

# 331-5309 Dell Compatible 1000BASE-LX SFP Transceiver

#### **Features**

- Supports 1000BASE Ethernet
- Transmission distance up to 10km on SMF
- Hot-Swappable if your device supports
- Lifetime Warranty
- Plugs into SFP port
- Industry-standard LC duplex connector
- Digital diagnostic monitor interface
- Compliant to SFP Electrical & Mechanical MSA
- 0°C to +70°C case operating temperature range
- Laser Class 1 IEC / CDRH compliant
- RoHS 6/6 compliant
- Compliant with product safety standards



#### **Product Overview**

The Hummingbird Networks 100% Dell Compatible 331-5309 optical transceiver module is for transmission at 1310nm over single mode fiber. It supports Ethernet standards which make it ideally suited for 1000BASE-LX data communications. It offers customers a wide variety of Gigabit Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport applications.

Its sub watt power consumption and its excellent EMI performance allow system design with high port density. The small form factor integrates an 1310nm vertical cavity surface emitting laser (VCSEL) in an LC package and the receiver section uses an integrated GaAs detector preamplifier (IDP). Module is lead free, RoHS compliant and is designed and tested in accordance with industry safety standards.

The Transceivers convert information from electrical to optical format, and back again, at standard data rates. The transmitter section uses a multiple quantum well laser and is a class 1 laser compliant according to International Safety Standard IEC-60825. The receiver section uses an integrated InGaAs detector preamplifier (IDP) mounted in an optical header and a limiting post-amplifier IC.

## **Ordering Information**

Part No.	Data Rate	Laser	Fiber Type	Distance	Optical Interface	DDMI
331-5309-HN	1.25Gbps	1310nm	SMF	10km	LC	NO



## **Supported Standards**

Application	Standard	Data Rate
Gigabit Ethernet	1000BASE-SX	1.25Gbps

## **Optical Characteristics**

Parameter	Symbol	Min.	Typical	Max.	Unit
9μm Core Diameter SMF			10		Km
Data Rate			1.25		Gbps

#### **Digital Optical Monitoring**

Transceivers offer the ability to monitor important module parameters during operation. The temperature, supply voltage, laser bias current, optical transmitter power and receiver optical power parameters are continuously monitored for getting information about the module's current status. All data is calibrated internally; there is no need for external post processing.

## **Regulatory Compliance**

The compatible 331-5309 modules are designed to meet international requirements and standards in terms of product safety. The modules optical output power meets Class 1 requirements for laser safety.

Feature	Standard	Performance		
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883E Method 3015.7	Class 1(>500 V) Isolation with the case		
Electromagnetic Interference (EMI)	FCC Part 15 Class B	Compatible with standards		
Laser Eye Safety	FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2	Compatible with Class I laser product.  Compatible with T µ V standards		
Component Recognition	UL and CUL	UL file E317337		
Green Products	RoHS	RoHS6		



# Additional Information

For more information about our compatible SFP modules, contact:

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