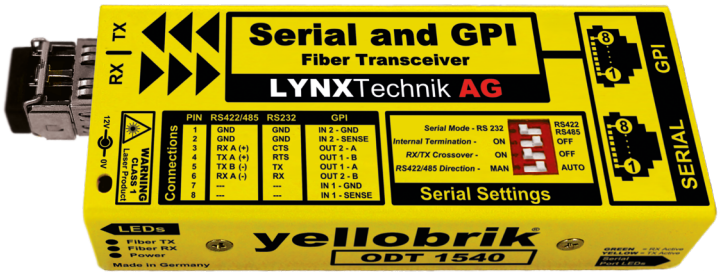
yellobrik® ODT 1540

Serial and GPI Fiber Transceiver (CWDM)



- Extend serial and GPI connections up to 40km
- Supports serial RS232 or RS422 or RS485
- 2 x GPI connections
- Select from 18 fiber wavelengths (CWDM)
- 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 ODT 1540 is a multi-function CWDM compatible module which (when used with another ODT 1540 in the remote location) will extend the reach of serial RS232, RS422 or RS485 as well as two GPI (general purpose I/O) up to 40km over fiber. 18 wavelength sections are provided for CWDM use.

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 ODT 1540 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 ODT 1540 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.

The ODT 1540 is 100% plug and play, hot pluggable and no special software drivers are required.

CWDM Wavelength Options. (select one)

Wavelength	TX Power	RX Sensitivity	Option #
1270nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1270**
1290nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1290**
1310nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1310**
1330nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1330**
1350nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1350**
1370nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1370**
1390nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1390**
1410nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1410**
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1530nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1530**
1550nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1550**
1570nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1570**
1590nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1590**
1610nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1610**

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: • Select RS232 / RS422 / RS485 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 TX activity + Serial RX activity
	RS422/485 Max number of electrical nodes = 25
	ESD protection for up to 26kV
GPI I/O	2x general purpose inputs + 2x general purpose outputs
	Connector RJ45
	GPI Inputs: • External passive closure between pins (short) to trigger • Max input switching frequency 25Hz (50 operations / second) • Input insulation 3.75kV
	GPI Outputs: • 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 Optic	**1x fiber optic input (SMF)** (Range 1270-1610nm, Sensitivity -3dBm to -23dBm) **1x fiber optic output (SMF)** CWDM (ITU-T G.694.2) 18 selectable wavelengths (see table) Duplex (Singlemode) using LC/PC Connections
	RX and TX activity LEDs on side of module next to fiber I/O
	Max. distance approx. 40km (24.8 miles - Singlemode)
Power	+12VDC @ 1.6W nominal without SFP +12VDC @ 2.1W nominal with SFP (supports 7 - 15VDC input range)
Physical	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 #	ODT 1540 - (EAN# 4250479315433)
Includes	Module, AC power supply

Specifications subject to change

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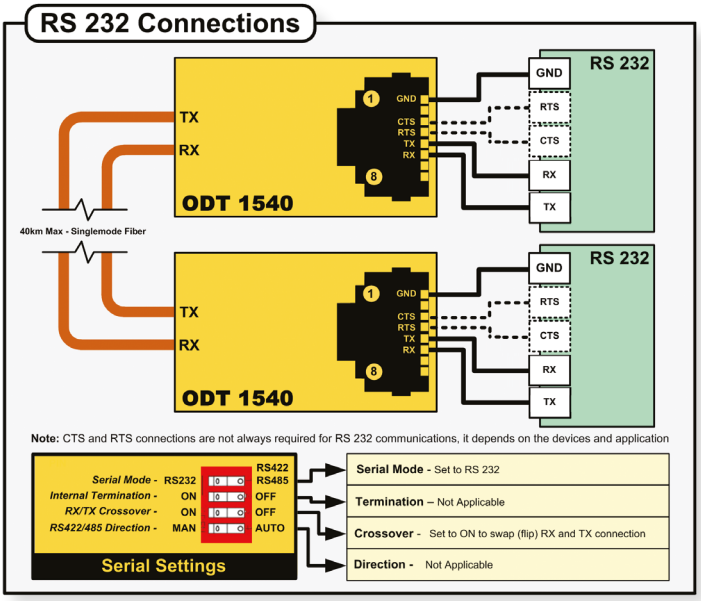
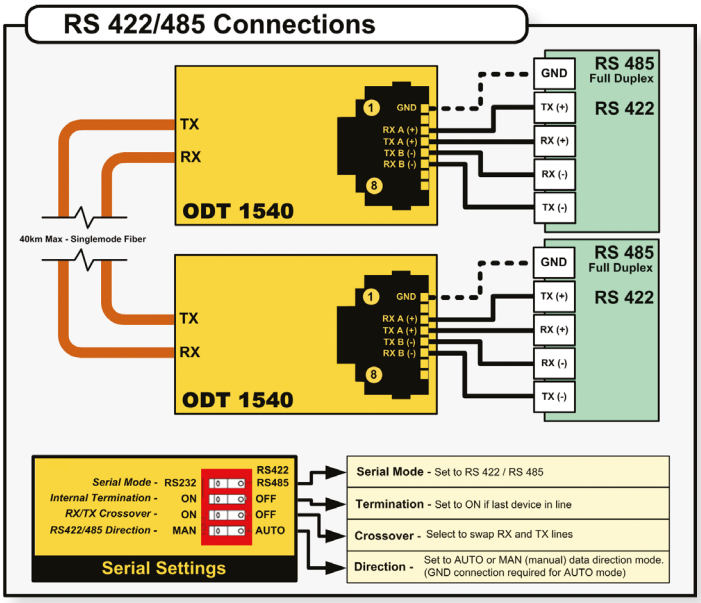
Connection Diagrams

