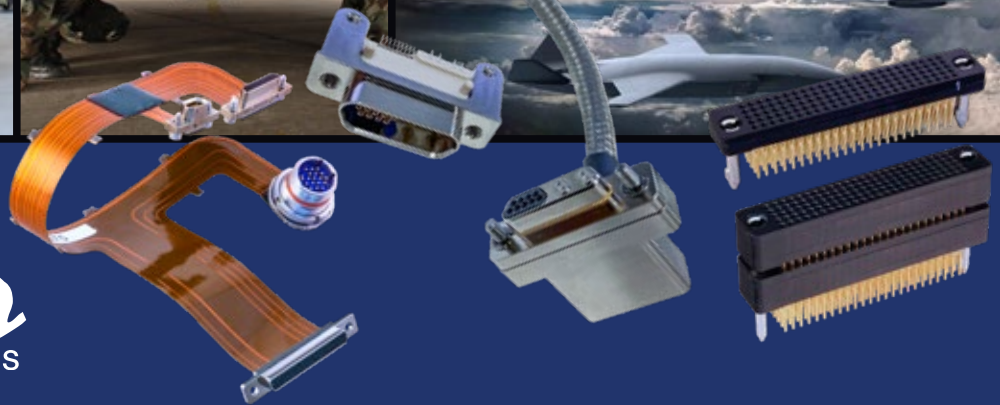




MISSION-CRITICAL
INTERCONNECT
SOLUTIONS



Glenair
SIGNATURE SERIES

Missile and Loyal Wingman (UCAV) Interconnect Solutions

Advanced Connectors for Missile Systems and Unmanned Loyal Wingman Drones (Collaborative Combat Aircraft)

MARCH 2024



Missile and Loyal Wingman (UCAV) Interconnect Solutions

Advanced Connectors for Missile Systems and Unmanned Loyal Wingman Drones (Collaborative Combat Aircraft)

TURNKEY MISSION-CRITICAL INTERCONNECT ASSEMBLIES FOR COMBAT AIRCRAFT



Complex cable and wire protection conduit assemblies

Integrated flex / rigid flex circuit assemblies

Aerospace-grade fiber optic interconnect assemblies

Turnkey high-frequency RF coax interconnect assemblies

Pure Air / Gas Tube assemblies for high-pressure cooling actuation

RUGGED CONNECTORS FOR HIGH-POWER AND HIGH-FREQUENCY APPLICATIONS



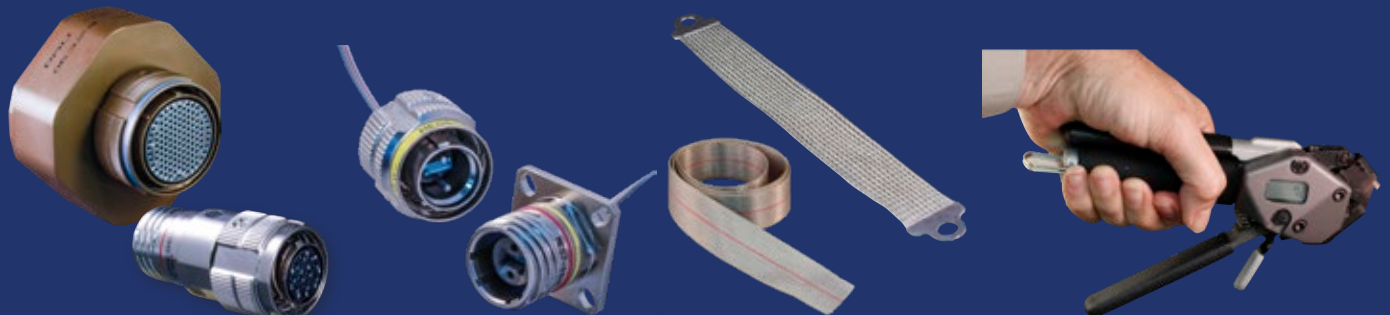
PowerLoad™ HV power distribution connectors

PowerTrip™ high-density connectors and cables

PowerPlay™ D38999 type high-voltage, high-vibration

Lightweight / ultra-flexible TurboFlex HV cable

AGGRESSIVE MANAGEMENT OF ELECTROMAGNETIC COMPATIBILITY



EMI/RFI filters and EMP transient voltage suppression

EMI-immune fiber optic connectors and cables

ArmorLite™ EMI/RFI braided shielding and grounding solutions

Band-Master ATS® advanced shield termination system

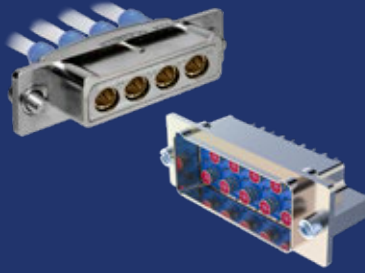
SMALL FORM-FACTOR SENSOR / AVIONIC CONNECTORS FOR SIZE AND WEIGHT REDUCTION



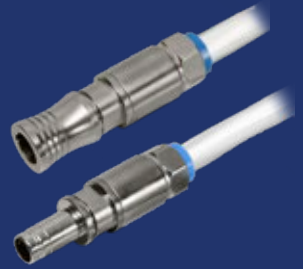
El Ochito® and other reduced SWaP High-Speed Interconnects



Series 806 Mil-Aero with optimized SWaP

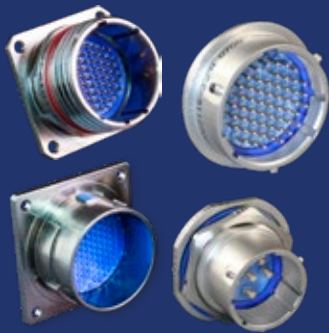


Series 791™ / 792™ crimp-contact high-density rectangular



SuperFly® Datalink nano high-speed

HARSH ENVIRONMENTAL AEROSPACE AND MISSILE LAUNCH CONNECTORS



SuperNine® "Better than QPL" Series I and II bayonet, Series III triple-start, and Series IV breech-lock



Glass-seal and lightweight hermetics

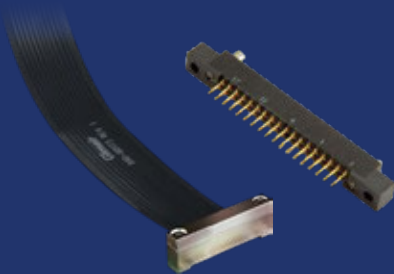


ThermaRex™ HT high-temperature connectors



Missile pylon and umbilical connectors

PCB-MOUNT MICROS / NANOS · HIGH-DENSITY BOARD-TO-BOARD CONNECTORS · BACKPLANE



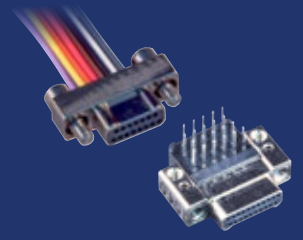
MIL-DTL-55302 (hyperboloid) and Series 171 AlphaLink (spring-pin) PCB connectors



VITA standard RF and fiber optic backplane connectors

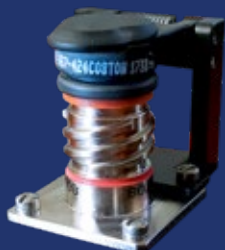


HD Stacker™ high-density board-to-board



Micro-D and Nano I/O and board connectors

INNOVATIVE CONNECTOR ACCESSORIES AND WIRE PROTECTION SOLUTIONS



ProSeal™ spring-action protective covers



Swing-Arm™ and Swing-Arm FLEX™ strain relief clamps



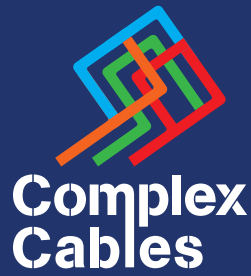
Bulkhead and firewall cable feed-thrus

Polymer- and metal-core conduit wire protection systems



Circular and rectangular connector EMC gaskets and conductive nut plates

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



MIL-STARTM
HIGH-PERFORMANCE HOOKUP WIRE AND CABLE

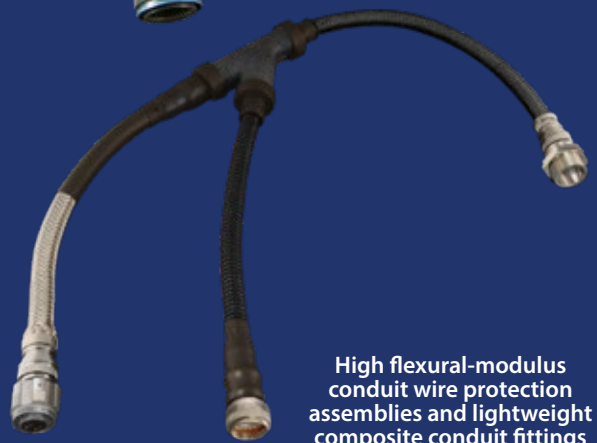
Glenair Turnkey Cable and
Conduit Assemblies for Military
Aerospace Applications



Glenair's Complex Cable Group is laser-focused on producing turnkey assemblies built principally from Glenair Signature interconnect components including small form-factor connectors, lightweight EMI/RFI shielding, and Glenair Signature MIL-STAR wire and cable.



