High-Speed Interconnect Solutions

Rugged Electrical, Optical, and Hybrid Solutions for Mission-Critical Aerospace and Defense Applications
Rugged High-Speed Interconnect Solutions

Electrical, Optical, and Hybrid Solutions for Mission-Critical Aerospace and Defense Applications

**El Ochito® High-Speed Octaxial Contacts and Connector Packaging**
- El Ochito® high-speed octaxial contacts
- SuperFly nano miniature with El Ochito®
- Series 792 micro miniature with El Ochito®
- Series 806 M6-Aero micro miniature with El Ochito®

**El Ochito® Packaging** (continued)
- Series 23 SuperNine® with El Ochito®
- Series 23 SuperNine® with SpeedMaster™ 10G high-speed contacts
- Octabyte™ industrial-strength Ethernet connectors

**Signature High-Speed Connector Solutions**
- SuperSeal™ RJ45 Ethernet and USB ruggedized field connectors
- Micro-D form-factor connector with VersaLink™ differential Twinax plus VersaLink™ Bridge
- High-Speed Micro-D high-density SWaP solution

**Signature High-Speed Connector Solutions** (continued)
- Octobyte™ industrial-strength Ethernet connectors

**Glenair Signature Butt-Joint Fiber Optic Interconnect Solutions**
- Rugged MIL-DTL-38999 type fiber optic
- Glenair High Density (GHD) rugged fiber optic
- Glenair Front Release (GFR) rugged fiber optic

**Signature Fiber Optic Solutions** (continued)
- Rugged MT Ferrule solutions for 38999 and Series 791
- Copper-to-fiber media converters for video applications
- Copper-to-fiber media converters for Ethernet applications

**Rugged High-Speed Electrical-Optical Media Converters**
- Rugged MT Ferrule solutions for 38999 and Series 791
- Copper-to-fiber media converters for video applications
- Copper-to-fiber media converters for Ethernet applications

**Rugged PCB-Mount Transceivers for Ethernet, High-Speed Video, and Storage**
- EMI shielded and radiation-tolerant transceivers
- Dual transceivers, quad transmitters, quad receivers
- Bi-directional transceivers
- Small form-factor, high-vibration, high-temperature tolerant

**Rf-over-fiber and High-Datarate Parallel Optical Transceivers**
- Rf-over-fiber low-noise PCB-mount transceiver
- Parallel optical 40 Gb/s PCB-mount transceivers
- Opto-electronic receptacle connectors populated with Size #8 Photonic transmitter and receiver contacts

**Size #8 Photonic Transmitter and Receiver Contacts for High-Speed Data**
- Rf-over-fiber low-noise PCB-mount transceiver
- Parallel optical 40 Gb/s PCB-mount transceivers
- Opto-electronic receptacle connectors populated with Size #8 Photonic transmitter and receiver contacts
High-speed octaxial contacts for Ethernet, SuperSpeed USB and multi-gigabit datalinks

High speed, harsh environment El Ochito® octaxial contacts save size and weight in aircraft avionics, weapons systems, satellites, radars, and communications equipment.

AVAILABLE SIGNATURE CONNECTOR PACKAGING INCLUDES

- SuperFly Nanominiature
- 806 Mil-Aero Micro miniature
- SuperNine “Better than QPL” 38999

- 10GbE, SuperSpeed USB, and multi-gigabit shielded pairs
- Universal drop-in for keyed size #8 connector cavities
- Data-pair isolation for optimal signal integrity
- Crimp or threaded shield termination contact types
- Snap-in, rear release
- Environmentally sealed
- Aerospace-grade cable assemblies
- 50% cable / contact reduction compared to QuadraX

El Ochito® Contacts

El Ochito® Type I Contacts, Non-Serviceable 10BASE-T, 100BASE-T

- Low-dielectric material, 90 ohms. El Ochito® White octaxial contacts provide an aerospace-grade solution for 100BASE-T solutions.
- 10GbE, SuperSpeed USB
- Low-dielectric material, 90 ohms. El Ochito® Blue octaxial contacts provide an aerospace-grade solution for SuperSpeed USB 3.0
- HDMI, DisplayPort, SATA
- El Ochito® Red octaxial contacts provide an aerospace-grade solution for multi-gigabit data rates.

El Ochito® Blue

El Ochito® Type II Contacts, Serviceable 26 AWG, Crimp Wire Shield Termination

- Low-dielectric material. Up to 5 Gbps. 100 ohms. El Ochito® Red octaxial contacts provide an aerospace-grade solution for multi-gigabit data rates.

El Ochito® Type II Contacts, Serviceable 24-26 AWG, Threaded Wire Shield Termination, Integral Contact Release Sleeve

- 50% cable / contact reduction compared to QuadraX

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# El Ochito® Contacts: How To Order

## High-Speed Octaxial Contacts

### Data Protocol: 10G Ethernet

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<thead>
<tr>
<th>Connector Type</th>
<th>Wire Size</th>
<th>Cable Type</th>
<th>El Ochito® Type I</th>
<th>El Ochito® Type II</th>
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### Data Protocol: HDMI/SATA/DisplayPort/General High-Speed

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<td>963-118</td>
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<td><strong>Series 23 SuperNine Series 801 and 805</strong></td>
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### Dimensions In Inches (millimeters)

Dimensions in inches (millimeters) are subject to change without notice.

**El Ochito® White Contacts**

- **Series 23 SuperNine Series 801 and 805 Mighty Mouse Series 28 HiPer-D**
- **Series 806**
- **EPX8**

**El Ochito® Blue and Red Contacts**

- **Series 792 and 806**
- **Series 23 SuperNine Series 801 and 805 Mighty Mouse Series 28 HiPer-D**
- **Series 806**
- **EPX8**

**El Ochito® Red Contacts**

- **Series 792 and 806**
- **Series 23 SuperNine Series 801 and 805 Mighty Mouse Series 28 HiPer-D**
- **Series 806**
- **EPX8**

*Omit F when using this cable*
SuperFly® Datalink

The high-speed nano miniature connector for harsh environments

High speed, harsh environment SuperFly® Datalink connectors—with shielded El Ochito® octaxial contacts for 10Gb Ethernet, SuperSpeed USB, and high datarate video display protocols—deliver outstanding signal integrity and save significant size and weight compared to Quadrax.

- Ultra-small size
- Shielded Octaxial contacts
- Up to 5 Gbps
- 10Gb Ethernet and SuperSpeed USB
- New Red insert for high-speed video, consult factory for layouts
- Environmentally protected
- Factory-terminated cables or discrete contacts and cables for customer assembly

Cable connectors feature gold-plated crimp contacts, precision insulators, integral backshell, sealing grommet and machined shells.

Quick Disconnect

Threaded Coupling

Straight PC Tails

Right Angle PC Tails

Push-Pull Quick-Disconnect

Latching EMI Springs

O-ring Interface Seal

BB2-001 Plug Connector

BB2-002 Receptacle Connector

Push-pull SuperFly Datalink receptacle connectors feature two canted coil springs for secure mating and excellent EMI protection. A fluorosilicone O-ring provides watertight sealing when mated.

Conformal-coating-compliant panel mount connectors
SuperFly Datalink Connectors, Octaxial, White

White dielectric indicates 100 ohm differential impedance for Ethernet protocols. Ideal for 10GBASE-T and 10GBASE-T applications in hostile environments with temperature extremes, high vibration, electromagnetic interference, as well as moisture exposure. Suitable for high performance aerospace grade Ethernet cable.

Quick Disconnect for 10Gb Ethernet

882-001 Cable Plug
Integral backshell and cable grommet. Supplied as unassembled kit for termination to Cat 6A Ethernet cable.

882-002 Cable Receptacle
Integral backshell and cable grommet. Supplied as unassembled kit for termination to Cat 6A Ethernet cable. Mates to 881-001.

882-005 Panel Receptacle, PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-001.

882-006 Panel Receptacle, 90° PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-001.

8571-0007 Cordset, Single-Ended
Pre-wired with aerospace-grade Cat 6A Ethernet cable. Cable has plug or receptacle on one end, other end is unterminated.

8571-0008 Cordset, Double-Ended
Pre-wired with aerospace-grade Cat 6A Ethernet cable. Cable has plug on one end and receptacle on the other end.

8571-0009 RJ45 Patchcord, Ground
Pre-wired with commercial-grade Cat 6A Ethernet cable. Cable has RJ45 plug on one end and plug or receptacle on the other end.

8571-0010 RJ45 Patchcord, Flight
Pre-wired with flight-grade Cat 6A Ethernet cable. Cable has RJ45 plug on one end and plug or receptacle on the other end.

8571-0012 Cordset, Single-Ended
Pre-wired with aerospace-grade Cat 6A Ethernet cable. Cable has plug or receptacle on one end, other end is unterminated.

8571-0013 Cordset, Double-Ended
Pre-wired with aerospace-grade Cat 6A Ethernet cable. Cable has plug on one end and receptacle on the other end.

8571-0015 RJ45 Patchcord, Ground
Pre-wired with commercial-grade Cat 6A Ethernet cable. Cable has RJ45 plug on one end and plug or receptacle on the other end.

8571-0016 RJ45 Patchcord, Flight
Pre-wired with flight-grade Cat 6A Ethernet cable. Cable has RJ45 plug on one end and plug or receptacle on the other end.

882-003 Cable Plug
Integral backshell and cable grommet. Supplied as unassembled kit for termination to Cat 6A Ethernet cable.

882-006 Cable Receptacle
Integral backshell and cable grommet. Supplied as unassembled kit for termination to Cat 6A Ethernet cable. Mates with 882-003.

882-004 Panel Receptacle, PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-003.

882-007 Panel Receptacle, 90° PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-003.

8571-0012 Cordset, Single-Ended
Pre-wired with aerospace-grade Cat 6A Ethernet cable. Cable has plug on one end and plug or receptacle on the other end.

8571-0013 Cordset, Double-Ended
Pre-wired with aerospace-grade Cat 6A Ethernet cable. Cable has plug on one end and receptacle on the other end.

8571-0015 RJ45 Patchcord, Ground
Pre-wired with commercial-grade Cat 6A Ethernet cable. Cable has RJ45 plug on one end and plug or receptacle on the other end.

8571-0016 RJ45 Patchcord, Flight
Pre-wired with flight-grade Cat 6A Ethernet cable. Cable has RJ45 plug on one end and plug or receptacle on the other end.

882-009 Cable Plug
Integral backshell and cable grommet. Supplied as unassembled kit for termination to USB 3.0 cable.

882-010 Cable Receptacle
Integral backshell and cable grommet. Supplied as unassembled kit for termination to USB 3.0 cable. Mates to 881-009.

882-013 Panel Receptacle, PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-009.

882-016 Panel Receptacle, 90° PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-009.

8572-0006 Cordset, Single-Ended
Pre-wired with aerospace-grade or commercial-grade USB 3.0 cable. Cable has plug or receptacle on one end, other end is unterminated.

8572-0007 Cordset, Double-Ended
Pre-wired with aerospace-grade or commercial-grade USB 3.0 cable. Cable has plug on one end and plug or receptacle on the other end.

8572-0008 Patchcord, USB
Pre-wired with commercial-grade USB 3.0 cable. Cable has standard USB connector on one end, other end is SuperFly Datalink.

8572-0010 Cordset, Single-Ended
Pre-wired with aerospace-grade or commercial-grade USB 3.0 cable. Cable has plug or receptacle on one end, other end is unterminated.

8572-0011 Cordset, Double-Ended
Pre-wired with aerospace-grade or commercial-grade USB 3.0 cable. Cable has plug on one end and receptacle on the other end.

8572-0013 Patchcord, USB
Pre-wired with commercial-grade USB 3.0 cable. Cable has standard USB connector on one end, other end is SuperFly Datalink.

882-011 Cable Plug
Integral backshell and cable grommet. Supplied as unassembled kit for termination to USB 3.0 cable.

882-014 Cable Receptacle
Integral backshell and cable grommet. Supplied as unassembled kit for termination to USB 3.0 cable. Mates with 888-011.

882-012 Panel Receptacle, PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-011.

882-015 Panel Receptacle, 90° PCB
Rear panel jam nut mount receptacle has O-ring seals and epoxy potting for watertight sealing. Mates with 882-011.

8572-0006 Cordset, Single-Ended
Pre-wired with aerospace-grade or commercial-grade USB 3.0 cable. Cable has plug or receptacle on one end, other end is unterminated.

8572-0007 Cordset, Double-Ended
Pre-wired with aerospace-grade or commercial-grade USB 3.0 cable. Cable has plug on one end and plug or receptacle on the other end.

8572-0008 Patchcord, USB
Pre-wired with commercial-grade USB 3.0 cable. Cable has standard USB connector on one end, other end is SuperFly Datalink.

