Military / Defense Interconnect Solutions
For Ground, Sea, Air, and Space Applications

SOLDIER APPLICATIONS

STAR-PAN™ Scalable Soldier Networks
STAR-PAN™ MISSION MANAGER
Tactical Soldier Cables
MouseBud™ Snap-Lock, Trigger Release Connectors
Series 804 Mighty Mouse QDC NATO Tactical Soldier Connectors
SuperFly™ and SuperFly Datalink™ Nanominiature Tactical Connectors

AEROSPACE AND MISSILE SYSTEM APPLICATIONS

Series 790 Advanced Performance Crimp-Contact Rectangular
Advanced Performance Circulars: SuperNine and Series 806
AlphaLink SL and Interposer Board-Level Interconnects
Turnkey, Connectorized Flex, Rigid Flex, and Rigid Assemblies
Missile Umbilicals and BLQ Aerospace Technologies

NAVY / SHIPBOARD APPLICATIONS

NAVSEA Approved Shielded Composite Junction Boxes
BackNav OFS repositionable harsh-environment backshell
MIL-PRF-24758A US Navy Qualified Conduit System

MILITARY VEHICLE APPLICATIONS

SuperSeal Ruggedized Field RJ45 and USB Solutions
PowerTrip Connectors for Extreme Environments
TurboFlex™ Ultra-Flexible Rugged Power Cable
Heat and Autoshrink Boots and Molded Shapes

HiPer 55116 Advanced-Performance Audio / Radio Connectors
Series 701 SeaKing™ Junior Dry-Mate Deep Water Connector
El Ochito™ Octaxial Ethernet Contacts and Connectors

© 2019 Glenair, Inc • Glenair Signature Military / Defense Interconnect Solutions
Ruggedized soldier-worn electronics have revolutionized mission effectiveness. But the ongoing evolution of Digitally Aided Close Air Support (DACAS) missions, including precision targeting, ground and air radio communications, real-time video downlink, GPS/navigation, and personal area network computing has added significant mission weight to the dismounted soldier ensemble. Battery power management for this broad range of electronic gear is a significant challenge in terms of mission time, weight and supply logistics. The Glenair STAR-PAN™ data hub and power distribution system enables soldiers—particularly in Joint Terminal Attack Controller (JTAC) roles—to make the most of C4ISR devices, improving situational awareness, surveillance, intelligence and reconnaissance while optimizing power monitoring, conditioning, and distribution performance. Importantly, all STAR-PAN™ technologies—from the high-density, NATO standard Mighty Mouse quick-disconnect connectors and cables to the low-profile hub enclosure itself—are designed for optimal size, weight, power, and ruggedized mil-spec performance with battle-tested environmental and EMC sealing and shielding.

- Versatile 2, 4, and 6-port high-speed hub configurations
- Compatible with USB 1.1, USB 2.0, and SMBus
- Embedded power charging/conditioning electronics in all designs
- Smart power monitoring for longer mission life
- Robust circuit protection
- Sealed IAW the MIL-STD-810 harsh-environment standard
- New MISSION MANAGER for on-the-fly device integration to soldier C4ISR networks

Export of STAR-PAN™ outside of the U.S. is controlled by the U.S. Department of Commerce Export Administration. See individual product pages for details. Consult factory for technology / hardware licensing information.
STAR-PAN™ MISSION MANAGER
Plug-and-play EUD / USB peripheral data exchange device

GLENAIR MISSION MANAGER WITH MX QUICK-CONFIGURATION SOFTWARE

JTAC peripheral device configuration for both general use and mission-specific profiles is a complicated and time-consuming process, repeated for each and every mission. The Glenair STAR-PAN™ MISSION MANAGER with MX quick-configuration software reduces this problem by providing a plug-and-play bridge between the soldier’s End User Device (EUD) and the C4ISR peripherals he depends on for mission success.

The STAR-PAN™ MISSION MANAGER is a Linux OS ARM-based embedded computing device that acts as a full-time host, brokering data between soldier USB peripherals and the EUD. In combination with Stauder Technologies’ user-configurable MX application software, the STAR-PAN™ MISSION MANAGER makes connecting multiple devices to any EUD—before, during, or between missions—easier than ever before.

- End User Device independent—no device rooting or custom ROM images needed
- Real-time, plug-and-play device integration
- Supports multiple simultaneous Ethernet devices
- Dedicated EUD port for connection to downstream EUD
- Minimal power demands
- Seamless integration into STAR-PAN systems
- NATO standard Mighty Mouse connector interface
- Mission Manager MX software Android, iOS, Windows and Linux compatible
- Export classification EAR99

MISSION MANAGER MX SOFTWARE CAPABILITIES

MISSION MANAGER with Stauder Technologies’ MX quick-configuration software eliminates the need for costly EUD OS development, and/or complicated device provisioning, by providing an intelligent interconnection bridge between the soldier’s EUD and his C4ISR peripherals. The secure datalink software runs directly on the EUD providing a graphical user interface for configuration and management of USB/Ethernet datalink connections and radios. STAR-PAN™ MISSION MANAGER with MX software eliminates the need to retest or recently complex systems after EUD update or replacement.

MISSION MANAGER MX software runs directly on the soldier’s EUD to provide plug-and-play configuration and management of USB/Ethernet datalink connections and radios

- Headless data management and routing for all open-system peripheral devices as shown below (lightweight single-radio configuration also supported for plug-and-play integration between radio and EUD)

PERFORMANCE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Operating Conditions</th>
<th>Storage Temperature</th>
<th>-40°C to +80°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Operating Temperature</td>
<td>-25°C to +45°C</td>
</tr>
<tr>
<td></td>
<td>Operation Altitude</td>
<td>9/75m</td>
</tr>
<tr>
<td></td>
<td>Storage Altitude</td>
<td>15/24m</td>
</tr>
<tr>
<td></td>
<td>Water Immersion</td>
<td>MIL-STD-810, Method 512, 1m for 1hr; IP67 rated dust / water resistant</td>
</tr>
</tbody>
</table>

QUALIFIED FOR USE WITH ALL STAR-PAN POWER / DATA HUBS:
LIGHT, I, II, IV, AND VI

STAR-PAN™ Mission Manager with MX Software
Plug-and-play EUD / USB peripheral data exchange
STAR-PAN™ System Cables and Adapters

Radio Cables and Adapters
- AN/PRC-152A Radio Adapter Cable
- AN/PRC-117G / RF-7800M-MP / RF-7800H-MP Radio Adapter Cable
- RT-1922 Microlight SADL Radio Data Cable

Power Cables and Battery Adapters
- BA5590/BB2590 Battery Shoe
- Radio Power Booster For Harris, L3, Silvus, and other radios
- Conformal Battery Adapter Cable

Targeting Cables and Adapters
- Safran Vectronix Vector 21/21B and Moskito Data Cable
- PLRF 15C/25C Laser Range Finder Cable
- Safran Vectronix STERNA TNF Data Cable

Video / GPS and Auxiliary C4ISR Cables
- OAGR GPS Navigation Cable
- TacRover-e Adapter Cable
- StrikeHawk Adapter Cable

Host / EUD Cables and Adapters
- USB-C EUD Charging Cable
- Kägwerks tactical EUD case with Adapter Cable
- Tactical EUD Juggernaut Case with Adapter Cable