Environmental backshell- and boot-equipped assembly

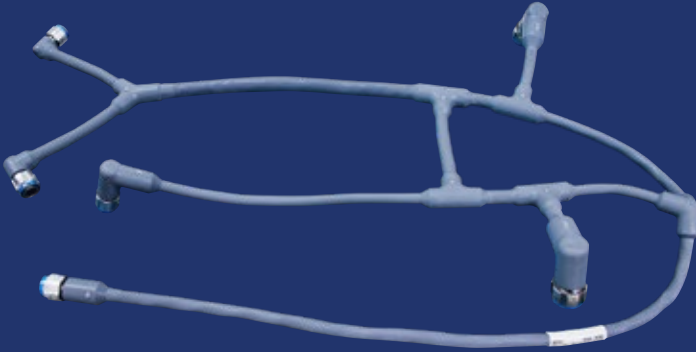


High flexural-modulus conduit wire protection assemblies and lightweight composite conduit fittings

MADE IN USA, ITALY, ENGLAND, AND GERMANY

Turnkey Military Aerospace Power and Signal Cable and Conduit Assemblies

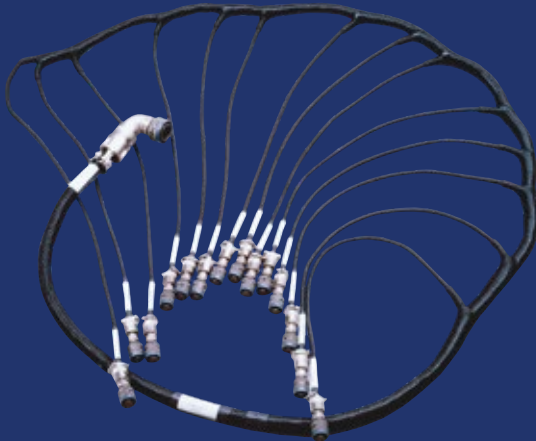
Built with Glenair Signature interconnect components



TurboFlex power distribution / sensor assembly with Duralectric™ overmolding and Mighty Mouse connectors



Non-environmental aircraft cable with integrated circuit breakout box and Mighty Mouse 807 Nett Warrior connectors



Complex multibranch assembly equipped with split-shell backshells for easy field repairability



Fabric overbraided assembly with discrete overmolded interconnect standoffs



Lightweight microfilament ArmorLite™ EMI/RFI shielded assembly with TurboFlex cable



Complex multibranch overmolded cable assembly for a military fighter jet application

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



The TurboFlex® Ecosystem: High-Power Cables,
Contacts, Connectors, and Assemblies



TURNKEY
turboflex
Flexible Cable Assemblies

TurboFlex is an ultra flexible and rugged power cable solution—ideal for high-power electrical distribution and propulsion applications such as battery plant-to-inverter-to-electric motor cables for eVTOL aircraft. Constructed from rope-lay configuration copper or aluminum wire and jacketed with Glenair signature Duralectric insulation, TurboFlex cables are optimized for use in an ecosystem of Glenair signature contact and connector technologies. Turnkey connectorized or lugged cable assemblies—fully tested and ready for immediate use—provide reliable high-temperature tolerant performance up to 4500 VAC.



STANDARD TURBOFLEX VS. TURBOFLEX M



M22759
cable construction



TurboFlex rope-lay
cable construction

All TurboFlex cables are jacketed with Duralectric insulation, which contributes significantly to the flexibility of the product. Available wire cores include rope-lay cable (standard) and M22759 cable (TurboFlex M). Standard TurboFlex provides maximum flexibility. TurboFlex M has a slightly larger bend radius but far superior flexibility compared to standard M22759 cable.



◀ Duralectric™ is the high-performance TurboFlex® jacketing material. Different compounding formulas are optimized for weight savings, radiation resistance, ultra low temperatures, conductivity, and immersion in chemical or caustic fuels. Available in a broad range of colors including safety orange.

TurboFlex ultra-flexible power distribution cable with rugged Duraelectric™ jacketing



THE TURBOFLEX ECOSYSTEM: HIGH-TEMPERATURE TOLERANT CROWN RING CONTACTS



Glenair Signature Crown Ring high temperature tolerant contacts

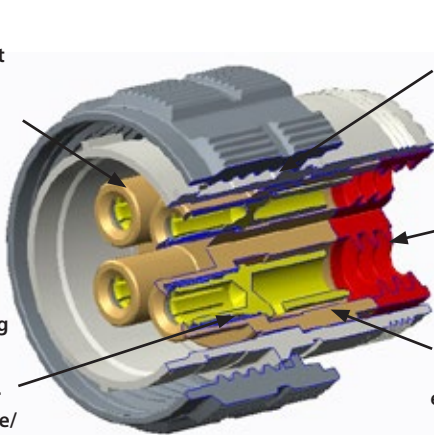
provide reduced contact resistance, superior conductivity, and higher temperature tolerance than conventional AS39029 contacts and specialized high-power contacts from other manufacturers. Safe-touch configurations available

- Maximum operating temperature 260°C
- Superior conductivity performance compared to beryllium copper contacts, across full temperature range
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)
- Contact bodies made from high conductivity copper alloy (approximately 95% IACS)
- Stainless steel Crown Ring
 - Provides socket forces without stress relaxation at high temperatures
 - Moves socket spring function from socket body to ring, allowing use of high-conductivity copper
- Gold over nickel plating
 - Thicker plating than industry standards for reduced contact fretting and higher temperature endurance
 - Gold over nickel is “gold standard” for high-reliability aerospace contacts
- Crimp versions use standard industry tooling, including crimp die/locator and insertion/extraction tools (2AWG Crown Ring contacts require custom tooling)

THE TURBOFLEX ECOSYSTEM: COMPATIBLE CONNECTOR DESIGNS WITH OPTIMIZED ELECTRICAL AND ENVIRONMENTAL PERFORMANCE

Raised “Safe-Touch” Socket towers for improved creep path performance

Crown Ring Socket contacts for higher temperature/higher power performance



Integrated EMI spring for improved shell to shell grounding

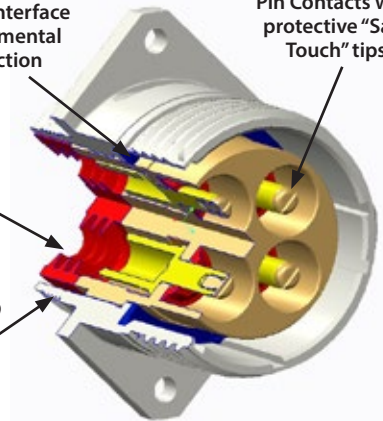
Triple-ripple grommet provides submersed condition (altitude immersion) sealing on TurboFlex cable with easy contact installation and removal

Single Piece insulator eliminates bond lines that can lead to electrical failure

Peripheral Seal for mating interface environmental protection

MIL-DTL-38999 Series III backshell attachment interface

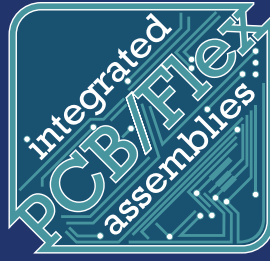
Pin Contacts with protective “Safe Touch” tips



THE TURBOFLEX ECOSYSTEM: TURNKEY POWER DISTRIBUTION CONNECTOR, LUG, CABLE, AND CONTACT ASSEMBLIES



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



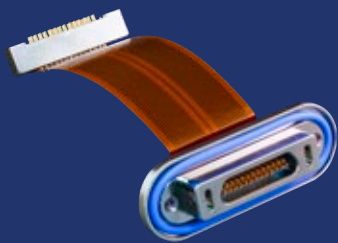
Flex, Rigid Flex, and Rigid PCB
assemblies with signature
interconnect technology for
aircraft LRU applications



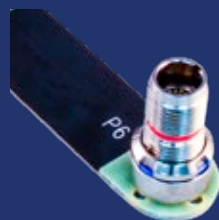
Turnkey connectorized flex, rigid flex, and rigid
PCB assemblies incorporating Glenair's broad
range of innovative small form-factor circular and
rectangular PC-tail connector solutions for optimized
ease-of-assembly and SWaP



GLENAIR SIGNATURE PC-TAIL CONNECTOR TYPES AVAILABLE IN TURNKEY FLEX ASSEMBLIES



Series MWD Micro-D and
spring-contact AlphaLink



Series 88
SuperFly



Series 79
Micro-Crimp



SuperNine MIL-DTL-38999 type
flexi with board connector

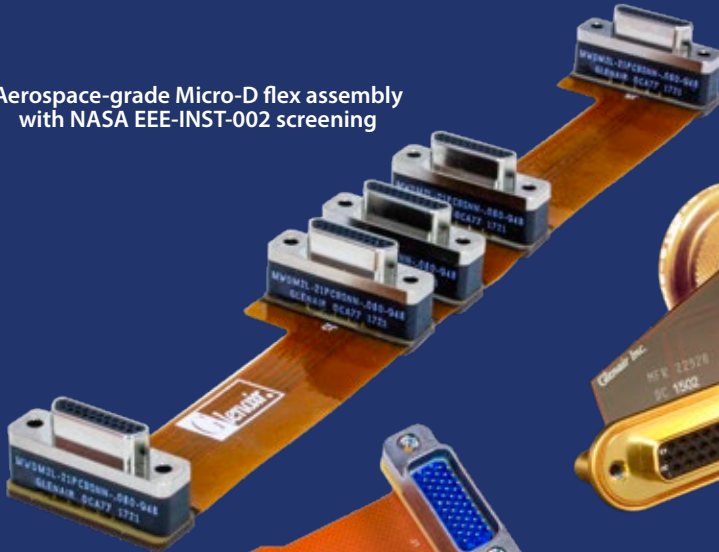
TURNKEY

Flex, Rigid Flex, and Rigid PCB Assemblies with Glenair Signature PC tail connectors for reliable, repeatable performance

for reliable, repeatable performance

MULTIBRANCH FLEX / PCB ASSEMBLIES WITH GLENAIR SIGNATURE CONNECTORS

Aerospace-grade Micro-D flex assembly with NASA EEE-INST-002 screening



High-shock matched-impedance Mighty Mouse assembly with flex circuit



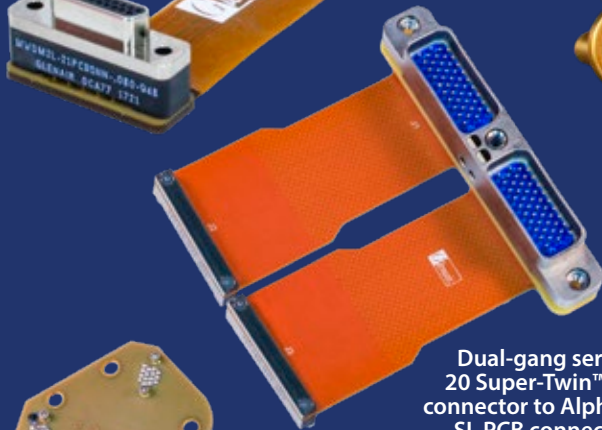
Aerospace-grade Series 28 HiPer-D to Series 80 Mighty Mouse I/O jumper: a tight space-constrained rectangular-to-circular solution