963-033 S/FTP Cable
24 and 26 AWG. S/FTP construction, foil shielded data pairs. High performance shielded cable is A56070/H6 approved.

963-003 and 963-037 S/UTP Cable
24 and 26 AWG. S/UTP construction with fluoropolymer spline. Meets FAA flammability requirements.

963-110 Flight-Grade Cable
High temperature, high performance, fluoropolymer altenails, shielded. High speed pairs have braid shields. -65 to +200°C.

963-118 Commercial-Grade Cable
Black PVC jacket, foamed PE wire insulation. High speed pairs have foil shields. 0 to +80°C.
The Series 792 connector brings high-speed data-rate performance to the Glenair Series 79 rectangular family. Size 8 cavities accept standard Quadrax or El Ochito® shielded octaxial contacts making it a perfect choice for radars, weapons systems, mission computers and displays, communications gear, and more.

**El Ochito®**
- High-speed Ethernet, USB 3.0, HDMI, and DisplayPort
- PCB-mount and cable connectors
- Scoop-proof interface
- 12 arrangements and 6 shell sizes
- Precision-machined dual-lobe polarized shells
- Environmentally sealed
- Integrated EMI shielding and grounding
- Blind mating

**Insert Arrangements**

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<tr>
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<td>B-2G2*</td>
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* Grounded aluminum insert

**DESCRIPTION**
- **Operating temperature**: 45° to +70°C
- **Current rating**: 15 Amps (data link contacts), 5 Amps (size #23 contacts)
- **DWV (sea level)**: 750 VAC (size #23 contacts), 1000 VAC (data link contacts)
- **Insulation resistance**: 5000 MΩ minimum
- **Contact resistance**: 55 millivolt maximum
- **Shell-to-shell resistance**: 2.5 millivolt maximum
- **Shielding effectiveness**: 100 dB (100 MHz), 75 dB (1000 MHz), 50 dB (10000 MHz)
- **Ingress protection**: IP67 rating

**PROCEDURE / NOTES**
- **Shell-to-shell resistance**: EIA-364-81
- **Shielding effectiveness**: EIA-364-66
- **Ingress protection**: IEC-60529
HIGH-SPEED Interconnect Solutions
Dimensions in Inches (millimeters) are subject to change without notice.
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El Ochito®
Size #8
Octaxial
Contact Key

Size
#22HD

A
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16
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8
7
6
5
4
3
2
1

Insert Arrangement

10-1 14-20A 16-22

No. of Contacts
1x #8 1x #8 2x #8

El Ochito®
Size #8
Octaxial
Contact Key

Size
#22HD

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

Insert Arrangement

18-3 20-4 20-28

No. of Contacts
3x #8 4x #8 4x #8

El Ochito®
Size #8
Octaxial
Contact Key

Size
#22HD

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

Insert Arrangement

22-5 22-44 24-8

No. of Contacts
5x #8 4x #8 8x #8

El Ochito®
Size #8
Octaxial
Contact Key

Size
#22HD

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

Insert Arrangement

26-259

No. of Contacts
5x #8 10x #22HD

FEATURES
• High-speed Ethernet, USB 3.0, HDMI, and DisplayPort
• Next-generation small form factor aerospace-grade circular connector
• Upgraded environmental, electrical and mechanical performance
• Integrated anti-decoupling technology
• High-Speed El Ochito® and hybrid #22HD contact arrangements

SAVE SIZE AND WEIGHT WITH SERIES 806 CONNECTORS

Series 806 Mil-Aero Smallest Size .500 In. Mating Threads 3 #20 Contacts or 7 #22 contacts
MIL-DTL-38999 Smallest Size .625 In. Mating Threads 3 #20 Contacts or 6 #22 contacts

Innovative design meets key performance benchmarks for harsh vibration, shock, and environmental settings—as well as high-altitude, unpressurized aircraft zones with aggressive voltage ratings and altitude immersion standards.

CONNECTOR CONSTRUCTION
• Shell and coupling nut: aluminum or stainless steel
• Contacts: copper alloy, gold plating
• Wire grommet: fluorosilicone
• Dielectric inserts: high grade rigid dielectric
• Peripheral seal: fluorosilicone
• Grounding spring: copper alloy, nickel plating
• Contact retention clips: copper alloy
• Ratchet springs: stainless steel, passivated
• Retainer rings: stainless steel, passivated
• Clinch nuts: stainless steel, passivated

RECOMMENDED BACKSHELL
Swing-Arm 3-in-1 strain relief with cable bushing (consult factory)

HIGH-SPEED SERIES 806 Mil-Aero Micro Miniature Circular Connectors with El Ochito® octaxial contacts

Innovative design meets key performance benchmarks for harsh vibration, shock, and environmental settings—as well as high-altitude, unpressurized aircraft zones with aggressive voltage ratings and altitude immersion standards.

Series 806 Mil-Aero
Smallest Size .500 In. Mating Threads 3 #20 Contacts or 6 #22 contacts
MIL-DTL-38999

SAVE SIZE AND WEIGHT WITH SERIES 806 CONNECTORS

Series 806 Mil-Aero
Smallest Size .500 In. Mating Threads 3 #20 Contacts or 7 #22 contacts
MIL-DTL-38999

FEATURES
• High-speed Ethernet, USB 3.0, HDMI, and DisplayPort
• Next-generation small form factor aerospace-grade circular connector
• Upgraded environmental, electrical and mechanical performance
• Integrated anti-decoupling technology
• High-Speed El Ochito® and hybrid #22HD contact arrangements

HIGH-SPEED SERIES 806 Mil-Aero Micro Miniature Circular Connectors with El Ochito® octaxial contacts

Innovative design meets key performance benchmarks for harsh vibration, shock, and environmental settings—as well as high-altitude, unpressurized aircraft zones with aggressive voltage ratings and altitude immersion standards.

Series 806 Mil-Aero
Smallest Size .500 In. Mating Threads 3 #20 Contacts or 7 #22 contacts
MIL-DTL-38999

SAVE SIZE AND WEIGHT WITH SERIES 806 CONNECTORS

Series 806 Mil-Aero
Smallest Size .500 In. Mating Threads 3 #20 Contacts or 6 #22 contacts
MIL-DTL-38999

Innovative design meets key performance benchmarks for harsh vibration, shock, and environmental settings—as well as high-altitude, unpressurized aircraft zones with aggressive voltage ratings and altitude immersion standards.

Series 806 Mil-Aero
Smallest Size .500 In. Mating Threads 3 #20 Contacts or 7 #22 contacts
MIL-DTL-38999

SAVE SIZE AND WEIGHT WITH SERIES 806 CONNECTORS

Series 806 Mil-Aero
Smallest Size .500 In. Mating Threads 3 #20 Contacts or 6 #22 contacts
MIL-DTL-38999
## How To Order Series 806 El Ochito® Plugs

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>806-012 -ME</th>
<th>18-23</th>
<th>P</th>
<th>B</th>
<th>A</th>
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</thead>
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<tr>
<td>Product</td>
<td>806-012 = Cable Plug</td>
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<tr>
<td>Shell Material and Finish</td>
<td>ME = Aluminum, Electroless Nickel</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MT = Aluminum, Ni/PTFE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ZR = Aluminum, Black Zircon-Nickel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NF = Aluminum, Olive Drab Cadmium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z1 = Stainless Steel, Passivated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrangement Number</td>
<td>See Contact Arrangements Table</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shell Style</td>
<td>M = Metric accessory threads</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B = Nano Band platform</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>P = Pin, S = Socket</td>
<td></td>
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<tr>
<td>Polarizing Position</td>
<td>ABCDEF</td>
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## How To Order Series 806 El Ochito® Square Flange Receptacles

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>806-013 -MT</th>
<th>18-21</th>
<th>P</th>
<th>B</th>
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</thead>
<tbody>
<tr>
<td>Product</td>
<td>806-013 = Panel Receptacle, Square Flange, Crimp</td>
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<tr>
<td>Shell Material and Finish</td>
<td>ME = Aluminum, Electroless Nickel</td>
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<tr>
<td></td>
<td>MT = Aluminum, Ni/PTFE</td>
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<td></td>
</tr>
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<td></td>
<td>ZR = Aluminum, Black Zircon-Nickel</td>
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<td></td>
<td>NF = Aluminum, Olive Drab Cadmium</td>
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<tr>
<td></td>
<td>Z1 = Stainless Steel, Passivated</td>
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<td>Arrangement Number</td>
<td>See Contact Arrangements Table</td>
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<td>M = Metric accessory threads</td>
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<tr>
<td></td>
<td>B = Nano Band platform</td>
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</tr>
<tr>
<td>Mounting Hole Style</td>
<td>T = Thru-holes</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>C = Clinch nut, 44-46 (rear panel mounting)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>P = Pin, S = Socket</td>
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<td></td>
</tr>
<tr>
<td>Polarizing Position</td>
<td>ABCDEF</td>
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</tbody>
</table>

## Table VI - El Ochito Contact Positions

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<thead>
<tr>
<th>Sym</th>
<th>El Ochito Contact Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B = Blue, R = Red, W = White</td>
</tr>
<tr>
<td>B</td>
<td>C = Common Ground</td>
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<tr>
<td>C</td>
<td>E = Ground Option</td>
</tr>
<tr>
<td>D</td>
<td>F = Contact Arrangement Number</td>
</tr>
<tr>
<td>E</td>
<td>G = Panel Mount</td>
</tr>
<tr>
<td>F</td>
<td>T = Thru-Hole</td>
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## How To Order Series 806 El Ochito® In-Line Receptacles

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<thead>
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<th>Sample Part Number</th>
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<tr>
<td>Product</td>
<td>806-019 = In-Line Receptacle</td>
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<tr>
<td>Shell Material and Finish</td>
<td>ME = Aluminum, Electroless Nickel</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>MT = Aluminum, Ni/PTFE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ZR = Aluminum, Black Zircon-Nickel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NF = Aluminum, Olive Drab Cadmium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z1 = Stainless Steel, Passivated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrangement Number</td>
<td>See Contact Arrangements Table</td>
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</tr>
<tr>
<td>Shell Style</td>
<td>M = Metric accessory threads</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B = Nano Band platform</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>P = Pin, S = Socket</td>
<td></td>
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<tr>
<td>Polarizing Position</td>
<td>ABCDEF</td>
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## How To Order Series 806 El Ochito® Jam Nut Receptacles

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<th>Sample Part Number</th>
<th>806-020 -MT</th>
<th>18-21</th>
<th>P</th>
<th>B</th>
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</thead>
<tbody>
<tr>
<td>Product</td>
<td>806-020 = Jam Nut Receptacle</td>
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</tr>
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<td>Shell Material and Finish</td>
<td>ME = Aluminum, Electroless Nickel</td>
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</tr>
<tr>
<td></td>
<td>MT = Aluminum, Ni/PTFE</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>ZR = Aluminum, Black Zircon-Nickel</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>Z1 = Stainless Steel, Passivated</td>
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<td></td>
</tr>
<tr>
<td>Shell Style</td>
<td>M = Metric accessory threads</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B = Nano Band platform</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P = Pin, S = Socket</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Polarizing Position</td>
<td>ABCDEF</td>
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</table>

## How To Order Series 806 El Ochito® PCB Receptacles

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>806-039 -MT</th>
<th>14</th>
<th>E</th>
<th>~18-21</th>
<th>P</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>806-039 = Jam Nut</td>
<td></td>
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</tr>
<tr>
<td>Shell Material and Finish</td>
<td>ME = Aluminum, Electroless Nickel</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>MT = Aluminum, Ni/PTFE</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>ZR = Aluminum, Black Zircon-Nickel</td>
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<tr>
<td></td>
<td>NF = Aluminum, Olive Drab Cadmium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z1 = Stainless Steel, Passivated</td>
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</tr>
<tr>
<td>Shell Size</td>
<td>14, 18, 18, 20, 22, 24</td>
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<tr>
<td>Contact Type</td>
<td>See Table VI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Option</td>
<td>G = Common Ground</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Arrangement Number</td>
<td>D = Contact Arrangement Number</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Panel Mount</td>
<td>T = Thru-Hole</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Thru-Hole Style</td>
<td>C = Clinch Nut for Rear Panel Mount</td>
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<tr>
<td>Offset for 806-019 Jam Nut</td>
<td>Omit for 806-019 Jam Nut</td>
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</tr>
<tr>
<td>P = Pin, S = Socket</td>
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<td>Polarizing Position</td>
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</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 Dimensions in Inches (millimeters) are subject to change without notice.
**SuperNine® high-speed connectors with special inserts to accommodate El Ochito® octaxial contacts**

