
Vi00850MMA-H

850 nm Multi-Mode SX Small Format Pluggable Hardened Fiber Transceiver

Features

- Compliant with SFP MSA and SFF-8472 standard for Digital Diagnostic Monitoring Interface
- Compliant with IEEE802.3z Gigabit Ethernet standard
- Compliant with industry standard small form pluggable (SFP) package
- Duplex LC connector
- Conforms to MultiSource Agreement for SFP
- Distances of 550m using 50/125um fiber and 300m using 62.5/125 cable
- Single power supply 3.3V
- TTL signal detect indicator
- Hot pluggable
- Class 1 laser product complies with EN 60825-1
- Hardened wide operating temperature range of -40°C to +75°C



Applications

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

The Vi00850MMA-H is an 850 nm SFP transmitting on multimode fibers that is compatible with the MultiSource Agreement (MSA). The Vi00850MMA-H is designed to work with any device conforming to the MSA standards. It operates on 50/125um fiber cables up to 550 meters (1815 feet). The Vi00850MMA-H is also compatible with 62.5/125 um fiber for distance of up to 300 meters (990 feet). The Vi00850MMA-H is the perfect solution for interfacing with existing fiber cable installations for single/multiple camera transmission or short haul backbones.

Technical Specifications*

Electrical

Supply Voltage	3.1V to 3.5V
Current	300mA
Signal Detect	TTL
Compatible with	RoHS, SONET/SDH, Fast Ethernet standard
Fiber Type	Multi-mode
Transmission Distance	550m using 50/125 um fiber 300m using 62.5/125 um fiber
Transmission Speed	1.25 Gbps
Wavelength	850nm

Regulatory

Safety	CE
Environmental	RoHS, WEEE

Environmental

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

Dimensions	0.41 x 2.2 x 0.53 in (10.5 x 57 x 13.7mm)
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 between 100Mbps and 1000Mbps. We suggest using the SFP designed for the primary ports bandwidth.

Ordering Information

PART No.	Description
Vi00850MMA-H	850nm Multi-mode hardened fiber SFP

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
	Extended		-40	+85	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Power Supply Current	Icc			300	mA
Data Rate			1.25		Gbps

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	-9.5 to -3	dBm	±3dB	Internal / External
RX Power	-22 to -3	dBm	±3dB	Internal / External



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Notes

Transmitter Section

The transmitter section consists of a 850 nm VCSEL 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").

