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



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.



- 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

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. l, 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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