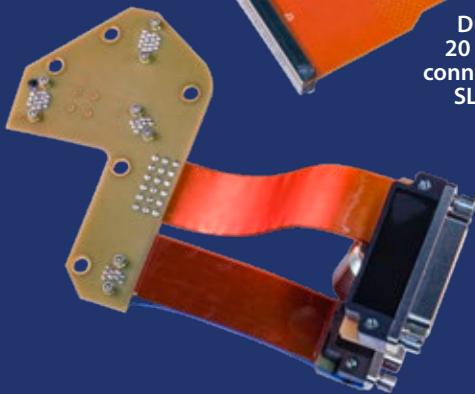
Hybrid flex/rigid flex multibranch Micro-D and Series 23 SuperNine flex assembly with discrete RF circuits



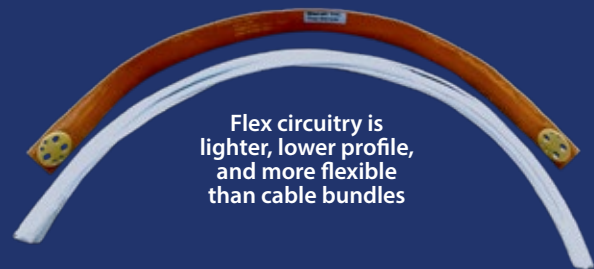
Dual-gang series 20 Super-Twin™ I/O connector to AlphaLink SL PCB connector



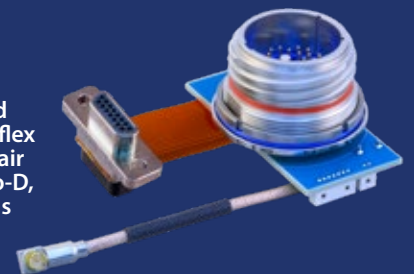
Stacked Micro-D I/O connectors with flex jumper to rigid PCB assembly



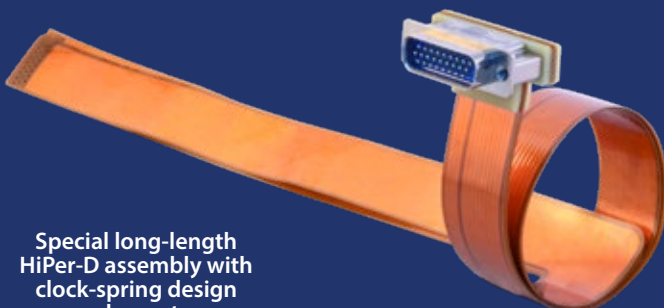
Flex circuitry is lighter, lower profile, and more flexible than cable bundles



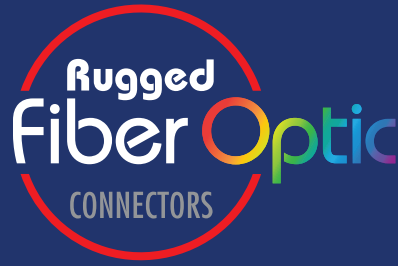
High vibration and shock resistant rigid flex assembly with Glenair Mighty Mouse, Micro-D, and RF connections



Special long-length HiPer-D assembly with clock-spring design element



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Fiber Optic Cables and Harnesses: turnkey environmental and inside-the-box assemblies

Glenair manufactures every popular mission-critical fiber optic interconnect system including MIL-DTL-38999 type, MIL-DTL-64266 NGCON, MIL-PRF-28876, ARINC 801, and more. Our fiber optic cable assembly team can integrate these ruggedized, military grade fiber optic technologies into turnkey cable and harness assemblies—terminated, tested, and ready for immediate use.



Hybrid environmental overmolded fiber optic / electrical cable assembly, MIL-DTL-38999 type with 29504/4 and /5 QPL termini



Hybrid optical / electrical assembly for weight reduction in a high-speed datalink application



Harsh environment overmolded MIL-DTL-38999 Series III type assembly with composite connectors



High-density Next-Generation (NGCON) fiber optic harness assembly



Cable reels and field-deployment technologies for both Glenair GFOCA and Eye-Beam® GMA fiber optic systems



Specialized MT ribbon fiber low-profile molded breakout capabilities



GFOCA I/O-to-board assembly with overbraiding for mechanical protection



Inside-the-box MIL-DTL-38999 type I/O connector to board cable harness



TURNKEY
Fiber Optic Cables and Harnesses
for rugged mission-critical applications



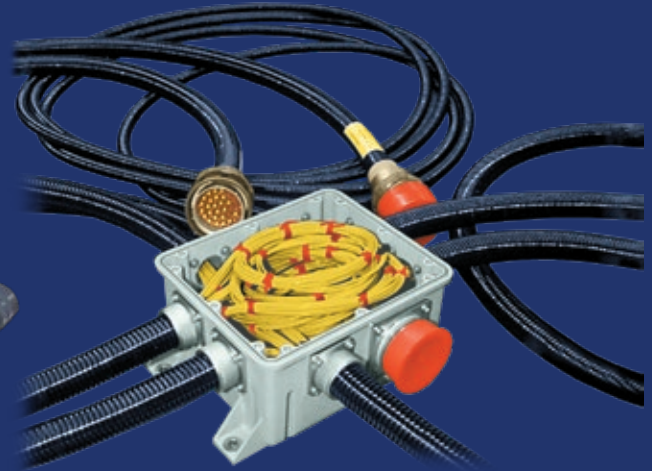
Hybrid MIL-DTL-38999 series III type fiber optic / electrical cable junction box



Harsh environment repairable MIL-DTL-38999 Series III type with FiberCon backshell to prevent fiber media damage



Field-deployable hermaphroditic GFOCA fiber optic cable assembly



Fiber optic multibranch assembly with flexible conduit wire protection and integrated cable storage bay



Point-to-point fiber optic cable with integrated strain relief



High-speed video fiber optic switch and cable junction box assembly

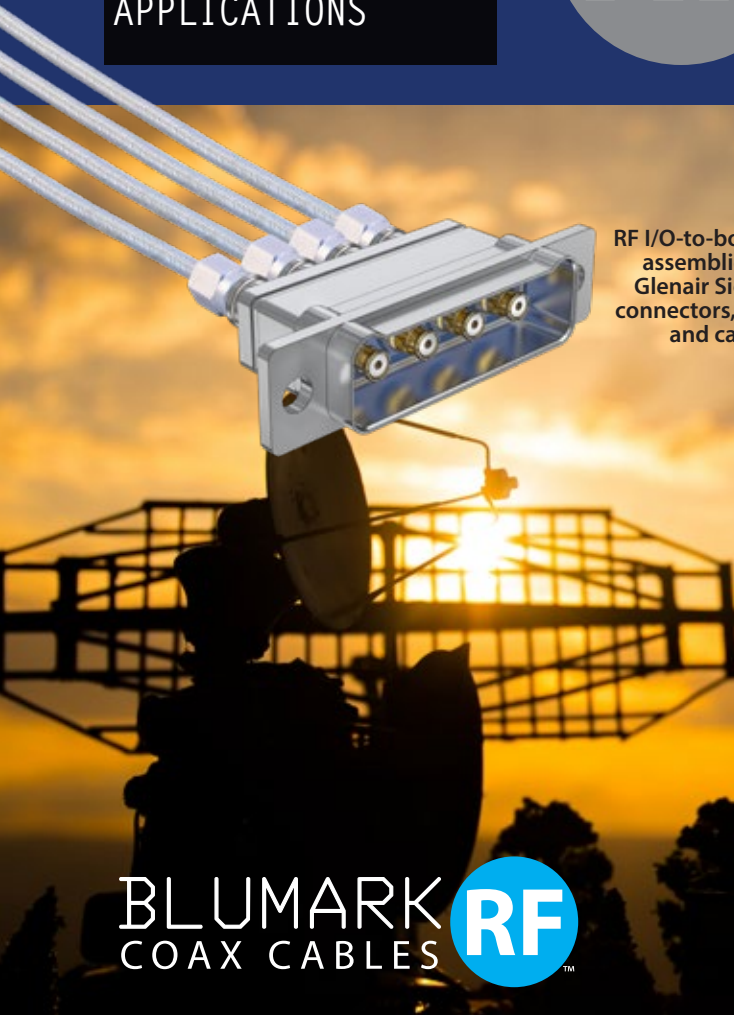


Turnkey Optical Flex circuit assembly with rugged MT ferrule terminations

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Flight-Grade RF, Microwave,
and mmWave Multiport Cable
Assemblies for Ground Test
and Flight Applications



RF I/O-to-board cable
assemblies with
Glenair Signature
connectors, contacts,
and cables

BLUMARK
COAX CABLES **RF**



VITA 67.3 RF ASSEMBLIES

Fully-customizable
SMPM and SMPS
connectors, shells,
and accessories

GLENAIR SIGNATURE MULTIPORT SHELLS FOR RF / MICROWAVE APPLICATIONS



SuperNine[®]

