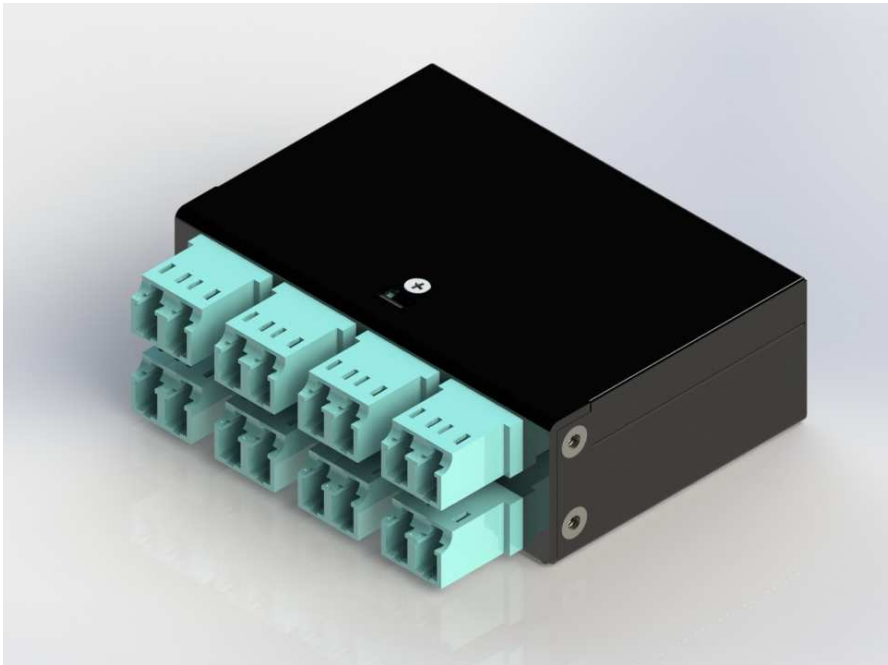


Specification

Passive Optical Bypass Module



POBM-C1CX8-P0A

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**
- **Eight Dual LC OM3 Adapter**
- **Compact Format and ROHS Compliant**

Product Overview

FormericaOE's High Density Passive Optical Bypass Module is a compact box that contains 2 optical bypass switches which can be controlled by the controller of In-Line equipment to perform the "Fail-to-Wire" optical bypass function. The FormericaOE's Passive Optical Bypass Module (POBM) is targeted for In-Line network system (e.g. IPS: Intrusion Prevention System, IES: Industrial Ethernet Switching, WAN Optimization System, and Application Switch, etc.) with high availability in 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 port in POBM. Thus, This POBM can bypass its Ethernet ports when there is 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.

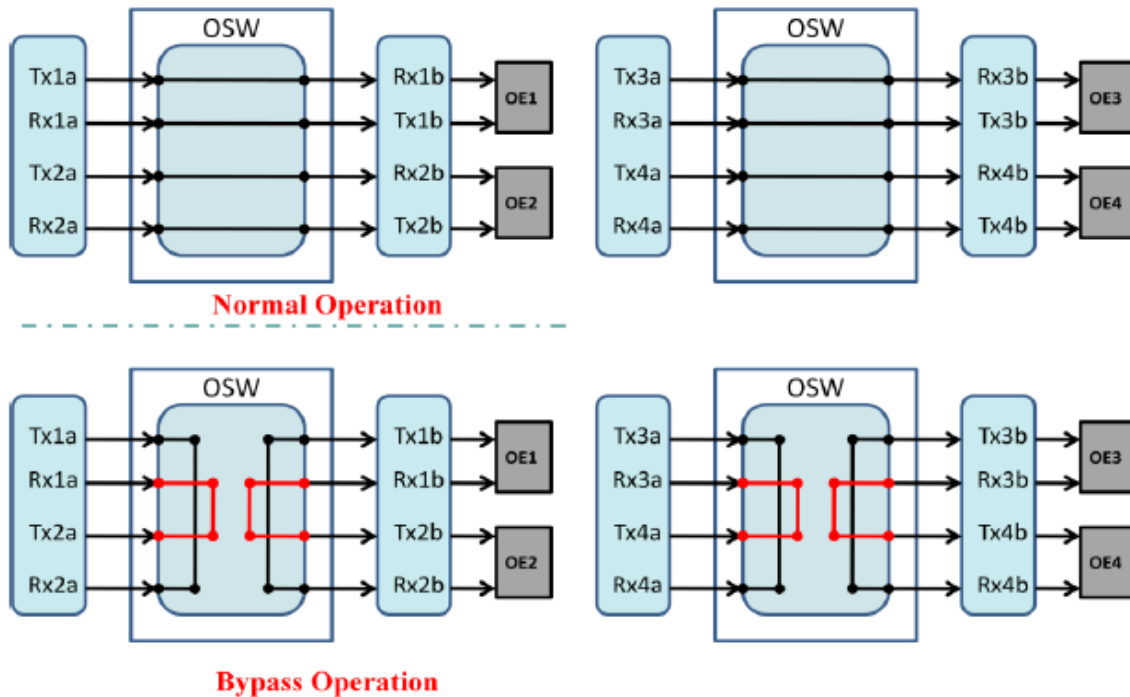
FormericaOE's Passive Optical Bypass Module is suitable for connecting with In-Line equipment in meeting the requirement of Fail-Over systems. When the In-Line unit is not on or is in Bypass Mode, the relays within the Passive Optical Bypass Module are set to bridge the optical signals directly through 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.

