

Document Information			
Model	V521	Product Type	Handheld OBD-II/EOBD Diagnostic Tool
Document Version	v1.0	Last Updated	2026-02-06
Hardware Version	V1.1	Release Date (spec)	2024-05-23

Overview

V521 is a handheld OBD-II/EOBD diagnostic tool designed for 12 V passenger vehicles. It powers from the vehicle's standard 16-pin DLC/OBD port and supports nine standard OBD-II/EOBD protocols.

Purpose of Document

This document summarizes key technical parameters and supported functions for product listings, partner reference and incoming inspection. MCU: APM32E103VET6 (LQFP100).



OBD Diagnosis
Read/Erase DTCs, turn off MIL, Freeze Frame, I/M Readiness, VIN/CALID/CVN

Live Data Stream
Real-time engine parameter display (vehicle-dependent)

Mode 6 / O2 / Mode 8
On-board monitor test, O2 Sensor test, EVAP/component test (where supported)

DTC Library (40,000+)
Built-in DTC lookup; coverage varies by firmware/region

Cloud Print (QR)
Generate QR codes from read data for scan/print/share via smartphone

Performance Test
Acceleration, braking, distance and dashboard data (vehicle-dependent)

Physical Specifications
173 × 91.7 × 25 mm
Weight: 309 g (tool) / 437 g (with pkg)
2.8" Color Screen (240 × 320)

- Key Functions (Complete List)**
- Read DTC / Erase DTC / turn off MIL
 - Vehicle Info (VIN / CALID / CVN)
 - O2 Sensor test
 - Cloud Print via QR code
 - Playback/Replay function
 - Freeze Frame (DTC snapshot)
 - Live Data Stream (real-time)
 - Mode 8 EVAP/component test
 - Battery voltage reading
 - I/M Readiness status
 - Mode 6 on-board monitor test
 - DTC Lookup Library (40,000+ entries)
 - Performance Test (accel/brake/distance)

- 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)**
- Diagnostic Trouble Codes read / clear
 - Coolant temperature
 - Short-term fuel trim (STFT)
 - Ignition timing advance
 - Throttle absolute position
 - Engine RPM
 - Fuel system status
 - Long-term fuel trim (LTFT)
 - Intake air temperature
 - O2 sensor parameters (if supported)
 - Calculated load value
 - Vehicle speed
 - Intake manifold pressure
 - Mass air flow rate (MAF)
 - Fuel pressure / consumption (if supported)
- Note: Supported items vary by vehicle model year/ECU; actual availability prevails.*

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 (J-2284)	14	CAN Low (J-2284)
7	K Line (ISO 9141-2 / ISO 14230-4)	15	L Line (ISO 9141-2 / ISO 14230-4)
8	Reserved	16	Battery Power

Note: Actual signals used depend on the vehicle protocol. Pins not used by the vehicle may be unpopulated or inactive.

Technical Specifications	
Model	V521
Product type	Handheld code reader (OBD-II/EOBD)
Hardware version (spec)	V1.1
Release date (spec)	2024-05-23
Main control chip (spec)	APM32E103VET6 (LQFP100)
Display	2.8" color screen (240 × 320)
Power supply	DC 9-16 V (powered by vehicle DLC/OBD port)
Working current	34-51 mA
Standby current (spec)	30 mA
Operating temperature	-20 to 60°C
Storage temperature	-20 to 60°C
Dimensions	173 × 91.7 × 25 mm
Weight (spec)	309 g (tool); 437 g (with packaging)
UI languages (spec)	EN/DE/FR/ES/IT/RU/NL/ZH/JA/PT/PL (11)
DTC lookup library (spec)	40,000+ DTC entries (coverage varies)
Communication	Wired OBD-II/EOBD via 16-pin DLC (serial)

Reference: Version information may vary by production lot; refer to the device About page where applicable.

Packaging Information
Retail box: 202 × 102 × 58 mm
Outer carton: 42.5 × 31 × 33.3 cm
Qty per carton: 30 pcs
Unit weight: 309 g (tool) / 437 g (with pkg)

Transportation & Storage
Storage: Clean, ventilated, cool and dry place; protect from moisture.
Transport: In packaging carton; prevent vibration, shock, squeezing, sunlight, rain.
Handling: Handle with care; keep packaging clean and intact.

UI Languages (11)	
• English	• Deutsch
• Français	• Español
• Italiano	• Russian
• Dutch	• Chinese
• Japanese	• Português
• Polish	

Safety & Precautions
<ul style="list-style-type: none"> Do not use abrasive cleaners to clean the product. Avoid long-term direct sunlight exposure. Do not use in rain or wet/high-humidity environments. Operate only within DC 9-16 V (vehicle DLC power). Keep away from heat sources and open flames. Do not disassemble or modify; no user-serviceable parts. Store in dry environment; avoid extreme temperatures and dust.

Notes & Disclaimer
<ul style="list-style-type: none"> This product is intended for OBD-II/EOBD compliant vehicles (engine/emissions related diagnostics). Available functions and data items depend on the vehicle ECU, model year and region; some items may display N/A or may not be available. Product information in this document is provided for reference and may be updated without notice.