SPACE-GRADE
PARALLEL OPTIC TRANSCEIVER WITH RLAT RADIATION TESTING AND LOT TRACEABILITY

DataStar™

DataStar™ SPACE

Hermetically-sealed space-grade **Quad Parallel Optics Transceiver** with 10Gbps per channel performance

The Glenair DataStar™ SPACE Quad PCB-mounted transceiver (P/N 0500-3060) is a space-grade, harsh environment, optoelectronic engine with 10 Gbps/channel performance that operates over a broad temperature range (-30°C to +85°C) in high shock and vibration environments.

The optical interface is a 12-fiber MTP® connector socket that ensures compatibility with existing network infrastructure and optical flex, ribbon, and wire pigtail cabling.

Glenair DataStar™ SPACE transceivers are purpose-designed for satellite applications and offer:

- Radiation lot acceptance testing
- Group C lot traceability
- ASTM E595 outgassing
- Heavy ion, gamma, and proton radiation resistance

CLASS G IAW SPACE GRADE

10 Gbps PER CHANNEL

- **Mechanical mounting** excellent for shock and vibration performance
- **Hermetically sealed** for moisture resistance
- **Solder-free** assembly to host PCB
- **Temperature-resistant** from -30°C to +85°C
- **Compatible mating** with MTP® 12-channel interface
- **Heat-sink optimized** for conduction cooling
- **Radiation-resistant** materials and RLAT testing
- **Precise optical alignment** for enhanced link margin

DataStar™ SPACE

Quad Parallel Optic Transceiver with 10 Gbps/channel data rate performance

0500-3060

KEY TECHNICAL FEATURES

- **QSFP+ CML-compatible** Electrical I/O signal levels
- **850nm VCSEL lasers** to support 10 Gbps per channel
- **PIN PD** to support 10Gbps
- **Hermetic hybrid section** helium leak rate 5 X 10^{-8} He cc/s
- **Evaluation board available,** P/N 0500-3060-EVALBOARD
- **Class 1M lasers** with enhanced output power and sensitivity enable high link margin
- **Pin-strapped** or externally-controlled options

COMPLIANCE SPECIFICATIONS

Characteristic	Standard	Condition	Notes
Mechanical Shock	MIL-STD-810	Para. 516.6, proc. I, 650g.	0.9 ms operating error-free after exposure to shock and random vibration, when using female MTP® cable assembly.
Mechanical Shock	MIL-STD-202-213	Test Condition E (1000 g ½ sine, .5 ms) TBC	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	Random, operating error-free after exposure to random vibration and shock, when using female MTP® cable assembly.
ESD	MIL-STD-883		500V HBM (TBV)
Flame Resistance	MIL-STD-1344	Method 1012, Cond. B	30 seconds (TBV)
Damp Heat	MIL-STD-1344	Method 1002.2, Cond. B	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**

0500-3060 EVALUATION BOARD

Designed for high data rate operation, supporting rates up to 10 Gbps per channel. The 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.