- Toolled and ready-to-ship high-speed and hybrid insert arrangement connectors for size #8 El Ochito shielded contacts. Arrangements for #8, #12, and #16 Coax, Twinox, and Quadrax also available.
- Supported applications: 10/100/1G/10G BASE-T Ethernet, HDMI, DisplayPort, SATA, USB 3.0, 1553 databus and general RF or differential data transmission

### EL OCHITO CONTACT REFERENCE GUIDE

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>White, Type I</th>
<th>White, Type II</th>
<th>Blue, Type I</th>
<th>Red, Type I</th>
<th>Socket</th>
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<tbody>
<tr>
<td>Pin</td>
<td>818-003</td>
<td>819-003</td>
<td>818-028</td>
<td>818-060-01</td>
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<tr>
<td>Socket</td>
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<td>819-006</td>
<td>818-029</td>
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### RECOMMENDED BACKSHELL

**Series 37 Aluminum Backshell for SuperNine plug and receptacle connectors. Straight, 45°, and 90° configurations available.**

### HOW TO ORDER SUPERNINE® HIGH-SPEED Connectors with El Ochito® contacts

**Sample Part Number**

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<thead>
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<th>Connector Style</th>
<th>Material/Finish</th>
<th>Connector Style</th>
<th>Ground Option</th>
<th>Insert Arrangement</th>
<th>Optional Mod Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>233-217</td>
<td>NF</td>
<td>G6</td>
<td>G</td>
<td>--</td>
<td>909EP</td>
</tr>
<tr>
<td>233-218</td>
<td>MT</td>
<td>ME</td>
<td>G</td>
<td>--</td>
<td>909XX</td>
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</table>

**How To Order SuperNine® High-Speed Connectors with El Ochito® contacts**

**Sample Part Number**

<table>
<thead>
<tr>
<th>Connector Style</th>
<th>Material/Finish</th>
<th>Connector Style</th>
<th>Ground Option</th>
<th>Insert Arrangement</th>
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</tr>
</thead>
<tbody>
<tr>
<td>233-217</td>
<td>NF</td>
<td>G6</td>
<td>G</td>
<td>--</td>
<td>909EP</td>
</tr>
<tr>
<td>233-218</td>
<td>MT</td>
<td>ME</td>
<td>G</td>
<td>--</td>
<td>909XX</td>
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</table>

**How To Order SuperNine® High-Speed Quick-Disconnect Connectors with El Ochito® contacts**

**Sample Part Number**

<table>
<thead>
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<th>Connector Style</th>
<th>Material/Finish</th>
<th>Connector Style</th>
<th>Ground Option</th>
<th>Insert Arrangement</th>
<th>Optional Mod Code</th>
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</thead>
<tbody>
<tr>
<td>233-217</td>
<td>NF</td>
<td>G6</td>
<td>G</td>
<td>--</td>
<td>909EP</td>
</tr>
<tr>
<td>233-218</td>
<td>MT</td>
<td>ME</td>
<td>G</td>
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<td>909XX</td>
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</table>

**How To Order SuperNine® High-Speed PC Tail Standoff Receptacles with El Ochito® contacts**

**Sample Part Number**

<table>
<thead>
<tr>
<th>Connector Style</th>
<th>Material/Finish</th>
<th>Connector Style</th>
<th>Ground Option</th>
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<td>233-218</td>
<td>MT</td>
<td>ME</td>
<td>G</td>
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**How To Order SuperNine® High-Speed Wall Mount Recectacles with El Ochito® contacts**

**Sample Part Number**

<table>
<thead>
<tr>
<th>Connector Style</th>
<th>Material/Finish</th>
<th>Connector Style</th>
<th>Ground Option</th>
<th>Insert Arrangement</th>
<th>Optional Mod Code</th>
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</thead>
<tbody>
<tr>
<td>233-217</td>
<td>NF</td>
<td>G6</td>
<td>G</td>
<td>--</td>
<td>909EP</td>
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<tr>
<td>233-218</td>
<td>MT</td>
<td>ME</td>
<td>G</td>
<td>--</td>
<td>909XX</td>
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</tbody>
</table>
SERIES 23
SuperNine® High-speed connectors
High-speed size #8 and hybrid insert arrangements
(note: size #8 cavities keyed for contact polarization)

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement

<table>
<thead>
<tr>
<th>No. of Contacts</th>
<th>Insert Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x #8</td>
<td>1G-5</td>
</tr>
<tr>
<td>1x #8</td>
<td>11-1</td>
</tr>
<tr>
<td>1x #8</td>
<td>13-14</td>
</tr>
<tr>
<td>1x #8</td>
<td>17-2</td>
</tr>
</tbody>
</table>

*Only available with ground plane option

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement

<table>
<thead>
<tr>
<th>No. of Contacts</th>
<th>Insert Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x #8</td>
<td>11-22</td>
</tr>
<tr>
<td>2x #12</td>
<td>17-60</td>
</tr>
<tr>
<td>8x #22</td>
<td>17-75</td>
</tr>
</tbody>
</table>

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement

<table>
<thead>
<tr>
<th>No. of Contacts</th>
<th>Insert Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x #8</td>
<td>19-4</td>
</tr>
<tr>
<td>4x #8</td>
<td>19-17</td>
</tr>
<tr>
<td>4x #20</td>
<td>19-38</td>
</tr>
</tbody>
</table>

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement

<table>
<thead>
<tr>
<th>No. of Contacts</th>
<th>Insert Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x #8</td>
<td>25-7</td>
</tr>
<tr>
<td>4x #8</td>
<td>25-9</td>
</tr>
<tr>
<td>4x #8</td>
<td>25-17</td>
</tr>
</tbody>
</table>

Insert Arrangement 25-7 25-9 25-17

No. of Contacts and Size
2x #8 19x #22 8x #8 6x #8 20x #22

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement

<table>
<thead>
<tr>
<th>No. of Contacts</th>
<th>Insert Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3x #8</td>
<td>25-20</td>
</tr>
<tr>
<td>4x #12</td>
<td>10x #16</td>
</tr>
<tr>
<td>4x #8</td>
<td>10x #20</td>
</tr>
<tr>
<td>5x #12</td>
<td>16x #20</td>
</tr>
</tbody>
</table>

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement

<table>
<thead>
<tr>
<th>No. of Contacts</th>
<th>Insert Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3x #8</td>
<td>25-41</td>
</tr>
<tr>
<td>2x #12</td>
<td>11x #15</td>
</tr>
<tr>
<td>22x #22D</td>
<td>2x #8</td>
</tr>
<tr>
<td>4x #16</td>
<td>40x #20</td>
</tr>
</tbody>
</table>

Contact Legend
#23  #22D  #16  #20  #12  #8

Insert Arrangement 25-41 25-46

No. of Contacts and Size
3x #8 2x #12 11x #15 3x #20 22x #22D 2x #8 4x #16 40x #20

Dimensions in Inches (millimeters) are subject to change without notice.
SpeedMaster™ is a dedicated contact module and insert package for SuperNine®, Mighty Mouse, and HiPer-D connectors. Optimized for high-speed Cat 6A Ethernet, the SpeedMaster™ 10G system offers industry-leading NEXT, return loss and insertion loss performance:

- Utilizes aerospace industry standard #22D contacts, tools, and widely available Ethernet flight cable
- Significant weight reduction compared to Quadrax solutions (reduces cable requirement by half)

**SpeedMaster SuperNine**

“better than QPL “ connectors

**SpeedMaster Mighty Mouse**

Locking Push/Pull Connectors

**SpeedMaster HiPer-D Rectangular**

(M24308 intermountable)

**SpeedMaster™ High-Speed 10G Connection System**

for Glenair SuperNine, Mighty Mouse, and HiPer-D connectors

The SpeedMaster Difference

SpeedMaster, the high-speed multi-contact solution for the Mighty Mouse, HiPer-D and SuperNine 38999 type family of connectors. Each SpeedMaster module consists of 4 pairs of pins or sockets incorporating industry standard size 22D contacts to provide 10G performance. Each module is individually shielded within the shell, and retained in place with a threaded ferrule. Additionally, module cavities are genderless allowing pin or socket interface for plugs or receptacles. Glenair offers these SpeedMaster contacts in 3 connector packages, including our small form factor Mighty Mouse Series 824 Locking Push/Pull, HiPer-D (M24308) hi-performance rectangular D-Sub, and our 38999 type “better than QPL” connectors allowing you to adapt and fit your application needs. These features result in a two fold benefit. An easily removable and repairable, shielded high performance contact packaged within robust industry standard connectors, helping to reduce network downtime and providing a connectorized solution to improve the overall network function and performance. Meet the demand for the next generation Cat 6A networks with SpeedMaster, the next generation contact system from Glenair.

### Cable Size

<table>
<thead>
<tr>
<th>Cable Size</th>
<th>Cable Diameter (mm)</th>
<th>Assembly Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.80</td>
<td>240-00 S/FTP</td>
</tr>
<tr>
<td>2</td>
<td>2.80</td>
<td>240-00 S/FTP</td>
</tr>
<tr>
<td>3</td>
<td>2.80</td>
<td>240-00 S/FTP</td>
</tr>
<tr>
<td>4</td>
<td>2.80</td>
<td>240-00 S/FTP</td>
</tr>
</tbody>
</table>

### SpeedMaster™ High-Speed Cable

<table>
<thead>
<tr>
<th>Cable P/N</th>
<th>Cabinet Category</th>
<th>Cable Construction</th>
<th>Wire Gauge</th>
<th>Cable Diameter (mm)</th>
<th>Assembly Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>963-063-24 Cat 6A</td>
<td>S/FTP</td>
<td>240-00 S/FTP</td>
<td>240-00</td>
<td>220</td>
<td>A18502B</td>
</tr>
<tr>
<td>963-063-26 Cat 6A</td>
<td>S/FTP</td>
<td>240-00 S/FTP</td>
<td>240-00</td>
<td>220</td>
<td>A18502B</td>
</tr>
<tr>
<td>963-063-24 Cat 6A</td>
<td>S/FTP</td>
<td>240-00 S/FTP</td>
<td>240-00</td>
<td>220</td>
<td>A18502B</td>
</tr>
<tr>
<td>963-063-26 Cat 6A</td>
<td>S/FTP</td>
<td>240-00 S/FTP</td>
<td>240-00</td>
<td>220</td>
<td>A18502B</td>
</tr>
</tbody>
</table>
Pre-wired SpeedMaster assemblies are 100% tested and ready for use. Compatible with Glenair Series 80 Mighty Mouse, Series 28 HiPer-D or Series 23 SuperNine connectors with keyed size #8 cavities, these assemblies are available with three termination options: single-ended, SpeedMaster contacts on both ends, or with an RJ45 plug on one end. Contacts are wired per the guidelines of ARINC 664 Part 2 Appendix N.

### Connector Compatibility
- Glenair 233-219, 233-220 SuperNine
- 858-100, 858-101 SpeedMaster

### Contact Positions
- Mating Face of Pin Contacts
- Mating Face of Socket Contacts

#### 8575-0001 SPEEDMASTER™ WIRING DIAGRAMS

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8575-0001-A -C -1 -12</td>
<td>End A Contact Type</td>
</tr>
<tr>
<td>End B Contact/Connector</td>
<td></td>
</tr>
<tr>
<td>Cable Option</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td></td>
</tr>
</tbody>
</table>

**OVERALL LENGTH**

END P1: TOLERANCE: UP TO 60 INCHES: +1.80/-0.00 (0.0)

OVER 60 INCHES: +3%/-0%

END P2: Pin Contact Option A

Socket Contact Option B

RJ45 Contact Option C

#### Specifications
- Operating temperature: -65°C to +200°C (SpeedMaster) or -40°C to +85°C (RJ45); cable dependent.
- Meets EIA/TIA 568C.2-1 and IEC 60063-7-51 Cat 6A 500 MHz.
- Characteristic Impedance: 100 ohms.
- Insulation resistance: 200 megoohms.
- Durability: 500 mating cycles.

