Vi01310SM2.5-H

1310nm Single-Mode 2.5G Hardened Fiber SFP Transceiver

Features

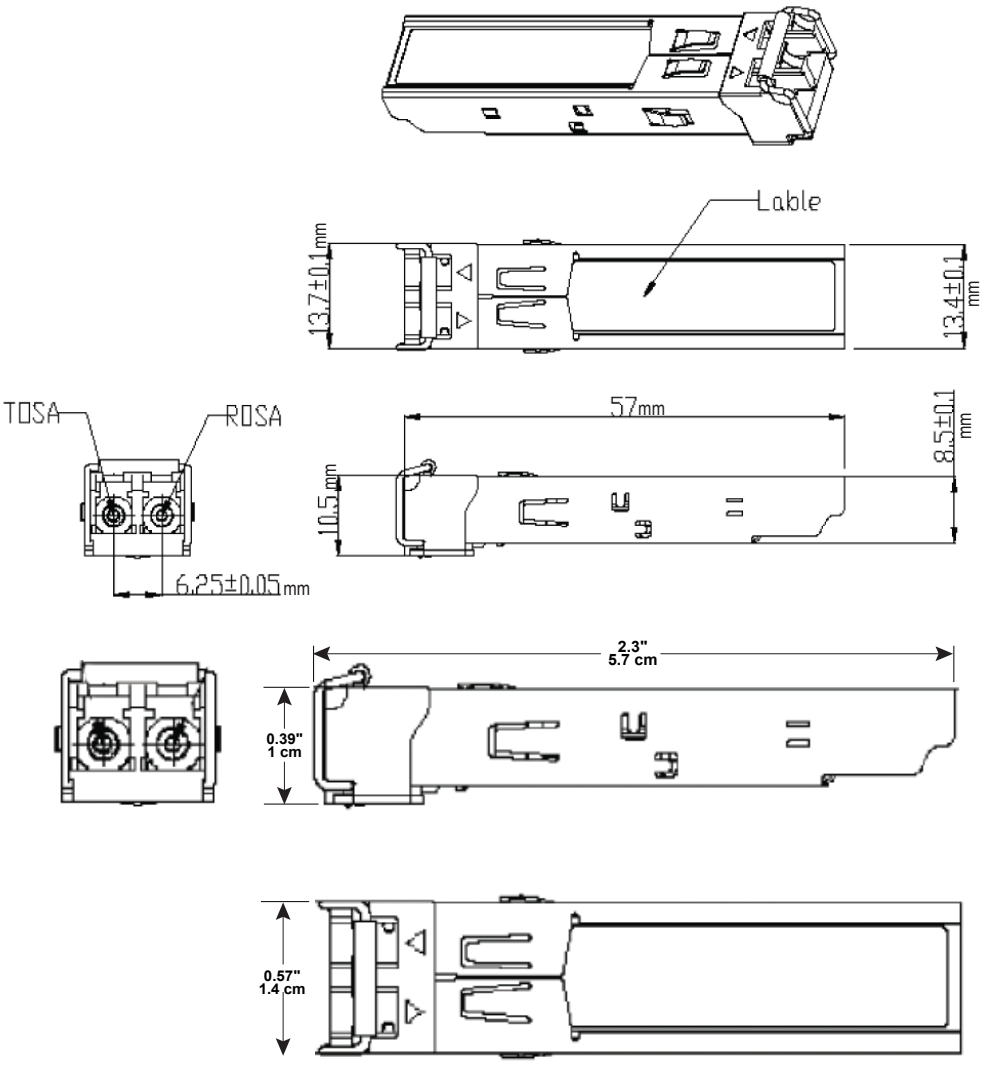
- Compliant with IEEE802.3z 2.5 Gigabit Ethernet Standard
- Conforms to MultiSource Agreement for SFP and SFF-8472 for digital diagnostic monitoring interface
- Distances of 20km (1000Base-LX)
- Duplex LC connector
- Industry standard small form pluaggable (SFP) package
- Single power supply 3.3V
- TTL signal detect indicator
- Hot pluggable
- Class 1 laser product complies with EN 60825-1
- Compatible 9/125um cable
- Compatible with SONET OC-24-LR-1
- Hardened wide operating temperature range of -40°C to +75°C

Applications

- Switch-to-Switch interconnect
- High speed wide bandwidth up and downlink

Vi01310SM-H is a 1310 nanometer SFP transmitting on singlemode fiber. Compatible with the MultiSource Agreement (MSA), the Vi01310SM-H is designed to work with any device conforming to the MSA standards. The Vi01310SM-H compatible with 9/125um fiber for distances up to 20km (over 12 miles). The Vi01310SM-H is the perfect solution for interfacing between network switches and Network Video Recorders over long distances.

