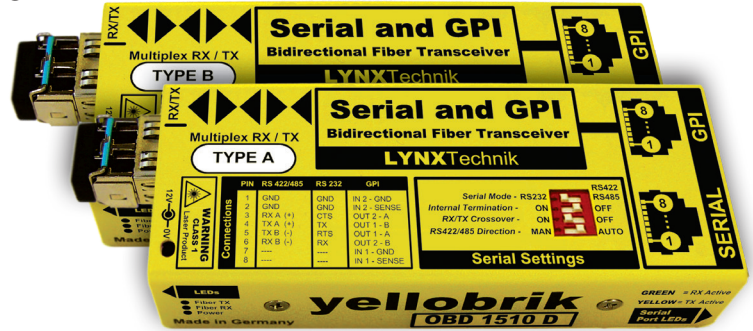


Serial and GPI Bidirectional Fiber Transceiver

- Bidirectional send and receive over single fiber link
- Extend serial and GPI connections up to 10km
- Supports serial RS232 or RS422 or RS485
- 2 x GPI connections
- Singlemode fiber up to 10km (6.2 miles)
- LC/PC duplex fiber connections
- Switchable RX/TX crossover
- Automatic or manual data direction
- Switchable end of line termination
- 'Plug and Play' - No PC software drivers needed
- Supports all serial protocols (standard or proprietary)
- 300 - 460K Baud (auto sensing and auto adjusting)



The OBD 1510 D is a pair of multi-function modules which will extend the reach of serial RS232, RS422 or RS485 as well as two GPI (general purpose interface) up to 10km (6.2 miles) over a single bidirectional fiber link (WDM)

A single RJ45 electrical serial connection can be configured for RS232, RS422 or RS485 serial standards. A separate RJ45 connector is provided for two electrical GPI inputs and outputs. Serial communications and GPI are transmitted and extended over the same fiber link.

The OBD 1510 D is completely agnostic to the serial protocol used, and supports all standard protocols and proprietary protocols at data rates from 300 to 460K Baud (*auto sensing and auto adjusting*).

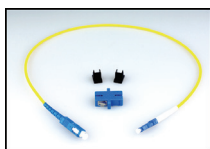
The integrated dip switch provides precise control over the serial mode of operation with selections for the *serial standard, serial termination, RX/TX crossover and RS422/485 data direction (automatic or manual)*. Data activity LEDs are provided for the serial port and the GPI port under the respective RJ45 connectors.

The OBD 1510 D also supports mixing and matching of serial standards. For example: the transmitting module can have a RS232 input, and the receiving module can be set for RS422 output.

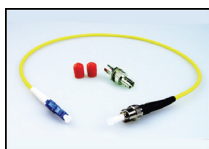
Note. This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the modules. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC SIM**
LC/PC to SC/PC Adapter



Model# **LC/ST SIM**
LC/PC to ST/SC Adapter

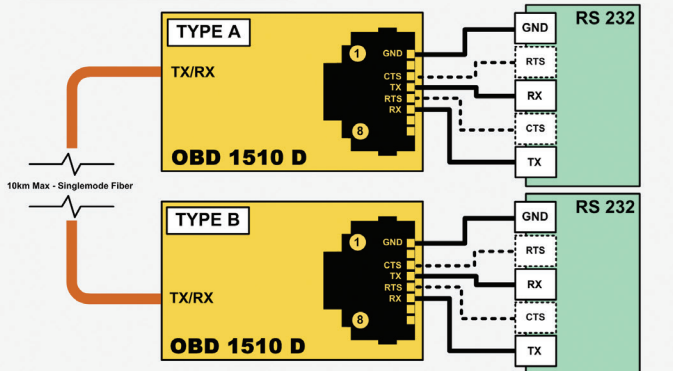
Technical Specifications

Serial I/O	EIA/ETA RS232C / RS422 / RS485 (selectable)
	Connector - RJ45
	Baud rate - Auto sense and auto adjust from 300 to 460K
	Serial setting dip switch provides settings for: <ul style="list-style-type: none"> • Select RS232 / RS422/485 modes • Select serial termination (for end of line) • RX/TX crossover to flip the RX and TX if needed • Set RS422/485 data direction to automatic or manual if needed
	LED status indicators (under RJ45 connector). Serial RX and TX activity
	RS422/485 Maximum number of electrical nodes = 25
	ESD protection for up to 26kV
GPI	2 x general purpose inputs + 2 x general purpose outputs
	Connector - RJ45
	GPI Inputs: <ul style="list-style-type: none"> • External passive closure between pins (short) to trigger • Max input switching frequency 25Hz (50 operations / second) • Input insulation 3.75kV
	GPI outputs: <ul style="list-style-type: none"> • Internal contact closure (relay) • Max switching frequency 25Hz (50 operations / second) • Max switching power 220VDC / 0.25A or 250VAC / 0.25A • Output insulation 3.75kV
	LED status indicators (under RJ45 connector) GPI Input 1 activity / GPI Input 2 activity GPI Output 1 activity / GPI Output 2 activity
Fiber I/O	1 x fiber optic I/O port (bidirectional) Simplex (single model) using LC/PC Connection
	WDM using 1310nm and 1550nm wavelengths Optical budget = 18dB
	Maximum distance approx. 10km (6.2miles)
	RX and TX activity LEDs on side of module next to fiber I/O
Power	+12VDC @ 2.0W nominal for each module - (supports 7 - 15VDC input range)
Physical (each module)	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OBD 1510 D - (EAN# 4250479319103)
Includes	2 x OBD 1510 D modules (Type A and Type B), 2 x AC power supplies, plastic transport case