Other Mil-Grade Cable Assemblies

- STAR-PAN™ System and other Mil-Grade Interconnect Cable Assemblies with Series 804 Mighty Mouse / NATO push-pull connectors

Harsh Environment Overmolded
- Overmolded breakout assembly featuring 100% Glenair content; a true turnkey solution
- Non-environmental aircraft cable with integrated circuit breakout box and Mighty Mouse 804 push-pull connectors

Ultraflexible Fabric Overbraid
- Multibranch cable assembly with Glenair Mighty Mouse, HPer-D M24508 and customer-supplied power connector
- Heads-up display (HUD) cable with custom Series 804 Mighty Mouse and low-profile cable routing

- Turnkey overmolded GPS cable assembly with integrated switch
- Military jet jumper cable with user-serviceable backshells and fabric overbraid for mechanical protection

- Environmental cable with Glenair Series 804 Mighty Mouse, Series 79, and RF Coax terminations
- Hybrid Mighty Mouse and Micro-D aircraft pilot helmet cable assembly
Ultra low-profile, light weight, harsh-environment tactical connector with push-to-mate and lock / trigger-release mating

- Self-locking auto-coupling, trigger-release mechanism
- Spring-loaded pins for extended durability and easy cleaning
- One meter, one hour water immersion
- 2000 cycles mechanical life
- High-speed data, power, video, and audio applications
- Meets MIL-STD-810G shock, vibration, immersion
- EMI protected with integral backshell and ground spring
- Ultra low-profile and lightweight

MOUSEBUD TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage rating</td>
<td>500 VAC</td>
</tr>
<tr>
<td>Current rating</td>
<td>5 amps</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>20 milliohms maximum</td>
</tr>
<tr>
<td>Plug-to-receptacle ground resistance</td>
<td>&lt;5 milliohm</td>
</tr>
<tr>
<td>Maximum wire size</td>
<td>#24 AWG</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>5000 megohms min.</td>
</tr>
<tr>
<td>Water immersion</td>
<td>MIL-STD-810 Method 512, one meter for one hour</td>
</tr>
<tr>
<td>Durability</td>
<td>2000 mating cycles</td>
</tr>
<tr>
<td>Corrosion resistance</td>
<td>1000 hours</td>
</tr>
<tr>
<td>Sine vibration</td>
<td>EIA-364-28 condition IV, 20g peak</td>
</tr>
<tr>
<td>Random vibration</td>
<td>EIA-364-28 condition V letter H, 29g rms</td>
</tr>
<tr>
<td>Shock</td>
<td>EIA-364-25 condition D, 30g peak</td>
</tr>
<tr>
<td>EMI shielding effectiveness</td>
<td>40 dB minimum to 10 GHz</td>
</tr>
</tbody>
</table>

The Series 860 MouseBud™ is designed for vest-wearable and helmet-mounted cable-to-tactical equipment interconnections. The ultra low-profile spring contact equipped MouseBud™ mated connector stack is less than 1/2 inch, making it the lowest profile right-angle solution available today. Overmolded MouseBud cordsets are available in two standard versions. Style 1 cordsets feature thermoplastic polyurethane cable jackets and polyamide overmolding. Style 2 cordsets with thermoplastic rubber (TPV) cable jackets and overmolding offer excellent cold bend performance down to -55° C.
Sr. 804 Mighty Mouse: the tactical C4ISR soldier interconnect

Worldwide (NATO) quick-disconnect standard for tactical soldier system C4ISR device interconnection

TURNKEY OVERMOLDED AND OVERBRAIDED FACTORY ASSEMBLIES

- Push-to-mate, pull-to-unmate
- Gold-plated stainless steel spring
- Crimp rear release contacts
- Integral band platform
- Available with size #12, #16, #20, #20HD and #23 contacts
- Environmentally sealed
- Wider field application and use than all other tactical soldier interconnects combined
- Full compatibility with US and NATO standards

SERIES 804
Mighty Mouse Quick-Disconnect
Worldwide standard for tactical soldier system C4ISR device interconnection

MIGHTY MOUSE 804: NATO-STANDARD INTERCONNECT INTERFACE FOR C4ISR-EQUIPPED WARRIORS

- Cable Plug
- Cobra Plug
- Panel Plug
- Cable Receptacle
- Panel Receptacle
- Hermetic Receptacle
- STAR-PAN™ tactical soldier radio data/power setup with Mighty Mouse 804-equipped radio power booster
- Ultralife lightweight wearable battery with Mighty Mouse 804 panel mount receptacle
- Kägwerks ruggedized EUD case with Mighty Mouse 804 dongle
- Palladium Lithium Ion conformal battery with plug-and-play Mighty Mouse 804 receptacle connector
- BB-2590 / BA-5590 standard soldier battery with Mighty Mouse 804 power adapter
- Juggernaut Case ruggedized EUD assembly with Mighty Mouse 804 dongle
- Tactover-e video downlink receiver with Mighty Mouse high-speed I/O connector and STAR-PAN interface cable
Mighty Mouse 804 not small enough? Meet the toughest, smallest, and highest-speed connector we’ve got—ideal for soldier-wearable C4ISR equipment.

**PRINTED CIRCUIT BOARD PLUG AND RECEPTACLES**

- Quick-disconnect pigtail plug and jam nut receptacle
- Design for high speed data applications
- Pre-wired, epoxy-sealed cordsets
- Straight and 90° PC tail receptacles
- Designed for high speed data applications
- Robust EMI shielding

**CONTACT ARRANGEMENTS**

Series 88 SuperFly connectors are available in 27 contact arrangements with 1 Amp, 3 Amp, 5 Amp contacts, and mixed-contact hybrid arrangements.

**ULTRAMINIATURE SUPERFLY® CORDSETS AND PIGTAILS**

- Overmolded threaded plug and receptacle
- Quick-disconnect overmolded cordset
- Threaded pigtail plug and receptacle
- Quick-disconnect pigtail plug and jam nut receptacle
- Designed for high speed data applications
- Pre-wired, epoxy-sealed cordsets
- 27 Contact arrangements
- Front or rear panel mounting
- Aluminium or stainless steel
- Accepts #22 to #32 AWG wire

**Series 88 SuperFly® Ultraminiature Soldier System Connectors and Cordsets**

- **Ground Pins**
- **Panel Mount, Vertical, Rear Panel**
- **Right Angle, Rear Panel Mount**
- **Vertical, Rear Panel Mount**
- **Vertical, Rear Panel Mount, PCB Mounting Holes**
- **Vertical, Rear Panel Mount, Ground Pins**
- **Vertical Plug, Rear Panel Mount**
- **Right Angle, Rear Panel Mount**

---

© 2019 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324
High speed, harsh environment SuperFly® Datalink connectors—shielded for 10Gb Ethernet and SuperSpeed USB protocols—deliver outstanding signal integrity and save significant size and weight compared to Quadrax solutions.

- Ultra-small size
- Shielded Octaxial contacts
- Up to 5 Gbps
- 10Gb Ethernet and SuperSpeed USB
- Environmentally protected
- Factory-terminated cables or discrete contacts and cables for customer assembly

### Connector Configurations

Quick-disconnect “push-pull” versions are ideal for tactical gear. Threaded-coupling versions are intended for aircraft and space-grade applications where secure mating is a requirement.

**Push-Pull Quick-Disconnect**

- Latching EMI Springs
- O-ring Interface Seal

**BB2-001**

**BB2-002**

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.