Mechanical Drawings



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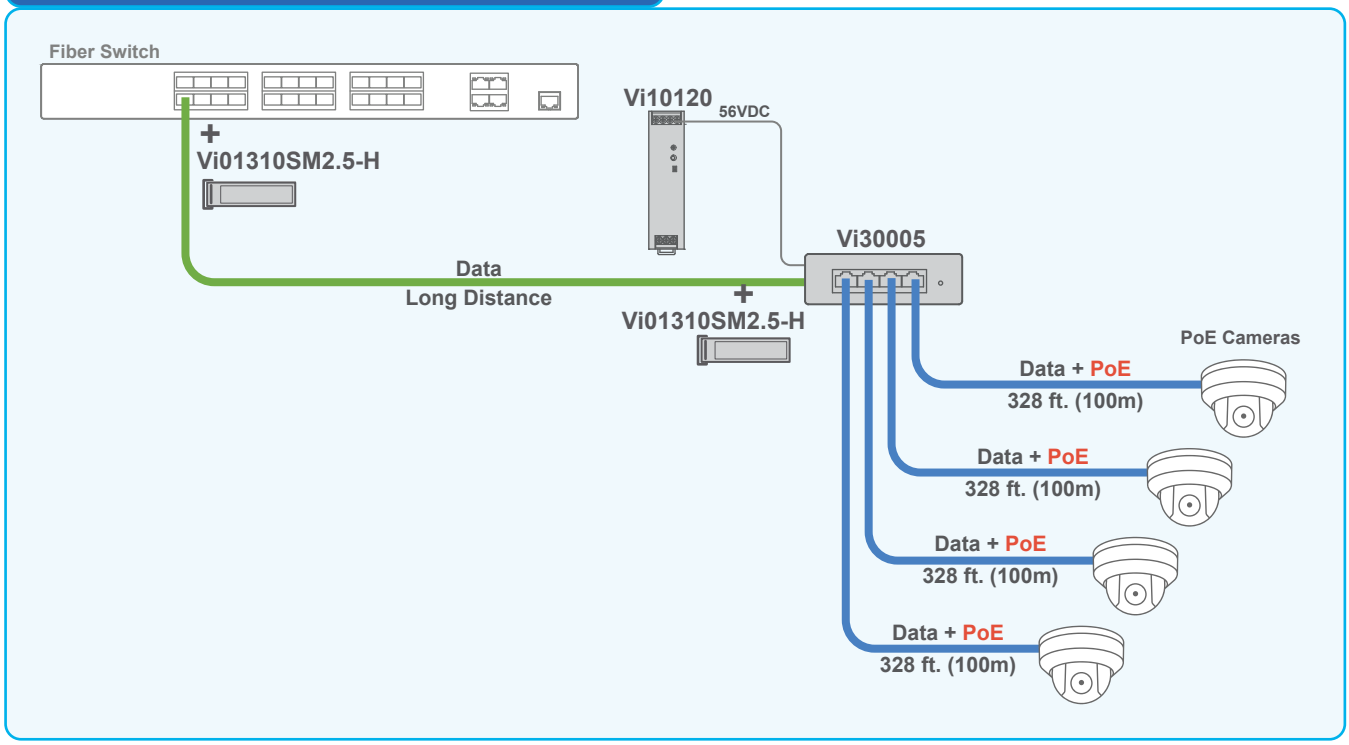
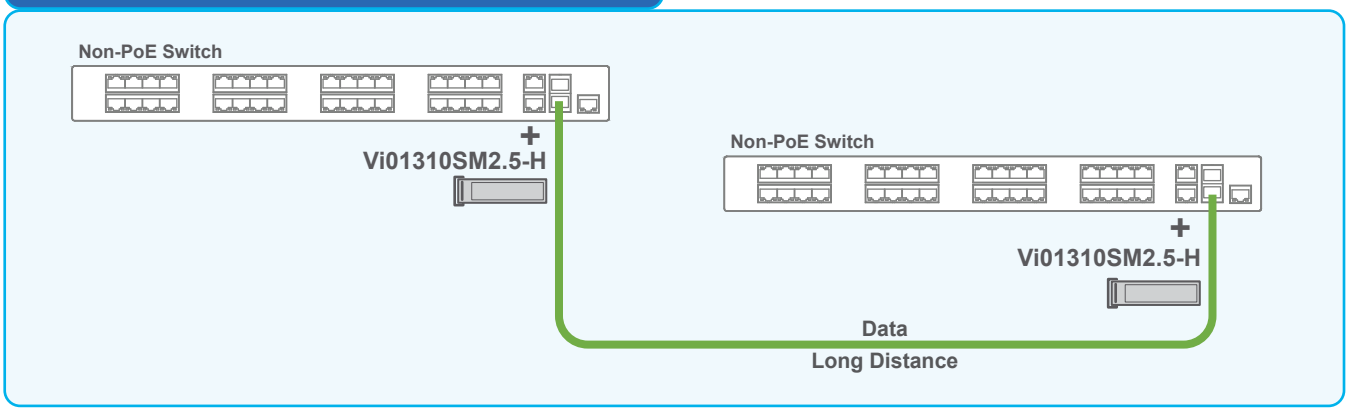
Application Drawings