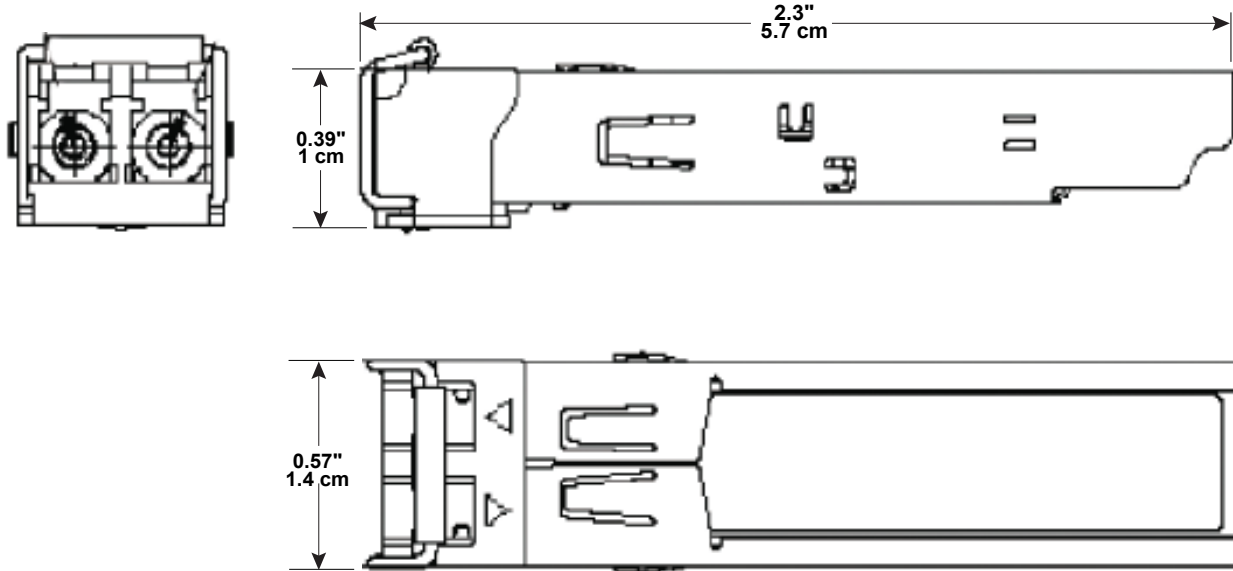
Receiver Section

The receiver utilizes a MSM detector integrated with a trans-impedance preamplifier in an OSA. This OSA is connected to a circuit providing post-amplification 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.

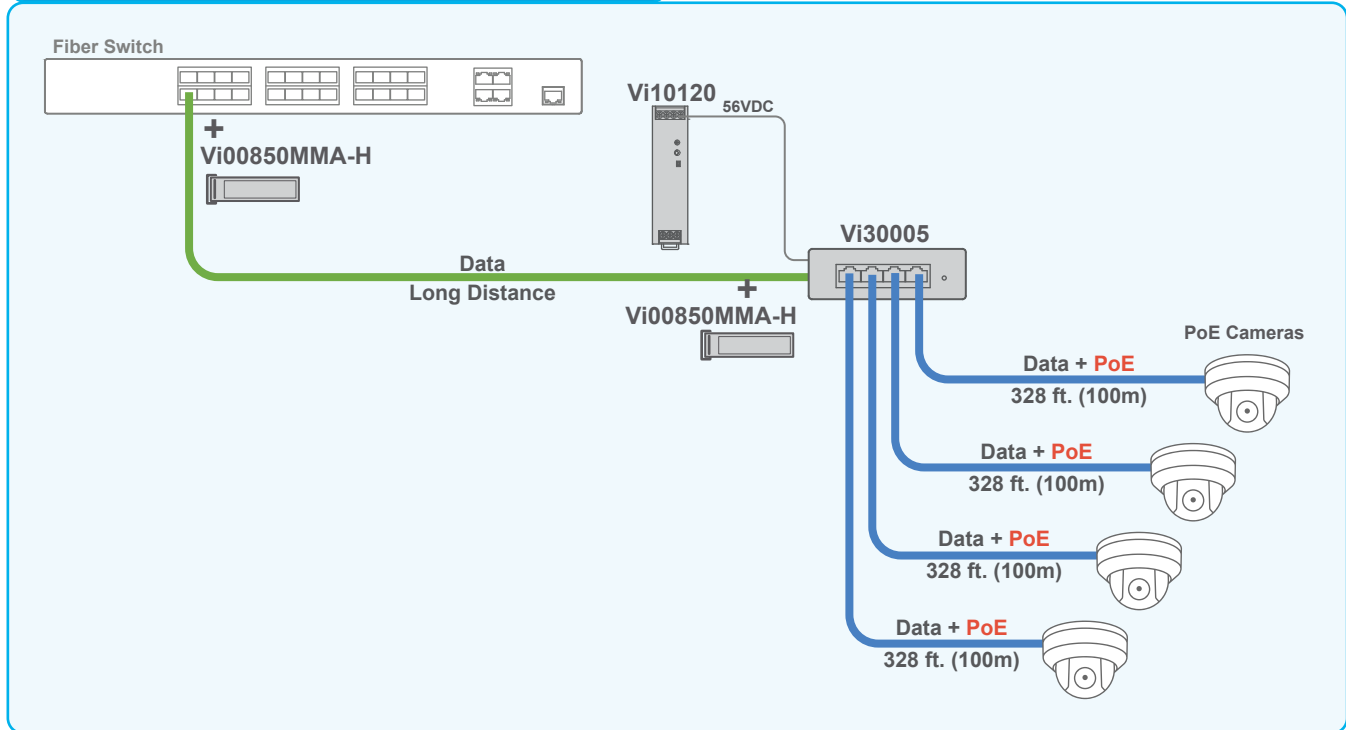
Mechanical Drawings



Application Drawings

— Cat 5/6
— Fiber Optics

Data transmission over Fiber Optic cables



The Vi00850MMA-H can provide long distance connection over fiber cables.