Series 23 SuperNine
"better-than-QPL"
MIL-DTL-38999 Series III
type connector



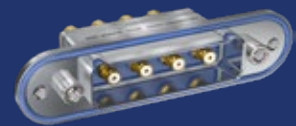
**MIGHTY
MOUSE**

Series 80 Mighty Mouse
reduced size and weight
aerospace-grade
connector



SERIES
806 RF
MIL-AERO

Series 806 Mil-Aero
micro miniature circular
with performance
IAW D38999



SERIES
795
RF

Series 795 RF
precision-machined
aerospace-grade
coax connector

FLIGHT-GRADE

RF and Microwave Turnkey Cable Assemblies with Glenair Signature Connectors, Cables, and Adapters

for mission-critical RF applications

50 AND 75 OHM COAX CONNECTORS FOR USE IN MULTI-PORT AEROSPACE-GRADE SHELLS



Size #16 coaxial contacts



Size #12 coaxial contacts

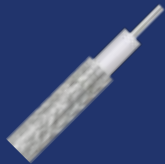


Size #8 coaxial and concentric twinax contacts



26.5 GHz G-Link RF contacts with integral female SMA adapter for easy cable attachment

BLUMARK RF COAX CABLES 50 OHM LOW-LOSS COAX CABLES



Size 047
26.5 GHz
hand-formable
tin-soaked braid



Size 086
40 GHz
FEP or
ETFE jacket



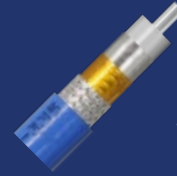
Size 160
18 and 40 GHz,
with FEP or
ETFE jacket,
Low Phase Change



Size 200
26.5 GHz
FEP or
ETFE jacket
triple shield



Size 235
18 GHz,
FEP or
ETFE jacket
triple shield



Size 300
18 GHz,
FEP jacket
triple shield



Size 450
10 GHz,
FEP jacket
triple shield

50 OHM COAX JUMPER ASSEMBLIES WITH LOW-LOSS CABLE AND PRECISION-GRADE CONNECTORS



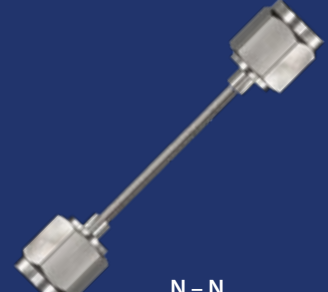
SMA
086 cable,
tinned-copper braid
DC-26.5 GHz



SMA
141 cable,
tinned-copper braid
DC-26.5 GHz



N-SMA
141 cable,
tinned-copper braid
DC-18 GHz



N-N
141 cable,
tinned-copper braid
DC-18 GHz

RF CONNECTOR ADAPTERS AND PROTECTIVE COVERS, PRECISION-GRADE



TNC-SMA
adapters



N-SMA
adapters



SMA-SMA
adapters



SMP-SMA
adapters



2.92-SMA
adapters



Protective covers
for RF connectors

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



VersaLink™, SpeedMaster™, El Ochito®,
and other lightweight, small form-factor
high-speed datalink connectors



SpeedLine
High-Speed Data Link Cables

SpeedLine™
high-speed
cable assemblies

Glenair Signature high-speed interconnects are
optimized for all popular datalink protocol standards



RF / HIGH-SPEED DATALINK CONTACTS



Size #8 differential
twinax contacts



Size #8
quadrax contacts



Size #8 spring-loaded
BMB microwave contacts



Size #12 SMPM type
spring-loaded coaxial



G-LinkRF
SMA contact adapter

LIGHTWEIGHT, SMALL FORM-FACTOR

High-Speed Datalink Interconnect Solutions with Glenair Signature Connectors, Contacts, and Cable up to 28 Gbps



El Ochito

THE OCTAXIAL SIZE #8 CONTACT FOR GbE/10GbE ETHERNET, USB 3.0, HDMI, AND MORE

Crimp Ferrule

Dielectric Sleeve

Socket Contacts

Contact Organizer
Insulator

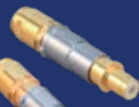
Front Insulator

Spline

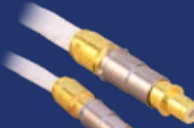
Alignment
Key

Outer Body

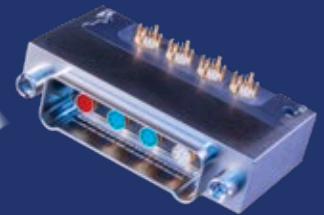
El Ochito®:
The high-speed
octaxial contact with
patented data pair isolation



Discrete contacts for
D38999 Series III, Series 806
Mil-Aero, SuperNine®, ARINC
600, and Series 79 for both
#24 and #26 gauge cable



Turnkey jumpers
with Cat 6A #24 or #26
gauge flexible
aerospace cable



Series 79 right-angle PCB
connector with El Ochito
white (Ethernet), blue (USB
3.0), and red (100 Ohm
HDMI, DVI, SATA, and PCI)



Series 882
SuperFly Datalink
El Ochito nanominiature



Series 806 Mil-Aero
high-speed El Ochito
micro miniature



SuperNine MIL-DTL-38999
"Better than QPL"
high-speed El Ochito



Series 792 Micro-Crimp
precision-machined
high-speed El Ochito

GLENAIR SIGNATURE HIGH-SPEED CONNECTOR SERIES



VersaLink micro miniature differential twinax with
Signature Series 806, 795, and Micro-D packaging



High-Speed Micro-D
TwistPin contact
10+Gb/sec. (example
insert with four high-
speed signal pairs



GMMD modular high-
speed Micro-D
RF / 10GbE connector



Speed-Master™ modular
10G+ Ethernet (shown in
SuperNine® packaging)

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



High-density, crimp-contact,
power and signal connectors
with precision-machined micro
miniature packaging



Originally designed for NASA's Orion project, the 791's small size and blind mate capability make it a perfect choice for rack-and-panel electronics modules. Applications include missile

systems, radars, exoatmospheric vehicles, flight avionics, power distribution units, and drone instrumentation.



Polarized / keyed shells prevent mis-mating and allow designers to specify identical layouts side-by-side without risk of circuit damage

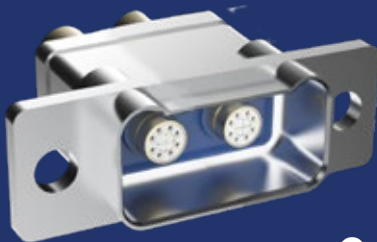
- Next-generation small form factor aerospace-grade rectangular connector
- Scoop-proof recessed pin contacts
- 37 arrangements, 12 shell sizes for the ultimate in versatility
- Rugged aluminum alloy dual-lobe shell
- Environmental
- EMI shielded
- Blind mating



High-speed El Ochito® variants of Glenair Signature micro miniature crimp-contact rectangular connectors



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
- Printed circuit board and cable connectors
- Scoop-proof interface
- 12 arrangements, 6 shell sizes for the ultimate in versatility
- Rugged aluminum alloy dual-lobe polarized shells
- Environmentally sealed
- Integrated EMI shielding and grounding
- Blind mating

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



MIL-DTL-83513 and
Glenair Signature
Micro-D Connectors
and Splice-Free
Cable Assemblies



The world leader in Micro-D connectors: from COTS to custom, backshells to hardware, Glenair has it all

TwistPin equipped MIL-DTL-83513 Micro-D connectors and cables offer outstanding mating performance, durability, low contact resistance, and same-day availability

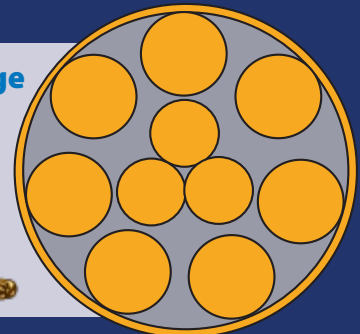
- High density TwistPin contacts on .050" centers
- Turnkey multibranch and complex cable assemblies
- 9 to 130 contact arrangements
- Single row, multi-row, low profile and high density insert arrangements
- QPL and commercial versions



Splice-free Micro-D and Nano cable assemblies

The Micro TwistPin Advantage

Seven strands of TwistPin BeCu wire make direct contact with the machined socket, assuring low resistance, plenty of contact wipe, and superior shock and vibration performance.



MIL-DTL-83513 AND COMMERCIAL Micro-D Connectors



Mission-critical mating performance
industry-leading selection and availability

MATERIAL CLASSES AND QUALIFICATIONS



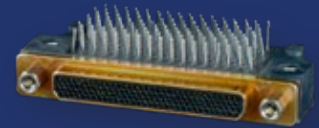
Environmental



Hermetic



EMI / RFI Filter

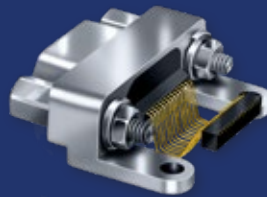


Space-Grade

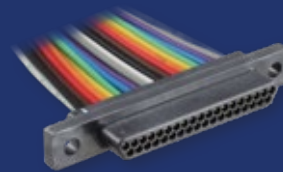
TERMINATION STYLES



Flex



PCB



Pigtail

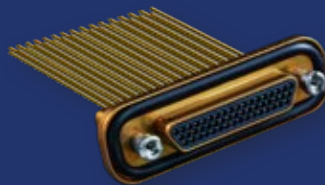


Solder

WIRED / CABLED CONFIGURATIONS



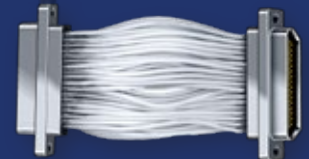
Shielded



Uninsulated



Insulated



Back-to-Back

PCB DESIGNS—AVAILABLE WITH POTTING MOD CODES FOR ADVANCED SEALING REQUIREMENTS



Vertical



Horizontal



Surface-Mount



Shrouded

SPECIAL-PURPOSE DESIGNS



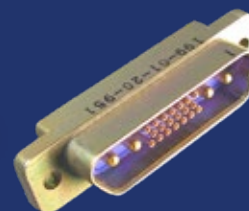
High-Temperature



Sav-Con®



Latching MicroStrip



Combo



GMMD High-Speed /RF
Modular

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



MIL-DTL-32139 QPL and Glenair Signature
Nano miniature connector designs



Turnkey solutions from
shielded cable assemblies
to discrete wire-to-board
interconnects

The M32139 Nano is the smallest and lightest mil-spec connector in the business. 1 Amp contacts are set on .025" centers and terminated to 30 AWG wire or PCB tails. Glenair supplies both standard QPL designs as well as a broader range of signature offerings.