### MIGHTY MOUSE 824 LOCKING PUSH-PULL
- Quick-disconnect coupling
- Audible, visual, and tactile full-mate indicators
- Optimized for SpeedMaster contact modules

#### Available connector configurations
- 824-009-06 Plug
- 824-010-01 In-line Receptacle
- 824-010-00 Front Panel Mount, Jam Nut Receptacle
- 824-010-07 Rear Panel Mount, Jam Nut Receptacle

#### HIPER-D M24308 INTERMOUNTABLE
- Advanced temperature, vibration and EMC/electrical performance
- Rugged machined one-piece shell

#### Series 28 In-Line Connectors
- 280-101M Plug
- 280-099F Receptacle

#### Series 28 Rear Panel Mount Connectors
- 280-102M Plug
- 280-099F Receptacle

#### Series 28 Float Mount Connectors
- 280-103M Plug
- 280-100F Receptacle

#### SUPERNINE D38999 SERIES III TYPE
- Advanced performance, “better than QPL” D38999 Series III type bodies and shells
- Optimized for SpeedMaster contact modules

#### RECOMMENDED BACKSHELL
- 377NS119 Aluminum Alloy Backshell
The faster ruggedized 4/8 pole interconnect system for Ethernet data applications

Octabyte™
The faster ruggedized Ethernet interconnect solution

Octabyte® contacts for Ethernet CAT 5 · CAT 6 · CAT 7 · COAX · MVB-WBT

**How To Order Octobyte contacts**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>How To Order Octobyte contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Series</td>
<td>Octobyte contacts</td>
</tr>
<tr>
<td>Contact Size</td>
<td>0 = contact size 0</td>
</tr>
<tr>
<td>Number of Contacts</td>
<td>8 = 8 poles 4 = 4 poles 2 = 2 poles</td>
</tr>
<tr>
<td>Contact Gender</td>
<td>M = Male  F = Female</td>
</tr>
<tr>
<td>Cable OD Range/Coax Cable Type</td>
<td>A = 0.062-0.067 B = O.D. 7-8 C = O.D. 8-9</td>
</tr>
<tr>
<td>Plating</td>
<td>G1 = gold plating</td>
</tr>
<tr>
<td>Alternative Color</td>
<td>Cat 7A only</td>
</tr>
<tr>
<td>Ethernet</td>
<td>7A = Cat 7A AD = Ethernet MVB-WBT Contacts Omiv for standard</td>
</tr>
</tbody>
</table>

Rugged environmental performance — the perfect Octobyte packaging solution

**Series ITH Connectors for Octobyte Contacts**

- **For** harsh-environment transit, industrial, or marine/subsea applications
- **RF** Coax applications (RG58 and RG59U cables)
- **High-speed interconnect solution** for audio, video, and digital displays
- **Qualified for use** in safety systems, sensors, detection devices, and control panels
- **Tested in accordance with**:
  - ISO F0 STP: CAT 7A
  - ENS0173-1 F600-STP: CAT 7
  - ENS0173-1 D STP: CAT 5E

**For** Ethernet 7A = Cat 7A AD = Ethernet MVB-WBT Contacts Omiv for standard

- **Rugged MIL-DTL-5015 type design** with fast reverse bayonet coupling
- **Rigid dielectric inserts** with contact retention clips
- **Positive lock technology** provides reliable vibration and shock resistance
- **Proven performance in** even the most rugged applications
- **Conforms to the European VG 95234 standard**, French (NFF 61030) and British (BS 6853) electrical standards and EEC compliance directives
- **Threaded coupling version** available, contact factory for ordering information

**Tested for compliance** IAW ENS0173-1 standards for CAT5E and CAT7.

**Ethernet-ready Octobyte solutions** for rail and transit applications are available as discrete contacts, packaged in rugged reverse-bayonet ITH series connectors, or as turnkey inside-the-box or environmental cable assemblies, tested and ready for immediate use.

- **Available** flap-lid protective cover
- **RadGrip** rubber-covered coupling nuts available in a wide range of colors including safety red

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OCTOBYTE™
The faster ruggedized Ethernet interconnect solution

How to order - Super ITS-ITH Octobyte connectors

**SUPER ITS - ITH OCTOBYTE CONNECTORS**

Precision machined connectors with 4/8 pole Octobyte contacts provide high-speed Ethernet connectivity for extreme environmental exposure and corrosion resistance typically needed in rail, mining, and other industrial applications. Convenient reverse bayonet mating provides easy intermateability while the locking three pin bayonet coupler prevents the connector from demating under high shock and high vibration conditions. Accessory thread for attachment of backshells and adapters.

**FRONT VIEW RECEPTACLE CONNECTORS**

<table>
<thead>
<tr>
<th>Sample Part Number:</th>
<th>ITH</th>
<th>030</th>
<th>A</th>
<th>SC</th>
<th>32-Q4</th>
<th>S</th>
<th>B0</th>
<th>N0</th>
<th>F6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>ITH</td>
<td>030</td>
<td>Rear Panel Mount Wall Mount Receptacle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Size</td>
<td>06</td>
<td>Straight Plug</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>R</td>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Keys</td>
<td>SC</td>
<td>5 keys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insert Arrangements</td>
<td>18-Q1, 32-Q4, 36-Q5, 40-Q7</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Gender</td>
<td>P</td>
<td>Pin contacts (male)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector less contact</td>
<td>B0</td>
<td>contact not supplied (order the contact separately)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessory</td>
<td>N0</td>
<td>without Backshell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plating</td>
<td>F6</td>
<td>Electrodeposited black paint (cataphoresis), RoHS compliant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F7</td>
<td>Black Zinc Nickel, RoHS compliant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How To Order**

**SERIES ITS - ITH OCTOBYTE CONNECTORS**

Precision machined connectors with 4/8 pole Octobyte, high-speed Ethernet contacts and power contacts provide both network connectivity and power distribution in one connector. Designed for extreme environmental exposure and corrosion resistance typically needed in rail, mining, and other industrial applications. Convenient reverse bayonet mating provides easy intermateability while the locking three pin bayonet coupler prevents the connector from demating under high shock and high vibration conditions. Accessory thread for attachment of backshells and adapters.

**FRONT VIEW PLUG CONNECTORS**

<table>
<thead>
<tr>
<th>Sample Part Number:</th>
<th>ITH</th>
<th>030</th>
<th>A</th>
<th>SC</th>
<th>28-0B4</th>
<th>S</th>
<th>B0</th>
<th>N0</th>
<th>F6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>ITH</td>
<td>030</td>
<td>Rear Panel Mount Wall Mount Receptacle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Size</td>
<td>06</td>
<td>Straight Plug</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>R</td>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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<td>Number of Keys</td>
<td>SC</td>
<td>5 keys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insert Arrangements</td>
<td>28-0B4, 36-0B7</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Contact Gender</td>
<td>P</td>
<td>Pin contacts (male)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector less contact</td>
<td>B0</td>
<td>contact not supplied (order the contact separately)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessory</td>
<td>N0</td>
<td>without Backshell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plating</td>
<td>F6</td>
<td>Electrodeposited black paint (cataphoresis), RoHS compliant</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>F7</td>
<td>Black Zinc Nickel, RoHS compliant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Military-grade, ruggedized field connectors that deliver improved environmental sealing, EMI/RFI grounding, and a broader range of wire termination options for RJ45 and USB—now for SuperSpeed 3.0

- New SuperSpeed USB 3.0 protocol support
- Superior sealing—IP67 unmated—for complete system protection against water, sand and dust
- Highly durable SuperSeal™ insert design, provides enhanced operating temperature, increased life-cycle, and rugged vibration and shock performance
- Crimp, solder-cup, PC tail and cable assemblies

Available ruggedized memory stick 32GB, 64GB, and 128GB versions
SuperSeal High-Speed Ruggedized RJ45/USB connectors and cables

Available connector packaging

**AVAILABLE TERMINATION OPTIONS**

- Solder Cup
- PC tail
- Crimp Contact
- Jack-to-Jack
- EMI Filtered
- Quadra
- MIL-STD-1560 Arrangements
- Turnkey Cordsets

**SuperSeal™ MIL-DTL-38999 Series III Type RJ45 Connectors and Cordsets plus NEW Transient Voltage Suppression Solutions**

**SuperSeal™ MIL-DTL-Series 39999 Series III Type USB 2.0 Connectors and Cordsets**

**ITS SuperSeal™ (5015 Intermountable) Reverse-Bayonet RJ45 Connectors**

**ITS SuperSeal™ (5015 Intermountable) Reverse-Bayonet USB 2.0 Connectors**

---

**SuperSeal High-Speed Ruggedized RJ45/USB connectors and cables**

Available connector packaging

- IPT SuperSeal™ MIL-DTL-26482 Type Bayonet RJ45 Connectors
- IPT SuperSeal™ MIL-DTL-26482 Type Bayonet USB Connectors

**SuperSeal™ MIL-DTL-28840 Type RJ12/RJ45 and USB Shipboard Connectors**

**SuperSeal™ Series 801, 804 and 805 Mighty Mouse Micro USB 2.0 Connectors**

**SuperSeal™ Series 801, 804 and 805 Mighty Mouse RJ45 Connectors**

**SuperSeal™ Series 801, 804 and 805 Mighty Mouse Standard USB 2.0 Connectors**

---

Dimensions in Inches (millimeters) are subject to change without notice.
Innovative differential Twinax contact technology in ruggedized, high-density mil-spec connector packaging

High-speed serial data protocols (USB 3.1 Gen2, USB-C, SATA, PCIe, DisplayPort, and HDMI) all have transmission rates in the 10Gb/s+ range for each data pair. In order to provide truly high-speed signal integrity for these bandwidth-dependent protocols, Glenair has invented a new contact technology called Versalink™ which delivers outstanding impedance matching and cross-talk isolation at both the cable-to-connector interface, as well as between connector and board. VersaLink is a highly-engineered differential Twinax contact module that may be packaged in a wide range of both circular and rectangular connector formats such as the MIL-DTL-83513 Micro-D. This high-density package solution provides mating reliability, ruggedness, signal integrity, and deployment simplicity.

Data-intensive servers, computers and peripheral devices in mission-critical applications require a new generation of shielded contact technology and tried-and-true connector package performance. Both are exquisitely realized in the Versalink Micro-D.

VersaLink: shielded differential Twinax interconnect solution

Signature Glenair design intermountable in standard Micro-D footprints

Higher speed and density than mil-spec style Twinax solutions

Individually shielded pairs result in virtually zero cross talk

Hybrid arrangements with VersaLink contact modules and standard Micro-D inserts for signal and power

EMI SHIELDING AND ENVIRONMENTAL SEALING

Plug connectors feature a gold-plated stainless steel ground spring for EMI protection, and a silicone gasket for environmental sealing.

CONTACT ARRANGEMENTS

VersaLink Micro-D contact arrangements face view pin connector (ref. GHS4-M-1000)

PERFORMANCE SPECIFICATIONS

Current Rating: 3 Amp (Micro-D pins)

Dew Point (Contact M): 600 VAC Sea Level

Insulation Resistance (Contact M): 32 Megohms Minimum

Contact Resistance (Contact M): 8 Megohms Maximum

Low Level Contact Resistance: 3.2 Megohms Maximum

Operating Temperature: -55°C To 125°C

Mating Force (Contact V): (5 Ounces) X (# Of Contacts)

Mating Force (Contact M): (10 Ounces) X (# Of Contacts)

Insulation Resistance (Contact M): 5000 Megohms Minimum

Contact Resistance (Contact V): 8 Milliohms Maximum

Features:
- 10Gb Ethernet
- 40Gb Ethernet
- DisplayPort 1.2
- SATA 3 (Serial AT Attachment)
- DVI
- HDMI 2.0 (High-Definition Multimedia Interface)
- USB 3.1 Type C (Universal Serial Bus)
- PCIe 3 (Peripheral Component Interconnect)
- Ultra Miniature Micro-D Connectors with High-Speed VersaLink Contact Technology

Glenair, Inc. • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324 • High-Speed Interconnect Solutions
How To Order VersaLink Micro-D Wired Connectors

Sample Part Number: GHS4-M

- **Series:** GHS4-M – Glenair VersaLink Micro-D
- **Shell Finish:**
  - 2 = Nickel
  - 3 = Gold
- **Insulator Material:**
  - 1 = LCP or PPS
- **Contact Layout (V-M):**
  - 1: P = Pin (Single-End Plug)
  - 2 = Socket (Single-End Receptacle)
  - 6 = Double-Ended Cable, Pin Connectors Both Ends
  - 7 = Double-Ended Cable, Socket Connectors Both Ends
  - 8 = Double-Ended Cable, Pin and Socket
- **Contact Type:**
  - 1 = Pin (Plug)
  - 3 = Socket (Receptacle)
- **Discrete Wire Color:**
  - 1
- **Discrete Wire Type:**
  - K
- **Discrete Wire Gage (AWG):**
  - 4
- **VersaLink Cable Type:**
  - B = Glenair Cable 963-043-26 (100 Ghz, +105°C Max)
- **Hardware:**
  - 1 = Hardware is always required to ensure connector pair is fully mated when installed
- **Wire Length:**
  - 6 Inch Minimum
- **PC Board, straight and right-angle: 2-9, 3-9, 4-0, 8-9, 2-15, 4-15
  - 0 = #24
  - 5 = #22
  - 6 = #20
  - 8 = #18
  - 10 = #16
- **PC Tail Length:**
  - .080
  - .110 (Length in Inches ±.015)
- **Threaded Insert Option:**
  - T = Threaded Insert in Board-Mount Hole
- **Terminate Type:**
  - BS = Board Straight
  - BR = Board Right Angle
- **Hardware:**
  - 1 = Hardware is always required to ensure connector pair is fully mated when installed
- **PC Tails solder-dipped:**
  - 60/40 Tin-Lead solder

