Glenair PCB mount transceiver modules are ruggedized equivalents to SFP transceivers but with mechanical design suited to the harsh temperature and vibration environments found in free space, satellite, and other Mil-Aero applications. Optional Digital Monitoring Interface (DMI) IAW SFF 8472. High bandwidth parallel optical modules with MT datalink technology. Radiation tolerant.

- Smallest footprint available
- Jet fighter and space launch shock and vibration tested
- High-speed board interconnection — no soldering required
- CML 100 Ohm differential input and output
- -40°C to +85°C operating temperature range

RUGGEDIZED PCB-MOUNT MODULES FOR ETHERNET, HIGH-SPEED VIDEO, AND STORAGE

- EMI shielded and radiation-tolerant transceivers
- Dual transceivers, quad transmitters, quad receivers
- Bi-directional transceivers
- Aerospace-grade DWDM transceivers for free-space optical links
- Small form-factor, high-vibration high-temperature tolerant
RUGGEDIZED
PCB-Mount Photonic Transceiver Modules

Parallel Optic Transceivers • RF-Over-Fiber Transceivers • Bi-Directional Transceivers • Radiation-Tolerant Designs

PARALLEL OPTIC TRANSCEIVERS

Glenair parallel optic transceivers deliver up to 25Gbps per channel high-speed data in free space optics (FSO) applications. Heat tolerant and compatible with conduction cooling for space applications, the transceivers are supplied as discrete printed circuit board mount devices, or with turnkey MTP jumpers or ruggedized MT fiber optic interconnections.

- 4 X 14 to 4 X 25 Gbps per fiber (up to 100 Gbps)
- 12-channel Tx and Rx with 10Gbps/channel
- Compatible with MTP optical connector
- Supports 12-fiber ribbon cable
- SiGe and GaAs optoelectronic ICs
- Hermetic opto-electronic hybrid
- Conduction-cooling for space applications
- 46 Grms, 650G shock
- -40°C to +85°C case temp
- Heavy ion radiation-tested

RF-OVER-FIBER TRANSCEIVERS

Radio Frequency over Fiber systems integrate wireless radio frequency (RF) transmissions and fiber optic datalinks into a single system. Benefits include lower transmission loss (attenuation) as well as reduced sensitivity to electromagnetic noise. Glenair ruggedized, low-noise, shielded RF-over-Fiber solutions have a 2MHz to 3.5GHz RF bandwidth and can be embedded inside-the-box or incorporated into standalone copper-to-fiber media converters for environmental applications.

- 2MHz – 3.5 GHz antenna signal distribution
- High-frequency units in excess of 20 GHz
- High-vibration PCB mount solution
- -40°C to +85°C operating case temperature
- High Spurious Free Dynamic Range (SFDR) link
- APC fiber optic contact standard
- Integrated high-speed PIN photo diode and low-noise RF amplifiers

Available evaluation boards: 050-346 parallel optic transceiver with MT-to-39029 fiber optic terminations

Convection cooling (left) and conduction cooling (right) designs as well as custom heat dissipation designs are available.

050-346 parallel optical transceiver, 4 X 10 – 14 Gbps
0500-3007 parallel optical transceiver, 0.1 – 25 Gbps

Convection cooling (left) and conduction cooling (right) designs as well as custom heat dissipation designs are available.

050-346 parallel optical transceiver, 4 X 10 – 14 Gbps
0500-3007 parallel optical transceiver, 0.1 – 25 Gbps

Available evaluation boards: 050-346 parallel optic transceiver with MT-to-39029 fiber optic terminations

RF over Fiber PCB-Mount Component Selection Guide

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Frequency Range</th>
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</thead>
<tbody>
<tr>
<td>050-400</td>
<td>PCB Mount RF-over-Fiber Transceiver</td>
<td>20MHz to 3.5 GHz</td>
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<tr>
<td>050-404</td>
<td>PCB Mount RF-over-Fiber Transmitter</td>
<td>2 MHz – 3.5 GHz</td>
</tr>
<tr>
<td>050-405</td>
<td>PCB Mount RF-over-Fiber Receiver</td>
<td>2 MHz – 3.5 GHz</td>
</tr>
<tr>
<td>050-406</td>
<td>PCB Mount RF-over-Fiber Transmitter</td>
<td>2 MHz – 3.5 GHz</td>
</tr>
<tr>
<td>050-407</td>
<td>PCB Mount RF-over-Fiber Receiver</td>
<td>2 MHz – 3.5 GHz</td>
</tr>
<tr>
<td></td>
<td>Low-Noise configuration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low-Noise configuration</td>
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</tr>
</tbody>
</table>

