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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!



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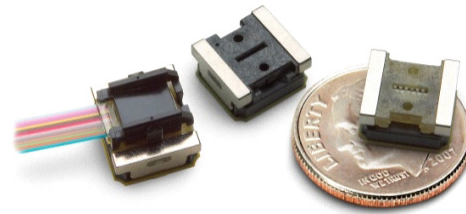


# MicroPOD™

## AFBR-77D2SZ, AFBR-78D2SZ

12.5 Gbps/Channel

Twelve Channel Parallel Fiber Optics Modules



## Product Brief

### Description

The AFBR-77D2SZ Twelve Channel, Pluggable, Parallel Fiber Optics Transmitter and AFBR-78D2SZ Twelve Channel, Pluggable, Parallel Fiber Optics Receiver are high performance fiber optics modules for short-range parallel multi-lane data communication and interconnect applications. The high density optical modules are designed to operate over multimode fiber systems using a nominal wavelength of 850 nm.

The optical interface requires the user to provide a custom designed optical turn 1×12 ribbon cable PRIZM® LightTurn® connector.

### Applications

- 100 GbE and IB-QDR / IB-DDR / IB-SDR and 12.5 Gbps proprietary interconnects
- Data Aggregation, Backplane and Proprietary Protocol and Density Applications
- High Performance and High Productivity computer interconnects
- Switch Fabric interconnects

### Part Number Ordering Options

		Base Part Number	
<b>Modules for use with Flat Ribbon Jumper Cable</b>	<b>Transmitter</b>	AFBR-77D2SZ	0-70 °C
		AFBR-77D2Z	20-55 °C
	<b>Receiver</b>	AFBR-78D2SZ	0-70 °C
		AFBR-78D2Z	20-55 °C
<b>MicroPOD Evaluation Board (Tx)</b>		AFBR-77EVB	
<b>MicroPOD Evaluation Board (Rx)</b>		AFBR-78EVB	

Where: Tx = Transmitter (77), Rx = Receiver (78)

### Features

- 12.5 Gbps with 64b/66b encoded data
- Compliant to IEEE 802.3ba 100GbE (100GBASE-SR10 and nPPI) per lane
- Compatible with 12×QDR Infiniband
- Operates at 10 Gbps per channel with 8b/10b encoded data for IB-QDR application, and at 10.3125 Gbps and up to 12.5 Gbps with 64b/66b encoded data, for 100GbE and proprietary applications
- High Aggregate bandwidth: 150 Gbps per module
- High density footprint: 7.8 mm × 8.2 mm × 3.9 mm size
- Separate transmitter and receiver modules
- 850 nm VCSEL array in transmitter; PIN array in receiver
- Links up to 150 m, from 10.3125 Gbps to 11.5 Gbps, and 100 m at 12.5 Gbps with OM4 4700 MHz-km fiber
- Optical Interface: PRIZM® LightTurn® optical turn 1×12 ribbon fiber connector
- Electrical interface: 9×9 micro-LGA with 0.7424 mm pitch
- Low Power consumption: 3.7 W Max per Transmitter / Receiver pair (0 °C to 70 °C operating range)
- Dedicated signals for module address, module reset and host interrupt
- Two Wire Serial (TWS) interface with maskable interrupt for expanded functionality including:
  - Individual channel functions: disable, squelch disable, lane polarity inversion, TX eye margin enable
  - A/D read back: module temperature and supply voltages, per channel laser current and laser power, or received power
  - Status: per channel Tx fault, electrical (transmitter) or optical (receiver) LOS, and alarm flags
  - Programmable equalization integrated with DC blocking caps at transmitter data input
  - Programmable receiver output swing and de-emphasis level
  - Field-upgradable firmware capability
- 0 °C to 70 °C case temperature continuous operating range. 85 °C supported for short durations up to 12.5 Gbps



# Package Dimensions

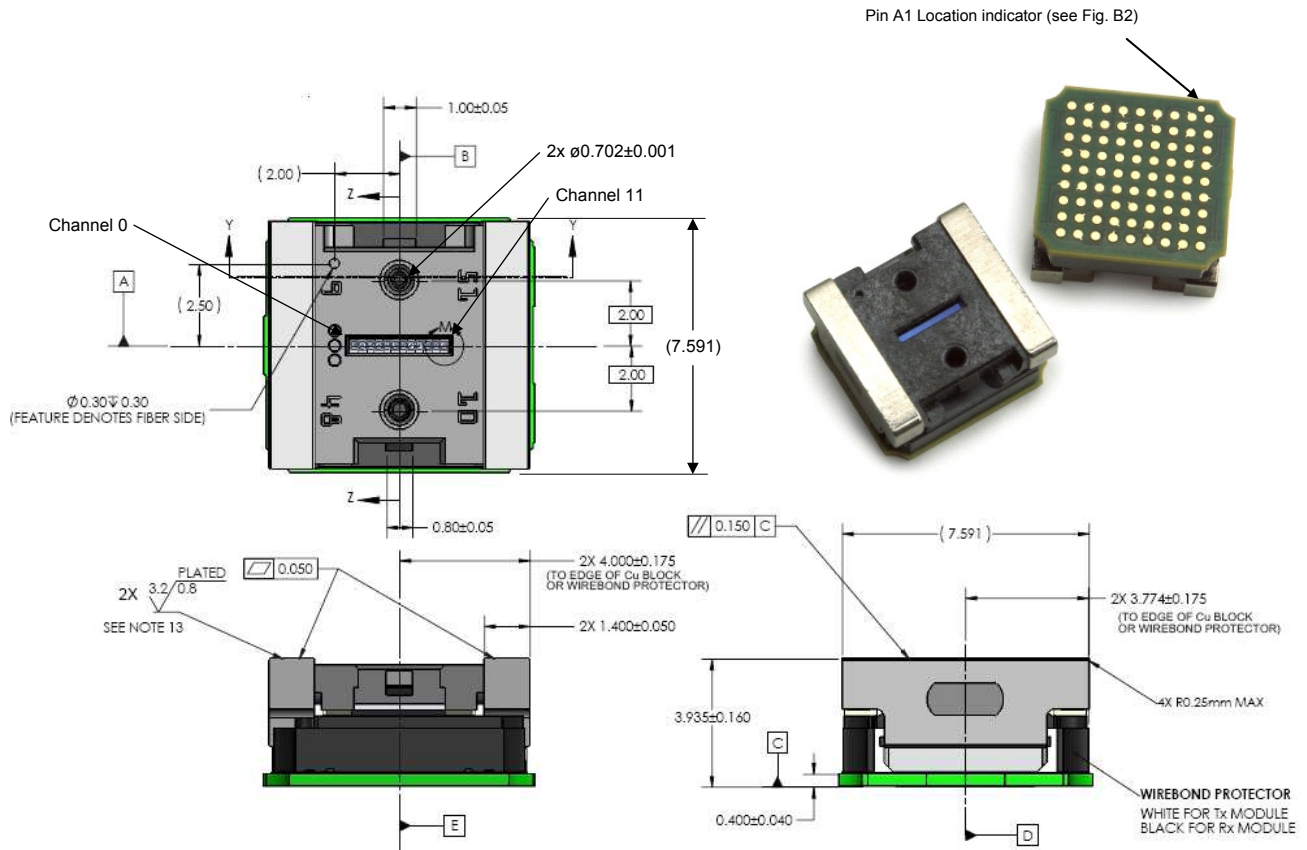


Figure 1. Module Top and Side View

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