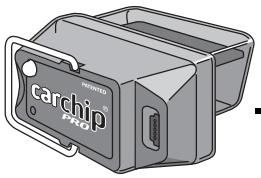
CarChip® Pro

OBD II - Based Vehicle Data Logger and Software



8226

The CarChip Pro (# 8226) data logger records vehicle trip and performance data to provide a detailed history of driver performance and vehicle operation. Recorded data includes; trip start and end times, vehicle speeds, rates of acceleration and braking, and any detected OBD II trouble codes. The CarChip Pro also provides additional vehicle monitoring capabilities including the logging of additional engine data parameters and detailed "accident" data for all sudden stops. It can also emit an audible alarm whenever a driver exceeds user-determined speed limits. Using the included CarChip software, you can see the logged data in summary, record, plot, or table formats and also export it to other applications.

The CarChip Pro data logger plugs into your car's OBD II port and is compatible with most passenger cars and light trucks model years 1996 and later. All CarChip Pros require CarChip software version 2.3 or later.

General

Operating Temperature	-40° to +185°F (-40° to +85°C)
Primary Power, Connected to Vehicle	9 to 16 VDC, 80 mA with vehicle running, 17 mA with the vehicle's power off
Primary Power, Connected to Computer	USB powered
Backup Power	Internal battery, minimum of 5 years total, with data logger not powered by vehicle or computer; 10-15 year life in normal use
Memory	512KB
Data Logging Capacity	300 hours maximum, depending on logging intervals and number of optional parameters selected
Time & Date	Accurate to +/- 2 seconds per day
Mounting	16-pin OBD II connector
Computer Interface	USB
Computer Cable Length	4' (1.2 m)
Alarm	Adjustable, audible alarm for exceeding speed, acceleration, and deceleration limits, when enabled in software
Status LED	LED, flashes to indicate CarChip status, when enabled in software
Dimensions	1.80" x 1.00" x 1.32" (46 mm x 26 mm x 34 mm)
Weight	0.7 oz. (20.5 g)

Software System Requirements

Operating System	Windows XP, Vista®, 7
Disk SpaCarChip Proce	5 MB free disk space
Display	Windows-compatible VGA minimum, 800 x 600 resolution

OBD II 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 CarChip Pro Exclusions List to see the known exceptions, exclusions and anomalies, available on www.davisnet.com.

Data Display

Trip Log Summary View	Start date and time, duration, distance, maximum 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 (up to 4 optional data parameters), comments.
Trip Log Plot View	Line graph for vehicle speed and up to 4 optional data parameters
Trip Log Table View	Elapsed time for trip and speed every 1, 5, 10, 20, 30, or 60 seconds. Up to four other parameters every 5, 10, 20, 30 or 60 seconds.
Activity Log Summary View	Date and time, CarChip ID, description of event
Activity Log Event View	Date and time, CarChip ID, description of event, 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, and corresponding 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, OBD II freeze-frame info (parameters included in freeze-frame vary from vehicle to vehicle)

Data Options

Supported Unit Systems	U.S., Metric, S.I., Custom (mix of U.S., Metric, and S.I.)
Vehicle Speed Logging Interval	1, 5, 10, 20, 30 or 60 seconds
Other Parameter Sampling Intervals	5, 10, 20, 30, or 60 seconds
Vehicle Speed Bands	4 user-configurable bands identify 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

CarChip Pro 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
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
O_2 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
8226	10.00" x 6.00" x 2.00" (254 mm x 152 mm x 50 mm)	6.50 oz. (0.184 kg)	0 11698 00887 2
8226B	8.38" x 7.25" x 2.00" (235 mm x 185 mm x 51 mm)	9.40 oz. (0.266 kg)	0 11698 00888 9
8226 (4-pack)	10.00" x 6.00" x 5.00" (254 mm x 152 mm x 127 mm)	1 lb. 10 oz. (0.792 kg)	3 0011698 00887 3
8226B (4-pack)	10.25" x 9.00" x 8.25" (261 mm x 229 mm x 210 mm)	3 lbs. 2 oz. (1.361 kg)	3 0011698 00888 0