

MIL - AERO - GRADE  
PARALLEL OPTIC  
TRANSCEIVER  
WITH COMPACT  
FORM FACTOR



*DataStar™ MIL-AERO*  
**Hermetically-sealed  
Quad Parallel Optic  
Transceiver with up to 14  
Gbps per channel data rate**



Glenair DataStar™ MIL-AERO 4-Channel (8-fiber) PCB-mounted transceivers provide electro-optical conversion from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  operating temperature in high shock and vibration environments. Modules may be configured for variable signal integrity requirements and for different data rates, up to 14 Gbps per fiber.

Class 1M Lasers with enhanced output power enable higher link margin than commercial counterparts. The compact form-factor design includes an internal microprocessor that provides automatic compensation of transceiver parameters over temperature. The optical transceiver engine has I2C interface capability, while the host board interface is a high-speed surface-mount electrical connector, with secure mechanical attachment.

- Compact package with internal microprocessor
- Secure PCB screw-mounting ensures excellent shock and vibration performance
- No-solder high-speed electrical PCB connector
- $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  operating case temperature
- 12-fiber MTP® connector socket
- Supports conduction or convection cooling
- Class 1M laser output power for higher link margin



# Aerospace-Grade Parallel Optic Quad Transceiver with up to 14 Gbps per fiber



050-346

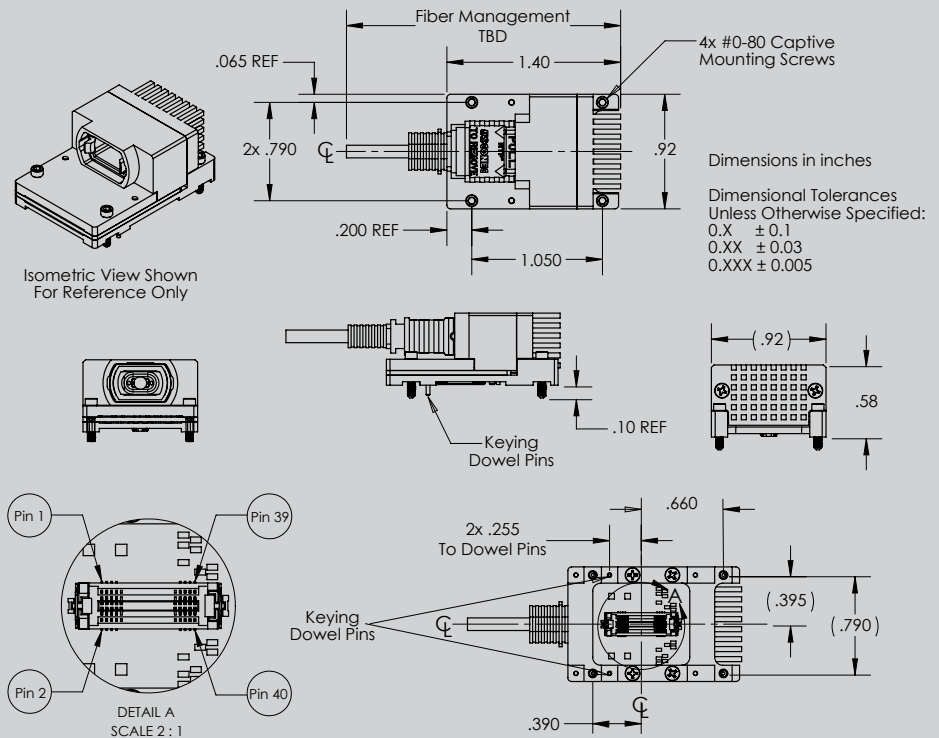
## KEY TECHNICAL FEATURES



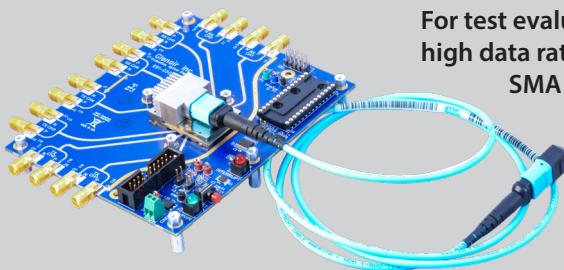
- QSFP+ CML-Compatible Electrical I/O signal levels
- QSFP+ compatible I<sup>2</sup>C Memory Map
- Digital Monitoring Interface (DMI) via I<sup>2</sup>C.
- Class 1M Lasers with enhanced output power and sensitivity enable higher link margin than commercial products
- ARINC 818, 100G Ethernet, FC 1x, 2x, 4x, 8x, 16x, 32x, sRIO, 10G BASE-SR, 40G BASE-SR4, 100GBASE-SR4 applications
- Multiple FPGA protocols
- 850nm InGaAs VCSEL lasers to support 28Gbps
- GaAs PIN PD supports excellent Sensitivity to 14Gbps

## COMPLIANCE SPECIFICATIONS

Characteristic	Standard	Condition	Notes
Mechanical Shock, Operating	MIL-STD-810	Para. 516.6, proc. I, 650g. 0.9ms, x,y and z 10 pulses (5+ & 5-)	0.9 ms operating error-free after exposure to shock and random vibration, when using female MTP® cable assembly.
Mechanical Vibration	MIL-STD-810	Para. 514.6, 46g rms x, y, and z, 2 hours per axis	Random, operating error-free, when using female MTP® cable assembly.
ESD	ARINC 804-1 (MIL-STD-883H)	Method 3015.8, Class 1C	500V HBM (TBV)
Damp Heat	MIL-STD-1344	Method 1002.2,	10 cycles , 24 hours (TBV)
Eye Safety	CDRH and IEC-825	Class 1M Laser Product	<b>LASER RADIATION DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 1M LASER PRODUCT</b>



## 050-346 EVALUATION BOARD



For test evaluation of 050-346 board-mount transceiver module. Designed for high data rate operation, supporting rates up to 14 Gbps. Board incorporates 16 SMA connectors to interface with high-speed 100 Ohm differential lines. Transceiver device is powered through 3.3V and GND connections. FMC Evalboard also available.