

APPLICATIONS

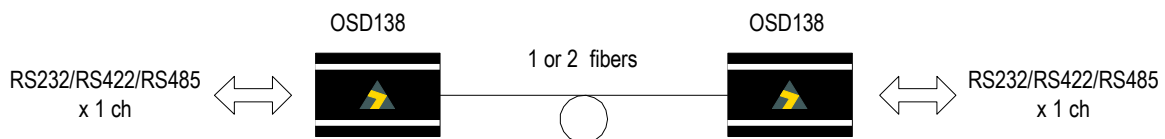
- ▲ Long distance RS422, RS232 or RS485 links
- ▲ Links requiring a module at one end and a rack mounted card at the other
- ▲ Secure, noise immune government and industrial communications



FEATURES AND BENEFITS

- ▲ Multi-protocol operation
- ▲ 2 and 4-wire RS485, TTL, RS422, Manchester, Biphase or RS232 operation
- ▲ Extends link lengths to 5km on multimode and over 50km on singlemode fiber
- ▲ Full duplex, asynchronous, DC to 1Mbps
- ▲ Card versions plug directly into the OSD350 or OSD370 standard chassis
- ▲ Optical connectors can be ST, SC or LC for 2 Fiber systems. ST or SC for Single Fiber systems
- ▲ Safe transmission in hazardous environments
- ▲ More secure than copper cables
- ▲ Robust and reliable

TYPICAL APPLICATION DESIGN



ORDERING INFORMATION

OSD138	Fiber Optic RS232/RS485/RS422/TTL Transceiver Card
OSD138L	1300nm singlemode version
OSD138.WA	1 multimode fiber version (Tx:850nm, Rx:1310nm)
OSD138.WB	1 multimode fiber version (Tx:1310nm, Rx:850nm)
OSD138L.WA	1 singlemode fiber version (Tx:1310nm, Rx:1550nm)
OSD138L.WB	1 singlemode fiber version (Tx:1550nm, Rx:1310nm)
Option C	Module version



SPECIFICATIONS

PERFORMANCE

Data rate DC to 1Mbps NRZ
Pulse Distortion and Jitter $<\pm 0.3\mu\text{S}$ over full dynamic range

OPTICAL SIGNAL

Wavelength OSD138, OSD138.WA: 850nm
OSD138.WB, OSD138L, OSD138L.WA: 1310nm
OSD138L.WB: 1550nm

Coupled Transmit Power -18 to -15dBm peak into 62.5/125 multimode fiber (OSD138, OSD138.WA, OSD138.WB)
-18 to -15dBm peak into 10/125 singlemode fiber (OSD138L, OSD138L.WA, OSD138L.WB only)

Receiver Sensitivity $<-37\text{dBm}$ peak for 1×10^{-9} BER

Optical Link Budget $>19\text{dB}$ at 850nm ($>5\text{km}$ of multimode fiber for OSD138, OSD138.WA, OSD138.WB)
 $>19\text{dB}$ at 1300nm, 1550nm ($>50\text{km}$ of singlemode fiber for OSD138L, OSD138L.WA, OSD138L.WB)

Receiver Saturation $>-12\text{dBm}$ peak

ELECTRICAL SIGNAL

Input User selectable between RS422/RS485 levels, TTL on the + input with - input floating or RS232 levels

User Controls A 6-way user adjustable lever switch controls:
RS422/RS232 or RS485
RS232 polarity
2-wire or 4-wire RS485
RS485 bias on/off
RS485 turnaround times

PIN CONFIGURATION

Pin 1	Data Input or I/O+	(To OSD138)	Pin 5	Data Output -	(From OSD138)
Pin 2	Data Input or I/O -	(To OSD138)	Pin 6	RS232 Input	(To OSD138)
Pin 3	Ground		Pin 7	RS232 Output	(From OSD138)
Pin 4	Data Output +	(From OSD138)	Pin 8	Ground	

PHYSICAL

Electrical Connectors 9 pin male subminiature D connector for power on card
2 way terminal block with screw clamps for power on module
8 way terminal block with screw clamps for data

Optical Connector ST, SC or LC for 2 Fiber systems.
ST or SC for Single Fiber systems

Operating Temperature -20 to +75°C

Relative Humidity 0 to 95% non-condensing

Power Requirements +11 to +35VDC or 22 to 28VAC @ 1.8VA

Weight 150g (card)
280g (module)

Dimensions(mm) 208D x 25W x 100H (card)
104D x 104W x 25H (module)

Chassis Current Consumption (CCC) 0.15 Amp