CarChip Fleet & CarChip Fleet with Alarm

OBDII-Based Vehicle & Driver Safety Monitoring System

8241
8245

CarChip Fleet (8241) and CarChip Fleet with Alarm (8245) log vehicle trip and engine data to provide a detailed history of driver performance and vehicle operation. The logged data includes trip start and end times, vehicle speeds, rates of acceleration and braking, engine performance data, all detected OBDII trouble codes, and detailed “accident” data for all sudden stops. CarChip Fleet with Alarm includes all the features of the CarChip Fleet, but also provides an audible alarm that can be used to alert drivers of unsafe driving. CarChip Fleet and CarChip Fleet with Alarm plug into your car’s OBDII port and are compatible with most passenger cars and light trucks with model years 1996 and later.

All CarChip Fleet versions require DriveRight Fleet Management Software (FMS) version 3.1 or later, purchased separately. Additional CarChip software included with DriveRight FMS allows you to view engine performance data and vehicle trouble codes.

General

Operating Temperature	-40° to +185°F (-40° to +85°C)
Primary Power, Connected to Vehicle	-9 to 16 VDC, 25 mA
Primary Power, Connected to Computer	USB
Backup Power	Internal battery, 10-15 year life in normal use
Memory	512KB
Data Logging Hours	300 hours max., 42 hours min., depending on the number of data parameters and the selected time intervals.
Time & Date	Accurate to +/- 2 seconds per day
Mounting	16-pin OBDII connector
Computer Interface	USB
Computer Cable Length	6’ (1.5m)
Status LED	LED, flashes to indicate unit status
Alarms, (8245 only)	Audible alarm for exceeding speed, acceleration, and deceleration limits
Dimensions	
For 8241	1.875" x 0.982" x 1.334" (48 mm x 25 mm x 35 mm)
For 8245	1.875" x 0.982" x 1.429" (48 mm x 25 mm x 36 mm)
Weight	
For 8241 (CarChip Data Logger Only)	0.8 oz. (23 g)
For 8245 (CarChip Data Logger Only)	0.9 oz. (25 g)

OBDII Compatibility

Supported Protocols	J1850-41.6, J1850-10.4, ISO9141, KWP2000 (ISO 14230), CAN (Control Area Network ISO 11898)
CarChip-Compatible Vehicles:	
US-Market	Most domestic and import vehicles model years 1996 and later.
European-Market	Some vehicles model years 1996 - 1999 and most vehicles model year 2000 and later vehicles compliant with the supported protocols listed above.
Elsewhere	Undetermined. 1996 and later vehicles that are compliant with the supported protocols may or may not be CarChip Compatible
Incompatible Vehicles	CarChip meets and complies with most of the supported protocols used with US market vehicles. Despite this, incompatibilities still exist. Review the General CarChip Exclusions List to see the known exceptions, exclusions and anomalies.

Data Display in CarChip Software (included with DriveRight FMS)

Trip Log Summary View	Start date and time, duration, distance, max speed, time in top speed

band, number of hard braking events, number of extreme braking events, number of hard acceleration events, number of extreme acceleration events, vehicle ID

Trip Log Report View . . . . . Vehicle ID, CarChip data logger ID, start time, end time, duration, time spent at idle, time spent in first speed band, time spent in second speed band, time spent in third speed band, time spent in fourth speed band, distance, average speed, maximum speed, number of hard braking events, number of extreme braking events, number of hard acceleration events, number of extreme acceleration events, list of logged parameters, comments

Trip Log Plot View . . . . . Line graph for vehicle speed plus line graphs for up to four optional parameters

Trip Log Table View . . . . . Elapsed time for trip and speed every 5 seconds plus up to four optional engine data parameters

Activity Log Summary View . . . . . Date and time, CarChip ID, description of event

Activity Log Event View . . . . . Date and time, CarChip ID, description of event, and comments

Accident Log Summary View . . . . . Date and time, CarChip ID, maximum speed in log

Accident Log Stop View . . . . . Date and time, CarChip ID, maximum speed in log, comments

Accident Log Plot View. . . . . Date and time, line graph of vehicle speed for 20 seconds prior to stop

Accident Log Table View . . . . . Vehicle speed for each of the 20 seconds prior to the stop

Trouble Log Summary View . . . . . Date and time, vehicle ID, trouble code, problem description

Trouble Log Problem View . . . . . Date and time, vehicle ID, CarChip ID, trouble code, problem description, comments, OBDII freeze frame info (freeze frame parameter vary from car to car)

Data Options

Supported Unit Systems. . . . . U.S., Metric, S.I., Custom (mix of U.S., Metric, and S.I.)

Vehicle Speed Logging Interval . . . . . 5 seconds

Vehicle Speed Bands . . . . . 4, user configurable, identifies normal vs. excessive vehicle speeds

Calculated Data . . . . . Hard and extreme braking, hard and extreme acceleration

Number of Optional Engine Data Parameters . . . . . 23 total possible as supported by vehicle, up to 4 can be selected at a time

Optional Parameters Logging Intervals. . . . . 5, 10, 20, 30, or 60 seconds, user selected

Fixed Data Parameters

Parameter	Range*	Resolution*
Vehicle Speed	0 to 158 mph, 0 to 255 km/h, 0 to 70 m/s	0.6 mph, 1 km/h, 0.3 m/s
Trip Distance Traveled	0 to 10,000 miles, 0 to 16,000 km	0.1 mile, 0.1 km
Acceleration/Deceleration Threshold	0 to 3 G, 0 to 30 m/sec^2	0.03 G, 0.3 m/sec^2

* *Range and resolution of sensor measurements only. Accuracy is dependent on the accuracy of the vehicle's sensors.*

Optional Engine Data Parameters

Parameter	Range*	Resolution*
Engine Speed	0 to 16,384 rpm	1 rpm
Throttle Position	0 to 100%	0.1%
Coolant Temperature	-40° to +420°F, -40° to +215°C	2°F, 1°C
Engine Load	0 to 100%	0.1%
Air Flow Rate	0 to 8714 lb/min, 0 to 655.35 gm/sec	0.1 lb/min, 0.01 gm/sec
Intake Air Temperature	-40° to +420°F, -40° to +215°C	2°F, 1°C
Intake Manifold Pressure	0 to 75 in. hg., 0 to 255 kPaA	0.3 in. hg., 1 kPaA
Fuel Pressure	0 to 110 psiG, 0 to 765 kPaG	0.5 psiG, 3 kPaG
O2 Sensor Voltage (up to 8 monitored)	0 to 1.275 V	0.005 V
Ignition Timing Advance	-64° to 63.5°	0.5°
Short Term Fuel Trim (up to 2 monitored)	-100% to 99.22%	0.8%
Long Term Fuel Trim (up to 2 monitored)	-100% to 99.22%	0.8%
Battery Voltage	6 to 16 VDC	0.01 VDC

* Range and resolution of sensor measurements only. Accuracy is dependent on the accuracy of the vehicle's sensors.

Package Dimensions

Product #	Package Dimensions (Length x Width x Height)	Package Weight	UPC Codes
8241	2" x 2" x 2" (50 mm x 50 mm x 50 mm))	1.3 oz. (39 g)	011698 00677 9
8245		1.5 oz. (43 g)	011698 00678 6
8421 (10-pack)	10" x 4" x 4" (254 mm x 152 mm x 127 mm)	1 lb 2.6 oz. (.526 kg)	3011698 00677 0
8245 (10-pack)		1 lb 3.2 oz. (.544 kg)	3011698 00678 7