Specifications subject to change

Connection Diagrams

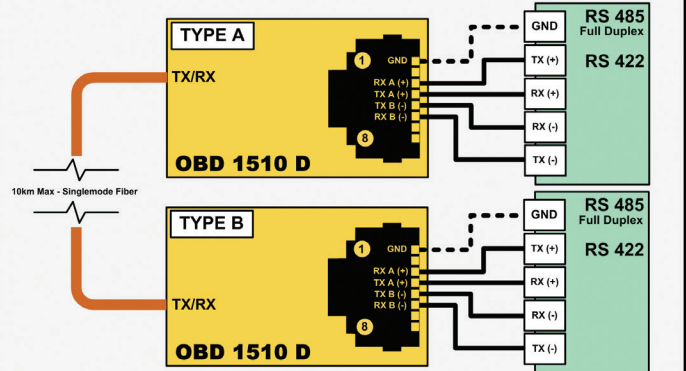
RS 232 Connections



Note: CTS and RTS connections are not always required for RS 232 communications, it depends on the devices and application

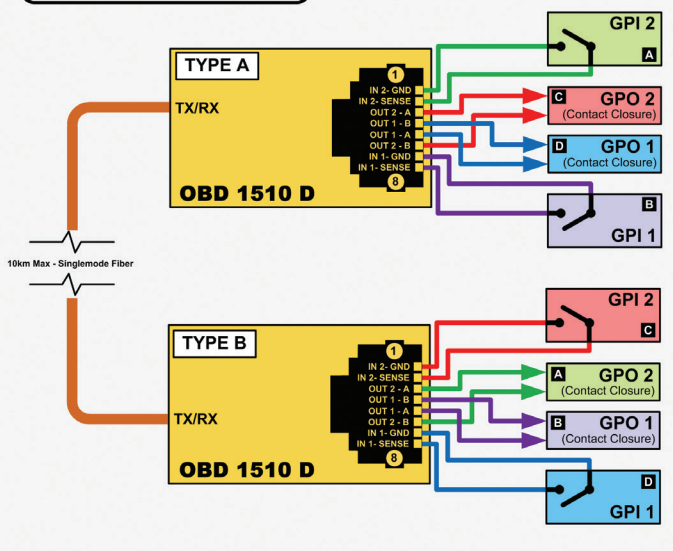
Serial Mode - RS232	<input type="checkbox"/>	RS422	<input checked="" type="checkbox"/>	Serial Mode - Set to RS 232
Internal Termination - ON	<input type="checkbox"/>	RS485	<input type="checkbox"/>	Termination - Not Applicable
RX/TX Crossover - ON	<input type="checkbox"/>		<input type="checkbox"/>	Crossover - Set to ON to swap (flip) RX and TX connection
RS422/485 Direction - MAN	<input type="checkbox"/>		<input checked="" type="checkbox"/>	Direction - Not Applicable
	<input checked="" type="checkbox"/>		<input type="checkbox"/>	

RS 422/485 Connections

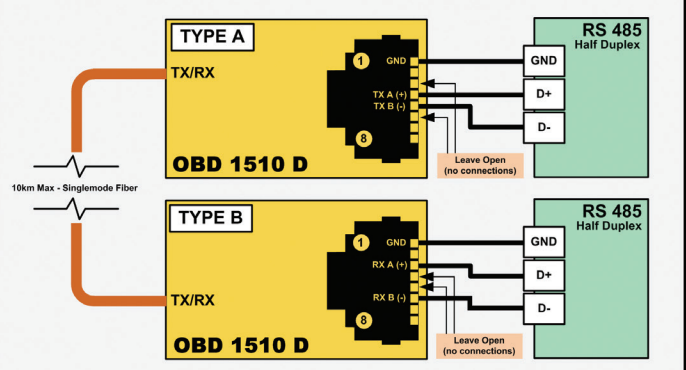


Serial Mode - RS232	<input type="checkbox"/>	RS422	<input checked="" type="checkbox"/>	Serial Mode - Set to RS 422 / RS 485
Internal Termination - ON	<input type="checkbox"/>	RS485	<input type="checkbox"/>	Termination - Set to ON if last device in line
RX/TX Crossover - ON	<input type="checkbox"/>		<input type="checkbox"/>	Crossover - Select to swap RX and TX lines
RS422/485 Direction - MAN	<input type="checkbox"/>		<input checked="" type="checkbox"/>	Direction - Set to AUTO or MAN (manual) data direction mode. (GND connection is required for AUTO mode)
	<input checked="" type="checkbox"/>		<input type="checkbox"/>	

GPI Connections



RS 485 Connections – Half Duplex



Serial Mode - RS232	<input type="checkbox"/>	RS422	<input checked="" type="checkbox"/>	Serial Mode - Set to RS 422 / RS 485
Internal Termination - ON	<input type="checkbox"/>	RS485	<input type="checkbox"/>	Termination - Set to ON if last device in line
RX/TX Crossover - ON	<input type="checkbox"/>		<input type="checkbox"/>	Crossover - Not Applicable
RS422/485 Direction - MAN	<input type="checkbox"/>		<input checked="" type="checkbox"/>	Direction - Set to AUTO
	<input checked="" type="checkbox"/>		<input type="checkbox"/>	

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.



P-TAP 1000
Use with a standard battery P-TAP power source.



XLR 1000
Use with a standard 4 pin XLR camera battery power source

Specifications subject to change