

Document Information			
Model	V321	Product Type	Handheld OBD-II/EOBD Code Reader
Document Version	v1.0	Last Updated	2026-02-06
Hardware Version	V1.1	Release Date (spec)	2025-05-15

Overview

V321 is a handheld OBD-II/EOBD code reader designed for passenger vehicles. It supports nine standard OBD-II/EOBD protocols and provides essential emissions/engine diagnostic functions through the vehicle's standard 16-pin DLC/OBD port.

Purpose of Document

This document summarizes key technical parameters and supported functions for product listings, integration reference and incoming inspection.



OBD Diagnosis
Read/Clear DTC, turn off MIL, Freeze Frame, I/M Readiness, VIN/CID/CVN

Live Data & Waveform
Live Data Stream and Real-time Curve (waveform) display

Test Report & Cloud Print
Summarize results, QR code for scan/print/share via phone

Battery Test
Battery voltage, voltage waveform, and battery start-up test

DTC Library (35,901)
Built-in DTC Lookup; supports some manufacturer-specific codes

O2 & EVAP Tests
O2 Sensor test and EVAP test (Mode 8) when supported

Physical Specifications
150 × 81 × 25.5 mm
Weight: 252.6 g (tool only)
2.4" TFT Color Display (320×240)

- Key Functions (Complete List)**
- Read DTC, Clear DTC, turn off MIL
 - Vehicle Information (VIN / CID / CVN)
 - EVAP Test / Mode 8 (vehicle-dependent)
 - DTC Lookup Library (35,901 entries)
 - Tri-color LED (Red / Yellow / Green)
 - Freeze Frame Data
 - Live Data Stream & Real-time Curve
 - Inspection/Test Report (key results summary)
 - Battery voltage, waveform & start-up test
 - Over-current and over-voltage protection
 - I/M Readiness Check
 - O2 Sensor Test (vehicle-dependent)
 - Cloud Print (QR code, firmware-dependent)
 - Shortcut keys: F1 / DTC / BAT

- 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)**
- DTC read
 - Calculated load value
 - Vehicle speed
 - Intake manifold pressure
 - Mass air flow rate (MAF)
 - Fuel pressure / consumption (if supported)
 - Clear DTC / turn off MIL
 - 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 related parameters (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	CANH	14	CANL
7	KLINE	15	LLINE
8	Reserved	16	Power

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

Technical Specifications	
Model	V321
Product type	Handheld OBD-II/EOBD code reader
Hardware version (spec)	V1.1
Release date (spec)	2025-05-15
Main control MCU	BAT32G137GH48FA (LQFP48)
Display	2.4" TFT color screen
Resolution	320 x 240
Power supply	DC 9-16 V (vehicle DLC)
Working current	40-60 mA
Standby current	50 mA (spec.)
Operating environment	-20 to 60°C
Storage temperature	-20 to 60°C
Dimensions (L x W x H)	150 x 81 x 25.5 mm
Weight	252.6 g (tool only, spec.)
Vehicle interface	16-pin OBD-II male connector
UI languages	English, Deutsch, Français, Español, Italiano, Russian, Chinese, Japanese, Portuguese, Polish
Firmware/Program version (spec)	V1.00.250417

Packaging Information
Inner box: 90 x 55 x 187 mm
Outer carton: 39.5 x 29 x 39 cm
Qty per carton: 40 pcs
Unit weight: 252.6 g (spec.)

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

UI Languages (10)	
• English	• Deutsch
• Français	• Español
• Italiano	• Russian
• Chinese	• Japanese
• Portuguese	• 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 not compatible with new energy vehicles, hybrid vehicles, or models that do not comply with the OBD2 protocol. 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. Information in this document is provided for reference and may be updated without notice.