Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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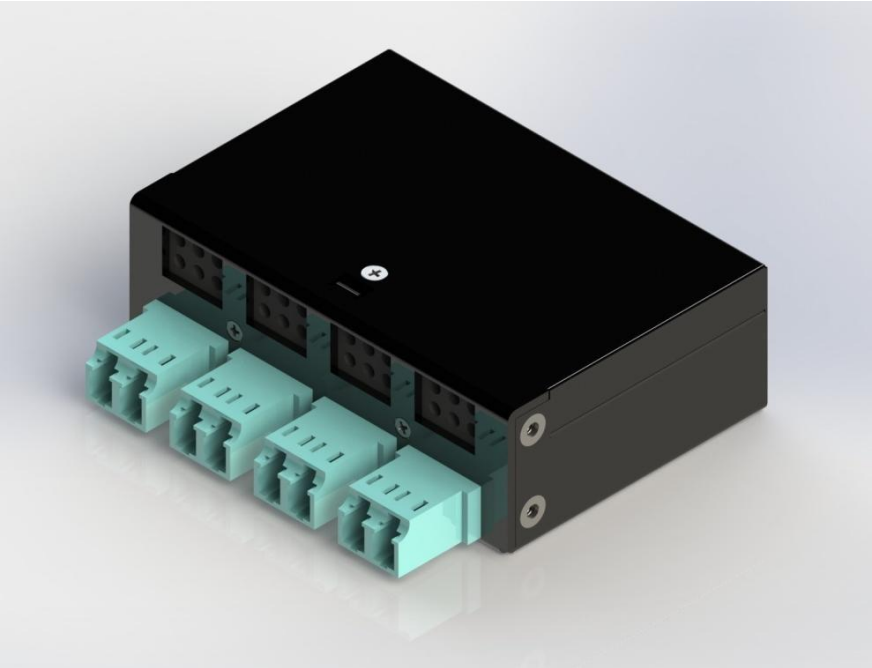
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Specification

Passive Optical Bypass Module



P O B M – C 1 C X 4 – P 0 A

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Hsinchu County 30265, Taiwan
Ph: +886-3-5600286 Fax: +886-3-5600239
www.formericaoe.com

Features

- **Reliable Passive Fiber Bypass(Non-latching)**
- **Low Bypass Loss and Return Loss**
- **Available in 50/125μm Multimode Fiber**
- **PCB Mountable Type**
- **Compliant with IEEE 802.3z**
- **Controlled by NIC's CPLD to Perform Programmable Normal and Bypass Modes at Powerless, System Hangs, and Software Request**
- **Four Dual LC OM3 Adapter**
- **Compact Format and ROHS Compliant**

Product Overview

FormericaOE'sHigh Density Passive Optical Bypass Module is a compact box that contains 1 optical bypass switchwhich can becontrolled by the controller of In-Line equipment to perform the "Fail-to-Wire" optical bypass function. The FormericaOE'sPassive Optical Bypass Module (POBM) is targeted to In-Line network system (e.g. IPS: Intrusion Prevention System, IES: Industrial Ethernet Switching, WAN Optimization System, and Application Switch, etc.) with high availabilityin maintaining network connectivity when power failure or system failure.

This POBM supports Normal and Bypass modes.In Normal mode, each port is an independent interface directly linked to optical transceiver on In-Line equipment by optical patch cord. In Bypass mode, all packets received from one port are transmitted to the adjacent portin POBM. Thus, This POBM can bypass its Ethernet ports when thereis host-system failure, power off, or upon software request. This POBM can also be mounted and integrated with any kind of NIC by a simple signal connector.

