

# D7100 Series

IFS 10/100 Mbps Ethernet Optical Transceiver



#### **OVERVIEW**

The IFS D7100 Series ethernet transceiver is designed to transmit and receive 10 or 100 Mbps data over multimode or single mode fiber. The IFS D7100 Series will function as a 10 Mbps Ethernet link, or as a 100 Mbps Ethernet link without any adjustments. The D7100 Series is environmentally hardened to operate in extreme temperatures. Status indicating LED's for power and data type are present at the RJ-45 connector and at the fiber optic transceiver end. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. The modules are available in either stand-alone or rack mount versions.

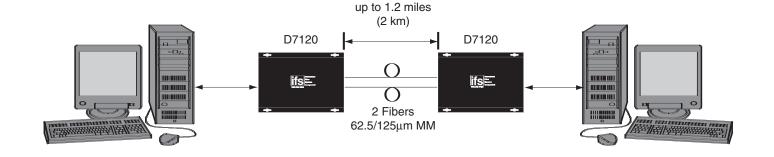
#### APPLICATION EXAMPLES

- 10/100 Mbps Ethernet
- High Speed Computer Links

#### STANDARD FEATURES

- 10/100 Mbps Ethernet
  - Auto-Negotiating
  - 10/100 Selectable
  - Full Duplex or Half Duplex Data
- Auto Network Detection MDI/MDI-X
- Distances up to 45 km (28 miles)
- NTCIP Compatible
- Tested and Certified by an Independent Testing Laboratory for Full Compliance with the Environmental Requirements (Ambient Operating Temperature, Mechanical Shock, Vibration, Humidity with Condensation, High-Line/Low-Line Voltage Conditions and Transient Voltage Protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- Multimode and Singlemode Versions Available
- ST Optical Connectors Standard
- No In-field Electrical or Optical Adjustments Required
- Power, Transmit and Receive Data Status LED Indicators
- Hot-Swappable Rack Modules
- IEEE 802.3 Compliant
- Comprehensive Lifetime Warranty

## SYSTEM DESIGN



## D7100 Series

IFS 10/100 Mbps Ethernet Optical Transceiver

## **Ordering Information**

	Part Number	Description	Fibers Required	Optical Pwr. Budget	Max. Distance*
Multimode 62.5/125µm**	D7120	10/100 Mbps Ethernet (1310 nm)	2	10 dB	1.2 miles 2 km)
	D7120WDMA ❖	10/100 Mbps Ethernet (1310/1550 nm)	1	10 dB	3 miles (5 km)
	D7120WDMB	10/100 Mbps Ethernet (1550/1310 nm)	1	10 dB	3 miles (5 km)
Single Mode 9/125µm	D7130WDMA ❖	10/100 Mbps Ethernet (1310/1550 nm)	1	15 dB	28 miles (45 km)
	D7130WDMB	10/100 Mbps Ethernet (1550/1310 nm)	1	15 dB	28 miles (45 km)
Accessories []	PS12VDC1.5A-U	12VDC, 1.5A Plug-in Power supply (110/220VAC) with Universal power plug adapter kit (Included)			
Options	Add '-R3' to Model Number for R3 Rack Mount (Requires R3 Rack purchased separately)				

<sup>\*</sup>Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. \*\*For 50/125 Fiber, subtract 4 dB from Optical Power Budget.

Ethernet

## **Specifications**

Data Interface:

Data interface.	Ethernet		
Data Rate:	10/100 Mbps		
	IEEE 802.3 Compliant		
	Full Duplex or Half Duplex		
Wavelength			
D7120	1310 nm, Multimode		
D7120WDM	1310/1550 nm, Multimode		
D7130WDM	1310/1550 nm, Singlemode		
Number Of Fibers			
	1 or 2		
Connectors			
Optical:	ST		
Power:	Terminal Block with Screw Clamps		
Data:	RJ-45		
Electrical & Mechanical			
Power:			
Surface Mount:	12 VDC @ 200 mA		
Rack:	From Rack		
Number of Rack Slots:	2		
Voltage Regulation:	Solid-state; independent on each board		
Current Protection:	Automatic Resettable Solid-State Current Limiters		
Circuit Board:	Meets IPC Standard		
Size (in./cm.) (LxWxH)			
Surface Mount:	7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm		
Rack Mount:	7.7 x 5.0 x 2.0 in., 19.6 x 12.7 x 5 cm		
Shipping Weight:	< 2 lbs./0.9 kg		
Environmental			
MTBF:	> 100,000 hours		
Operating Temp:	-40° C to +74° C		
Storage Temp:	Temp: -40° C to +85° C		
Relative Humidity:	0% to 95% (non-condensing)		

### **Agency Compliance**

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J





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Specifications subject to change without notice.

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<sup>∏</sup> All accessories are third party manufactured. 
♦WDMA must mate with a WDMB