**Cable Connector**

- Cable Sealing Grommet
- Backshell
- O-ring Retainer Clip
- Shield Bushing
- Spline
- Inner Insulator
- Pin Contacts
- Outer Insulator
- Coupling Nut and Shell Assembly

Cable connectors feature gold-plated crimp contacts, precision insulators, integral backshell, sealing grommet and machined shells.
High-speed octaxial contacts / connectors for Ethernet, SuperSpeed USB and MGb datalinks

El Ochito®: The Ultimate Shielded High-Speed Data Contact / Connector
Now available for SuperSpeed USB 3.0 and HDMI

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

- 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® White
10G Ethernet
1000BASE-T
10Gbps / 100 Ohms

El Ochito® Blue
SuperSpeed
USB 3.0
Aerospace-grade
5Gbps / 90 Ohms

El Ochito® Red
HDMI
SATA
DisplayPort
5Gbps / 100 Ohms

SuperNine® plug with El Ochito® contacts
Series 792 with El Ochito® contacts
Mighty Mouse hybrid with El Ochito® and size #23 signal contacts
Series 805 Mighty Mouse with El Ochito® contacts
SuperNine® CODE RED hermetic feed-thru with El Ochito® contacts
Series 28 HiPer-O® with El Ochito® contacts
Series 791 rack-and-panel with El Ochito® contacts
ARINC 600 series with El Ochito® contact module
Series 152 HiPer 55116 connectors offer significant performance advantages for modern soldier communication systems

- Intermateable and interoperable with standard MIL-DTL-55116 connectors
- Low contact resistance: Less than 10 milliohms
- Integrated EMI ground spring provides improved 2.5 milliohm shell-to-shell conductivity performance
- IP68 rated sealing in mated and unmated condition, prevents water ingress into radio equipment
- 1,000 hour+ salt spray corrosion resistance
- Integrated cable shield termination band porch
- Superior 100 pound cable pull test rating

Glenair DLA Qualified Series 151 Standard MIL-DTL-55116 Audio Connectors

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>151-001</td>
<td>QPL audio plug with wire strain relief</td>
</tr>
<tr>
<td>151-002</td>
<td>QPL audio plug/overmold adapter</td>
</tr>
<tr>
<td>151-003</td>
<td>QPL radio-mount jam nut receptacle</td>
</tr>
<tr>
<td>151-004</td>
<td>QPL in-line receptacle, strain relief</td>
</tr>
</tbody>
</table>

Audio plug, field serviceable, with wire strain relief and rigid contacts, crimp and solder cup
Overmolded audio plug cordset with wire strain relief
Audio plug with shield termination porch, overmolding adapter and rigid contacts, crimp and solder cup
In-line receptacle with shield termination porch, overmolding adapter, and non-rigid spring contacts, crimp and solder cup
Overmolded in-line audio receptacle cordset
Radio-mount jam nut audio receptacle with non-rigid spring contacts or PC tails and optional ground pins
Filtered radio-mount jam nut audio receptacle with non-rigid spring contacts, solder cup or PC tails
Special adapter configurations and protective covers
Series 701 SeaKing™ Junior Harsh-Environment Underwater Connectors

10K psi (mated condition) high-density, connector series for overmolded cable applications

SeaKing Junior - How To Order

Sample Part Number 701-016 17-08 Z1 S N

<table>
<thead>
<tr>
<th>Connector Style</th>
<th>Firefighting 150° 210°</th>
<th>High-Reliability 1A° B° C°</th>
<th>High-Reliability 1A° B° C°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 701-011</td>
<td>Firefighting 150° 210°</td>
<td>High-Reliability 1A° B° C°</td>
<td>High-Reliability 1A° B° C°</td>
</tr>
<tr>
<td>Series 701-016</td>
<td>Firefighting 150° 210°</td>
<td>High-Reliability 1A° B° C°</td>
<td>High-Reliability 1A° B° C°</td>
</tr>
<tr>
<td>Series 701-017</td>
<td>Firefighting 150° 210°</td>
<td>High-Reliability 1A° B° C°</td>
<td>High-Reliability 1A° B° C°</td>
</tr>
</tbody>
</table>

Performance Specifications

- Current Rating: 425-5 A, 420-7.5 A, 40-15 A
- Insulation Resistance: 1000 megohms at 500 VDC
- Operating Temperature: 40°C to +70°C
- Hydrotstatic Pressure: 10,000 PSI mated condition, tested per MIL-STD-902C
- Shock: 100 g
- Vibration: 37 g
- Durability: 2000 mating cycles

Material and Finish

- Shells, Jam Nuts: Stainless steel or Titanium
- CCP Coupling Nuts: Marine bronze, unplated
- Contacts: Copper alloy, gold plated
- Insulators: Composite thermoplastic
- Retaining ring and hardware: Stainless steel
- Interfacial seal (pin inserts only) and Grommet: Fluorosilicone
- O-rings and Seals: Nitrile, 90 shore

Series 701 Polarization

<table>
<thead>
<tr>
<th>Key Position</th>
<th>Key Rotation</th>
<th>Plug</th>
<th>Receptacle</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>A° B°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal (N)</td>
<td>150° 210°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>75° 250°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>95° 230°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>140° 275°</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© 2019 Glenair, Inc • Glenair Signature Military / Defense Interconnect Solutions

© 2019 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324
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

SuperSpeed USB 3.0 Ruggedized connectors and cables
MIL-DTL-38999 Series III Type

NEW SUPERSPEED USB 3.0 RUGGEDIZED FIELD CONNECTORS

Cable plug
Wall mount receptacle with metric clinch nuts
Wall mount receptacle with slotted holes
Wall mount receptacle with round holes
Jam nut mount Receptacle

TURNKEY SUPERSPEED USB 3.0 CABLE ASSEMBLIES AND JUMPERS

Glenair SuperNine USB 3.0 cable jumpers, SuperSeal to standard USB Type A and Micro-B connectors

SuperSeal USB 3.0 connectors are available as turnkey cable jumpers. Rugged field connector styles—including plug, wall mount and jam-nut receptacles—may be cabled with commercial 3.0 connector types including male Type A, female Type A, and male Micro B. Assemblies may be ordered with straight or right angle cable exit. In addition, the USB 3.0 insert may be ordered in horizontal or vertical orientation to provide protection against mis-mating. Maximum overall length is 15 feet.

SUPPORTED USB 3.0 CONNECTOR TYPES

USB 3.0 male Type A
USB 3.0 female Type A
USB 3.0 male Micro B

USB ORIENTATION OPTIONS

Horizontal
Vertical

= Master Keyway
Series 970 PowerTrip™

Reduced size and weight power connectors

- Fast, easy mating with triple-start ACME thread: 360° turn for full mating
- Reduced size and weight compared to 5015/VG95234 solutions
- LouverBand sockets for improved current ratings and longer life, up to 2000 mating cycles
- Splined backshell interface for improved backshell attachment and EMI shielding
- Ratcheting coupling nut for secure mating
- Operating temperature -65° C to +200° C
- Hermetic and filter options available

The Series 970 PowerTrip™ offers improved performance compared to standard 5015 type power connectors: higher density and lighter weight packaging, rapid mating and demating triple-start threaded coupling, and extremely rugged splined and threaded backshell attachment interface.

