

Advanced OBDII Data Streamer

Models LDVDSV2-1587 & QCLDVSV2-KIT

B+B SMARTWORX

Powered by

ADVANTECH

www.advantech-bb.com



- + Outputs OBDII data in J1708 data format
- + Ignition-On signal output
- + Status LEDs for vehicle connection and power
- + Automatic low power mode senses when vehicle speed and engine speed is zero
- + Automatic disconnect when technician scan tool is connected (requires separate OBDII Y-cable)
- + Proprietary vehicle detection algorithm and embedded database permits same hardware to work on all compliant vehicles
- + Wide Operating Temperature: -40 to 85 °C (-40 to 185 °F)
- + Low Power Consumption: 2W in Operating Mode; 0.15W in Automatic Sleep Mode (Key Off)

Model LDVDSV2-1587, OBDII Data Streamer, connects your PC, driver terminal, Java-enabled phone, or other on-board computing device to the OBDII diagnostic bus of light-duty and medium-duty vehicles. It enables the retrieval of the most commonly used parameters of value in telematics and fleet management applications. The OBDII Streamer supports any 1996 or newer vehicles that comply with the SAE's J1979 OBDII specification.

Model LDVDSV2-1587 provides a simple operational protocol to communicate to the OBDII bus. It provides a common interface and deterministic response time for all vehicles. The complete Command and Response Protocol is available on the company website.

Model QCLDVSV2-KIT conveniently bundles the converter with accompanying cables and an installation kit.

ORDERING INFORMATION

| MODEL NO. | DESCRIPTION |
|-----------------|---------------------------------------------------------------------------------------------------------------|
| BB-LDVDSV2-1587 | OBDII Data Streamer/Converter |
| BB-QCLDVSV2-KIT | Bundled Kit, includes: Model LDVDSV2-1587 Streamer/Converter, Y cable, host cable, installation kit |

ACCESSORIES / REPLACEMENT PARTS

BB-LDVYCBL - Y Cable, 61 cm (24 in) length

BB-45-JB723 - Host Cable

BB-65-J9545-1 - Installation Kit, includes: 4 tie wraps, 1 alcohol wipe pad, 2 mounting tape strips

PROTOCOLS & PARAMETERS

SUPPORTED PROTOCOLS

SAE J1850 VPW
SAE J1850 PWM
SAE J2284/ISO 15765 (CAN)
ISO 9141-2
ISO 14230-4 (KWP2000)

SUPPORTED PARAMETERS

Vehicle Identification Number
Vehicle Speed - monitor aggressive driving
Engine Speed - monitor idle time and engine abuse
Throttle Position
Odometer/Distance Traveled - monitor trip distance and HOS
Instantaneous Fuel Rate in Gallons per Hour
Total Fuel - Monitor MPG & protect against theft
Ignition status - track idle time
Battery Voltage - watch for charging system failures
PTO Status - automatically figure fuel tax savings
Diagnostic Trouble Codes
MIL Status
Emissions Readiness Monitors - check remotely if vehicles are ready for emissions certification
Brake Switch Status and Seatbelt Fastened - available on most Ford & GM trucks and vans
Other parameters available on a custom basis

All product specifications are subject to change without notice.

LDVDSV2_QCLDVSV2-KIT_0118ds



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QCLDVS2-KIT

SPECIFICATIONS

LED STATE DESCRIPTIONS

- On (LED_ON): lit, solid
- Off (LED_OFF): unlit
- FB (LED_FAST): Alternating on-off; 125ms on, 125ms off
- SB (LED_SLOW): Alternating on-off; .5 sec on, 0.5 sec off
- VSB (LED_VERY_SLOW): Alternating on-off; 0.25 sec on, 2 sec off

| LEDS | | | | | |
|------|-----------------|----------------------|-----------------|----------------------------------------------------|----------------------------------------------------|
| | Red LED (Power) | Green LED (Activity) | Red LED (Debug) | Actual State | Description |
| 1 | On | On | Off | Normal operation | Normal operation |
| 2 | On | SB | Off | Detecting vehicle | Detecting vehicle |
| 3 | Off | FB | Off | Database version mismatch | Database needs to be updated |
| 4 | Off | SB | Off | Update in progress | Update in progress |
| 5 | Off | VSB | VSB | Device asleep | Device asleep |
| 6 | Off | Off | Off | Device unpowered | Device unpowered |
| 7 | Off | On | FB | Error FPGA image invalid | Firmware needs to be updated |
| 8 | Off | Off | FB | Error with EMM code | Update system manager |
| 9 | Off | Off | FB | EMM checking CRC of images | Wait 10 seconds. If state does not change, see #8. |
| 10 | Off | SB | FB | Error writing/reading to/from flash during update. | Restart update of current component. |

VEHICLE BUS CONNECTION - DB15 FEMALE

| | |
|-----------|------------------------------------|
| Pin 1 | ISO9141 K/ |
| Pins 4, 5 | J1850-, J1850+ |
| Pins 6, 7 | Ground |
| Pin 9 | Vehicle unswitched Vbat |
| Pin 10 | ISO9141L |
| Pin 11 | Vehicle Vbat to external scan tool |
| Pin 12 | CAN Low |
| Pin 13 | CAN High |

RS-232 CONNECTION - DB9 FEMALE (DCE)

| | |
|-------|---------------------------------------------------------------------|
| Pin 1 | Optional Vbat Power In or Vbat Power Out (2 separate build options) |
| Pin 3 | J1708- |
| Pin 7 | Ground |
| Pin 8 | J1708+ |

ADDITIONAL SPECIFICATIONS

| | |
|-------------------------|---------------------------------------------|
| Dimensions | 104.1 x 43.2 x 20.3 mm (4.1 x 1.7 x 0.8 in) |
| Operating Voltage Range | 8 to 30 VDC |
| MTBF, Calculated | 111440 Hours |

APPROVALS, DIRECTIVES, STANDARDS

EMC TESTING

| | |
|------------------------------------|--------------|
| Radiated Interference | SAE J1113/41 |
| Load Dump and Transient Protection | SAE J1113/11 |
| ESD Immunity | SAE J1113/13 |

ENVIRONMENTAL TESTING

| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Test | Ten (10) temperature cycles as follows, with unit operating normally: 1. Room (25°C) to Tmin in 15 minutes. 2. Soak at Tmin 1 Hour with power removed from unit 3. Start unit at Tmin, confirm successful start by executing a command/response. Power-down unit. Maintain unit unpowered for one minute between power-ups. 4. Repeat Step 3 three times 5. Start unit at Tmin and ramp Tmin to Tmax in 30 minutes 6. Operate at Tmax for 1 hour 7. Ramp Tmax to Tmin in 15 minutes 8. Repeat steps 1 through 7 nine times for a total of 10 cycles: a. 5 cycles at Vmin input b. 5 cycles at Vmax input |
| Vibration Test: IEC 60068-2-6 | 10 sweeps of 10 to 500 to 10Hz at rate 0.5 oct/min. each axis. Level to be 10 to 36Hz, 0.06 in DA 36 to 500Hz, 4g's Unit must remain operational during and after the test. |
| Shock Test: IEC 60068-2-27 | 18 to 50g's, 11ms, ½ sine pulses, 3 each direction each axis Unit must remain operational during and after the test. |
| Drop Test: IEC 60068-2-32 | 10 Freefall drops from 1 meter onto concrete surface. Drop 1 time one each face (6), 1 on a corner and the 3 edges of this corner. The drop unit shall return to normal operation without physical damage. |