B&B ELECTRONICS

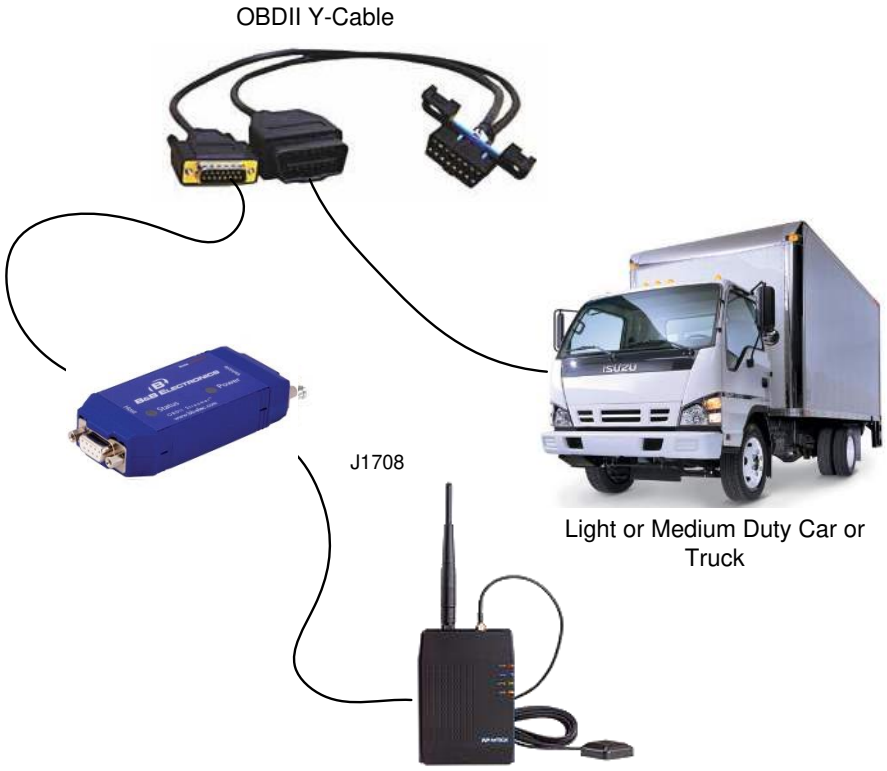
PRODUCT INFORMATION

Model LDVDSV2-1587

Advanced OBDII Data Streamer

The B&B Electronics AutoTap™ OBDII Data Streamer Model LDVDSV2 connects your PC, driver terminal, Java-enabled phone, or other on-board computing device to the OBDII diagnostic bus of light and medium duty vehicles. It enables the retrieval of the most commonly used parameters of value in telematics and fleet management applications.

The LDVDSV2 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 published on B&B's website ***www.rvdstreamer.com***.



Supported Vehicles

The OBDII Streamer supports any 1996 or newer vehicles that comply with the SAE's J1979 OBDII specification.

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/vans
- Other parameters available on a custom basis

Additional Features

- Outputs OBDII data in a J1708 data format
- Ignition-On Signal Output
- Status LED's for vehicle connection and power

	Red LED (Power)	Green LED (Activity)	Red LED (Debug)	Actual State	Customer 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

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, .5 sec off
- VSB (LED_VERY_SLOW): Alternating on-off; .25 sec on, 2 sec off

- Automatic low power mode senses when vehicle speed & engine speed is zero.
- Automatic disconnect when technician scan tool is connected (Requires separate OBDII Y-Cable)
- Proprietary vehicle detection algorithm and embedded database lets the same hardware work on all compliant vehicles
- Wide Operating Temperature: -40 to 85 ºC (-40 to 185 ºF)
- Low Power Consumption: 2W in Operating Mode; 0.15W in Automatic Sleep Mode (Key Off)

Available Form Factors

External Box

Vehicle Bus Connection: DB15 female

Pin 1	ISO9141 K/
Pins 4, 5:	J1850-, J1850+
Pin 6, 7	Ground
Pin 9	Vehicle unswitched Vbat
Pin 10	ISO9141 L
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+

Dimensions: 4.1 x 1.7 x 0.8 in (104.1 x 43.2 x 20.3 mm)
Operating Voltage Range: 8 to 30 VDC
Calculated MTBF: 111,440 Hours

EMC Testing

Radiated RF 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 (25ºC) 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 un-powered 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.