---

How To Order VersaLink Micro-D Right-Angle Board-Mount Connectors

Sample Part Number: GVLM

- **Series:**
  - 2 = Nickel
  - 3 = Gold
- **Insulator Material:**
  - 1 = LCP or PPS
- **Contact Layout (V-M):**
  - 1: P = Pin (Plug)
  - 3 = Socket (Receptacle)
- **Contact Type:**
  - 1 = Pin (Plug)
  - 3 = Socket (Receptacle)
- **Discrete Wire Color:**
  - 1
- **Discrete Wire Type:**
  - K
- **Discrete Wire Gage (AWG):**
  - 4
- **VersaLink Cable Type:**
  - B = Glenair VersaLink Micro-D
- **Hardware:**
  - 1 = Hardware is always required to ensure connector pair is fully mated when installed
- **PC Tails solder-dipped:**
  - 60/40 Tin-Lead solder

---

How To Order VersaLink Micro-D Straight Board-Mount Connectors

Sample Part Number: GVLM

- **Series:**
  - 2 = Nickel
  - 3 = Gold
- **Insulator Material:**
  - 1 = LCP or PPS
- **Contact Layout (V-M):**
  - 1: P = Pin (Plug)
  - 3 = Socket (Receptacle)
- **Contact Type:**
  - 1 = Pin (Plug)
  - 3 = Socket (Receptacle)
- **Discrete Wire Color:**
  - 1
- **Discrete Wire Type:**
  - K
- **Discrete Wire Gage (AWG):**
  - 4
- **VersaLink Cable Type:**
  - B = Glenair VersaLink Micro-D
- **Hardware:**
  - 1 = Hardware is always required to ensure connector pair is fully mated when installed
- **PC Tails solder-dipped:**
  - 60/40 Tin-Lead solder

---

For optimal performance, reference Glenair Application note AN0005.
VersaLink Bridge: bypass high-loss board traces with a low insertion-loss and low signal-latency point-to-point Twinax jumper

**VERSALINK BRIDGE FEATURES**
- Small footprint, high-density solution
- Versatile solder-mount or screw-mount board termination
- 100 Ohm differential Twinax
- Push-pull mating or bayonet-lock for high vibration and shock applications
- Keyed polarization prevents mis-mating
- Low insertion loss and low signal latencies for high datarate board transmissions

**AVAILABLE CONFIGURATIONS: QUICK-DISCONNECT**
- Quick-disconnect plug
- QDC Jack board pin straight screw mount
- QDC Jack board pin straight solder mount
- QDC Jack board pin right-angle screw mount
- QDC Jack board pin right-angle solder mount

**AVAILABLE CONFIGURATIONS: BAYONET-LOCK**
- Bayonet-lock plug
- Bayonet-lock Jack board pin straight screw mount
- Bayonet-lock Jack board pin straight solder mount
- Bayonet-lock Jack board pin right-angle screw mount

**RECOMMENDED CABLES FOR PLUG CONNECTORS**

<table>
<thead>
<tr>
<th>Cable P/N</th>
<th>Cable Construction</th>
<th>Wire Gauge</th>
<th>Impedance</th>
<th>Max. Overall Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>963-043-26</td>
<td>Twinax In-Line</td>
<td>26</td>
<td>100 Ω</td>
<td>.125” X .076”</td>
</tr>
</tbody>
</table>

**MATERIALS AND FINISHES**
- Contacts: Copper alloy / gold
- Insulators: Superior rigid dielectric
- Body: Copper alloy / gold
- Ferrules (plugs): Copper alloy / electroless nickel
- Spring (plugs): Music wire

**ELECTRICAL PARAMETERS**
- Impedance: 100 Ohms
- DWV: 500 RMS
- IR: 5000 Megaohms min. at 200 VDC

**VERSALINK BRIDGE FEATURES**
- Small footprint, high-density solution
- Versatile solder-mount or screw-mount board termination
- 100 Ohm differential Twinax
- Push-pull mating or bayonet-lock for high vibration and shock applications
- Keyed polarization prevents mis-mating
- Low insertion loss and low signal latencies for high datarate board transmissions

**VersaLink Bridge components may be ordered separately or as turnkey point-to-point cordsets, consult factory.**
HIGH-SPEED VersaLink™ Bridge
QDC Differential Twinax “bypass” connectors

How To Order VersaLink Bridge Quick-Disconnect Plug Connectors

Sample Part Number 853-051
Series 853-051 VersaLink Bridge Plug socket QDC connector

Mounting Style
1 = Solder Mount  2 = Screw Mount

PC Tail Finish
S = Solder dipped in 63/37 Tin/Lead  G = Gold Plated

PC Tail Length -.140, -.110, -.080 (length in inches)

How To Order VersaLink Bridge Bayonet-Lock Differential Twinax “bypass” connectors

How To Order VersaLink Bridge Bayonet-Lock Plug Connectors

Sample Part Number 853-064
Series 853-064 VersaLink Bridge Plug socket bayonet connector

Mounting Style
1 = Solder Mount  2 = Screw Mount

PC Tail Finish
S = Solder dipped in 63/37 Tin/Lead  G = Gold Plated

PC Tail Length -.140, -.110, -.080 (length in inches)

How To Order VersaLink Bridge Bayonet-Lock Straight Board Connectors

Sample Part Number 853-065
Series 853-065 VersaLink Bridge Bayonet-lock straight board pin connector

PC Tail Finish
S = Solder dipped in 63/37 Tin/Lead  G = Gold Plated

PC Tail Length -.140, -.110, -.080 (length in inches)
Micro-D High-speed Micro-D connector and contact packaging

The miniature high-speed connector with mil-spec pedigree

- Pre-wired factory cordsets and PCB connectors
- Unique contact isolation and spacing for optimal high-speed performance
- Standard layouts support maximum #28 AWG wire
- Ultra-low dielectric material combined with optimized contact size and spacing
- Precision-machined shells with gold or nickel plating
- Hybrid contact solutions available with 3 amp and 1 amp TwistPin contacts (perfect for USB 3.0 SuperSpeed applications)

**SUPPORTED HIGH-SPEED PROTOCOLS**

<table>
<thead>
<tr>
<th>Shell Sizes and contact arrangements optimized for today’s popular high-speed protocols</th>
</tr>
</thead>
</table>

**MATERIALS AND FINISHES**

- Connector Shell: Aluminum Alloy 6061
- Insulator: Polyphenylene Sulfide (PPS)
- Flange Seal: Fluorosilicone Rubber, Blue
- Pin Contact: Copper Alloy, Gold over Nickel Plating
- Socket Contact: Copper Alloy, Gold over Nickel Plating
- Ground Spring: Stainless Steel, Gold Plating
- Hardware: 300 Series Stainless Steel, Passivated
- Epoxy Resin: Hysol EE4215 and Stycast 2850FT/Catalyst 11

**PERFORMANCE SPECIFICATIONS**

- Current Rating: 1 Amp*
- DWV: 600 VAC, Sea Level
- Insulation Resistance: 5000 Megohms Minimum (500 VDC)
- Contact Resistance: 80 Milliohms Maximum
- Operating Temperature: -55°C To 125°C
- Matting Force: (7 Ounces) X (# of 1 Amp Contacts)**
- Durability: 500 Mating Cycles

*Contact factory for custom configurations supporting up to 3 Amps.

**Add (10 Ounces) X (# of 3 Amp Contacts) for mating force for configurations with 3 Amp contacts.
### How To Order High-Speed Micro-D Wired Connectors

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSM</th>
<th>2</th>
<th>R</th>
<th>-31</th>
<th>P</th>
<th>-A</th>
<th>8</th>
<th>J</th>
<th>1</th>
<th>-18</th>
<th>L</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong> GHSM = Glenair High-Speed Micro-D</td>
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<tr>
<td><strong>Shell Finish</strong> 2 = Nickel 5 = Gold</td>
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<tr>
<td><strong>Insulator Material</strong> S = PPS</td>
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<tr>
<td><strong>Contact Layout</strong> 9, 15, 21, 23, 31, 37, 51-2, 67</td>
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<tr>
<td><strong>Contact Type</strong> P = Pin (Single-End Plug) S = Socket (Single-End Receptacle) GP = Double-End Cable, Pin Connectors Both Ends GS = Double-End Cable, Socket Connectors Both Ends</td>
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<tr>
<td><strong>High Speed Cable Type</strong> B = Glenair Cable 963-129-28 (100 Ohm)</td>
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<tr>
<td><strong>Discrete Wire Gage (AWG)</strong> F - #30, G - #28 (Wire Type only)</td>
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<tr>
<td><strong>Discrete Wire Color</strong> L = White 7 = Ten Color Repeating</td>
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<tr>
<td><strong>Discrete Wire Type</strong> 2 = M22759/11 600 VRMS Teflon (TFE) 7 = M22759/13 600 VRMS Modified Cross Linked Tefzel (TFE)</td>
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<tr>
<td><strong>Discrete Wire Length</strong> Wire Length in Inches, 6 Inch Minimum</td>
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<tr>
<td><strong>Mounting Hardware</strong> M, P, S (See Mounting Hardware Designations table below)</td>
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</tr>
<tr>
<td><strong>Shield and Jacket Option</strong> X = ArmorLite Braided Microfilament Stainless Steel shield with E-CTFE Halar “Expando” Jacket</td>
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<tr>
<td><strong>Mounting Hardware Designations</strong> P = Jackpost M = Hex Head Jackscrew S = Slot Head Jackscrew</td>
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</tbody>
</table>

1. Hardware is always required to ensure connector pair is fully mated when installed

### How To Order High-Speed Micro-D Board Straight Surface Mount Connectors

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSM</th>
<th>2</th>
<th>R</th>
<th>-31</th>
<th>S</th>
<th>BSS</th>
<th>PU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong> GHSM = Glenair High-Speed Micro-D</td>
<td></td>
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<tr>
<td><strong>Shell Finish</strong> 2 = Nickel 5 = Gold</td>
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</tr>
<tr>
<td><strong>Insulator Material</strong> S = PPS</td>
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</tr>
<tr>
<td><strong>Contact Layout</strong> 9, 15, 21, 23, 31, 37, 51-2, 67</td>
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<tr>
<td><strong>Contact Type</strong> P = Pin (Plug)  S = Socket (Receptacle)</td>
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</tr>
<tr>
<td><strong>Termination Type</strong> BSS = Board Straight Surface Mount</td>
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</tr>
<tr>
<td><strong>Jackpost Option</strong> (see table below) PU = Short Jackpost and Threaded Insert</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jackpost Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>PN = Extended Jackpost for .062” PCB</td>
</tr>
<tr>
<td>RN = Extended Jackpost for .196” PCB</td>
</tr>
<tr>
<td>PU = Short Jackpost and Threaded Insert</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hardware Designations</th>
</tr>
</thead>
<tbody>
<tr>
<td>P = Jackpost M = Hex Head Jackscrew S = Slot Head Jackscrew</td>
</tr>
</tbody>
</table>

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Dimensions in Inches (millimeters) are subject to change without notice.
## How To Order High-Speed Micro-D Wired Connectors

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSM 2 R -31 P -A 8 J 1 -18 R3 N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>GHSRPM = Glenair High-Speed Micro-D, Rear Panel Mount</td>
</tr>
<tr>
<td>Shell Finish</td>
<td>2 = Nickel S = Gold</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>8 = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 33, 37, 51, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>High Speed Cable Type</td>
<td>A = Glenair Cable 963-043-26 (100 Ohm, -105°C Max) B = Glenair Cable 963-129-28 (90 Ohm)</td>
</tr>
<tr>
<td>Discrete Wire Gage (AWG)</td>
<td>B = #28 0 = #30 (Wire Type only)</td>
</tr>
<tr>
<td>Discrete Wire Type</td>
<td>B = M22759/11 600 VRMS Teflon (TFE) J = M22780/33 600 VRMS Modified Cross-Linked Tefzel (ETFE)</td>
</tr>
<tr>
<td>Discrete Wire Color</td>
<td>T = White 7 = Ten Color Repeating</td>
</tr>
<tr>
<td>Wire Length</td>
<td>Wire Length in Inches, 6 Inch Minimum</td>
</tr>
<tr>
<td>O-Ring Material</td>
<td>C = Conductive N = Non-Conductive (Nitrile)</td>
</tr>
</tbody>
</table>