© 2020 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324 • High-Speed Interconnect Solutions
Size 8 photonic contacts transmit and receive differential CML or LVPECL electrical signals over Multimode fiber optic cable. Transmitters consist of a 850nm VCSEL laser or 1300nm LED with temperature compensation circuit. Receivers consist of a PIN Photo Detector, a Transimpedance Amplifier with automatic gain control circuit, and a Limiting Amplifier. Differential output data signals are LVPECL or CML compatible.

- Fast and Gigabit Ethernet, DVI, HDMI video capable transmitter and receiver-equipped contacts
- ARINC 664, 801, 803, 804 and 818 standard compliant
- Link distances up to 550 meters, multimode
- Single, 3.3 V power supply
- For use in ARINC 600 and other size #8 cavity-equipped connectors
- Current offerings include 1.25mm ARINC 801 and 2.5mm ELIO® solutions
RUGGEDIZED
Photonic Contacts and Connectors for Ethernet, Video and High-Speed Data

**050-301 SIZE 8 CAVITY OPTO-ELECTRONIC CONTACTS, 100MBPS TO 5GBPS, MMF, 3.3V**

- Front-release, front-insert, front-removable Size #8 OE converter designed for ARINC 600
- ARINC 664, 801, 803, 804, and 818 Standard Compliant
- Data rates from 100Mbps to 5.00Gbps
- Supports Fast and Gigabit Ethernet, AFDX, 1x/2x Fibre Channel, DVI, DHMI, SFPDP, Serial Rapid I/O (sRIO)
- 100 ohms differential CML inputs with Tx Fault and Tx Disable
- Link distances up to 550 meters with multimode 50/125μm or 62.5/125 μm fiber
- Single 3.3V power supply
- ARINC 801 1.25mm ceramic fiber ferrule
- Solutions available in 38999 style connectors
- -40°C to +85°C Operating Case Temperature
- Evaluation fixtures available

**050-307 SIZE 8 CAVITY OPTO-ELECTRONIC CONTACTS, 100MBPS TO 5GBPS, MMF, 3.3V**

- Front-release, front-insert, front-removable Size #8 OE converter designed for ARINC 600
- ARINC 664, 801, 803, 804, and 818 Standard Compliant
- Data rates from 100Mbps to 5 Gbps
- Supports Fast and Gigabit Ethernet, AFDX, 1x/2x Fibre Channel, DVI, DHMI, SFPDP, Serial Rapid I/O (sRIO)
- 100 ohms differential CML inputs with Tx Fault and Tx Disable
- Link distances up to 550 meters with multimode 50/125μm or 62.5/125 μm fiber
- Single 3.3V power supply
- ELIO 2.5mm ceramic fiber ferrule
- Solutions available in 38999 style connectors
- Mates with ELIO 2.5mm Termini
- -40°C to +85°C Operating Case Temperature
- Evaluation fixtures available
- Compatible with Souriau ELIO AQ6S Quadrax Adapter

**050-367 SIZE 8 CAVITY OPTO-ELECTRONIC CONTACTS, 3G-SDI AND HD-SDI, MMF, 3.3V**

- SMPTE EG 34:2004 Compliant to Pathological Conditions CASE 1, CASE 2 and CASE 3.
- SMPTE ST 297:2015 (3G-SDI & HD-SDI)
- SMPTE 424 Compliant (3G-SDI)
- SMPTE 292 Compliant (HD-SDI)
- SFP Compatible Electrical Input signal levels
- 850nm VCSEL support 3G-SDI & HD-SDI
- Industry standard CML input and outputs that make for simple integration on customer host PCB
- Front-release, front-insert, front-removable
- Fits size 8 quadrax cavity for ARINC 600
- Solutions available in 38999 style connectors
- -40°C to +85°C Operating Case Temperature
- Evaluation fixtures available

