



## OBD II to RS-232 Data Streamer

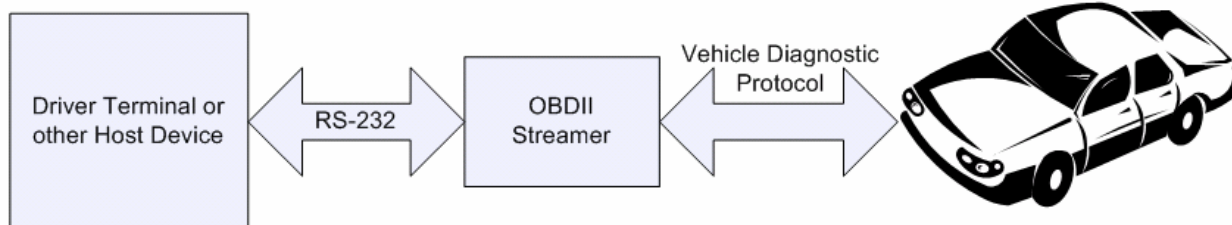
Model: LDVDS-S

### Introduction

The B&B Electronics AutoTap™ OBD II Data Streamer Model LDVDS-S connects your PC, driver terminal, Java-enabled phone, or other device to the OBD II 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 LDVDS-S provides a simple operational protocol to communicate to the OBD II bus. It provides a common interface and deterministic response time for all vehicles. The complete Command and Response protocol is published on B&B Electronics' website: [www.AutoTap.com](http://www.AutoTap.com).

The OBD II Streamer is intended to be installed in a vehicle permanently. Coupled with B&B Electronics OBD II Y-cable, model LDVYCBL, the LDVDS-S will immediately disconnect from the OBD II bus when another scan tool is connected to the bus.



### Supported Vehicles

The OBD II Streamer supports any 1996 or newer vehicles that comply with the SAE's J1979 OBD II specification. It supports manufacturer-specific parameters for:

- Ford/Lincoln/Mercury
- GM - Chevrolet/GMC/Buick/Oldsmobile  
- Cadillac/Pontiac/Saturn
- Chrysler/Dodge/Jeep

Generic parameters are supported on all other OBD II compliant vehicles.

### Supported Protocols

- J1850 VPW
- J1850 PWM
- ISO 15765-4 (CAN)
- Chrysler SCI
- ISO 9141-2
- ISO 14230-4 (KWP2000)

### Supported Parameters

The following parameters are supported when available on the vehicle:

- Vehicle Speed
- Engine Speed
- Throttle Position
- Odometer
- Calculated Trip Odometer
- Calculated Trip Fuel
- Fuel Level %
- Fuel Level Gallons Remaining
- Instantaneous Fuel Rate in Gallons per Hour
- Transmission Gear (PRND)
- Ignition Status
- Battery Voltage
- PTO Status
- Driver Seatbelt Fastened
- Brake Switch Status
- Cruise Control Status
- Turn Signal Status
- MIL Status
- Dashboard Airbag Warning Lamp
- Dashboard ABS Warning Lamp
- Dashboard Oil Pressure Warning Lamp
- Dashboard Brake Malfunction Indicator Lamp
- Dashboard Coolant Hot Lamp
- Misfire Monitor
- Fuel System Monitor
- Comprehensive Component Monitor
- Catalyst Monitor
- Heated Catalyst Monitor
- Evaporative System Monitor
- Secondary Air System Monitor
- A/C System Refrigerant Monitor
- Oxygen Sensor Monitor
- Oxygen Sensor Heater Monitor
- EGR System Monitor



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**Parameter Reporting Methods**

There are four methods for parameter updates. The parameter trigger method for each parameter is configured individually.

- Time Based: The Streamer sends parameter values at a specific interval determined by the Host device.
- Threshold Exceeded: The Streamer sends parameter values when a programmed threshold value is exceeded.
- As Requested: The Streamer sends parameter values when requested by the Host device.
- Full Speed: Parameter values are transmitted to the Host device when they are obtained from the vehicle.

**Firmware Updates**

The firmware program stored in flash is able to be updated through the serial port.

**Accessory Cables**

Accessory cabling is available (see the following B&B cable models) for the LDVDS-S to make connections to the RS-232 Host device as well as the OBD II bus.

Model LDVDS-CBL .....DB15 male to male J1962 OBD II, 40 in (1.0 m)

Model LDVYCBL .....DB15 male to 2 J1962 OBD II Y-cable

Used for permanent installations to allow connection of the technician's scan tool

Model 9PAMF6B .....DB9 male to DB9 female cable, 6 ft (1.8 m)

**Specifications**

Dimensions: 4.5 x 2.5 x 1.25 in

Mounting: Two mounting tabs on enclosure

Indicators: Single red LED to indicate vehicle power & connection status

**Vehicle Bus Connection: DB15 female**

Pin 1	ISO9141 K/ SCI Rx
Pins 4, 5	J1850-, J1850+
Pin 6, 7, 16, 17	Ground
Pin 9	Vehicle un-switched Vbat
Pin 10	ISO9141 L
Pin 11	Vehicle Vbat to scan tool
Pin 12	CAN Low
Pin 13	CAN High/ SCI Tx
Pin 15	Low Speed GMLAN

**RS-232 Connection: DB9 female, DCE**

Pins 1, 4, 6	Connected together
Pin 2	RD
Pin 3	TD
Pin 5	Ground
Pin 7	RTS
Pin 8	CTS (Vehicle Ignition Status)
Pin 9	Optional Vbat Power In or Vbat power out (2 separate build options)

Operating Temperature: -40 to 85 °C (-40 to 185 °F)

Operating Voltage Range: 8 to 20 VDC

Power Consumption: 1.2W in Operating Mode; 0.36W in Sleep Mode (Key Off)

Over-Voltage Protection: Survive up to 24 VDC for up to 10 minutes.

Powering Options:

- Standard model powered from the vehicle through the DB-15 connector.
- Build option to get input power from pin 9 of the DB-9 connector.
- Build option to provide vehicle power to the host device on Pin 9 of the DB-9 connector.  
Power output will be specified as 12 Watts.

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, 40g'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 on each face (6), 1 on corner, and 1 time on each of 3 edges of that corner.



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