MIL-AERO-GRADE
PARALLEL OPTIC
TRANSCEIVER
WITH ULTRA
LOW-PROFILE
FORM FACTOR

DataStar™

DataStar™ MIL-AERO

Low-Profile Quad **Parallel Optic Transceiver** with up to 28 Gbps per channel data rate performance

Glenair DataStar™ MIL-AERO low-profile 4-Channel (8-fiber) PCB-mounted transceivers provide electro-optical conversion from -40°C to +100°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 28 Gbps per fiber.

The ultra-low-profile, small form-factor mechanical design is ideally suited for crowded circuit board applications. Thermal conductive carrier design optimizes heat dissipation for reliable high-temperature operation. The optical transceiver engine has I2C interface capability with internal microprocessor and memory. Host board interface is a high-speed surface-mount electrical connector, with secure mechanical attachment.

CLASS M IAW MIL-AERO GRADE

28 Gbps PER CHANNEL

- **Compact, low-profile package**: 7.6 mm × 14 mm × 29.7 mm
- **Secure PCB screw-mounting** ensures excellent shock and vibration performance
- **No-solder** high-speed electrical PCB connector
- **-40°C to +100°C** operating case temperature
- **Configurable fiber packaging options**: MPO/MTP®, pigtail, MT ferrule
- **Conduction-cooled** for low air-flow or high-altitude applications
- **Class 1M laser output power** for higher link margin

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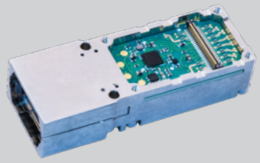
DataStar™ MIL-AERO

Low-Profile Aerospace-Grade Parallel Optic Quad Transceiver with up to 28 Gbps per fiber

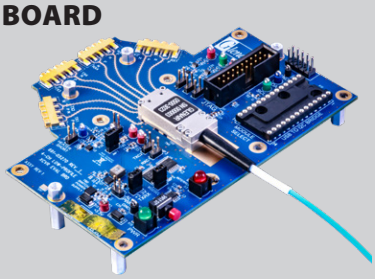
0500-3023

KEY TECHNICAL FEATURES



- **QSFP+ CML-Compatible Electrical I/O signal levels**
- **QSFP+ compatible I2C Memory Map**
- **Digital Monitoring Interface (DMI) via I2C.**
- **Class 1M Lasers with enhanced output power and sensitivity enable higher link margin than commercial products**
- **ARINC 818, 10G Ethernet, FC 1x, 2x, 4x, 8x, 16x, 32x, sRIO, SpaceFibre, 10G BASE-SR, 40G BASE-SR4, 100GBASE-SR4 applications**
- **Multiple FPGA protocols**

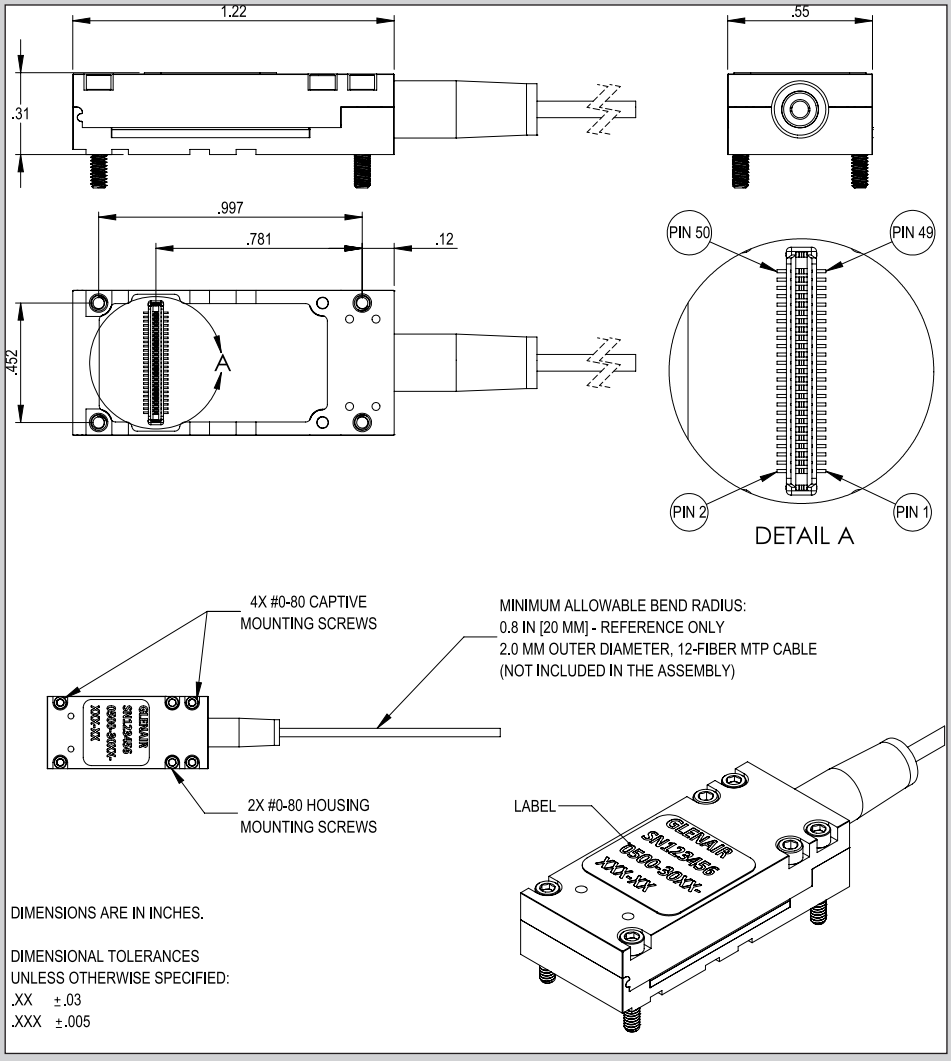
0500-3023 EVALUATION BOARD



For test evaluation of 0500-3023 low-profile board-mount transceiver module. Designed for high data rate operation, supporting rates up to 28 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.

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)
Humidity, Operating (DC power only)	MIL-STD-883H,	Method 1004.7	10 cycles , 24 hours (TBV)
Eye Safety	CDRH and IEC-825	Class 1M Laser Product	**LASER RADIATION DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 1M LASER PRODUCT**



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