**050-399 SIZE 8 CAVITY OPTO-ELECTRONIC CONTACTS, DC TO 1 MBPS, MMF, 3.3V**

- Front-release, front-insert, front-removable Size #8 OE converter designed for ARINC 600
- ARINC 664, 801, 803, 804, and 818 Standard Compliant
- Data rates from DC to 1 Mbps
- Supports RS232, RS422, and RS485 data rates
- DC coupled transmitter and receiver
- Link distances up to 2Km
- Single 3.3V power supply
- ARINC 801 1.25mm ceramic fiber ferrule
- Solutions available in 38999 style connectors
- -40°C to +85°C Operating Case Temperature
- Evaluation fixtures available

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Glenair size #8 optoelectronic contacts are easily housed in a range of circular and rectangular connectors for fast/gigabit Ethernet, DVI and HDMI video, and other high-speed data transfer protocols. Special size #8 cavity adapters are available to enable construction of compatible plug connectors on the cable side.

- 2.5mm ELIO® solution for multimode Ethernet, video, and high-speed data applications
- 1.25mm ARINC 801 multimode fiber optic termini solution for Ethernet, video, and high-speed data
- Hybrid high-speed layouts with Size #8 Optoelectronic contacts and Glenair Signature El Ochito high-speed Octaxial contacts
## Optoelectronic Connector Selection Guide

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>050-313</td>
<td>Optoelectronic Transceiver, MIL-DTL-38999 Type 2.5mm ELIO® Compatible 100Mbps – 4.25Gbps</td>
</tr>
<tr>
<td>050-304</td>
<td>D38999 Series III Type Active Receptacle Connector with Glenair Size 8 Optoelectronic Contacts 050-304 CS Wall Mount, Clinch Nut 050-304 00 Wall Mount, Slotted 050-304 07 Jam Nut 059-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>050-392</td>
<td>D38999 Series III Type Active Hybrid Receptacle Connector with Glenair Size 8 Optoelectronic and Electrical Contacts 050-392 07 Jam Nut 059-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>050-355</td>
<td>D38999 Series III Type Active Receptacle Connector with Glenair Size 8 Optoelectronic Contacts. 050-355 CS Wall Mount, Clinch Nut 050-355 00 Wall Mount, Slotted 050-355 07 Jam Nut 059-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>0500-3004</td>
<td>D38999 Series III Type Active Hybrid Receptacle Connector with PCB standoffs, Glenair Size 8 Optoelectronic contacts, and electrical contacts Compatible with 050-301 and 050-367 contacts 059-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>0500-3005</td>
<td>D38999 Series III Type Active Hybrid Receptacle Connector with Glenair Size 8 Optoelectronic Contacts. and El Ochito Contacts. 0500-3005 CS Wall Mount, Clinch Nut 0500-3005 00 Wall Mount, Slotted 0500-3005 07 Jam Nut</td>
</tr>
<tr>
<td>0500-3001</td>
<td>D-Sub Active Receptacle Connector with Glenair Size 8 Optoelectronics Contacts. Compatible 050-301, 050-367, 050-399, and 0500-3015 contacts 1.25 Gbps – 5.00 Gbps / HD-SDI and 3G-SDI / DC to 50 Mbps</td>
</tr>
<tr>
<td>0500-3024</td>
<td>D-Sub Active Receptacle Connector with 2 × Glenair Size 8 Optoelectronics Contacts. Compatible 050-301 and 050-367 contacts 1.25 Gbps – 5.00 Gbps</td>
</tr>
<tr>
<td>0500-3034</td>
<td>D-Sub Active Receptacle Connector with 2 × Glenair Size #8 Optoelectronics Contacts. Compatible 050-301, 050-367, 050-399, and 0500-3015 contacts 1.25 Gbps – 5.00 Gbps / HD-SDI and 3G-SDI / DC to 50 Mbps</td>
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