

C O N T E N T S

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# Data Dictionary

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| Table Name | Description | Type |
| Summary | Aggregated summary per vehicle per trip.  Each ignition cycle generates only one summary record. | Log |
| Host | Periodic log of host vehicle’s internal signal | Log |
| RvBsm | The messages **received** by the host vehicle from remote vehicle | Log |
| EvtWarn | Log of all the **events** observed by the host vehicle  Each event of interest creates a one-record snapshot of the kinematics | Log |
| Spat | The messages received from intersection unit.  One record each 0.5 sec that is received by the host | Log |
| RvZone | Relative location of the remote vehicle | Dictionary |
| RvBasicVehClass | Basic type/class of the remote vehicle | Dictionary |
| AlertLevel | Level of the event | Dictionary |
| EventAppId | Type of event/alert | Dictionary |

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| Summary Table | **Type** | **Units** | **Description** | **Range** |
| Device | int32 |  | Randomly selected number between 2000 and 3000 | 2000 to 3000 |
| Trip | int32 |  | Sequential trip number | 0 - 2147483647 |
| StartTime | int32 | centi-secs | Start of Trip Time in centi-seconds | 0 - 2147483647 |
| EndTime | int32 | centi-secs | End of Trip Time in centi-seconds | 0 - 2147483647 |
| UTCTime | long64 | ms | Coordinated Universal Time | N/A |
| TripStart | Double | Days | Serial Date/Time value (UTC) corresponding to trip time = 0 (Ref: January 1, 1900) | N/A |
| TodTripStart | Double | Days | Serial Date/Time value (Central Time corrected for DST) corresponding to trip time = 0 (Ref: January 1, 1900) | N/A |

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| EvtWarn Table | **Type** | **Units** | **Description** | **Range** |
| Device | int32 |  | Randomly selected number between 2000 and 3000 | 2000 to 3000 |
| Trip | int32 |  | Sequential trip number | 0 - 2147483647 |
| Time | int32 | centi-secs | Sequential time start at 0 and increasing by 10 (10 hz) | 0 - 2147483647 |
| NativeFlag | tinyint |  | Flag indicating a match between Time and Localtime (within a 0.1 s) | 0 - 1 |
| LocalTimeMS |  | ms |  | 0 - 86400000 |
| PsId | uint32 |  |  | 0 - 0xFFFFFFFF |
| RvBasicVehicleClass | enum |  | car, truck, bicycle, pedestrian, etc. |  |
| RvRandomId | uint16 |  |  | 0 - 0xFFFF |
| RvDevice | uint16 |  |  | 0 - 0xFFFF |
| AlertLevel | tinyint | enum |  |  |
| EventAppId | enum |  | Showing which application transitioned to Inform or Warn |  |
| RvZone | enum |  | Showing the location of the Rv at the time of the Inform or Warn |  |
| RvLatitude | double | deg |  | -90.0 - 90.0 |
| RvLongitude | double | deg |  | -180.0 - 180.0 |
| RvHeading | float | deg |  | 0 - 360.0 |
| RvElevation | float | m |  | -409.5 - 6143.9 |
| RvSpeed | float | m/s |  | -55.5556 - 55.5556 |
| RvBrakeStatus | tinyint |  |  | 0 = Brake Not Active 1 = Brake Active |
| RvYawRate | float | deg/s |  | -327.68 - 327.67 |
| RvLongitudinalAccel | float | m/s2 |  | -15.0 - 15.0 |
| RvTurnSignal | tinyint | enum | 0 = unknown/off; 1 = Left; 2 = right; 3 = both |  |
| RvEventFlags | tinyint | enum | Bit 0 = Hazard lights Bit 1 = Stop line violation Bit 2 = ABS activated Bit 3 = Traction ctrl loss Bit 4 = Stability ctrl activated Bit 5 = Hazardous materials Bit 6 = Reserved Bit 7 = Hard braking Bit 8 = Lights changed Bit 9 = Wipers changed Bit 10 = Flat tire Bit 11 = Disabled vehicle Bit 12 = Air Bag Deployed |  |
| RvRange | float | m |  | 0 - 655.35 |
| RvRangeRate | float | m/s |  | -400.0 - 400.0 |
| RvLongOffset | float | m |  |  |
| RvLatOffset | float | m |  |  |
| HvLatitude | double | deg |  | -90.0 - 90.0 |
| HvLongitude | double | deg |  | -180.0 - 180.0 |
| HvHeading | float | deg |  | 0 - 360.0 |
| HvElevation | float | m |  | -409.5 - 6143.9 |
| HvSpeed | float | m/s |  | -55.5556 - 55.5556 |
| HvBrakeStatus | tinyint |  |  | 0 = Brake Not Active 1 = Brake Active |
| HvYawRate | float | deg/s |  | -327.68 - 327.67 |
| HvLongitudinalAccel | float | m/s2 |  | -15.0 - 15.0 |
| HvTurnSignal | tinyint | enum | 0 = unknown/off; 1 = Left; 2 = right; 3 = both |  |