Data transmission over Fiber Optic cables



The Vi01310SM2.5-H can provide long distance connection over fiber cables.

Data transmission over Fiber Optic cables



The Vi01310SM2.5-H can connect 2 network switches at long distances at 1000Mbps data rate.

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Technical Specifications*

Electrical

Supply Voltage	3.1V to 3.5V
Current	250mA
Signal Detect	TTL
Compatible with	IEEE 802.3z, SONET OC-24-LR-1
Fiber type	SingleMode
Transmission speed	1.25Gbps
Wavelength	1310nm
Distance	20Km

Regulatory

Safety	CE
Environmental	RoHS, WEEE

Environmental

Temperature	Operating: -40°C to +75°C Storage: -40°C to +85°C

Mechanical

Dimensions	0.41 x 2.2 x 0.53 in (10.5 x 57 x 13.7 mm)
Weight	0.035 lbs (15g)
Material	Metal Alloy

* Specifications subject to change without notice.
**There is no standard method for reading SFP bandwidth. Different SFPs may not sense the differences

Ordering Information

Part No.	Description
Vi01310SM-H	1310nm Single-Mode Hardened Fiber SFP Transceiver

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.5	4.5	V
Storage Temperature	Ts	-40	+85	°C
Operating Humidity	-	5	85	%

Recommended Operating Conditions

Parameter		Symbol	Min	Typical	Max	Unit
Operating Case Temperature	Standard	Tc	0		+70	°C
	Industrial		-40		+85	°C
Power Supply Voltage		Vcc	3.13	3.3	3.47	V
Power Supply Current		Icc			300	mA
Data Rate	Gigabit Ethernet			1.25		Gbps
	Fiber Channel			1.063		

Diagnostics Specification

Parameter	Range	Unit	Accuracy	Calibration
Temperature	-40 to +85	°C	±3°C	Internal / External
Voltage	3.0 to 3.6	V	±3%	Internal / External
Bias Current	0 to 100	mA	±10%	Internal / External
TX Power	-9 to -3	dBm	±3dB	Internal / External
RX Power	-23 to -3	dBm	±3dB	Internal / External

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Notes

Transmitter Section

The transmitter section consists of a 1310 nm InGaAsP laser in an eye safe optical subassembly (OSA) which mates to the fiber cable. The laser OSA is driven by a LD driver IC which converts differential input LVPECL logic signals into an analog laser driving current.

TX_DISABLE

The TX_DISABLE signal is high (TTL logic “1”) to turn off the laser output. The laser will turn on when TX_DISABLE is low (TTL logic “0”).

Receiver Section

The receiver utilizes an InGaAs PIN photodiode mounted togther with a trans-impedance preamplifier IC in an OSA. This OSA is connected to a circuit providing post-amplication quantization, and optical signal detection.

Receive Loss (RX_LOS)

The RX_LOS is high (logic “1”) when there is no incoming light from the companion transceiver. This signal is normally used by the system for the diagnostic purpose. The signal is operated in TTL level.

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