## How To Order High-Speed Micro-D Hybrid Board Right Angle Connectors

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSM 2 R -25 S HBR P T -110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>GHSRPM = Glenair High-Speed Micro-D</td>
</tr>
<tr>
<td>Shell Finish</td>
<td>2 = Nickel S = Gold</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>8 = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 33, 37, 51, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>HBR = Hybrid Board Right Angle</td>
</tr>
<tr>
<td>Jackpost Option</td>
<td>L = Hex Head Jackscrew (non-removable) R = Jackpost</td>
</tr>
<tr>
<td>Threaded Insert Option</td>
<td>T = Threaded Insert in Board Mounting Hole</td>
</tr>
</tbody>
</table>
**HIGH-SPEED Micro-D**

**How-to-order**

**GHSRPM-BSS Rear-Panel Board Straight Surface Mount connectors**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSRPM-BSS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td>GHSRPM</td>
</tr>
<tr>
<td>Shell Finish</td>
<td>2 = Nickel</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>S = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 23, 31, 37, 51-2, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>R = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 23, 31, 37, 51-2, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>R = PPS</td>
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<td>Contact Layout</td>
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<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
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<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
</tbody>
</table>

**How To Order High-Speed Micro-D Board Straight Surface Mount Connectors**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSRPM-BSS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td>GHSRPM</td>
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<tr>
<td>Shell Finish</td>
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<td>Rear Panel Mount</td>
<td>Hardware Option</td>
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<tr>
<td>Insulator Material</td>
<td>R = PPS</td>
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<tr>
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<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
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</tbody>
</table>

**HIGH-SPEED Micro-D**

**How-to-order**

**GHSRPM-HBR Rear-Panel Hybrid Board Right-Angle Connectors**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSRPM-HBR</th>
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</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td>GHSRPM-HBR</td>
</tr>
<tr>
<td>Shell Finish</td>
<td>2 = Nickel</td>
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<td>Insulator Material</td>
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<td>Contact Layout</td>
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<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
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<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>R = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 23, 31, 37, 51-2, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
</tbody>
</table>

**How To Order High-Speed Micro-D Hybrid Board Right Angle Connectors**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>GHSRPM-HBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td>GHSRPM-HBR</td>
</tr>
<tr>
<td>Shell Finish</td>
<td>2 = Nickel</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>S = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 23, 31, 37, 51-2, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
<tr>
<td>Insulator Material</td>
<td>R = PPS</td>
</tr>
<tr>
<td>Contact Layout</td>
<td>9, 15, 21, 23, 31, 37, 51-2, 67</td>
</tr>
<tr>
<td>Contact Type</td>
<td>P = Pin (Plug) S = Socket (Receptacle)</td>
</tr>
<tr>
<td>Termination Type</td>
<td>E = End Cap</td>
</tr>
<tr>
<td>Rear Panel Mount</td>
<td>Hardware Option</td>
</tr>
</tbody>
</table>

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Dimensions in Inches (millimeters) are subject to change without notice.

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Dimensions in Inches (millimeters) are subject to change without notice.
SuperNine®
Tight-Tolerance
MIL-DTL-38999 Sr. III
Fiber Optic Connection System

The high-performance fiber optic interconnect system successfully deployed in hundreds of commercial and military aerospace and other applications—from F-16 upgrade systems to the revolutionary F-35 Joint Strike Fighter

- Composite, aluminum and stainless steel shells available
- Qualified size #16 MIL-PRF-29504 precision ceramic termini
- Singlemode and multimode fiber, from 9/125 to 1000 microns
- Ultra-low insertion loss values, <.50dB typical
- From 2 to 37 Termini Plug and In-Line, Jam Nut and Square Flange Receptacles
- Patented MIL-DTL-38999 fiber optic test probes and adapters

Terminated and tested point-to-point and multibranch D38999 type fiber optic cable assemblies

Glenair M29504/4 and /5 QPL termini are in stock and ready for immediate, same-day shipment

MIL-DTL-38999 type fiber optic connection system termination, inspection, test, and cleaning tools are available now from Glenair. We also offer comprehensive F/O training services for assembly and maintenance technicians.

Glenair optical fiber test probes and connector adapters provide accurate and repeatable testing of MIL-DTL-38999 F/O assemblies

A complete range of metal and composite backshells and protective covers is available.

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A complete range of metal and composite backshells and protective covers is available.
### SUPERNINE FIBER OPTIC CONNECTORS

#### M29504/04 TYPE, STYLE 1 PIN AND SOCKET TERMINI FOR MIL-DTL-38999 SERIES III

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Fiber Size Gage/Cladding/Coating (Microns)</th>
<th>Ø A (Microns)</th>
<th>Ref. M29504/04-XXXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>181-00X-523</td>
<td>9/125 (Singlemode)</td>
<td>125.0</td>
<td>M29504/04-4008</td>
</tr>
<tr>
<td>181-00X-531</td>
<td>9/125 (Singlemode)</td>
<td>126.0</td>
<td>M29504/04-4030</td>
</tr>
<tr>
<td>181-00X-537</td>
<td>50/125 &amp; 62.5/125</td>
<td>127.0</td>
<td>M29504/04-4040</td>
</tr>
<tr>
<td>181-00X-542</td>
<td>100/140</td>
<td>142.0</td>
<td>M29504/04-4080</td>
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<tr>
<td>181-00X-544</td>
<td>100/140</td>
<td>144.0</td>
<td>N/A</td>
</tr>
<tr>
<td>181-00X-545</td>
<td>100/140</td>
<td>145.0</td>
<td>M29504/04-4044</td>
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<tr>
<td>181-00X-556</td>
<td>62.5/125/125 (Polyimide)</td>
<td>156.0</td>
<td>M29504/04-4041</td>
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<tr>
<td>181-00X-557</td>
<td>62.5/125/125 (Polyimide)</td>
<td>157.0</td>
<td>M29504/04-4042</td>
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<tr>
<td>181-00X-573</td>
<td>100/140/175</td>
<td>175.0</td>
<td>M29504/04-4097</td>
</tr>
<tr>
<td>181-00X-575</td>
<td>100/140/175</td>
<td>175.0</td>
<td>M29504/04-4093</td>
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<tr>
<td>181-00X-581</td>
<td>200/250</td>
<td>231.0</td>
<td>N/A</td>
</tr>
<tr>
<td>181-00X-586</td>
<td>200/250</td>
<td>236.0</td>
<td>N/A</td>
</tr>
<tr>
<td>181-00X-588</td>
<td>400/448</td>
<td>448.0</td>
<td>N/A</td>
</tr>
<tr>
<td>181-00X-593</td>
<td>486/500</td>
<td>531.0</td>
<td>N/A</td>
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</tbody>
</table>

#### SuperNine® MIL-DTL-38999 Series III Type

**How to order Connectors**

<table>
<thead>
<tr>
<th>Part number development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Part Number</td>
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<tr>
<td>180-091</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Series / Basic Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D38999 Series III Type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material/Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Material/Finish Table</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Connector Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 = Jam Nut Receptacle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shell Size/Insert Arr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IW MIL-DTL-38999 Series III, Per MIL-STD-1560</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insert Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>P = Pin</td>
</tr>
<tr>
<td>S = Socket</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternate Key Position*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, C, D, E, N = Normal, Per MIL-DTL-38999</td>
</tr>
</tbody>
</table>

**How to order Terminals and Connectors**

<table>
<thead>
<tr>
<th>Series / Basic Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D38999 Series III Type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material/Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Material/Finish Table</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connector Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>05 = Wall Mount Receptacle with Slotted Holes (Std)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shell Size/Insert Arr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IW MIL-DTL-38999 Series III, Per MIL-STD-1560</td>
</tr>
</tbody>
</table>

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>P = Pin</td>
</tr>
<tr>
<td>S = Socket</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternate Key Position*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, C, D, E, N = Normal, Per MIL-DTL-38999</td>
</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 Dimensions in Inches (millimeters) are subject to change without notice.
Glenair High Density (GHD): nearly double the density of standard mil-spec fiber optic designs

- Innovative #18 (1.25mm ferrule) front-release genderless termini accommodate 900µ to 2.0mm jacketed fiber
- M85045/16 cable accommodation
- Composite, aluminum or stainless steel shells
- Single keying for APC polish available
- Better optical performance than D38999 with nearly double the density
- Precision alignment sleeve retainer with integrated guide pins
- Piston o-ring sealing—submersible design

The system of choice for military and commercial air, space and other applications: Outstanding optical and environmental performance with nearly double the density of standard mil-spec fiber optic designs

**Glenair High Density (GHD) Insert arrangements**

**Fiber Optic Pin Termini Specifications**

<table>
<thead>
<tr>
<th>Assembly Dash Number</th>
<th>Fiber Size Core/Cgaard</th>
<th>A Dia. (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>181-047-0200C</td>
<td>6/125 (Singlemode)</td>
<td>126.0</td>
</tr>
<tr>
<td>181-047-0600C</td>
<td>50/125, 62.5/125</td>
<td>127.0</td>
</tr>
<tr>
<td>181-047-0200C</td>
<td>100/140</td>
<td>142.0</td>
</tr>
<tr>
<td>181-047-0600C</td>
<td>100/140</td>
<td>142.0</td>
</tr>
<tr>
<td>181-047-0200C</td>
<td>100/150</td>
<td>155.0</td>
</tr>
<tr>
<td>181-047-0600C</td>
<td>100/150</td>
<td>155.0</td>
</tr>
<tr>
<td>181-047-0200C</td>
<td>100/172 (Polyimide)</td>
<td>172.0</td>
</tr>
<tr>
<td>181-047-0600C</td>
<td>100/172 (Polyimide)</td>
<td>172.0</td>
</tr>
<tr>
<td>181-047-2300C</td>
<td>200/235</td>
<td>236.0</td>
</tr>
<tr>
<td>181-047-2800C</td>
<td>200/280</td>
<td>286.0</td>
</tr>
</tbody>
</table>

**GHD Fiber Optic Part Number Reference**

<table>
<thead>
<tr>
<th>Glenair Dwg. Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>181-047</td>
<td>#18 Pin Terminus, Keyed for APC Polish</td>
</tr>
<tr>
<td>181-050</td>
<td>#18 Dummy Terminus</td>
</tr>
<tr>
<td>181-122</td>
<td>In-Line Receptacle Connector</td>
</tr>
<tr>
<td>181-122</td>
<td>Plug Connector with Alignment Sleeve Retainer</td>
</tr>
<tr>
<td>181-122</td>
<td>Dome Receptacle Connector</td>
</tr>
<tr>
<td>181-122</td>
<td>Square Flange Receptacle with Round Holes</td>
</tr>
<tr>
<td>181-122</td>
<td>Square Flange Receptacle with Stotted Holes</td>
</tr>
</tbody>
</table>

**Pin Density Comparison:**

- **Glenair High Density Versus D38999 and M28876**

**Glenair High Density (GHD) Features**

- Innovative #18 (1.25mm ferrule) front-release genderless termini accommodate 900µ to 2.0mm jacketed fiber
- M85045/16 cable accommodation
- Composite, aluminum or stainless steel shells
- Single keying for APC polish available
- Better optical performance than D38999 with nearly double the density
- Precision alignment sleeve retainer with integrated guide pins
- Piston o-ring sealing—submersible design

**GHD Insert Arrangements**

**Plug face marking with removable alignment sleeve retainer (ASR) shown. Receptacle face opposite. ASR includes two guide pins and a threaded center jack screw.**

**Glenair High Density (GHD) fiber optic conduit assembly**
How to order connectors

Signature HD fiber optic connection system

Sample Part Number

Part Number Development

Glenair High Density Fiber Optic Connector

Material/Finish

See Material/Finish Table

Connector Style

NF = In-Line Receptacle

Shell Size/Insert Arr.


Alternate Key Position* A, B, C, D, E, N = Normal

O-Ring Option

C = Conductor O-Ring

Omit = Standard O-Ring

Dimensions in Inches (millimeters) are subject to change without notice.
The unique design of the Glenair Front Release system allows for rapid integration of optical media in a broad range of cylindrical and rectangular connector packages. By placing retention and environmental sealing components directly on the termini, Glenair is able to fabricate unique fiber optic connector shell packages without costly tooling and engineering.

- Precision size 16 pin-socket front release termini with integrated retention clip
- Singlemode and multimode for all popular fiber sizes
- Typical insertion loss less than 0.5 dB
- Cylindrical and rectangular connectors
- Connector shells available in aluminum and stainless steel

Glenair Front Release (GFR) fiber optic connection systems perform at insertion loss levels equivalent to other high-performance, tactical fiber optic systems such as M29504 termini used in D38999 and M28876 connectors. The GFR system enables Glenair to integrate optical media in Micro-D and D-Subminiature shells as well as micro miniature circular packaging. Contact the factory for availability and application engineering assistance for both standard and custom fiber optic connection systems.