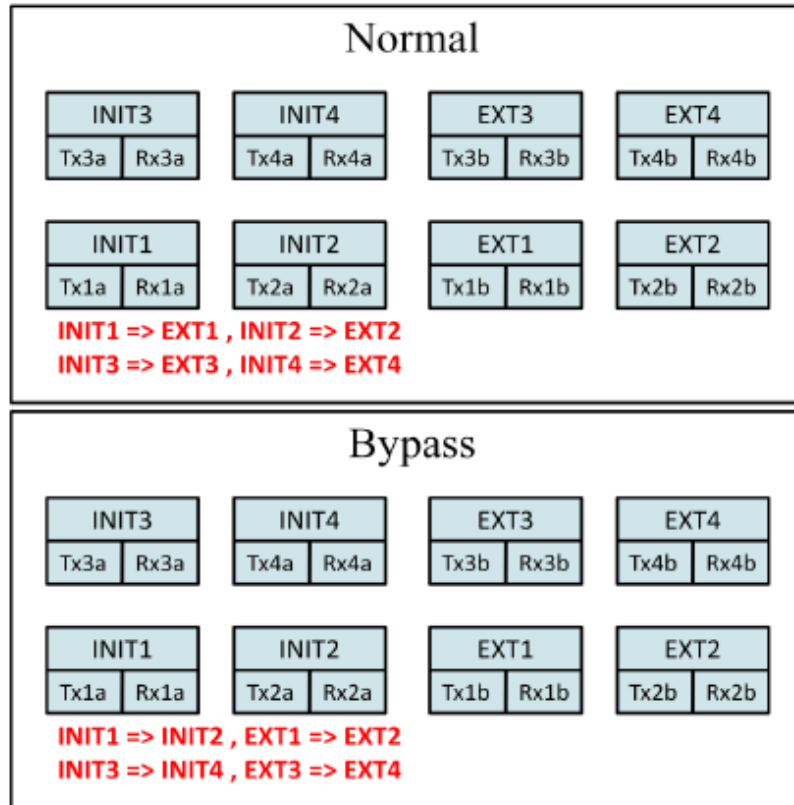
This compact module provides network users excellent and cost effective protection for your network.

Note:

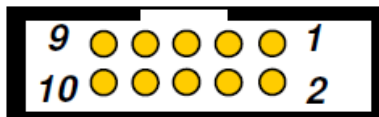
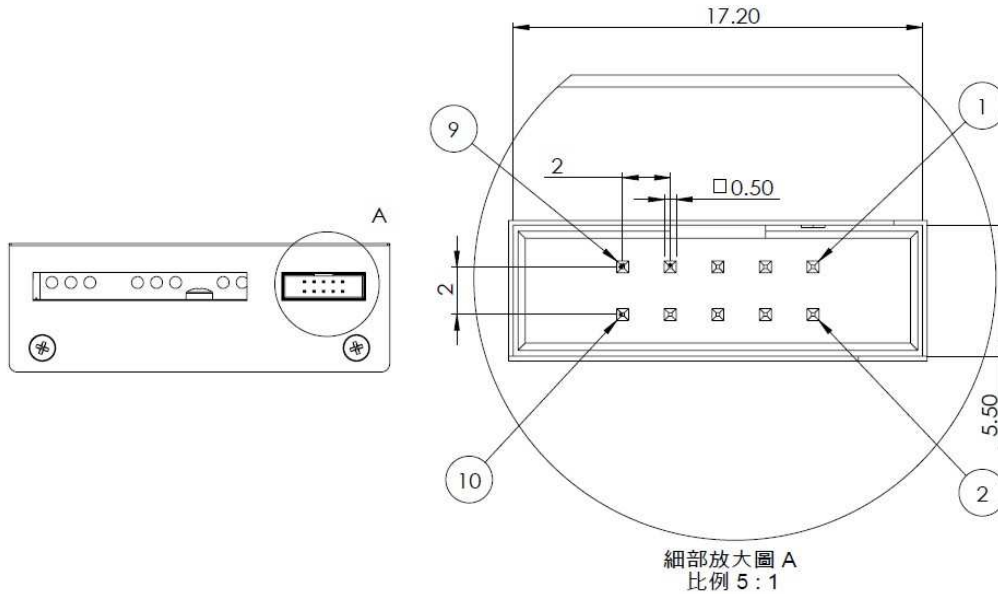
- a. Latching POBM is also available. Delay Timer and System Enabled PIN can be embedded into the Non-latching module at customer's request.
- b. 62.5/125µm fiber type (OM1) is also available.
- c. Module can be customized to pluggable type.