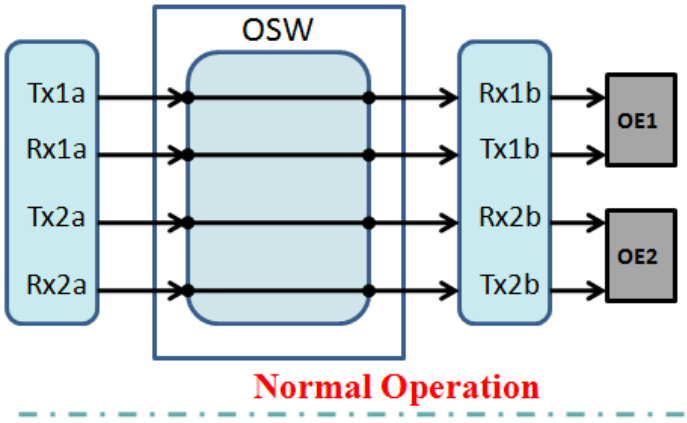
FormericaOE'sPassive Optical Bypass Module is suitable for connecting with In-Line equipment inmeeting the requirement of Fail-Over systems. When the In-Line unit is not on or is in Bypass Mode, the relays within the Passive Optical Bypass Module are set to bridge the optical signals directly through the switch, completely bypassing the In-Line equipment. If the In-Line equipment is on and is operating normally, it supplies power to the switch through a connector PIN.

This compact module provides network users excellent and cost effective protection for your network.

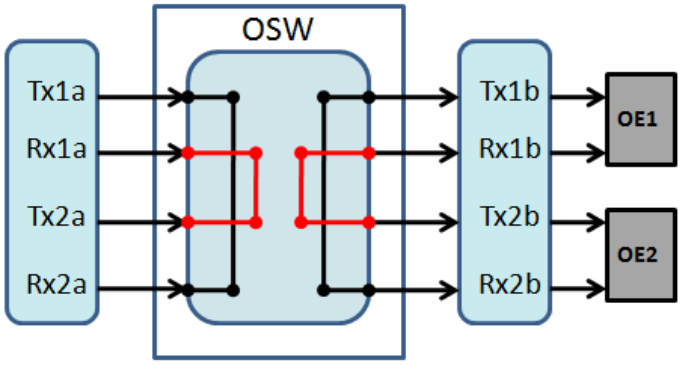
Note:

a. Latching POBM is also available. Delay Timer and System Enabled PIN can be embedded into the Non-latching module at customer's request.
b. 62.5/125µm fiber type (OM1) is also available.
c. Module can be customized to pluggable type.

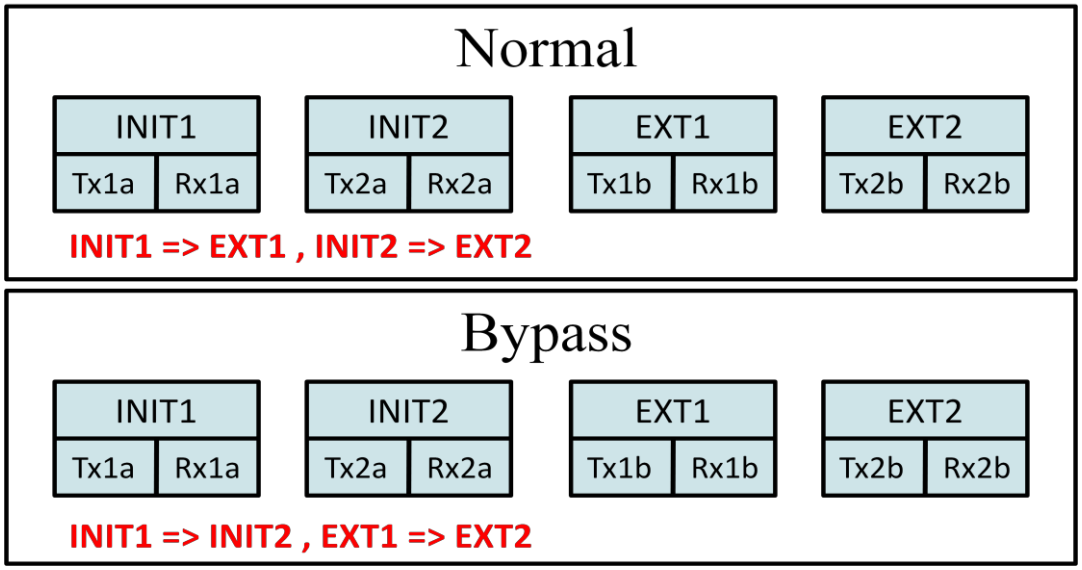
BLOCK DIAGRAM and OPTICAL PATHS:



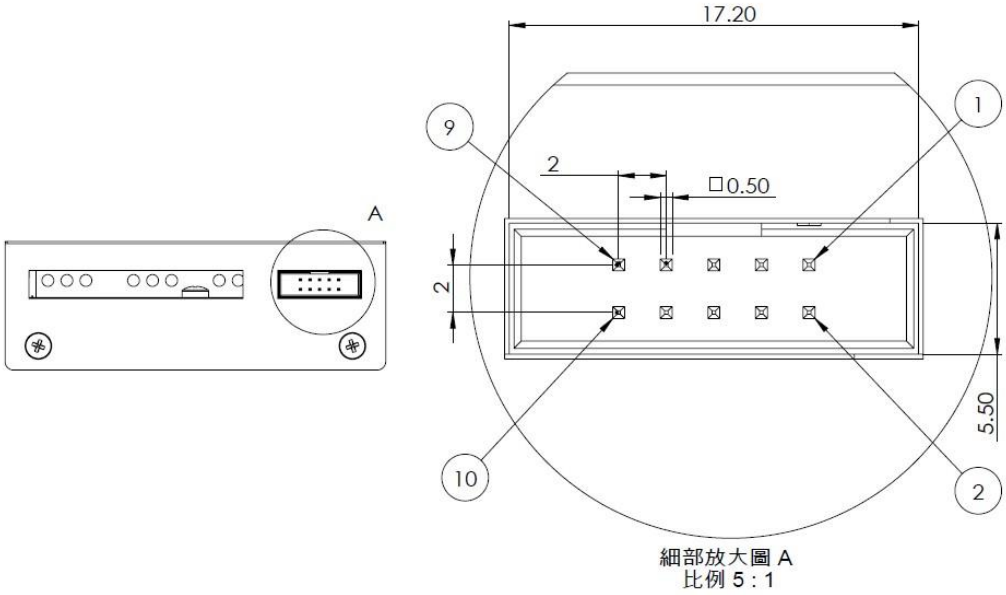
Normal Operation



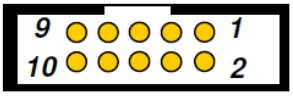
Bypass Operation



PIN Assignment



PIN No.	Name	I/O	Description
1	Vcc_1	I	3.3V Power Supply (OSW1Power and High=Normal Mode, Low=Bypass Mode)
2	Ground		
3	OSW1Bypass Control	I	High= NormalMode, Low= BypassMode for OSW1
4	OSW1State Output	O	High=Normal Mode, Low=Bypass Mode for OSW1
5	Ground		
6	On-Line		0 Ohm to Ground
7	Reserve		
8	Reserve		
9	Reserve		
10	Reserve		



POBM CHARACTERISTICS:

Characteristics	Multimode@850nm		Unit	Remarks
Relay Type	Two Coil Latching			Single Coil for Non-latching one is Available
Fiber Type	50/125		μm	SMF-28e is also Available
OpticalWavelength	850±40/1300±40		nm	
Cable Type	250		μm	Customized by Request
Adapter Type	Dual LC		pc	Customized by Request
Insertion Loss	Typical	Maximum	dB	With Connectors and Adapters, same as Bypass Loss
	1.5	2.0		
Return Loss	Typical	Maximum	dB	With Connectors
		30		
Cross-talk	≦-35		dB	With Connectors
Switching Time	≦10		ms	With Connectors
Repeatability	±0.05		dB	Peak to Peak (100 cycles)
Optical Input Power	300		mW	
Operating Temperature	0~70		℃	For -40~85℃ Industrial Type, Bare Fiber is needed to be routed in the module
Storage Temperature	-40~80		℃	
Package Dimensions	80(W)x55(D)x27(H)		mm	Customized by Request

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
+3.3V Supply Voltage	Vcc	3.10		3.50	V
OSWBypass Control-High	V_{BCH}	2		Vcc+0.3	V
OSWBypass Control-Low	V_{BCL}	0		0.8	V
OSWState Output -High	V_{STH}	2.4		Vcc	V
OSWState Output -Low	V_{STL}	0		0.5	V
Typical Current	Icc			75	mA

Mechanical Dimension