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| Host Table | **Type** | **Units** | **Description** | **Range** |
| Device | int32 |  | Randomly number between 2000 and 3000 | 2000 to 3000 |
| Trip | int32 |  | Sequential trip number | 0 - 2147483647 |
| Time | int32 | centi-secs | Sequential trip time starting at 0 and increasing by 50 (2 hz) | 0 - 2147483647 |
| NativeFlag | tinyint |  | Flag indicating a match between Time and Localtime (within a 0.1 s) | 0 - 1 |
| LocalTimeMS | uint32 | ms |  | 0 - 86400000 |
| Latitude | double | deg |  | -90.0 - 90.0 |
| Longitude | double | deg |  | -180.0 - 180.0 |
| Elevation | float | m |  | -409.5 - 6143.9 |
| Heading | float | deg |  | 0 - 360.0 |
| GpsSpeed | float | m/s |  | -55.5556 - 55.5556 |
| BrakeStatus | tinyint |  | Boolean: (0 = off; 1 = on) | 0 = Brake Not Active 1 = Brake Active |
| Speed | float | m/s |  | -55.5556 - 55.5556 |
| YawRate | float | deg/s |  | -327.68 - 327.67 |
| LongitudinalAccel | float | m/s2 |  | -15.0 - 15.0 |
| Throttle Position | tinyint | % |  | 0 - 100 |
| Steering Wheel Angle | float | deg |  | -450 - 450 |
| TurnSignal | enum |  | enum: 0 = off; 1 = left; 2 = right; 3 = both | 0 = Off 1 = Left 2 = Right 3 = Both |
| Headlamp | enum |  | enum: 0 = off; 1 = parking; 2 = low; 3 = high | 0 = Off 1 = Parking 2 = Low 3 = Hight |
| Wiper | enum |  | enum: 0 = off; 1 = delay; 2 = low; 3 = high | 0 = Off 1 = Delay 2 = Low 3 = High |
| TransmissionState | enum |  | enum: 0 = Neutral; 1 = Park; 2 = Forward gears; 3 = Reverse gears | 0 = Neutral 1 = Park 2 = Forward gears 3 = Reverse gears |
| Stability Control | tinyint |  | Boolean: (0 = off; 1 = on) | 0 = Off, 1 = On |
| ABS | tinyint |  | Boolean: (0 = off; 1 = on) | 0 = Off, 1 = On |
| Traction Control | tinyint |  | Boolean: (0 = off; 1 = on) | 0 = Off, 1 = On |
| GpsFixType | tinyint |  |  | 0 = Invalid 1 = GPS fix 2 = DGPS fix 4 = RTK fix 5 = Float RTK fix 6 = Dead reckoning 7 = Manual fix 8 = Simulated fix 9 = WAAS |
| Semi-major Axis Accuracy | float | m |  | 0 - 12.7m |
| Semi-minor Axis Accuracy | float | m |  | 0 - 12.7m |
| Orientation of Semi-major axis of Error Ellipse | float | deg from true north |  | 0 - 360 |

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| RvBsm Table | **Type** | **Units** | **Description** | **Range** |
| Device | int32 |  | between 2000 and 3000 | 2000 to 3000 |
| Trip | int32 |  | Sequential trip number | 0 - 2147483647 |
| Time | int32 | centi-secs | Sequential trip time starting at 0 and increasing by 50 (2 hz) in centi-seconds | 0 - 2147483647 |
| NativeFlag | tinyint |  |  | 0 - 1 |
| LocalTimeMS | uint32 | ms |  | 0 - 86400000 |
| PsId | uint32 | ms |  | 0 - 270,549,119 |
| RvBasicVehicleClass | enum |  |  | 0 = Car 20 = Light truck 25 = Heavy duty truck 40 = Motorcycle 60 = Emergency vehicle 82 = Pedestrian 85 = Bicycle |
| RvRandomId | uint16 |  |  | 0 - 0xFFFF |
| RvLatitude | double | deg |  | -90.0 - 90.0 |
| RvLongitude | double | deg |  | -180.0 - 180.0 |
| RvElevation | float | deg |  | -409.5 - 6143.9 |
| RvHeading | float | deg |  | 0 - 360.0 |
| RvGpsSpeed | float | m/s |  | -55.5556 - 55.5556 |
| RvBrakeStatus | tinyint |  |  | 0 = Brake Not Active 1 = Brake Active |
| RvYawRate | real | deg/s |  | -327.68 - 327.67 |
| RvLongitudinalAccel | real | m/s2 |  | -15.0 - 15.0 |

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| Spat Table | **Type** | **Units** | **Description** | **Range** |
| Device | int32 |  | number between 2000 and 3000 | 2000 to 3000 |
| Trip | int32 |  | Sequential trip number | 0 - 2147483647 |
| Time | int32 | centi-secs | Sequential trip time starting at 0 and increasing by 50 (2 hz) in centi-seconds | 0 - 2147483647 |
| NativeFlag | tinyint |  | Flag indicating a match between Time and Localtime (within a 0.1 s) | 0 - 1 |
| LocalTimeMS | uint32 | ms |  | 0 - 86400000 |
| IntersectionId | uint16 |  |  | 0 - 65535 |
| LaneId | tinyint |  |  | 1 - 254 |
| MovementPhaseState | tinyint |  |  | 0 - 9 0 = Dark 1 = Green 2 = Yellow 3 = Flashing Red 4 = Red |
| SignalGroupID | tinyint |  |  | 1 - 255 |
| MinEndTime | uint16 | 1/10th UTC Time | Note: Tenths of a second in the current or next hour when the phase is to change | 0 - 36000 |