V520

OBD-II/EOBD Code Reader

Drove West

Professional Diagnostic Tools

Product Specification

v1.0 • HW: V1.1 • 2026-02-06

Document Information

Model	V520	**Product Type**	Handheld OBD-II/EOBD Code Reader
Document Version	v1.0	**Last Updated**	2026-02-06
Hardware Version	V1.1	**Release Date (spec)**	2023-09-07

Overview

V520 is a handheld vehicle fault diagnosis instrument that supports the OBD-II/EOBD nine standard protocols. It is powered by the vehicle through the standard 16-pin diagnostic port and provides plug-and-play access to common OBD functions for engine/emissions diagnostics.

Purpose of Document

This document summarizes key hardware parameters, interfaces, and supported functions for product listing, integration reference, and incoming inspection. MCU: APM32E103VET6 (LQFP100).

OBD Diagnosis

Read/Clear DTCs, turn off MIL, Freeze Frame, I/M Readiness, VIN/CALID/CVN

Live Data Stream

Real-time sensor data from the vehicle ECU (vehicle-dependent)

Mode 6 / O2 / Mode 8

On-board monitor test, O2 Sensor test, component test (where supported)

DTC Library (35,901)

Built-in DTC lookup library with 35,901 code definitions

Cloud Print (QR)

Share/print DTC, data stream and freeze frame results via QR code

Battery Voltage

Battery voltage reading via Voltage menu and BAT shortcut key

Physical Specifications

171 × 85 × 28 mm
Weight: 230 g (tool) / 304 g (with box)
2.8" Color Screen | OBD-II via cable

Key Functions (Complete List)

- Read / Clear DTCs / turn off MIL
- Vehicle Info (VIN / CALID / CVN)
- Mode 6 on-board monitor test
- DTC Lookup Library (35,901 entries)
- Freeze Frame (snapshot data)
- Live Data Stream (real-time)
- Oxygen sensor test
- Cloud Print via QR code
- I/M Readiness status
- Battery voltage reading
- Mode 8 component test

Supported OBD-II Protocols (9 Protocols)

- SAE J1850 PWM (41.6 Kbaud)
- ISO 14230-4 KWP (5 baud init, 10.4 Kbaud)
- ISO 15765-4 CAN (29-bit ID, 500 Kbaud)
- SAE J1850 VPW (10.4 Kbaud)
- ISO 14230-4 KWP (fast init, 10.4 Kbaud)
- ISO 15765-4 CAN (11-bit ID, 250 Kbaud)
- ISO 9141-2 (5 baud init, 10.4 Kbaud)
- ISO 15765-4 CAN (11-bit ID, 500 Kbaud)
- ISO 15765-4 CAN (29-bit ID, 250 Kbaud)

Supported Vehicle Data (examples)

- Read Diagnostic Trouble Codes (DTC)
- Calculated load value
- Vehicle speed
- Intake manifold pressure
- Mass air flow rate
- Fuel system status (if supported)
- Clear fault codes / turn off MIL
- Coolant temperature
- Short-term fuel trim
- Ignition timing advance
- Throttle position (absolute)
- Fuel pressure (if supported)
- Engine speed (RPM)
- Fuel system status
- Long-term fuel trim
- Intake air temperature
- O2 sensor voltage / STFT (if supported)
- Fuel consumption monitoring (if supported)

Interface Definition (OBD-II 16-pin)

Pin	Signal	Pin	Signal
1	Reserved	9	Reserved
2	J1850+	10	J1850−
3	Reserved	11	Reserved
4	Chassis Ground	12	Reserved
5	Signal Ground	13	Reserved
6	CAN High (CANH)	14	CAN Low (CANL)
7	K-Line	15	L-Line
8	Reserved	16	Power (+12V)

Technical Specifications

Model	V520
Product type	Handheld OBD-II/EOBD code reader
Hardware version (spec)	V1.1
Release date (spec)	2023-09-07
Main control MCU	APM32E103VET6 (LQFP100)
Display	2.8" color screen
Resolution	240 × 320
Power supply	DC 9-16 V (vehicle DLC)
Working current	36-54 mA
Standby current	40 mA
Operating environment	−30 to 70°C
Storage temperature	−30 to 70°C
Dimensions (L × W × H)	171 × 85 × 28 mm
Weight	230 g (tool); 304 g (with retail box)
Vehicle interface	16-pin OBD-II (via cable)
UI languages	EN/DE/FR/ES/IT/RU/NL/ZH/JA/PT (10)
Protocols	9 OBD-II / EOBD standard protocols

Packaging Information

Inner box: 200 × 130 × 43 mm

Carton size: 540 × 420 × 235 mm

Qty per carton: 40 pcs

Unit weight: 230 g (tool) / 304 g (with box)

Transportation & Storage

Store in a clean, dry environment. Avoid moisture, rain, direct sunlight, extreme temperatures and dust. Handle with care during transportation to prevent mechanical damage.

UI Languages (10)

- English
- Deutsch
- Français
- Español
- Italiano
- Russian
- Dutch
- Chinese
- Japanese
- Português

Safety & Precautions

- Do not use abrasive cleaners to clean this product.
- Do not expose the product to direct sunlight for a long time.
- Do not use this product in rain or excessive moisture.
- Operate diagnostics only when the vehicle is safely parked.
- Do not allow this product to be heated or placed near fire sources.
- Do not attempt to disassemble or modify; no user-serviceable parts.
- Store in dry environment; avoid extreme temperatures and dust.

Notes & Disclaimer

1) OBD functions and available data items depend on the vehicle model/year and ECU implementation.
2) CAN bit-rate values are based on the user manual; if any conflict exists between documents, follow the device label and the actual production lot.
3) This document is for reference only and may be updated without notice.

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