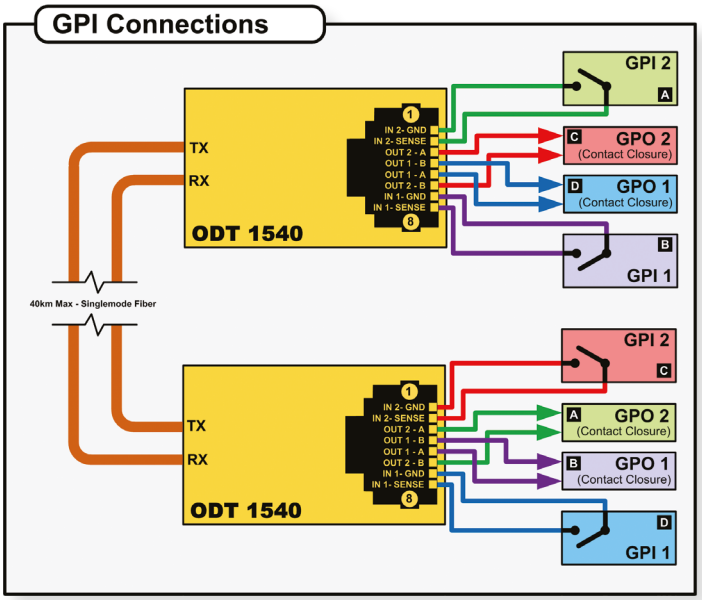
RS 232 Connections



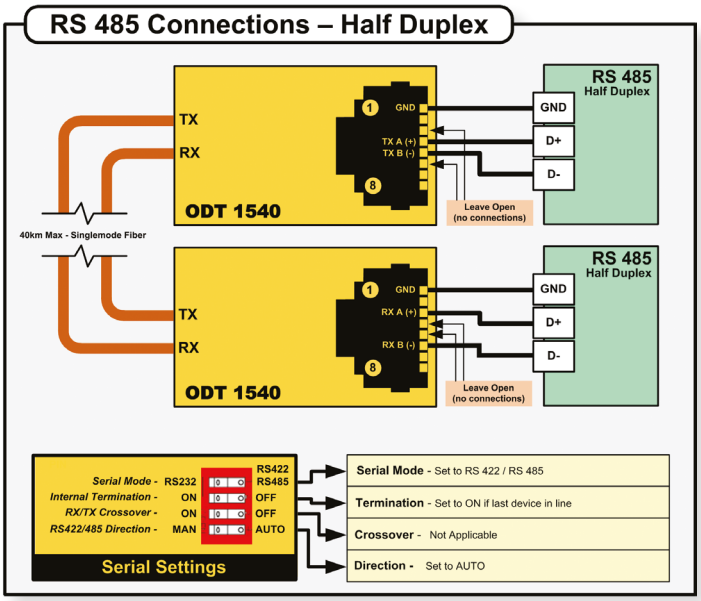
RS 422/485 Connections



GPI Connections



RS 485 Connections – Half Duplex



Power Adapter Options

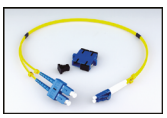
The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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

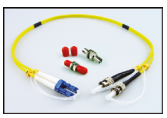
XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Fiber Adapter Options

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



LC/SC DUP
LC/PC to SC/PC Adapter



LC/ST DUP
LC/PC to ST/PC Adapter

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