CONTACT RESISTANCE AFTER 1000 MATING CYCLES

<table>
<thead>
<tr>
<th>Contact Size</th>
<th>AS39029 Specification</th>
<th>M39029 Average</th>
<th>LouverBand Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.025</td>
<td>4.00</td>
<td>4.10</td>
<td>4.00</td>
</tr>
<tr>
<td>0.035</td>
<td>4.00</td>
<td>4.10</td>
<td>4.00</td>
</tr>
<tr>
<td>0.040</td>
<td>4.00</td>
<td>4.10</td>
<td>4.00</td>
</tr>
</tbody>
</table>

AS39029 Specification

M39029 Average

LouverBand Average

ABOUT THE POWERTRIP CONTACT SYSTEM

Series 970 contacts are precision-machined using high conductivity copper alloy. A stamped and formed spring ("LouverBand") is installed into the socket contact. The spring is made from 6 mil copper alloy. Testing has demonstrated that this contact system outperforms conventional aerospace-grade contact systems. The LouverBand spring provides many points of electrical contact with the mating pin, as opposed to a few "high spots" on a conventional four-finger contact as shown in the figure below. The size #8 Powertrip socket contact has a total of 18 louvers. The #4 has 27 louvers, and the #1/0 has 42 louvers. The LouverBand design offers lower voltage drop for reduced joule heating. In addition to its electrical advantages, the LouverBand also is mechanically superior to four-finger contacts. The LouverBand spring has consistent, stable normal force, even when subjected to thousands of mating cycles and temperature extremes.

Conventional contact on the left, LouverBand contact on the right

LouverBand socket contact cutaway
TurboFlex® power distribution cables are constructed from highly flexible conductors and high-performance insulation to produce cables ideally suited for applications where flexibility, durability, and weight reduction are required. Amazingly durable and flexible—especially in cold weather—the 16 AWG to 450 MCM TurboFlex cable features high strand count rope lay inner conductors made with tin-, nickel- and silver-plated copper. TurboFlex is jacketed with Glenair’s unique Duralectric™ compound that provides outstanding flexibility and resistance to environmental and chemical exposure. Duralectric is also low smoke, zero halogen. Long life and performance are critical in power distribution applications. TurboFlex, with its flexible conductors and durable jacket delivers both.

Duralectric™ is the high-performance TurboFlex® jacketing material perfectly suited for immersion, chemical or caustic fluid exposure, temperature extremes, UV radiation and more—available in a broad range of colors including safety orange.

Many sizes in-stock and available for immediate, same-day shipment. No minimums! Duralectric™ is the high-performance TurboFlex® jacketing material perfectly suited for immersion, chemical or caustic fluid exposure, temperature extremes, UV radiation and more—available in a broad range of colors including safety orange.

Many sizes in-stock and available for immediate, same-day shipment. No minimums!
MILITARY VEHICLES

Environmental heat-shrink and Autoshrink™ boots and molded shapes

For advanced abrasion protection, environmental sealing, splicing, and wire protection

ALSO AVAILABLE: HEAT SHRINK TERMINATION SLEEVES / SPLICES

<table>
<thead>
<tr>
<th>Description</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified space-grade shrink boots: low-outgassing fluoropolymer alloy</td>
<td><img src="image1.jpg" alt="Qualified space-grade shrink boots" /></td>
</tr>
<tr>
<td>Wired and unwired AS83519/1 and /2 Type heat shrink terminations for EMI shield-to-ground termination applications (note braided versions qualified for lightning strike)</td>
<td><img src="image2.jpg" alt="Wired and unwired AS83519/1 and /2 Type heat shrink terminations" /></td>
</tr>
<tr>
<td>Example rectangular interconnect assembly outfitted with heat shrink termination grounds</td>
<td><img src="image3.jpg" alt="Example rectangular interconnect assembly" /></td>
</tr>
<tr>
<td>Three sizes of available inline splices</td>
<td><img src="image4.jpg" alt="Three sizes of available inline splices" /></td>
</tr>
<tr>
<td>Mil-Aero / Industrial fluid-resistant lipped shrink boots</td>
<td><img src="image5.jpg" alt="Mil-Aero / Industrial fluid-resistant lipped shrink boots" /></td>
</tr>
<tr>
<td>Fast and easy repair of Duralectric jacketed cables</td>
<td><img src="image6.jpg" alt="Fast and easy repair of Duralectric jacketed cables" /></td>
</tr>
<tr>
<td>Utilize for termination of fugs on new installations</td>
<td><img src="image7.jpg" alt="Utilize for termination of fugs on new installations" /></td>
</tr>
</tbody>
</table>

ENVIRONMENTAL “FULL NELSON” HEAT-SHRINK BOOTS AND MOLDED SHAPES

- Standard lipped or lipless boots
- Long tail and high ratio configurations
- 90° and 45° angle boots
- SuperFly, Mighty Mouse, and O-subminiature configurations
- Convolution accordion boots
- Y, T, and multibranch transitions
- Colored boots available

ENVIRONMENTAL “AUTOSHRINK” BOOTS AND MOLDED SHAPES

- Autoshrink D: UV-Resistant / LSZH
- Autoshrink F: Advanced Fluid Resistant
- Autoshrink S: Subsea
- Autoshrink T: High-Temperature-Tolerant

- Straight, 45° and 90° angle-lipped shrink boots and shrink tubing
- Fire-resistance in all material types
- Reliable IP68 sealing
- 3000 VAC rated
- Service temperature range: -65°C to 300°C
- Integrated ground strap versions available
Series 79 is the advanced-performance, aerospace-grade crimp-contact rectangular connector

**SERIES 79 MICRO-CRIMP PRODUCT SELECTION GUIDE**

- Crimp, PCB, fiber optic, coax, power and pitot
- Precision machined aluminum shells sealed to IP67
- High-density #23 contact arrangements set on .076 centers
- Blind mating for rack and panel applications
- Environmental, hermetic and filter versions
- Integrated ground spring for improved EMI shielding

**SERIES 79 MICRO-CRIMP PERFORMANCE SPECIFICATIONS**

- Current rating:
  - Size #23: 5 Amps,
  - Size #16: 13 Amps,
  - Size #12: 23 Amps maximum
- Voltage rating:
  - Size #23: 500 VAC rms.,
  - Size #16 and #12: 1800 VAC rms.
- Insulation resistance: 5000 megohms minimum
- Operating temperature: -65°C to +150°C
- Contact resistance: 5 milliohms maximum
- Water ingress protection: IP67
- Shielding effectiveness: >75 dB attenuation from 100 MHz to 1000 MHz, >80 dB from 1GHz to 4GHz, >40 dB from 4GHz to 10GHz

**SERIES 791 MICRO-CRIMP**

The next-generation ultraminiature rectangular connector for demanding defense applications

- 31 insert arrangements supporting signal, power, and high-speed contacts
- 37 contact arrangements
- Crimp-and-poke or epoxy-sealed board mount versions
- Scoop-proof recessed pins
- Two to 102 contacts
- Size 23, 16, 12 and 8 contacts
- Two shell sizes
- Guide pins for blind mate modules
- Shell size A – the smallest 791
- Integral band platform for direct attachment of cable braid
- -65°C to +150°C
- Panel mount versions with O-ring or EMI spring
- Contacts meet SAE AS39029 requirements
- Internal ground spring for EMI protection
- Approved for manned space flight
**AEROSPACE/MISSILE SYSTEMS**