- Single and double row
- Metal shell, aluminum, titanium or stainless steel
- TwistPin contact system
- Gold alloy contact, unplated
- Thru-hole and surface-mount PCB versions

THE NANO TWISTPIN ADVANTAGE



Transverse cross-section of a TwistPin contact crimped to solid wire



- Gas-Tight Crimp Joint
- Better Shock and Vibration Performance
- Corrosion Proof Contact Alloy



SERIES 89

Nano miniature Connectors

Nano high density · single- and dual-row · cable and PCB



Series 89 Nano miniature Connector Performance	
Contact Spacing	.025" (0.64mm) Contact Centers
Wire Accommodation	#30-#32 AWG
Current Rating	1 AMP Max
DWV	250 VAC RMS Sea Level
Insulation Resistance	5000 Megohms Minimum
Operating Temperature	-55° C. to +125° C.
Contact Resistance	71 Millivolt Drop Maximum
Shock, Vibration	100g's, 20 g's
Durability	200 Mating Cycles
Corrosion Resistance	48 Hours Salt Spray
Mating Force	5 Ounce Max, 0.4 Ounce Min

How Small Are They?



D-Subminiature Connector
25 Contacts
on 0.109 Inch Spacing



Micro-D Connector
25 Contacts
on 0.050 Inch Spacing



Nano Connector
25 Contacts
on 0.025 Inch Spacing

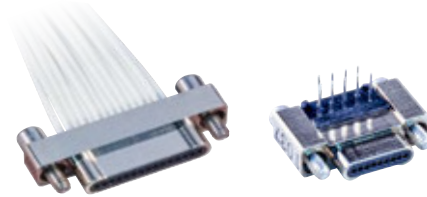


Also available: aerospace-grade
Nano circulars

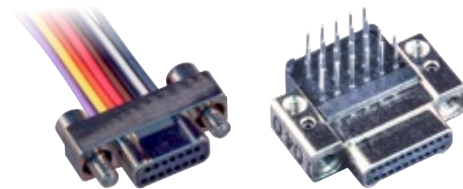
Nano Circular Connectors and Accessories



Nano Rectangular Single-Row Connectors and Accessories



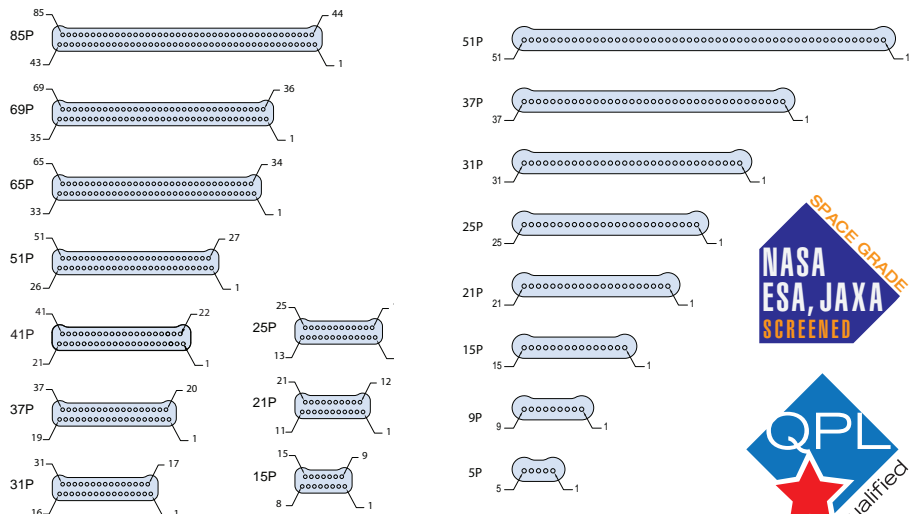
Nano Rectangular Dual-Row Connectors and Accessories



MIL-DTL-32139 Qualified Connectors and Accessories



NANO MINIATURE CONTACT ARRANGEMENTS



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

AlphaLink®

Rugged I/O to spring-pin contact
connectors and flex assemblies



AlphaLink® SL flex jumpers: Compact point-to-point assemblies that combine lightweight flex circuitry with Glenair signature I/O and board-level connectors. These turnkey jumpers reduce system size and weight while accelerating assembly qualification and test of missile and other mission-critical electronic systems.

- Chemically etched, copper-clad polyimide flex circuit jumpers offer excellent temperature tolerance, dimensional stability, and reduced size and weight
- All designs utilize AlphaLink® SL board connectors with solder-free spring-loaded contacts
- Glenair small form-factor Mighty Mouse, Micro-Crimp, HiPer-D, and SuperFly I/O connectors
- Designed for optimal electrical performance, including matched-impedance applications

ALSO NOW AVAILABLE FROM GLENAIR: MIL-DTL-55302 PCB

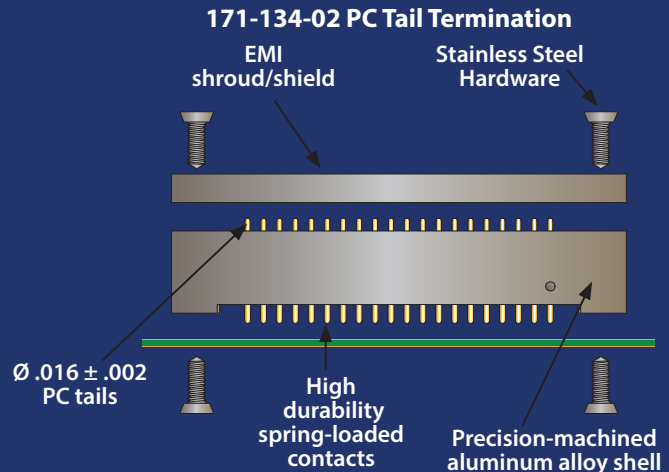
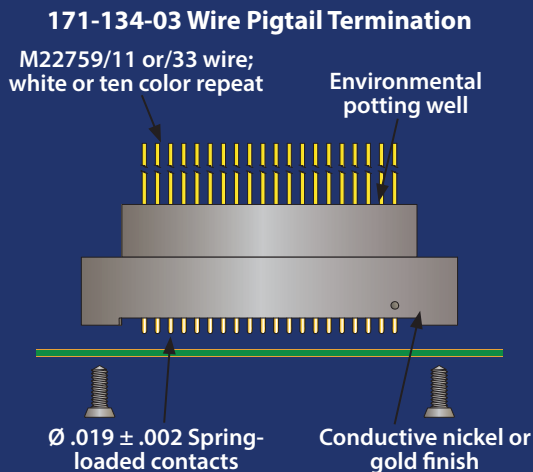
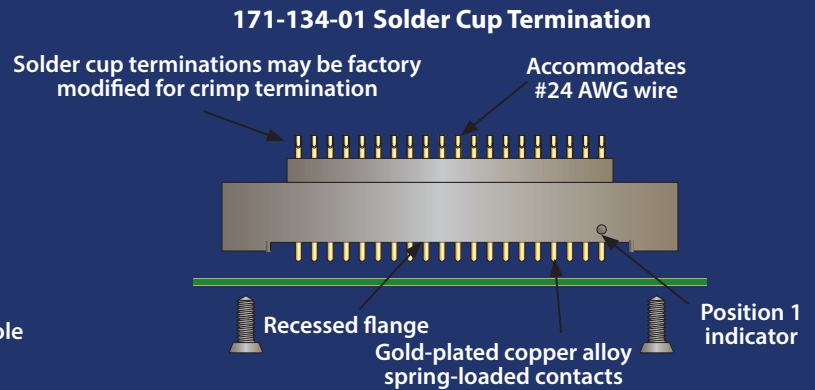
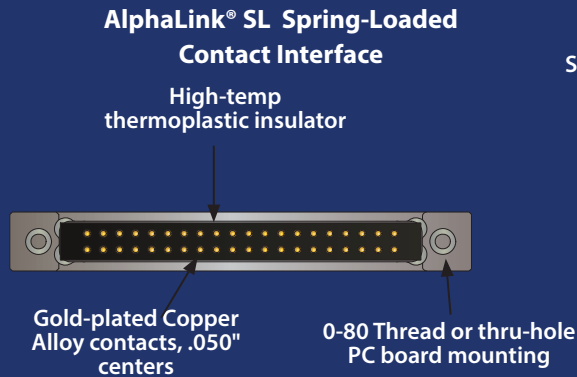


Glenair MIL-DTL-55302 qualified and signature board connectors—with hyperboloid contacts—offer superior electrical and mechanical performance compared to popular COTS-grade board-mount solutions. Glenair offers the 55302 /57 through /64 design with size #22 contacts on .100" contact spacing (GTBA and GTBB series), and qualified /190 and /191 slash sheets with size #24 contacts on .075" contact spacing (GTCA and GTCB series). Both designs utilize low mating/demating force, low-resistance, and high shock and vibration resistant hyperboloid socket contacts.

