



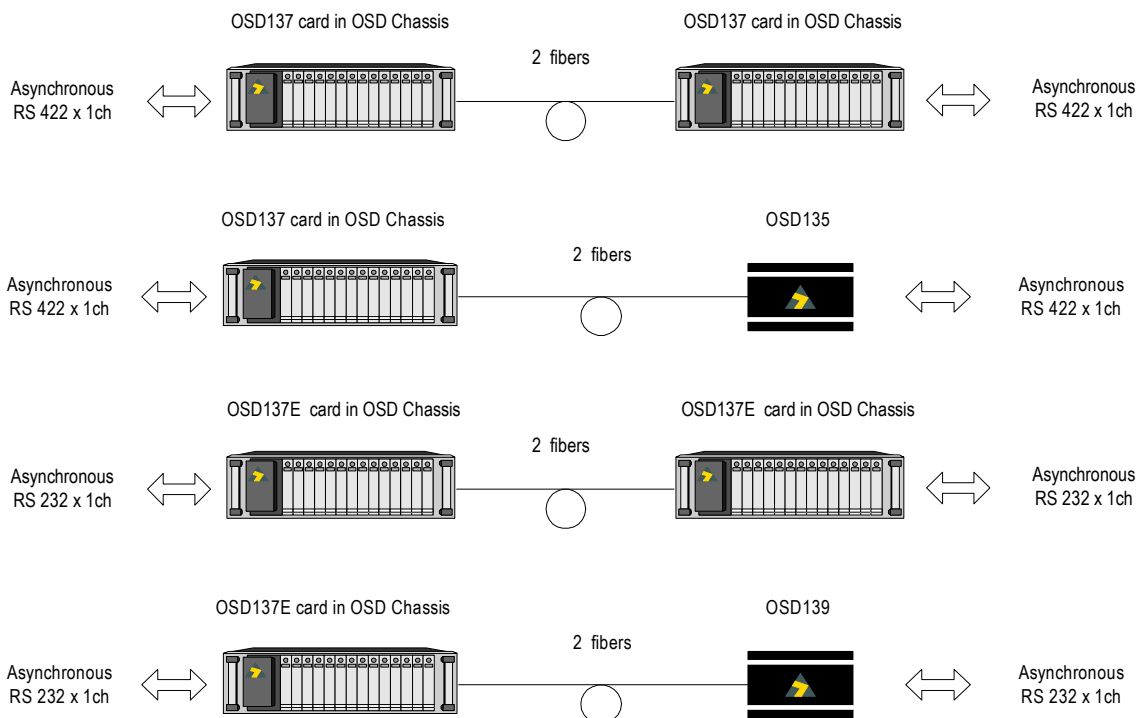
**APPLICATIONS**

- ▲ Long distance RS422 links
- ▲ Secure, noise immune government and industrial communications
- ▲ Links requiring a module at one end and a card at the other

**FEATURES AND BENEFITS**

- ▲ TTL, RS422 or RS232 operation
- ▲ Extends link lengths to 5km
- ▲ Full duplex, asynchronous, DC to 1Mbps
- ▲ Plugs directly into the OSD370 standard chassis
- ▲ ST optical connectors standard
- ▲ Safe transmission in hazardous environments
- ▲ More secure than copper cables
- ▲ Robust and reliable

**TYPICAL APPLICATION DESIGN**



**ORDERING INFORMATION**

OSD137	Fiber Optic RS422/TTL/RS232 Transceiver Card
OSD137L	1310nm singlemode version
OSD137E	OSD139 compatible version



# SPECIFICATIONS

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## PERFORMANCE

Data rate	DC to 1Mbps NRZ DC to 120kbps NRZ (OSD137E only)
Pulse Distortion and Jitter	<±0.3µS over full dynamic range <±3.0µS over full dynamic range (OSD137E only)

## OPTICAL

Wavelength	850nm nominal (1310nm for the OSD137L)
Coupled Transmit Power	-15 to -13dBm peak into 62.5/125 multimode fiber -23 to -20dBm peak into 10/125 singlemode fiber (OSD137L only)
Receiver Sensitivity	<-37dBm peak for 1 x 10 <sup>-9</sup> BER <-43dBm peak for 1 x 10 <sup>-9</sup> BER (OSD137E only)
Optical Link Budget	>22dB at 850nm (>5km of multimode fiber for OSD137) >14dB at 1310nm (>30km of singlemode fiber for OSD137) >28dB at 850nm (>8km of multimode fiber for OSD137E) >20dB at 1310nm (>40km of singlemode fiber for OSD137E)
Receiver Saturation	>-20dBm peak

## ELECTRICAL

Input	User selectable between RS422 levels, or TTL on the + Input with - input floating or RS232 levels
Input Selection	A 3-pin header on the board selects either RS422 or RS232 Input
Input/Output Polarity	Two 3-pin headers select logical polarity of both optical output and optical input

## PIN CONFIGURATION

Pin 1	Protective Ground	Pin 5	RS422 Receive Data -	(From OSD137)
Pin 2	RS422 Transmit Data + (To OSD137)	Pin 7	Shield Ground	
Pin 3	RS422 Transmit Data - (To OSD137)	Pin 8	RS232 Transmit Data	(To OSD137)
Pin 4	RS422 Receive Data + (From OSD137)	Pin 9	RS232 Receive Data	(From OSD137)

## PHYSICAL

Electrical Connectors	9 pin male subminiature D connector for power 9 pin female subminiature D connector for data
Optical Connector	ST standard
Operating Temperature	-20 to +75°C
Relative Humidity	0 to 95% non-condensing
Power Requirements	+11 to +16VDC at less than 150mA
Weight	150g
Dimensions (mm)	208D x 25W x 100H
Chassis Current Consumption (CCC)	0.15 Amp

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