The next-generation ultraminiature rectangular connector for high-speed aerospace applications

**SERIES 792 INSERT ARRANGEMENTS (PIN FACE SHOWN)**

<table>
<thead>
<tr>
<th>Insert Arrangement</th>
<th>Pin Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1W1</td>
<td>1 #8</td>
</tr>
<tr>
<td>A-3W1</td>
<td>1 #8, 2 #23</td>
</tr>
<tr>
<td>B-2W2</td>
<td>2 #8</td>
</tr>
<tr>
<td>B-6W2</td>
<td>2 #8, 4 #23</td>
</tr>
<tr>
<td>C-9W3</td>
<td>3 #8, 6 #23</td>
</tr>
<tr>
<td>D-4W4</td>
<td>4 #8</td>
</tr>
<tr>
<td>D-12W4</td>
<td>4 #8, 8 #23</td>
</tr>
<tr>
<td>E-5W5</td>
<td>5 #8</td>
</tr>
<tr>
<td>E-15W5</td>
<td>4 #8</td>
</tr>
<tr>
<td>F-9W9</td>
<td>9 #8</td>
</tr>
<tr>
<td>F-31W9</td>
<td>9 #8</td>
</tr>
</tbody>
</table>

**DESCRIPTION**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>PROCEDURE / NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature -65° to +175°C</td>
<td>EIA-364-32 Test Condition IV</td>
</tr>
<tr>
<td>Current rating 1.5 Amps (datalink contacts)</td>
<td>DataLink contacts tested: El Ochito® White</td>
</tr>
<tr>
<td>Current rating 5 Amps (Size #23 contacts)</td>
<td>EIA-364-20</td>
</tr>
<tr>
<td>Dielectric Withstanding Voltage (sea level)</td>
<td>EIA-364-21</td>
</tr>
<tr>
<td>Insulation resistance 1000 MΩ/minimum</td>
<td>EIA-364-21</td>
</tr>
<tr>
<td>Contact resistance, 25°C 35 millivolt maximum</td>
<td>EIA-364-06, 1.0 A test current, #24 AWG wire</td>
</tr>
<tr>
<td>Shell-to-shell resistance 2.5 millivolt maximum</td>
<td>EIA-364-03</td>
</tr>
<tr>
<td>Shielding effectiveness</td>
<td>EIA-364-66</td>
</tr>
<tr>
<td>Dielectric Withstanding Voltage (sea level)</td>
<td>EIA-364-20</td>
</tr>
<tr>
<td>Insulation resistance 1000 MΩ/minimum</td>
<td>EIA-364-21</td>
</tr>
<tr>
<td>Contact resistance, 25°C 35 millivolt maximum</td>
<td>EIA-364-06, 1.0 A test current, #24 AWG wire</td>
</tr>
<tr>
<td>Shell-to-shell resistance 2.5 millivolt maximum</td>
<td>EIA-364-03</td>
</tr>
<tr>
<td>Shielding effectiveness</td>
<td>EIA-364-66</td>
</tr>
<tr>
<td>Dielectric Withstanding Voltage (sea level)</td>
<td>EIA-364-20</td>
</tr>
<tr>
<td>Insulation resistance 1000 MΩ/minimum</td>
<td>EIA-364-21</td>
</tr>
<tr>
<td>Contact resistance, 25°C 35 millivolt maximum</td>
<td>EIA-364-06, 1.0 A test current, #24 AWG wire</td>
</tr>
<tr>
<td>Shell-to-shell resistance 2.5 millivolt maximum</td>
<td>EIA-364-03</td>
</tr>
<tr>
<td>Shielding effectiveness</td>
<td>EIA-364-66</td>
</tr>
</tbody>
</table>

**SERIES 792**: The next-generation ultraminiature rectangular connector for high-speed aerospace applications

- High-speed Ethernet, USB 3.0, HDMI
- Printed circuit board 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

The Series 792 connector brings high-speed datalink performance to the Glenair Series 79 rectangular family. Size 8 cavities accept standard Quadrax and El Ochito™ datalink contacts making it a perfect choice for radars, weapons systems, communications gear and more.
The advanced-performance MIL-DTL-38999 Series III type connector

SERIES 23

SuperNine®

MIL-DTL-38999 Series III Type
Advanced Performance Aerospace / Defense Connectors

SUPERNINE: SUPERIOR VIBRATION, SHOCK, EMC, AND DURABILITY PERFORMANCE

The world’s most complete range of QPL and COTS MIL-DTL-38999 solutions for both pressurized and unpressurized aircraft equipment zones

DLA QPL MIL-DTL-38999 SERIES III AND IV

SuperNine®
environmental class connectors

SuperNine®
ruggedized RJ45 and USB connectors

SuperNine®
glass and CODE RED hermetic connectors

SuperNine®
high-speed connectors

SuperNine®
EMI/EMP filter connectors

SuperNine®
fiber optic connectors

SuperNine®
parylene-compatible PC tail connectors

SuperNine®
space-grade assisted separation force connectors

SuperNine®
Sav-Con® connector savers and go-betweens

DLA Qualified Series III environmental plug, jam nut, and square flange receptacles, class W, F, T, and G. Qualified Series IV breech-lock connectors in classes F and W. All 1560 crimp-contact insert arrangements fully supported.
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.

SAVE SIZE AND WEIGHT WITH SERIES 806 CONNECTORS

Series 806 Mil-Aero: Advanced performance, reduced size and weight

Series 806 Mil-Aero

Ultraminiature Circular Connectors

for harsh mil-aero applications IAW MIL-DTL-38999

Series 806 Mil-Aero: Advanced performance, reduced size and weight

Next-generation small form factor aerospace-grade circular connector

Designed for harsh application environments such as aircraft, industrial robotics and more

Upgraded environmental, electrical and mechanical performance

Integrated anti-decoupling technology

Higher density 20HD and 22HD crimp contact arrangements

Hermetic and filter versions

+200°C temperature rating

SERIES 806 MIL-AERO FEATURES / SPECIFICATIONS

- Supported wire sizes:
  - #20HD contacts: 20–24 AWG
  - #22HD contacts: 22–28 AWG

- Dielectric withstanding voltage:
  - #20HD layouts: 1800 Vac
  - #22HD layouts: 1300 Vac

- Reduced pitch triple-start modified anti-decoupling stub ACME mating threads

- “Triple ripple” wire sealing grommet (75,000 ft. rated)

- Integral Nano-Band shield termination platform

- EMI shielding effectiveness per D38999M para. 4.5.28 (65 dB min. leakage attenuation @ 10GHz)

- 10,000 amp indirect lightning strike

MIL-S-901 Grade A high impact shock

AVAILABLE LIGHTWEIGHT ALUMINUM "CODE RED" HERMETICS

CODE RED is a lightweight encapsulant sealing and assembly process with 50% package-weight savings compared to glass-to-metal seal Kovar/stainless steel solutions. Non-outgassing CODE RED (IAW NASA/ESA) provides durable hermetic sealing with 1X10^-7 leak rate performance. Gold-plated copper contacts deliver outstanding low-resistance current carrying capacity.