POINT-TO-POINT AlphaLink® SL Flex Jumpers



Rugged I/O to spring-pin contact connectors and turnkey flex assemblies



ALPHALINK® SL SOLDER-FREE I/O-TO-BOARD AND BOARD-TO-BOARD JUMPERS



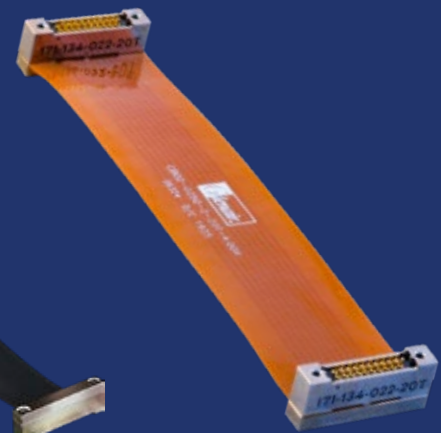
Series 89 Rectangular Nanominiature-to-AlphaLink SL flex jumper (rear-panel-mount plug or receptacle)



High-reliability Micro-D MIL-DTL-83513 type rectangular-to-AlphaLink SL flex jumper



Series 79 Micro-Crimp advanced-performance rectangular-to-AlphaLink SL flex jumper

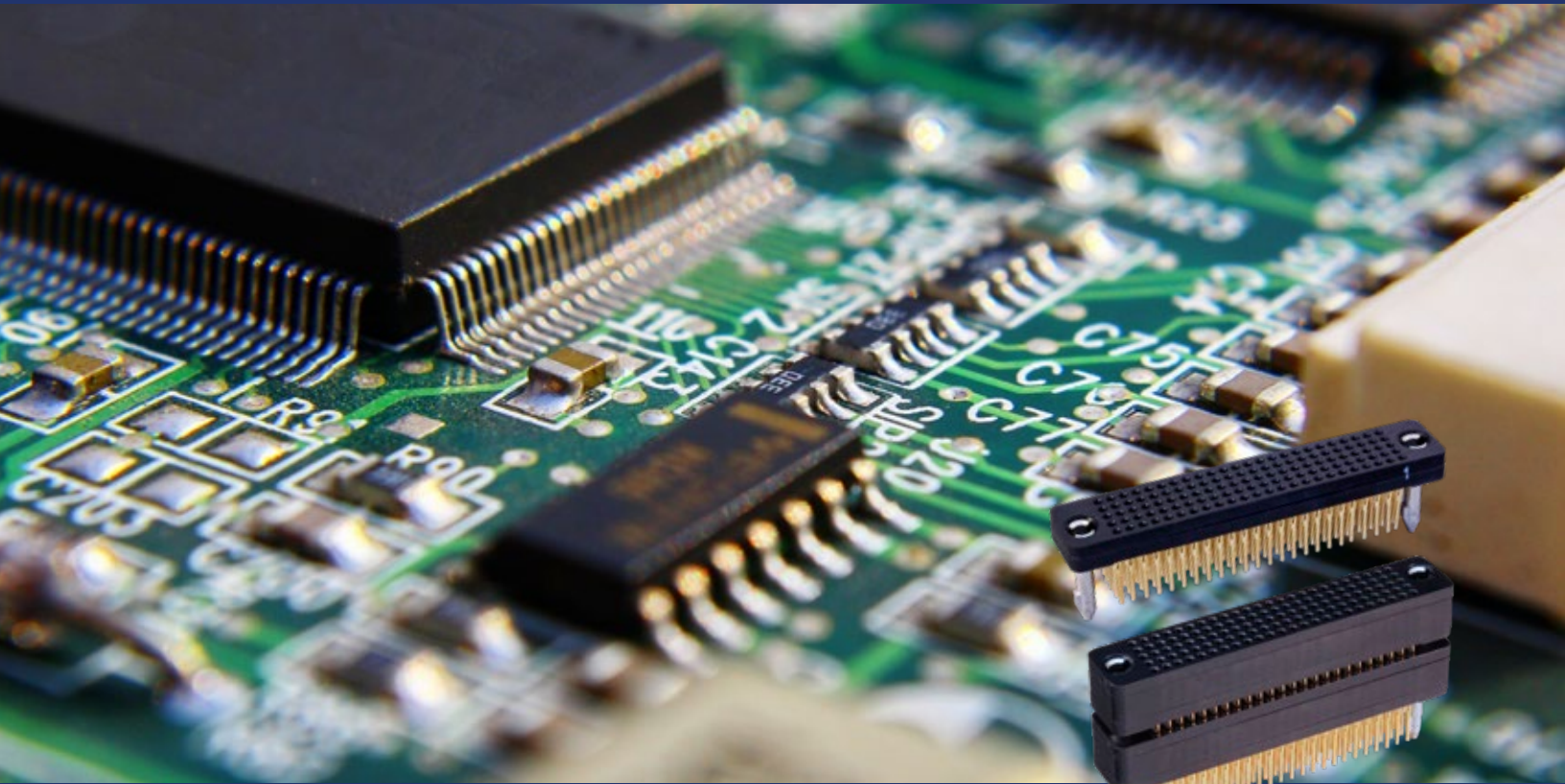


AlphaLink-to-AlphaLink board-to-board flex jumper assembly

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

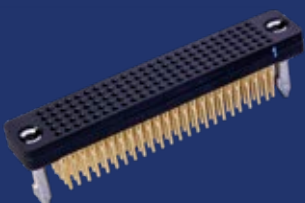


High-density, solder-free, compliant pin
board-to-board stackable connectors

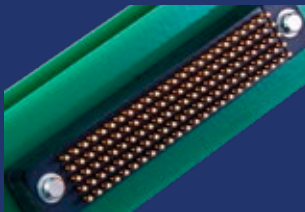


HD Stacker: the innovative mission-critical board-to-board connector with fail-safe signal integrity and rugged, reliable harsh-environment performance

- 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



Solder-free press-fit (compliant pin) board mounting



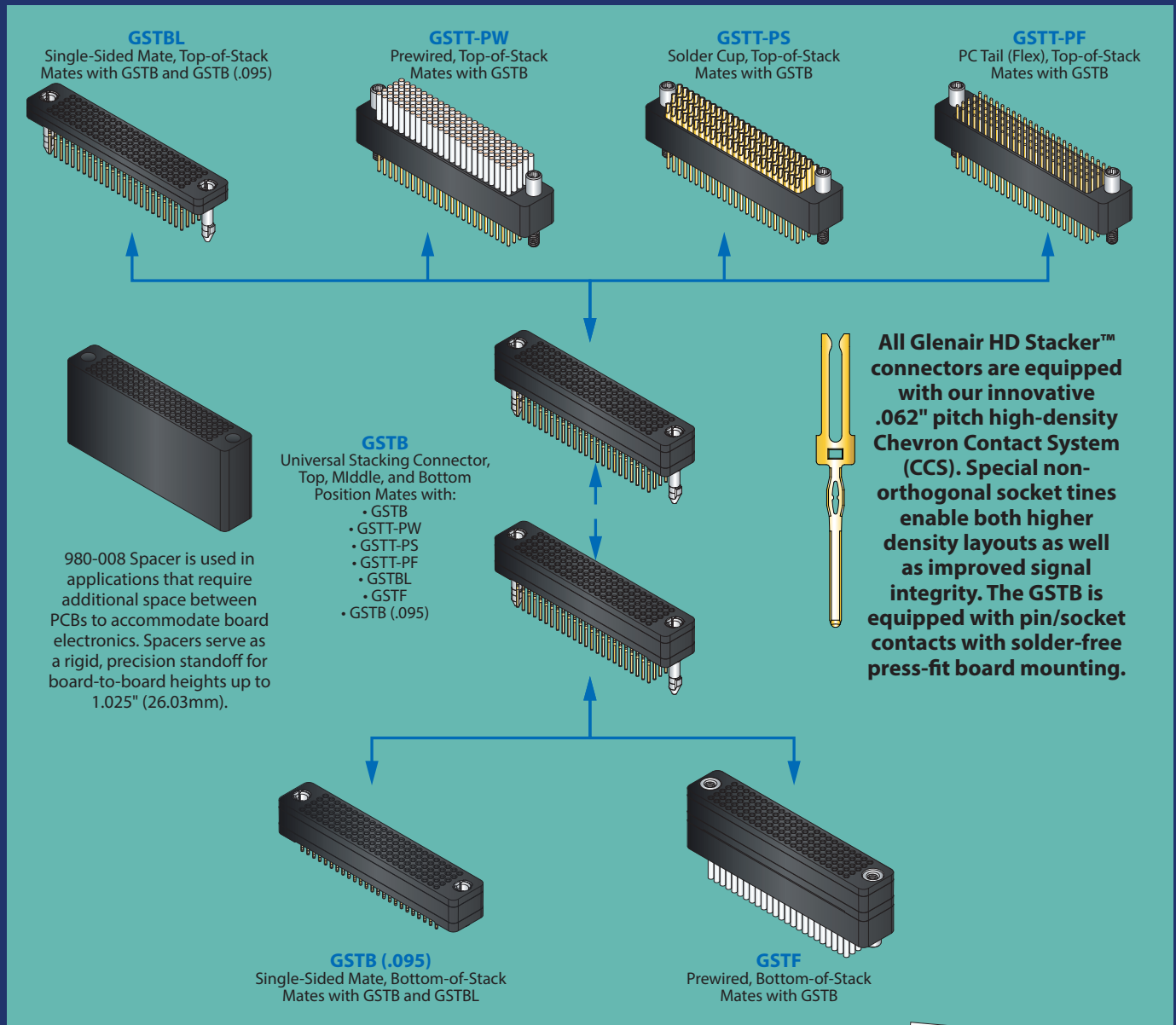
.0625" pitch contact spacing: highest available density



Polarized shells and keyed guide pin hardware prevent mis-mating

High-density, rugged, solder-free compliant pin board-to-board stackable connectors

HD STACKER™ POSITION AND MATING COMPATIBILITY GUIDE



QUALIFICATION TESTING / HIGH-SPEED PERFORMANCE

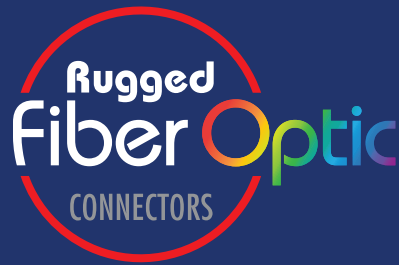
Stacker connectors were qualified in accordance with MIL-DTL-55302G testing for:

- Contact engagement/separation
- Contact retention
- DWV
- Electrical resistance
- Mechanical vibration and shock
- Insulation resistance
- Thermal shock
- Contact resistance
- 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/test-reports-and-technical-information



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



VITA 66 Style MT Ferrule Rugged Optical Backplane Connectors



The VITA 66 interconnect series introduces fiber optic connectivity to VPX ruggedized embedded computing systems. Glenair's VITA 66.1 and 66.4 compliant blind-mate, optical MT module/backplane connectors use the open architecture defined in VITA 46. These products are both compatible with VPX systems and available as standalone connector solutions for reliable, high-speed transmission in extreme commercial and military environments.