BLOCK DIAGRAM and OPTICAL PATHS:





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 | I | High= NormalMode, Low= BypassMode for |
| 4 | OSW1State Output | O | High=Normal Mode, Low=Bypass Mode for |
| 5 | Ground | | |
| 6 | On-Line | | 0 Ohm to Ground |
| 7 | Reserve | | |
| 8 | Reserve | | |
| 9 | Reserve | | |
| 10 | Reserve | | |

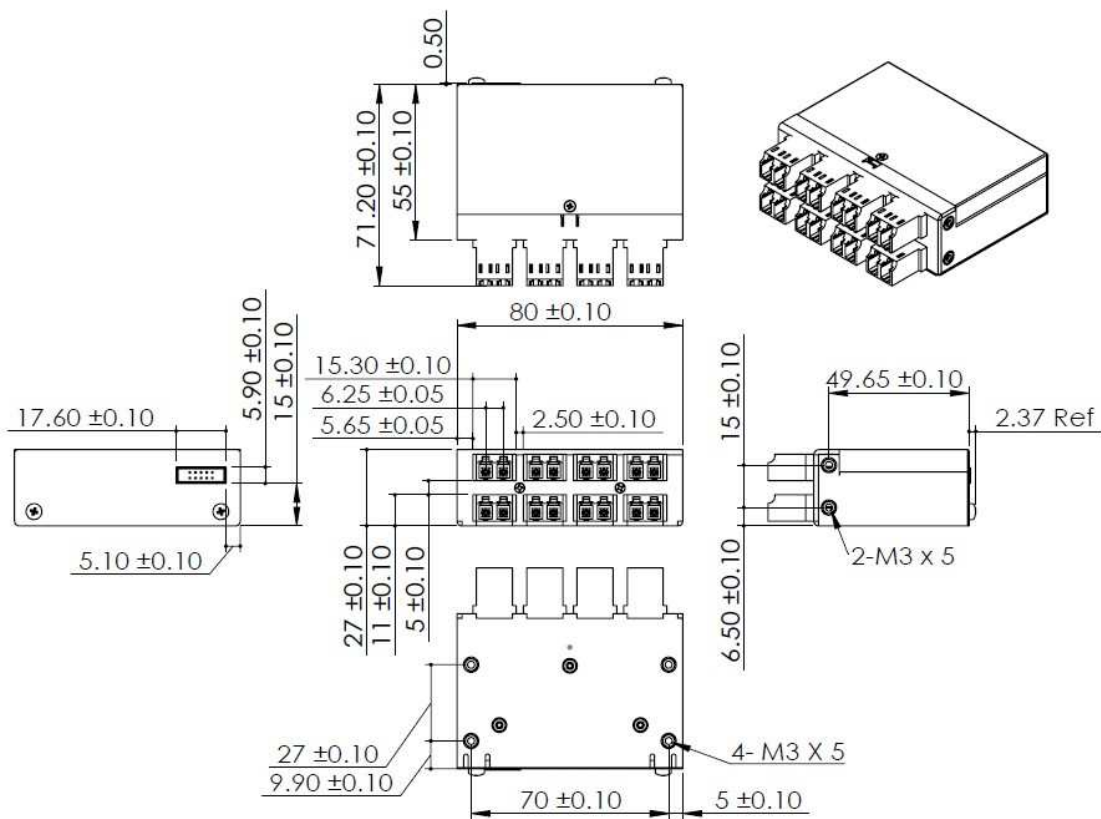
POBM CHARACTERISTICS:

| 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 |
| Optical Wavelength | 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 | 0~70 | | °C | For -40~85 °C Industrial Type, Bare Fiber is needed to be routed in the module |
| Storage Temperature | -40~80 | | °C | |
| Package Dimensions | 80(W)x55(D)x27(H) | | mm | Customized by Request |

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Un |
|-------------------------|--------|------|------|---------|----|
| +3.3V Supply Voltage | Vcc | 3.10 | | 3.50 | V |
| OSW Bypass Control-High | VBCH | 2 | | Vcc+0.3 | V |
| OSW Bypass Control-Low | VBCL | 0 | | 0.8 | V |
| OSW State Output -High | VSTH | 2.4 | | Vcc | V |
| OSW State Output -Low | VSTL | 0 | | 0.5 | V |
| Typical Current | Icc | | | 150 | mA |

Mechanical Dimension



ESD

Normal ESD precautions are required during the handling of this module. This transceiver is shipped in ESD protective packaging. It should be removed from the packaging and handled only in an ESD protected environment.

Contact Information

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