CODE RED is a lightweight encapsulant sealing and assembly process with 50% package-weight savings compared to glass-to-metal seal Kovar/stainless steel solutions. Non-outgassing CODE RED (IAW NASA/ESA) provides durable hermetic sealing with 1X10^-7 leak rate performance. Gold-plated copper contacts deliver outstanding low-resistance current carrying capacity.

SMALLER AND LIGHTER WITH EQUAL D38999 PERFORMANCE?

High-Density Layouts

Twice as many contacts in a smaller package

“Top Hat” Insulator

High voltage rating, foolproof alignment

Triple Ripple Wire Seal

Reliable 75,000 ft. altitude immersion
HD Stacker: the innovative mission-critical board-to-board connector with fail-safe signal integrity and rugged, reliable harsh-environment performance

- High-density .0625" pitch Chevron Contact System: 55% more contacts per connector size
- PCIe 3.0 capable
- Performance up to 10.5 Gbps
- Polarized insulator and hardware options
- Solder free “eye of the needle” compliant tail for press fit installation
- High-temp PPS insulator meets NASA outgassing requirements
- Available wired / flex jumpers
- Available between-board spacers up to 1 inch

980-008 Spacer is used in applications that require additional space between PCBs to accommodate board electronics. Spacers serve as a rigid, precision standoff for board-to-board heights up to 1.025” (26.03mm).

All Glenair HD Stacker™ connectors are equipped with our innovative .062" pitch high-density Chevron Contact System (CCS). Special non-orthogonal socket tines enable both higher density layouts as well as improved signal integrity. The GSTB is equipped with pin/socket contacts with solder-free press-fit board mounting.

QUALIFICATION TESTING / HIGH-SPEED PERFORMANCE

Stacker connectors were qualified in accordance with MIL-DTL-55302G testing for:
- Contact engagement/separation
- Contact retention
- DWV
- Electrical resistance
- Mechanical vibration and shock
- Insulation resistance
- Contact resistance
- Thermal shock
- Humidity

High-frequency electrical performance tests were performed for: Insertion loss, return loss, crosstalk, and time-domain performance metrics including impedance and eye pattern. Complete test reports are available at www.glenair.com/technical_information_test_reports
Board-level spring-loaded-contact connectors, interposers, and turnkey flex jumpers

AlphaLink® SL is a high-performance, solderless board-level connector technology developed by Glenair that significantly expands board-level interconnection options for users of mil-spec caliber connectors. Precision-machined and EMI shielded, these ultralightweight PC tail, solder cup, and/or pigtail equipped connectors are designed for high-reliability applications that require avionic system levels of vibration and shock tolerance. Ultra low-profile and high-density, AlphaLink® SL connectors are equipped with 2–3 Amp spring-loaded contacts and may be ordered either as discrete connectors or in turnkey flex jumpers that combine popular Glenair high-reliability I/O connectors. Glenair is perfectly positioned to provide the entire solution with in-house manufacturing for every component part—from connectors and contacts to rugged polyimide-based flex. AlphaLink® SL flex jumpers are available with Series 80 Mighty Mouse, Series 88 SuperFly, and Series 89 nanominiature circular connectors, as well as Series 89 nanominiature, Micro-D subminiature and Series 79 Micro-Crimp rectangular connectors. A wide range of insert arrangements, from 4–40 contacts is available.

- Spring-loaded, solderless board-level solution
- Available I/O-to-board flex and pigtail wire jumpers
- Lightweight, low-profile: up to 40% space savings compared to 2mm pitch solutions
- High-density .050" center-to-center contact footprint
- Fast and easy PC board integration with reduced board preparation and masking
- Temperature, vibration and shock resistant

### AlphaLink® SL Spring-Loaded Contact Interface
- High-temp thermoplastic insulator
- Gold-plated Copper Alloy contacts set on .050” centers
- 0-80 Thread or thru-hole PC board mounting

### 171-134-01 Solder Cup Termination
- Solder cup terminations may be factory modified for crimp termination
- Accommodates #24 AWG wire
- Recessed flange
- Gold-plated Copper Alloy spring-loaded contacts

### 171-134-03 Wire Pigtail Termination
- M22759/11 or M22759/33 wire; white or ten color repeat
- Conductive nickel or gold finish
- Environmental potting well

### 171-134-02 PC Tail Termination
- EMI shroud/shield
- Stainless Steel Hardware
- Ø .016 ± .002 PC tails
- High durability spring-loaded contacts
- Precision machined aluminum alloy shell

AlphaLink® Interposer and Bridge Technologies: Unique pogo pin contact technology enables this signature Glenair connector series to deliver the lowest profile board-to-board solution available in the industry today.

AlphaLink® SL flex jumpers: Compact interconnect assemblies that combine circuit board technology and cabling into a lightweight, integrated package. These turnkey jumper assemblies reduce system size and weight and are ideally suited for prototype applications and new product development efforts.
Turnkey connectorized flex/PCB cable assemblies incorporating Glenair’s broad range of innovative small form-factor circular and rectangular PCB connector solutions, backpotted for protection during conformal coating.

GLENAIR SIGNATURE PCB CONNECTOR TYPES AVAILABLE IN TURNKEY FLEX ASSEMBLIES

- Series MWD Micro-D and innovative pogo-pin AlphaLink
- Series 88 SuperFly
- Series 79 Micro-Crimp
- SuperSeal RJ45 and USB
- Stacked Micro-D I/O connectors with flex jumper to rigid PCB assembly
- Hybrid flex/rigid flex multibranch Micro-D and Series 23 SuperNine flex assembly with discrete RF circuits

**TURNKEY PCB/Flex Circuit Assemblies with Glenair signature PC tail connectors**

**MULIBRANCH FLEX / PCB ASSEMBLIES WITH GLENAIR SIGNATURE CONNECTORS**

- Space-grade Micro-D flex assembly with NASA EEE-INST-002 screening
- High-shock matched-impedance Mighty Mouse assembly with flex circuit
- Dual-gang series 20 Super-Twin™ I/O connector to AlphaLink 5L PCB connector
- Space-grade Series 28 HiPer-D to Series 80 Mighty Mouse I/O jumper
From air and ground missile launch interconnects to pure air gas assemblies and high-voltage, high-altitude connectors, Glenair BLQ’s Aerospace group is positioned to address some of the most difficult and mission-critical interconnect challenges in the manned and unmanned aerospace industry.

**UNIQUE CAPABILITIES**
- High-voltage electric power distribution connectors for aircraft and space propulsion applications
- Flight line and ground support interconnect technologies
- Cockpit and aircraft headlight interconnects
- Surface-to-air and air-to-air missile launch umbilicals
- High-voltage partial discharge testing

**WEAPONS STORES, UMBILICALS, AND MISSILE-LAUNCH INTERFACE CONNECTORS**
- MIL-DTL-1760 type
- Rectangular configurations
- Bulkhead feed-thrus
- Circular MS type
- Custom configurations
- New innovative designs
- Discrete connectors and harnesses

**IN-HOUSE HERMETIC CONNECTOR DESIGN AND MANUFACTURE**
- Rectangular configurations
- Circular MS type
- Custom configurations

**PURE AIR HIGH PRESSURE COOLING GAS TUBE ASSEMBLIES**
- Complete systems and ancillaries for IR guided weapons and weapons ejection applications

**BLQ AEROSPACE**
No ITAR restrictions, 100% designed and manufactured for EU mil/aero applications
Durable, lightweight corrosion-free EMI/RFI shielded composite junction boxes NAVSEA standard drawing 803-6983506 Rev. B

Series 316 stainless steel hardware provides long-term durability

Unlimited corrosion resistance compared to metal junction boxes reduces repair and maintenance costs.