Also available: VITA 67.3
SMPM and SMPS
RF connectors, contacts,
and accessories

- VITA 66.1 and 66.4 spec compliant
- Integrated alignment pins
- Glenair designed spring-loaded MT ferrules
- Supports industry standard MT ferrules—up to 24 channels per MT
- No unique tooling required for assembly

APPLICATIONS

- VPX compliant backplanes
- Embedded computing devices
- Military aircraft (Phased Array) Radars
- Flight computers and other aircraft LRUs
- Command center comms equipment

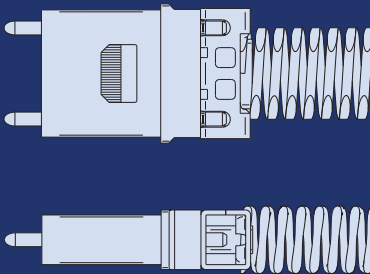
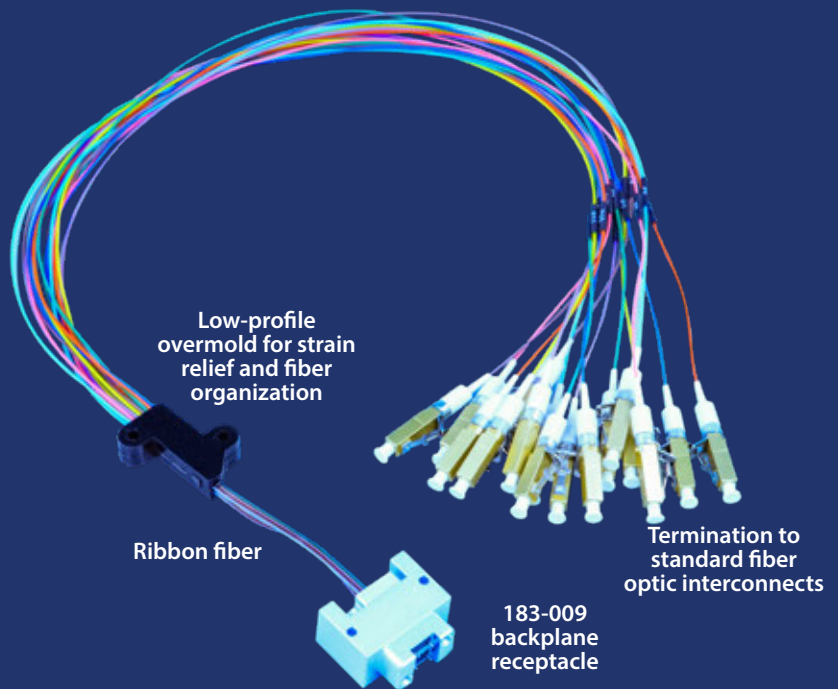
Rugged, blind-mate MT solution

TURNKEY VITA 66.1 CONNECTORS, CABLE ASSEMBLIES, AND FERRULES

Glenair can design, terminate, and test complex multibranch and point-to-point assemblies incorporating VITA 66.1 style backplane connectors with standard commercial fiber optic interconnects for termination to board-level transceivers. Low-profile cable overmolds provide fiber media organization and ribbon-to-wire strain relief. Discrete backplane connectors and MT ferrule assemblies are also available



Right-angle configurations for motherboard to daughtercard applications



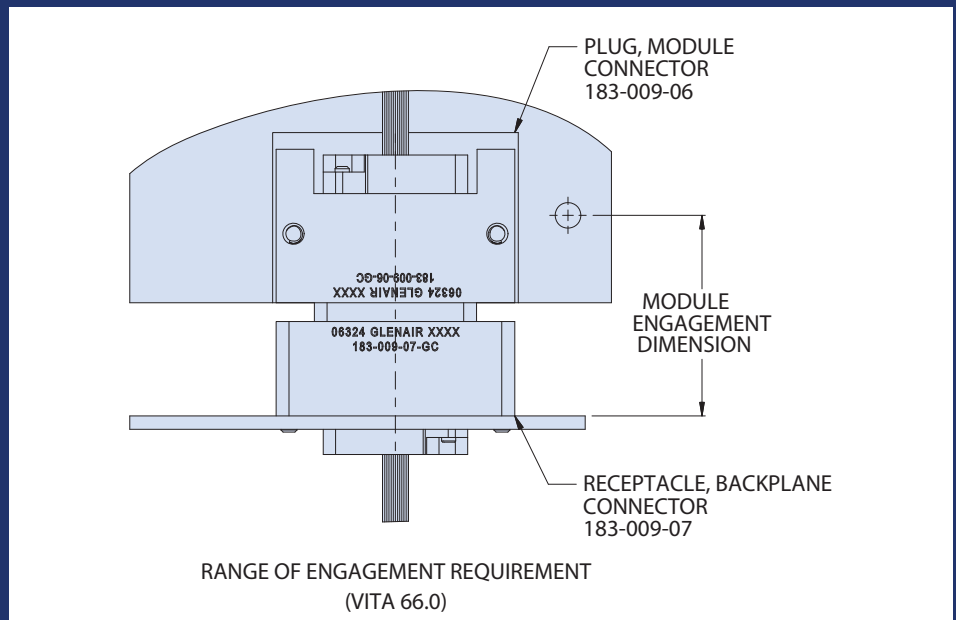
Glenair designed floating MT ferrule contacts

The MT Ferrule High-Density Advantage

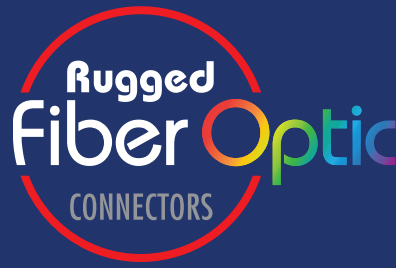
24 fibers

3 fibers

Up to 24 fibers in a single compact, lightweight ferrule (7mm x 3mm / .276" x .118") — same real estate as three size #16 termini side by side



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



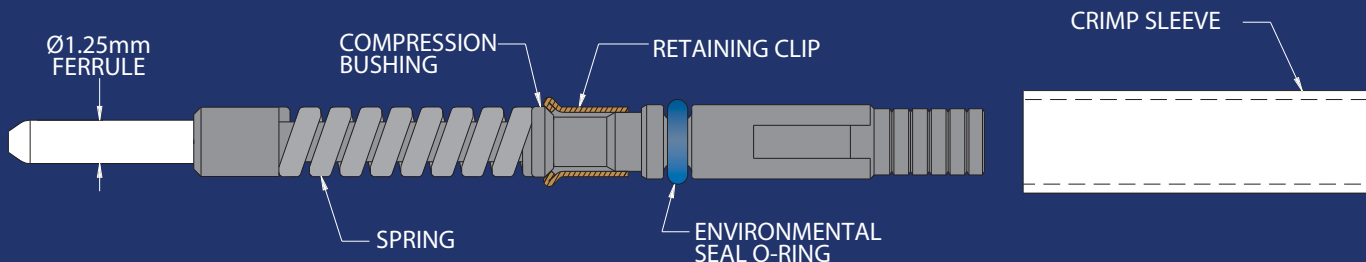
Glenair High Density
(GHD) and other EMI-
Immune Aerospace-
Grade Fiber Optic
Connection Systems



Our extensive portfolio of high-speed, high-datarate fiber optic connection systems for military defense applications includes QPL'd MIL-T-29504 termini for Mil-standard 38999 fiber optic connectors, ARINC 801 fiber optic connectors and qualified termini, NAVSEA-qualified 28876 fiber optic connectors and qualified termini, and Glenair Signature High-Density (GHD).

DESIGNED FOR

- Low mass
- Dynamic vibration and shock resistance
- Extreme temperature resistance
- Environmentally sealed
- flammability, toxicity, low-smoke
- Indirect lightning strike
- ease-of-maintenance
- uncompromised reliability



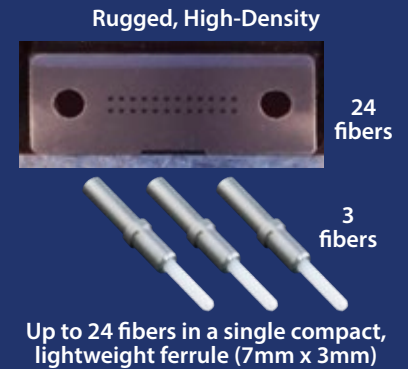
GHD's high-density cavity spacing is achieved with an innovative front-release terminus design that incorporates a high-force spring and compression bushing that enables low-loss performance even in high-vibration / high-shock applications.

