | 2018-09-14 07:39:08 AM | America/Los_Angeles |
| Development | 2018-09-15 | MRH | Vehicle | | 3.9 | 2 | 0.2 | 0.0 | 27.6 | 2018-09-15 06:52:01 PM | 2018-09-15 08:23:35 PM | America/Los_Angeles |
| Development | 2018-09-16 | MRH | Vehicle | | 11.6 | 7 | 0.9 | 0.5 | 35.9 | 2018-09-16 09:36:40 AM | 2018-09-16 08:01:58 PM | America/Los_Angeles |

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Options: Available: 2 Selected: 0

Trip Detail View

Data refreshed 2018-09-17 at 19:41:28

From Date: 2018-09-13 00:00:00 To Date: 2018-09-14 23:59:59

| Group | Asset Name | Asset Type | Asset Category | Trip Start Location | Starting Location Landmark | Starting Landmark Category | Start Time | Trip End Location | Destination Landmark |
|-------------|------------|------------|----------------|---|----------------------------|----------------------------|------------------------|---|----------------------|
| Development | MRH | Vehicle | | 718 Garnet St. S Inna Ave. Los Angeles, California, Redondo Beach | | | 2018-09-13 11:28:23 AM | 87 Pacific Alton Pkwy Orange, California Irvine 92618 US | |
| Development | MRH | Vehicle | | 2050 W 150th St. Gramercy Pl. Los Angeles, California, Torrance | | | 2018-09-13 11:38:02 AM | 87 Pacific Alton Pkwy Orange, California Irvine 92618 US | |
| Development | MRH | Vehicle | | 1405 27 Los Arboles California, Los Angeles 90015 US | | | 2018-09-13 11:48:54 AM | 87 Pacific Alton Pkwy Orange, California Irvine 92618 US | |
| Development | MRH | Vehicle | | 1405 158 Orange, California, Huntington Beach, 92647 US | | | 2018-09-13 11:58:30 AM | 87 Pacific Alton Pkwy Orange, California Irvine 92618 US | |
| Development | MRH | Vehicle | | 1405 4 Orange, California, Irvine, 92612 US | | | 2018-09-13 12:08:30 PM | 800 S Prospect Ave S Maria Ave Los Angeles, California, Redondo Beach | |
| Development | MRH | Vehicle | | 85 Pacific Gateway Blvd Orange, California Irvine 92618 US | | | 2018-09-13 07:41:33 PM | 800 S Prospect Ave S Maria Ave Los Angeles, California, Redondo Beach | |
| Development | MRH | Vehicle | | 1405 7 Orange California Irvine, | | | 2018-09-13 07:45:01 PM | 800 S Prospect Ave S Maria Ave Los Angeles, California, Redondo Beach | |

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Options: Available: 3 Selected: 0

Operator Performance Summary View

Data refreshed 2018-09-17 at 20:38:02

From Date: 2018-09-10 00:00:00 To Date: 2018-09-16 23:59:59

| First Name | Last Name | Active Days | Work Stops | Total Stops | Total Stop Time | Total Idle Time | Engine Hours | Distance (Miles) | # Speeding Events | Rapid Acceleration Events | Hard Braking Events | Hard Cornering Events | Time Zone |
|------------|-----------|-------------|------------|-------------|-----------------|-----------------|--------------|------------------|-------------------|---------------------------|---------------------|-----------------------|---------------------|
| Mark | Holworth | 7 | 7 | 16 | 11h:53m | 0h:49m | 1h:41m | 25.1 | 0 | 3 | 0 | 1 | America/Los_Angeles |

Cal/Amp AssetOutlook® | Reports

Options: Available: 20 Selected: 20

Vehicle Summary View

Data refreshed 2018-09-17 at 20:46:25

From Date: 2018-09-10 00:00:00 To Date: 2018-09-16 23:59:59

| Group Name | Asset Name | Active Days | Distance Driven (Miles) | Total Stops | Engine On Time | Total Idle Time | Avg. Initial On Time | Avg Last Off Time | Asset Time Zone | Ending Odometer (Miles) | Last Reported Location | Geofence |
|-------------|------------|-------------|-------------------------|-------------|----------------|-----------------|----------------------|-------------------|---------------------|-------------------------|------------------------|----------|
| Development | BC.Eco | 2 | 0.0 | 0 | 0.0 | 0.0 | | | America/Los_Angeles | 121335.8 | | |
| Development | RG.Honda | 7 | 92.9 | 31 | 5.8 | 2.5 | 12:43 PM | 05:40 PM | America/Los_Angeles | 45592.6 | | |
| Development | MRH | 7 | 198.9 | 21 | 5.9 | 1.7 | 11:56 AM | 06:37 PM | America/Los_Angeles | 39539.5 | | |

CalAmp is happy to offer an in-depth analysis of your organization and provide a comprehensive solution that best meets your needs. Please reach out to me directly for any other information.

Peter Nemeth
SE Regional Manager
Municipal Government

Cal/Amp®

954 907 1493- Mobile
PNemeth@CalAmp.com