### How To Order Glenair Front Release Micro Miniature Circular Connectors

**GFR Micro Miniature Circular Connector**

<table>
<thead>
<tr>
<th>Shell Size</th>
<th>Shell Size/Insert Arr</th>
<th>Contact Type</th>
<th>Connector Style</th>
<th>Key Polarization</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>9-4</td>
<td>Pin Terminals</td>
<td>04-Jam Nut or 9-2 Configuration only</td>
<td>A, B, C, D (see Table)</td>
</tr>
<tr>
<td>M</td>
<td>6-12</td>
<td>S- Socked Terminals</td>
<td>08-Jam Nut Receptacle</td>
<td>A, B, C, D (see Table)</td>
</tr>
<tr>
<td>ZN</td>
<td>13-8, 16-12</td>
<td></td>
<td>07-Wall Mount Receptacle</td>
<td>A, B, C, D (see Table)</td>
</tr>
<tr>
<td>ZNU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contact the Factory**

Contact the factory for circular connectors requiring enhanced vibration and mechanical shock performance.
How to order GFR Termini

**Glenair Front Release (GFR)**

**How to order GFR Termini**

**PIN TERMINI**
- Single O-Ring Design (Standard)
- Dual O-Ring Design

**SOCKET TERMINI**
- Single O-Ring Design (Standard)
- Dual O-Ring Design

**DUMMY TERMINUS**
- Size #16 Dummy Terminus

**How To Order GFR Fiber Optic Termini**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>181-011</th>
<th>181-012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dash No.</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Ferrule Hole Ø</td>
<td>9.5/25 μm</td>
<td>9/125 μm</td>
</tr>
<tr>
<td>Typical Fiber Type</td>
<td>Single Mode</td>
<td>Single Mode</td>
</tr>
<tr>
<td>Typical Fiber Size core/cladding/coating</td>
<td>9/125 μm</td>
<td>9/125 μm</td>
</tr>
</tbody>
</table>

**TERMINI MATERIAL AND FINISH**
- Ferrule: Zirconia Ceramic
- Alignment Sleeve (socket): Zirconia Ceramic or Stainless Steel/Passivate
- Protective Cover (socket): BeCu Alloy/Nickel
- Body: Stainless Steel/Passivate
- Spring (pin): Stainless Steel/Passivate
- Bushing (pin): Stainless Steel/Passivate
- Retention Clip: BeCu Alloy
- O-Rings (cavity): Fluorosilicone
- Crimp Sleeve: Brass Alloy/Nickel

**NOTES**
Crimp sleeves are supplied with terminus assemblies. Spares may be ordered separately. See Glenair GAP-031 and GAP-031B for termination and assembly tools/procedures.

<table>
<thead>
<tr>
<th>Table II: Tools and Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>162-0055</td>
</tr>
<tr>
<td>162-005P</td>
</tr>
<tr>
<td>162-012</td>
</tr>
<tr>
<td>162-013</td>
</tr>
<tr>
<td>162-014</td>
</tr>
<tr>
<td>162-015</td>
</tr>
<tr>
<td>162-016</td>
</tr>
<tr>
<td>181-071-S</td>
</tr>
<tr>
<td>205-002</td>
</tr>
</tbody>
</table>

**How To Order GFR Micro-D and D-Subminiature Connectors**

**D-Subminiature Connectors**
- 180-064 Plug
- 180-065 Receptacle

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>180-064</th>
<th>180-065</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell Size</td>
<td>9 (4 termini max)</td>
<td>18 (4 termini max)</td>
</tr>
<tr>
<td>No. of Termini</td>
<td>18 (4 termini max)</td>
<td>18 (4 termini max)</td>
</tr>
<tr>
<td>Material / Finish</td>
<td>Aluminum Alloy</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**How To Order GFR D-Subminiature Connectors**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>180-066</th>
<th>180-067</th>
</tr>
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<tbody>
<tr>
<td>Shell Size</td>
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<td>18 (4 termini max)</td>
</tr>
<tr>
<td>No. of Termini</td>
<td>18 (4 termini max)</td>
<td>18 (4 termini max)</td>
</tr>
<tr>
<td>Material / Finish</td>
<td>Aluminum Alloy</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**Avoid damage! Consult the factory for mating / unmating instructions**
Rugged high-density MT Ferrule fiber optic connection system—with mil-grade SuperNine® or Series 791 packaging

SuperNine with MT
Ruggedized “better than QPL” SuperNine® MIL-DTL-38999 Series III type interconnect packaging
- Singlemode and multimode fiber
- Low insertion loss
- Environmental sealing: IP67 mated, IP68 available at interface
- RoHS-compliant finishes available
- MT ferrules sold separately
- MT assembly tool, P/N 182-062 also available and sold separately

MT Ferrule
Signature fiber optic connection system:
SuperNine D38999 and Series 791 Rectangular

Shell Size 11
Insert Arrangement -1
Up to 24 fibers (1 MT ferrule)

Shell Size 13
Insert Arrangement -2
Up to 48 fibers (2 MT ferrules)

Shell Size 15
Insert Arrangement -3
Up to 72 fibers (3 MT ferrules)

Shell Size 17
Insert Arrangement -4
Up to 96 fibers (4 MT ferrules)

SERIES 791 WITH MT
Series 791 MT fiber optic connector is the world’s smallest ruggedized MT connector solution with robust resistance to vibration and shock. Series 79 MT delivers superior low insertion-loss performance (up to 500 mating cycles) compared to commercial solutions. Connectors are supplied in single (consult factory for dual and quad) MT configurations with retaining plate and optional banding porch on plugs, and ultra low-profile retaining plate on receptacles.

SERIES 791 PRECISION-MACHINED SPACE-GRADE MT FERRULE-EQUIPPED CONNECTORS
- Ruggedized small form-factor, high-density MT fiber optic solution
- Temperature tolerance from -40°C to +85°C
- Optimized for use with parallel optic transceivers in ribbon or round cable applications
- Low insertion loss performance in high vibration and shock environments
How to order connectors

**SuperNine MT Fiber Optic Connectors**

**SERIES 183-001**

### How to order connectors

**MT Ferrule Fiber Optic Connectors**

**SERIES 183-001**

#### Sample Part Number

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>MT Ferrule Fiber Optic Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>183-001 ME G8 17-4</td>
<td>S N</td>
</tr>
</tbody>
</table>

**Basic Part Number**

MT Ferrule Fiber Optic Connector

**Material/Finish Code**

See Table I

**Connector Style**

G8 = Plug with EMI/RFI ground spring

**Shell Size / Insert Arrangement**

11-1, 13-2, 15-3, 17-4

**Insert Designator**

S = Socket insert (plug only)

**Alternate Key Position**

A, B, C, D, E, N = Normal (per MIL-DTL-38999)

---

### Table I - Material and Finish

<table>
<thead>
<tr>
<th>Code</th>
<th>Material</th>
<th>Finish Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME</td>
<td>Aluminum Alloy</td>
<td>Electrolites Nickel</td>
</tr>
<tr>
<td>MT</td>
<td>Nickel-PTFE, Grey</td>
<td></td>
</tr>
<tr>
<td>MF</td>
<td>Cadmium, Olive Drab</td>
<td></td>
</tr>
<tr>
<td>ZR</td>
<td>Zinc-Nickel, Black</td>
<td></td>
</tr>
<tr>
<td>XM</td>
<td>Composite</td>
<td>Electroless Nickel</td>
</tr>
<tr>
<td>XW</td>
<td>Cadmium, Olive Drab</td>
<td></td>
</tr>
<tr>
<td>Z1</td>
<td>Stainless Steel</td>
<td>Passivate</td>
</tr>
<tr>
<td>ZL</td>
<td>Stainless Steel</td>
<td>Electro-Deposited Nickel</td>
</tr>
</tbody>
</table>

---

### Boot: TPE

- Stainless Steel
- Aluminum Alloy
- Nickel-PTFE, Grey
- Cadmium, Olive Drab
- Composite
- Stainless Steel Passivate
- Electro-Deposited Nickel

---

**How To Order MT Ferrules**

**Sample Part Number**

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>MT Ferrule Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>181-108</td>
<td>ME G8 17-4 P N</td>
</tr>
</tbody>
</table>

**Basic Part Number**

MT Ferrule kit

**Fiber Type**

- 1253 = Singlemode
- 126 = Multimode

**Number of Fibers**

- 12 (12 fibers, available in singlemode and multimode)
- 24 (24 fibers, available in multimode only)

**Ferrule Style**

- S = Female (Plug Only)
- P = Male (Receptacle Only)

**Material/Finish**

- Ferrule: Polyphenylene Sulfide Resin
- Spacer, Female: High-grade engineering plastic
- Spring: Stainless Steel
- Boot: TPE

---

### SuperNine MT Wall-Mount Receptacle, Standard Holes

**SERIES 183-001**

#### Sample Part Number

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>MT Ferrule Fiber Optic Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>183-001 ME H7 17-4</td>
<td>P N</td>
</tr>
</tbody>
</table>

**Basic Part Number**

MT Ferrule Fiber Optic Connector

**Material/Finish Code**

See Table I

**Connector Style**

H7 = Wall-mount receptacle with round holes

**Shell Size / Insert Arrangement**

11-1, 13-2, 15-3, 17-4

**Insert Designator**

P = Pin insert (receptacle only)

**Alternate Key Position**

A, B, C, D, E, N = Normal (per MIL-DTL-38999)

---

### SuperNine MT Wall-Mount Receptacle, Slotted Holes

**SERIES 183-001**

#### Sample Part Number

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>MT Ferrule Fiber Optic Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>183-001 ME S7 17-4</td>
<td>P N</td>
</tr>
</tbody>
</table>

**Basic Part Number**

MT Ferrule Fiber Optic Connector

**Material/Finish Code**

See Table I

**Connector Style**

S7 = Wall-mount receptacle with slotted holes

**Shell Size / Insert Arrangement**

11-1, 13-2, 15-3, 17-4

**Insert Designator**

P = Pin insert (receptacle only)

**Alternate Key Position**

A, B, C, D, E, N = Normal (per MIL-DTL-38999)

---

### SuperNine MT Wall-Mount Receptacle, Slotted Holes

**SERIES 183-001**

#### Sample Part Number

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>MT Ferrule Fiber Optic Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>183-001 ME Z1 17-4</td>
<td>P N</td>
</tr>
</tbody>
</table>

**Basic Part Number**

MT Ferrule Fiber Optic Connector

**Material/Finish Code**

See Table I

**Connector Style**

Z1 = Wall-mount receptacle with round holes

**Shell Size / Insert Arrangement**

11-1, 13-2, 15-3, 17-4

**Insert Designator**

P = Pin insert (receptacle only)

**Alternate Key Position**

A, B, C, D, E, N = Normal (per MIL-DTL-38999)

---

### Table I - Material and Finish

<table>
<thead>
<tr>
<th>Code</th>
<th>Material</th>
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<tr>
<td>ME</td>
<td>Aluminum Alloy</td>
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<tr>
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<td>Nickel-PTFE, Grey</td>
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<td>ZR</td>
<td>Zinc-Nickel, Black</td>
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<tr>
<td>XM</td>
<td>Composite</td>
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<td>Cadmium, Olive Drab</td>
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<td>Stainless Steel</td>
<td>Passivate</td>
</tr>
<tr>
<td>ZL</td>
<td>Stainless Steel</td>
<td>Electro-Deposited Nickel</td>
</tr>
</tbody>
</table>

---

**Dimensions in Inches (millimeters) are subject to change without notice.**
RUGGEDIZED PCB-MOUNT PHOTOCONICS

Ruggedized high-density, high signal integrity optical transceiver modules—up to 25Gbps per channel

Glenair PCB mount transceiver modules are ruggedized harsh-environment equivalents to SFP transceivers but with mechanical design suited to the harsh temperature and vibration environments found in free space, satellite, RF and other military and aerospace applications. Selected components have been subjected to Gamma, proton, and heavy ion radiation testing (consult factory).

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.

Parallel Optic Transceivers • RF-Over-Fiber Transceivers

PARALLEL OPTIC TRANSCIEVERS

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
- Compatible with MTP optical connector
- Supports 12-fiber ribbon cable
- SiGe and GaAs optoelectronic ICs
- Hermetic opto-electronic hybrid
- Radiation tolerant (consult factory), smallest footprint available
- Jet fighter and space launch shock and vibration tested
- No soldering required
- CML 100 Ohm differential input and output
- -40°C to +85°C operating temperature range

Convection cooling (left) and conduction cooling (right) designs as well as custom heat dissipation designs are available. 050-346 parallel optical transceiver, 4x10 – 14 Gbps 0500-3007 parallel optical transceiver, 0.1 – 25 Gbps

RF-OVER-FIBER TRANSCIEVERS

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 embodied inside-the-box or incorporated into standalone copper-to-fiber media converters for environmental applications.