Glass reinforced composite thermoplastic material is strong and durable, yet extremely lightweight.

IP68 rated seals and gaskets protect equipment from moisture and dust

Over a dozen different tooled sizes and shapes.

Extremely durable, corrosion-free, high temperature engineering composite thermoplastic

Tested and qualified to U.S. Navy, UK MOD and hundreds of commercial aircraft and marine applications

Example box shown: one of a series of NAVSEA-approved signal, switch, sound power, control boxes designed to eliminate corrosion damage and reduce maintenance cost on Navy ships

Glenair Composite Box Product Specifications

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plating Adhesion</td>
<td>Tested IAW MIL-DTL-38999.</td>
</tr>
<tr>
<td>Shock</td>
<td>Tested IAW MOD BR 8470 Grade C and F.</td>
</tr>
<tr>
<td>Vibration</td>
<td>Tested IAW ASTM D5265.</td>
</tr>
<tr>
<td>Impact</td>
<td>Tested IAW MIL-STD-1344, Method 2004 Condition II.</td>
</tr>
<tr>
<td>Temperature Cycling</td>
<td>Tested IAW MIL-STD-1344, Method 1003 at -65°C to 200°C.</td>
</tr>
<tr>
<td>Hydrolytic Stability</td>
<td>Tested IAW ASTM D5170-81.</td>
</tr>
<tr>
<td>Flammability</td>
<td>Tested IAW MIL-STD-1344, Method 1012, Smoke Index, NES 711 Issue 2, NES 713 Issue 1 and ISO 4589.</td>
</tr>
<tr>
<td>Water Tightness</td>
<td>Tested IAW MIL-STD-1344, Method 1003 at -65°C to 200°C.</td>
</tr>
<tr>
<td>Outgassing</td>
<td>Tested IAW ASTM D5170-81.</td>
</tr>
<tr>
<td>Electromagnetic Shielding</td>
<td>Tested IAW MIL-STD-1344, Method 1012, Smoke Index, NES 711 Issue 2, NES 713 Issue 1 and ISO 4589.</td>
</tr>
</tbody>
</table>

Discrete components or turnkey wired and connectorized systems

Complex installations fully supported with feed-thru fittings and wire protection conduit

Broad range of sizes and shapes

Glenair Composite Shielded Composite Junction Boxes

for Naval applications

Durable, lightweight corrosion-free EMI/RFI shielded composite junction boxes NAVSEA-Approved

Shielded Composite Junction Boxes

for Naval applications

NAVSEA-Approved Shielded Composite Junction Boxes

NAVSEA-Approved Shielded Composite Junction Boxes

for Naval applications

NAVSEA-Approved Shielded Composite Junction Boxes

for Naval applications

TESTED AND QUALIFIED THROUGHOUT THE FLEET: GLENAIR CORROSION-FREE COMPOSITE BOXES

© 2020 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

© 2020 Glenair, Inc • Glenair Signature Military / Defense Interconnect Solutions
BacNav OFS repositionable harsh-environment backshell

Outstanding, flexible performance

BacNav OFS is the only fully-sealed EMI/RFI backshell and strain relief device that delivers fast and easy cable angle configuration in the field—using a common 7/64” hex wrench, and without decoupling from the connector and/or cable. The sealed, flexible connector backshell adjusts to straight, 45° and 90° cable angles with zero impact on signal integrity or system performance.

**SERIES 390**

### MORE ADVANCED GLENAIR BACKSHELL TECHNOLOGY: FIREWALL AND PRESSURE BOUNDARY FEED-THRU

- High-grade engineering thermoplastic or machined metal
- Six pressure-boundary feed-thru layouts with accommodation for 1 – 6 cables
- Split-shell jam nut versions with EMI/RFI shield termination chin
- O-ring sealed panel and box mounting interface
- Conductive and non-conductive finish options

### PERFORMANCE DATA

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>REQUIREMENT</th>
<th>STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnetic permeability</td>
<td>Less than 2.0µ</td>
<td>EIA-364-54</td>
</tr>
<tr>
<td>Shell conductivity</td>
<td>&lt; 2.5 milliohms</td>
<td>EIA-364-83</td>
</tr>
<tr>
<td>Shell spray (corrosion)</td>
<td>No exposure of basis material as defined in AIR4789 for 500 hours</td>
<td>EIA-364-28</td>
</tr>
<tr>
<td>Filtration</td>
<td>CFT &lt; 0.188 No discontinuities No damage</td>
<td>MIL-STD-167-1A (SHIPS), paragraph 3.1.2.6 (tembrance test)</td>
</tr>
<tr>
<td>Shock</td>
<td>CFT &lt; 0.568 No discontinuities No damage</td>
<td>MIL-S-8810D, grade A, Class I</td>
</tr>
<tr>
<td>Water pressure</td>
<td>50 meters for 48 hours (IP68)</td>
<td>QTP-384</td>
</tr>
<tr>
<td>Cable pullout</td>
<td>No slippage exceeding 1/8” CFT &lt; 0.568</td>
<td>AS85049 (Heavy Duty)</td>
</tr>
<tr>
<td>Internal bending moment</td>
<td>150-750 lbs (no size dependent)</td>
<td>AS85049 (Heavy Duty)</td>
</tr>
<tr>
<td>Fluid immersion</td>
<td>No changes detrimental to performance</td>
<td>EIA-364-10</td>
</tr>
<tr>
<td>Insertion loss</td>
<td>MIL-PRF-28876 Multi-mode Fiber-Optic connectors</td>
<td>TIA-455-34 Method A</td>
</tr>
<tr>
<td>External bending moment</td>
<td>300-750 in-lbs (size dependant)</td>
<td>AS85049 (Heavy Duty)</td>
</tr>
<tr>
<td>Temperature cycling</td>
<td>No damage detrimental to performance</td>
<td>EIA-364-10</td>
</tr>
<tr>
<td>Thermal Shock</td>
<td>5 cycles -40°C to +85°C</td>
<td>TIA-455-71</td>
</tr>
<tr>
<td>Humidity/cycling</td>
<td>No damage detrimental to performance</td>
<td>TIA-455-1 Method B</td>
</tr>
<tr>
<td>Temperature cycling</td>
<td>No damage detrimental to performance</td>
<td>TIA-455-1 Method B</td>
</tr>
<tr>
<td>Life Aging</td>
<td>10 cycles</td>
<td>TIA-455-3</td>
</tr>
<tr>
<td>Freezing water immersion</td>
<td>No damage detrimental to performance</td>
<td>TIA-455-3</td>
</tr>
<tr>
<td>Bend and dust</td>
<td>No damage detrimental to performance</td>
<td>TIA-455-3</td>
</tr>
<tr>
<td>Modified ISO/salt spray</td>
<td>480 hours No damage detrimental to performance</td>
<td>ASTM B85 + Annex A4</td>
</tr>
</tbody>
</table>

Designed for use in rugged shipboard applications as well as military ground systems—such as armored vehicles—the Glenair BacNav OFS delivers outstanding mechanical, electrical, and environmental performance. The innovative design incorporates an environmentally-sealed, EMI shielded core with a locking pivot that facilitates cable routing and eliminates the need to stock discrete straight, 45° and 90° variants of standard wire sealing, strain relief, and EMI shield termination backshells. Built to withstand the handling abuse that topside and below-deck electrical and fiber optic interconnect systems are routinely subjected to by ham-fisted sailors and marines, the BacNav OFS is purpose-designed to deliver life-of-ship and life-of-system performance and durability. Available for the broad range of power, signal, and fiber optic connector systems—including MIL-PRF-28876 and MIL-PRF-62466 (fiber optics) to MIL-DTL-28840, ASS0151, and more—BacNav OFS meets every current requirement for backshell-equipped connectorized cabling.

**D**esigned for above and below deck shipboard use and other harsh environmental applications, BacNav OFS delivers submersible environmental protection for electrical and fiber optic interconnect systems.

- **Easy repositioning from straight, 45° and 90° cable-exit orientations**
- **Submersible performance without the need for shrink boots**
- **Durable, flexible EMI/RFI and environmentally-sealed core with locking-pivot Swing-Arm™ frame**
- **Accommodates power, signal and fiber optic jacketed cables**
- **Reposition terminated cables with no impact on signal integrity or system performance**
- **Easy repeatable assembly process using standard tools**

**MORE ADVANCED GLENAIR BACKSHELL TECHNOLOGY: FIREWALL AND PRESSURE BOUNDARY FEED-THRU**

- High-grade engineering thermoplastic or machined metal
- Six pressure-boundary feed-thru layouts with accommodation for 1 – 6 cables
- Split-shell jam nut versions with EMI/RFI shield termination chin
- O-ring sealed panel and box mounting interface
- Conductive and non-conductive finish options

© 2019 Glenair, Inc • Glenair Signature Military / Defense Interconnect Solutions
**Improved sealing and shielding: the ultimate in highly flexible, crush-proof EMI/EMP wire protection**

- Hermetically sealed, flexible metal-core conduit for shipboard wire interconnect applications
- UV-resistant “BlueJacket” jacketing over Brass, Stainless Steel, or Nickel Iron Alloy conduit
- Turnkey, factory-terminated assemblies for fast-turnaround dockside maintenance cycles
- All materials deliver superior EMC performance as well as crush resistance and environmental sealing compared to legacy systems

**Options**

- **Part Number 750-098**
  - Select for superior crush resistance and corrosion protection
  - Highly flexible crush-proof metal conduit in stainless steel with Viton, Neoprene, or Bluejacket protective covering

- **Part Number 750-192**
  - Select for low-frequency EMC protection in and around motors and control equipment
  - Nickel-iron conduit material plus shielding and jacketing

**MIL-PRF-24758A NAVSEA-APPROVED Metal-Core Conduit Wire Protection Systems**

US Navy Qualified Brass, CRES, and Nickel-Iron, with Glenair Signature “BlueJacket” jacketing

**Do it once, do it right with Glenair Signature MIL-PRF-24758A wire protection conduit systems**

- Qualified to MIL-PRF-24758A(SH)
- User-installable and factory terminated configurations
- Innovative fitting design with advanced environmental sealing, EMI shield termination and rotatable coupling nut
- Adapters for all shipboard interfaces—fully compatible with legacy MIL-C-24758 conduit system components

**Fittings and Adapters for User-Installed Applications**

- Composite conduit splice fitting
- Stainless steel conduit feed-thru fitting
- Low-Profile RP Plus System
- Heavy-duty environmental conduit-to-panel fitting
- Heavy-duty environmental conduit-to-connector fitting
Glenair Mil-Spec Interconnect Technologies

Qualified Products: Glenair is a Mil-Aero connector supplier. Our product quality begins in engineering (the largest team in the high-performance interconnect business) and is realized in our “made in the USA” vertically-integrated manufacturing cells. One of the key ways we ensure both areas are functioning smoothly is to submit designs and manufactured specimens into the military QPL process administered by the Defense Logistic Agency of the US government. These certification exercises are multi-year activities that test every aspect of a connector’s performance.

Glenair is proud of the quality and reliability we build into our broad range of mission-critical interconnect solutions—from discrete connectors to complex cable assemblies and embedded systems. Glenair is the biggest “made in the USA” interconnect supplier in the high-reliability industry, but we also operate factories in the UK, Italy, and Germany to serve the unique requirements of those markets. Glenair’s Worldwide Quality System is ISO 9001 and AS9100 certified and registered. We also hold many discrete product and operations certifications for specialty, high-performance markets including space, nuclear power, and rail. In addition to world-class quality, we are laser-focused on customer service and committed to being the easiest manufacturer in our industry to do business with. Here are just some of our key customer service principles:

- Lightning-fast turnarounds on quotes and special orders
- Worldwide sales and technical support in every major market
- Full-spectrum, “no gap” product lines
- No dollar or quantity minimums
- ISO 9001 and AS9100 certified
- Huge same-day shipment inventory
- Generous NRE, RMA, and sample request policies
- Abundant engineering and technical support
- No attitudinal constraints when it comes to customer convenience and service
**GLENAIR GLENDALE:**
Complete vertical integration of manufacturing resources—
at home in Southern California since 1956

Glenair operates the largest high-reliability interconnect manufacturing operation in the United States, allowing us to fully support our broad range of military, defense, and security customers.

Glenair SoCal’s most important asset: highly technical staff, fully empowered with all the right facilities and operation resources.
IN-HOUSE TESTING CAPABILITIES

Glenair UK operates an independently accredited BS9000:CECC:IECQ test lab for internal and third-party product development / design verification and connector qualification including pure air standards.

SAME-DAY SHIPMENT STOCKING
Immediate availability for high-demand connectors and tooling.

HARNESS ASSEMBLIES
for Micro-D, Nanominiature, and fiber optic connectors and cable assemblies.

GLENAIR UK:
Mission-critical connectors and assemblies for UK and European markets with a special focus on micro and nanominiature flexi assemblies.

SAME-DAY SHIPMENT STOCKING
Immediate availability for high-demand connectors and tooling.

HARNESS ASSEMBLIES
for Micro-D, Nanominiature, and fiber optic connectors and cable assemblies.

GLENAIR UK:
Mission-critical connectors and assemblies for UK and European markets with a special focus on micro and nanominiature flexi assemblies.
GLENAIR ITALIA: Manufacturing harsh-environment military, nuclear, rail, and industrial interconnects for power, high-speed Ethernet, and fiber optic applications.

TOTAL VERTICAL INTEGRATION includes in-house rubber and thermoplastic injection molding.

IN-HOUSE TEST LAB with capabilities for both high-voltage as well as high-speed signal product qualification. Credentials include ISO 17025 and others.

HIGH-CAPACITY CNC MACHINING CENTERS allow Glenair BLQ to provide lightning-fast turnaround on small and custom orders as well as large production runs, all with superior surface finishes and better part quality.

ADVANCED PLATING LINE Capabilities include VG95328-qualified Marine Bronze and "Code J" Tin-Zinc plating—VG95211 and VG95212 qualified cadmium alternative for corrosion-resistant interconnects.
GLENAIR SPACE SYSTEMS, SALEM:
Facility includes a 600 m² production floor, 300 m² ISO 8 and ISO 6 clean rooms, an ISO 5 flow chamber (certified to ESD Standard 61340-5-1), with ample accommodation for large mock-up and integration projects.