- 4 x 14 to 4 x 25 Gbps per fiber
- Up to 100 Gbps
- Conduction-cooling for space applications
- 46 Grms, 650G shock
- -40°C to +85°C case temp
- Heavy ion radiation-tested

Convection cooling (left) and conduction cooling (right) designs as well as custom heat dissipation designs are available. 050-346 parallel optical transceiver, 4x10 – 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

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
- Parallel optical transceivers
- Small form-factor, high-vibration, high-temperature tolerant
- Radiation tolerant (consult factory), smallest footprint available
- Jet fighter and space launch shock and vibration tested
- No soldering required
- CML 100 Ohm differential input and output
- -40°C to +85°C operating temperature range

PARALLEL OPTICS PCB-MOUNT Transceivers and Compatible High-Density MT Fiber Optic Connectors

Parallel Optic Transceivers • RF-Over-Fiber Transceivers

PARALLEL OPTIC TRANSCIEVERS

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.

050-346 parallel optical transceiver, 4x10 – 14 Gbps 0500-3007 parallel optical transceiver, 0.1 – 25 Gbps

PARALLEL OPTIC TRANSCIEVERS

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
- Compatible with MTP optical connector
- Supports 12-fiber ribbon cable
- SiGe and GaAs optoelectronic ICs
- Hermetic opto-electronic hybrid
- Radiation tolerant (consult factory), smallest footprint available
- Jet fighter and space launch shock and vibration tested
- No soldering required
- CML 100 Ohm differential input and output
- -40°C to +85°C operating temperature range

Convection cooling (left) and conduction cooling (right) designs as well as custom heat dissipation designs are available. 050-346 parallel optical transceiver, 4x10 – 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 TRANSCIEVERS

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 embodied inside-the-box or incorporated into standalone copper-to-fiber media converters for environmental applications.

- 2MHz – 3.5 GHz antenna signal distribution
- High-frequency 20 / 40 GHz units in development
- 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, 4x10 – 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

Convection cooling (left) and conduction cooling (right) designs as well as custom heat dissipation designs are available. 050-346 parallel optical transceiver, 4x10 – 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
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>DATARATE (Gbps)</th>
<th>WAVELENGTH (nm)</th>
<th>LASER TYPE</th>
<th>RECEIVER TYPE</th>
<th>MAX. DISTANCE (km)</th>
<th>PACKAGE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>050-315</td>
<td>Transceiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>PIN TX</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-316</td>
<td>Dual Transmitter</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-317</td>
<td>Dual Receiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>N/A</td>
<td>PIN TX</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-318</td>
<td>Transceiver</td>
<td>0.1 - 1.25</td>
<td>1310</td>
<td>FP</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>050-319</td>
<td>Dual Transmitter</td>
<td>0.1 - 2.5</td>
<td>1310</td>
<td>FP</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
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<tr>
<td>050-320</td>
<td>Dual Receiver</td>
<td>0.1 - 4.25</td>
<td>1310</td>
<td>N/A</td>
<td>PIN TX</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>050-321</td>
<td>Transceiver</td>
<td>0.05 - 0.2</td>
<td>1300</td>
<td>LED</td>
<td>PIN TX</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>050-324</td>
<td>Transceiver</td>
<td>0.1 - 2.5</td>
<td>1100</td>
<td>DFB</td>
<td>PIN TX</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>050-325</td>
<td>Dual Transmitter</td>
<td>0.1 - 2.5</td>
<td>1100</td>
<td>DFB</td>
<td>N/A</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>050-327</td>
<td>Transceiver</td>
<td>1 - 10.5</td>
<td>850</td>
<td>VCSEL</td>
<td>PIN TX</td>
<td>0.4</td>
<td>1</td>
</tr>
<tr>
<td>050-328</td>
<td>Transceiver</td>
<td>1 - 10.5</td>
<td>1100</td>
<td>DFB</td>
<td>PIN TX</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-331</td>
<td>SMPTE Dual Transmitter</td>
<td>1.5 - 2.97</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>050-332</td>
<td>SMPTE Dual Receiver</td>
<td>1.5 - 2.97</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>050-333</td>
<td>Dual Transceiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>2</td>
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<tr>
<td>050-336</td>
<td>Dual Receiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>050-337</td>
<td>Quad Receiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>N/A</td>
<td>PIN TX</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>050-340</td>
<td>BIDI Transceiver</td>
<td>0.1 - 1.25</td>
<td>1100/1550</td>
<td>FP/FP</td>
<td>PIN TX</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>050-341</td>
<td>BIDI Transceiver</td>
<td>1 - 10</td>
<td>1270/1330</td>
<td>DB/DFB</td>
<td>PIN TX</td>
<td>10</td>
<td>1</td>
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<tr>
<td>050-342</td>
<td>CWDM Transceiver</td>
<td>0.1 - 2.5</td>
<td>CWDM</td>
<td>DFB</td>
<td>N/A</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>050-343</td>
<td>CWDM Transceiver</td>
<td>1 - 10.5</td>
<td>CWDM</td>
<td>DFB</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-346</td>
<td>Parallel Optical Transceiver</td>
<td>4 X 10 – 14</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>3</td>
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<tr>
<td>050-348</td>
<td>EMI Shielded Transceiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-352</td>
<td>Transceiver</td>
<td>0.05 - 0.2</td>
<td>850</td>
<td>FP</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-354</td>
<td>Quad Transmitter</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-355</td>
<td>CWDM Dual Transmitter</td>
<td>0.1 - 2.5</td>
<td>CWDM</td>
<td>DFB</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-357</td>
<td>SMPTE Dual Receiver</td>
<td>1.5 - 2.97</td>
<td>1250/1600</td>
<td>VCSEL</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-358</td>
<td>SMPTE CWDM Dual Transmitter</td>
<td>1.5</td>
<td>CWDM</td>
<td>DFB</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-360</td>
<td>Radiation-Tolerant Dual Transmitter</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-361</td>
<td>Radiation-Tolerant Receiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
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<tr>
<td>050-362</td>
<td>Radiation-Tolerant Transceiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-363</td>
<td>Radiation-Tolerant Quad Transmitter</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>050-364</td>
<td>Radiation-Tolerant Quad Receiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>050-369</td>
<td>Transceiver MMF TX · SMF RX</td>
<td>1 - 10</td>
<td>850</td>
<td>VCSEL</td>
<td>PIN TX</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-370</td>
<td>Dual Transceiver (4 mounting screws)</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>050-374</td>
<td>Quad Transmitter (4 mounting screws)</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>050-377</td>
<td>CWDM Dual Transmitter</td>
<td>1 - 10</td>
<td>CWDM</td>
<td>DFB</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-379</td>
<td>SMPTE CWDM Transceiver</td>
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<td>CWDM</td>
<td>DFB</td>
<td>N/A</td>
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<td>1</td>
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<tr>
<td>050-385</td>
<td>Radiation-Tolerant Dual Transceiver</td>
<td>0.1 - 5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-386</td>
<td>Dual Transmitter</td>
<td>1 - 10.5</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>050-389</td>
<td>SMPTE Transceiver</td>
<td>1.5 - 2.97</td>
<td>850</td>
<td>VCSEL</td>
<td>PIN TX</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>050-394</td>
<td>BIDI Transceiver</td>
<td>0.1 - 2.5</td>
<td>1100/1550</td>
<td>DB/DFB</td>
<td>PIN TX</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-397</td>
<td>BIDI Transceiver</td>
<td>0.1 - 1.25</td>
<td>1100/1550</td>
<td>DB/DFB</td>
<td>PIN TX</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>050-3007</td>
<td>Parallel Optical Transceiver</td>
<td>4 X 25</td>
<td>850</td>
<td>VCSEL</td>
<td>N/A</td>
<td>0.1</td>
<td>3</td>
</tr>
<tr>
<td>050-3011</td>
<td>DWDM EML FSO Transceiver</td>
<td>4 X 25</td>
<td>DWDM</td>
<td>EML</td>
<td>N/A</td>
<td>40</td>
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</tbody>
</table>
RUGGEDIZED
PHOTONIC CONTACTS AND CONNECTORS

Ruggedized Size #8 photonic transmitter and receiver contacts and connectors for Ethernet, video and high-speed data

Size #8 photonic contacts transmit and receive differential CML or LVPECL electrical signals over Multimode fiber optic cable. Transmitters consist of a laser driver or LED driver with a temperature compensation circuit to maintain optical power over the entire operating temperature range, and a 850nm VCSEL laser or a 1300nm LED. 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. The transmitter has a Tx Disable pin to turn off transmitter output. These optoelectronic contacts may be readily incorporated into space-grade caliber connector packages including MIL-DTL-38999, ARINC 801, as well as low-profile rectangular connector designs.

Patented photonic contacts integrate into Glenair connectors including Superfine® (D38999 Series III), ARINC 801, ARINC 404, and others. Selected part numbers have been designed and tested for radiation tolerance (consult factory).

- 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, 3.3V power supply
- Wave-solderable termination with RoHS-compliant solders
- For use in ARINC 600 and other size #8 cavity-equipped connectors
- Current offerings include 1.25mm ARINC 801 and 2.5mm ELIO® solutions

Current offerings for Ethernet, video and high-speed data include:

- **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 5Gbps
  - Supports Fast and Gigabit Ethernet, AFDX, 1x/2x Fiber Channel, DVI, DMM, SFPDP, Serial Rapid I/O (u/b)
  - 100 ohms differential CML inputs with Tx Fault and Tx Disable
  - Link distances up to 550 meters with multimode 50/125μm or 62.5/125μm 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**
  - ARINC 664, 801, 803, 804, and 818 Standard Compliant
  - Data rates from 100Mbps to 5Gbps
  - Supports Fast and Gigabit Ethernet, AFDX, 1x/2x Fiber Channel, DVI, DMM, SFPDP, Serial Rapid I/O (u/b)
  - 100 ohms differential CML inputs with Tx Fault and Tx Disable
  - Link distances up to 550 meters with multimode 50/125μm or 62.5/125μm fiber
  - Single 3.3V power supply
  - EL2 2.5mm ceramic fiber ferrule
  - Solutions available in 38999 style connectors
  - Mates with EL2 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 292-2015 (3G-SDI & HD-SDI)
  - SMPTE 424 Compliant (3G-SDI)
  - SMPTE ST 297:2015 (3G-SDI & HD-SDI)
  - SMPTE EG 34:2004 Compliant to Pathological Conditions CASE 1, CASE 2 and CASE 3.
  - 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
Glenair is able to offer our Optoelectronic solutions customers turnkey multichannel receptacle connectors housing integrated transceiver technology for fast/gigabit Ethernet, DVI and HDMI video, as well as various high-speed data transfer protocols. The two available connector designs incorporate Glenair small form-factor optoelectronic contacts (050-301) or an ELIO® equipped configuration that intermates with the standard ELIO® 2.5mm fiber optic terminus (050-307). Receptacles are populated with factory-tested size #8 contacts, and are ready for immediate use as fiber-optic-to-electrical circuit board I/O connectors. Special size #8 cavity adapters are also 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
- **SuperNine D38999 Sr. III type active connectors**
- **Hybrid high-speed layouts with Size #8 Optoelectronic contacts and Glenair Signature El Ochito high-speed Octaxial contacts**
- **D-Subminiature rectangular active receptacle connectors**

Opto-electronic receptacle connectors are populated with size #8 contacts, ready for immediate assembly in I/O to circuit board applications.

### Optoelectronic Connector Selection Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>050-313</td>
<td>Optoelectronic Transceiver, MIL-OLT-38999 Type 2.5mm ELIO® Compatible 100Mbps – 4.25Gbps</td>
</tr>
<tr>
<td>050-304</td>
<td>D38999 Series II 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 050-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>050-392</td>
<td>D38999 Series II Type Active Hybrid Receptacle Connector with Glenair Size 8 Optoelectronic and Electrical Contacts 050-392 07 Jam Nut 050-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>050-355</td>
<td>D38999 Series II 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 050-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>0500-3004</td>
<td>D38999 Series II Type Active Hybrid Receptacle Connector with PCB standoffs, Glenair Size 8 Optoelectronic contacts, and electrical contacts Compatible with 050-301 and 050-307 contacts 050-0001 - D38999 Size 8 Cavity Adapter Kit (Includes ARINC 801 Style Terminus)</td>
</tr>
<tr>
<td>0500-3005</td>
<td>D38999 Series II 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, 050-307, 050-399, and 0500-3011 contacts 1.25 Gbps – 5.00 Gbps / HD-SDI and 3G-SDI / DC to 50 Mbps</td>
</tr>
<tr>
<td>0500-3034</td>
<td>D-Sub Active Receptacle Connector with 2 × Glenair Size 8 Optoelectronics Contacts. Compatible 050-301 and 050-397 contacts 1.25 Gbps – 5.00 Gbps</td>
</tr>
</tbody>
</table>

**RUGGEDIZED Photonic Contacts and Connectors for Ethernet, Video and High-Speed Data**

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