AEROSPACE AND DEFENSE Fiber Optic Interconnect Systems



Ruggedized, harsh-environment solutions

ALSO-AVAILABLE MIL-STANDARD TECHNOLOGY: MT FERRULE FIBER OPTICS



EYE-BEAM POWER: RUGGED, HIGH-POWER FIBER OPTICS FOR DIRECTED ENERGY AND LIDAR APPLICATIONS



- Size #8 drop-in expanded-beam optical contact for rugged military/aerospace applications
- Powerful 20W and higher optical contact ideally suited for directed energy applications
- Turnkey incorporation in Glenair signature SuperNine, Series 792, and Series 806 Mil-Aero connectors
- Compatible with 1064nm polarization-maintaining fiber with a 0.5 dB typical insertion loss
- Low temperature rise at peak power

ALSO-AVAILABLE MIL-STANDARD TECHNOLOGY: ULTRA-LOW dB LOSS ARINC 801 FIBER OPTICS



- Genderless terminus design eliminates pin and socket complexity
- Rear-release size #16 termini
- Singlemode and multimode
- Mechanical and environmental performance IAW ARINC 801 standards
- Sav-Con Connector Savers available

ALSO-AVAILABLE MIL-STANDARD TECHNOLOGY: TIGHT-TOLERANCE MIL-DTL-38999 SERIES III TYPE

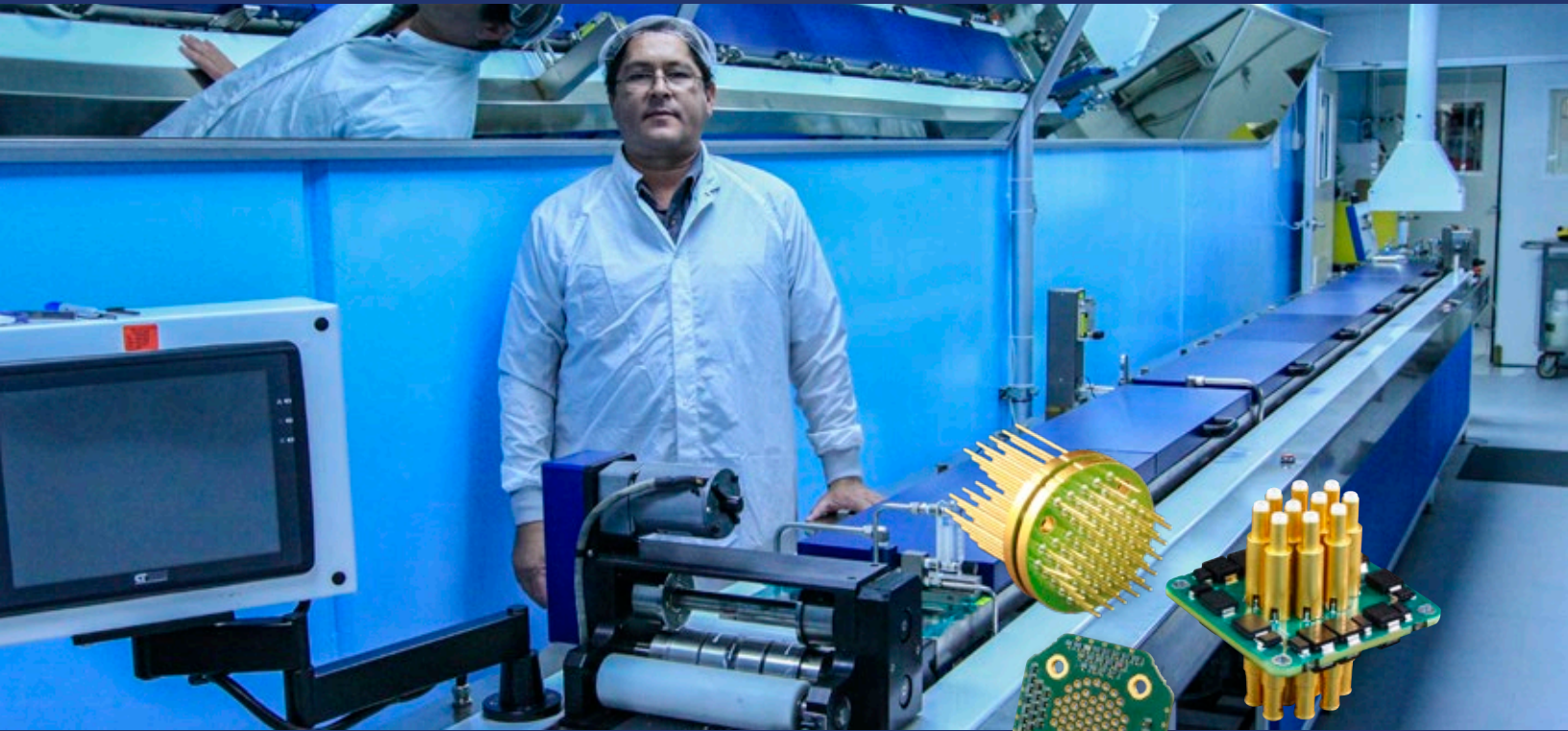


- Composite, aluminum and stainless steel shells available
- QPL size #16 MIL-PRF-29504 /4 and /5 precision ceramic termini
- Singlemode and multimode fiber, from 9/125 to 1000 microns
- Ultra-low insertion loss, <.50dB typical
- From 2 to 37 Termini
- Patented MIL-DTL-38999 fiber optic test probes and adapters

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



EMI/RFI Filter Connectors
and EMP Suppression:
Planar Array Power, Signal,
and TVS Solutions



All diode-equipped
EMP inserts and planar
array EMI filter inserts
produced in-house

Planar filter array and TVS diode
connectors diodes in standard
catalog as well as build-to-order
configurations

- Planar, multilayer ceramic capacitive filters, with and without transient voltage suppression diodes
- Space-grade plating and outgassing processing
- C and Pi electrical configurations
- PC tail, crimp or solder cup termination
- 35 – 240,000 pF capacitance
- Fast and reliable diode burn-in and test services
- Turnkey in-house manufacturing of all filter connector elements and processes

Table I: Capacitor Array Code / Capacitance Range

Class	Pi - Circuit (pF)	C - Circuit (pF)
X	160,000 - 240,000	80,000 - 120,000
Y	80,000 - 120,000	40,000 - 60,000
Z	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60



Planar filter arrays and TVS diodes may also be incorporated into rectangular connector packaging such as the Micro-D and Series 79 Micro-Crimp devices shown here.

AEROSPACE-GRADE EMI/EMP Filter connectors



Innovative designs · total vertical integration



Extended-shell
PC-tail cylindrical filter
with threaded standoff



Special-purpose
filter connector cable
adapter (Sav-Con®)



Custom reduced-length
sidecar filter connector design



Series 80 Mighty Mouse
PC-tail filter receptacle



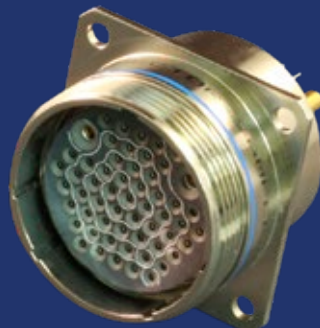
Series 80 Mighty Mouse
solder-cup filter receptacle
with integrated banding porch



MIL-DTL-38999 type
crimp-contact termination
filter receptacle



MIL-DTL-38999 Series
III type EMP TVS diode-
equipped filter connector



MIL-DTL-83723 type filter
connector, gold-plated for atomic
oxygen corrosion resistance



Quick-disconnect circular with
solder-free contact filter array

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

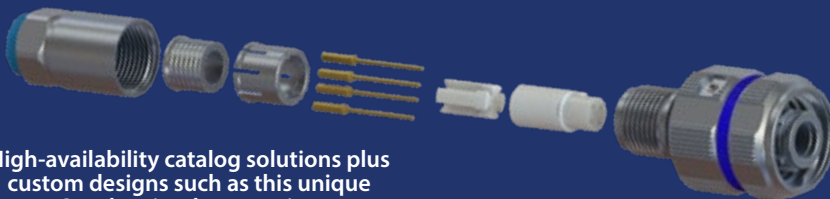
SERIES
806
MIL-AERO

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



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.

SIZE AND WEIGHT SAVING SOLUTIONS: CATALOG OR CUSTOM



High-availability catalog solutions plus custom designs such as this unique Quadrax implementation

- Next-generation small form factor aerospace-grade circular connector
- Designed for harsh application environments including SWAMP-zone sensors, flight navigation electronics, and flight deck avionics
- Integrated anti-decoupling technology
- High density 20HD, 22HD, RF, power, and high-speed contact arrangements
- Hermetic and filter versions
- +200°C temperature rating

Series 806 Mil-Aero Ultraminiature Circular Connectors



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

SERIES 806 MIL-AERO: FEATURES / SPECIFICATIONS

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

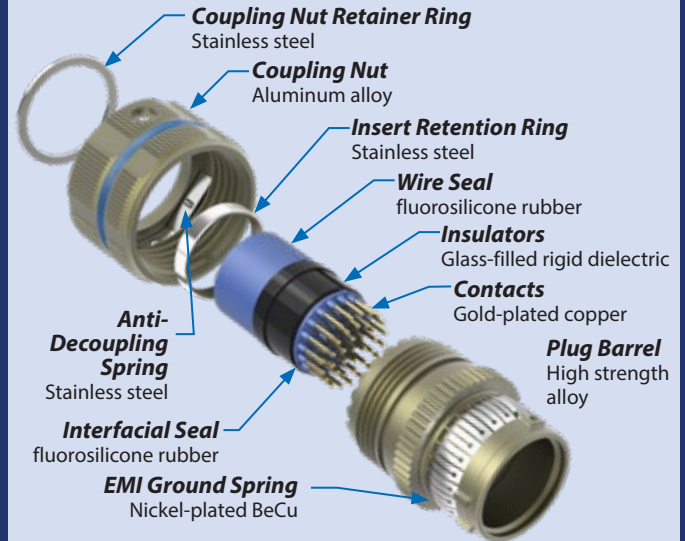


AVAILABLE LIGHTWEIGHT ALUMINUM “CODE RED” HERMETICS

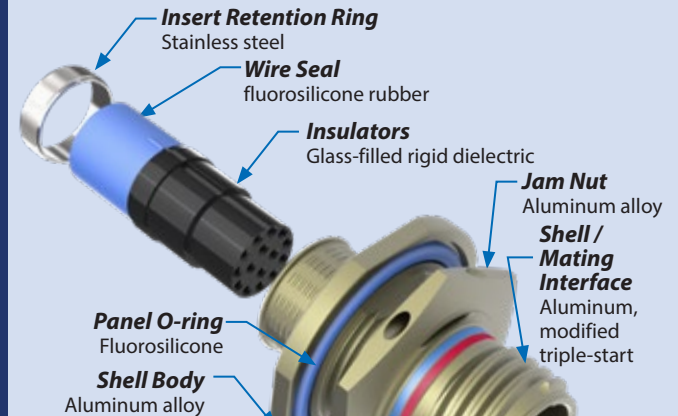
CODE RED is a lightweight encapsulant sealing and assembly process with 50% package-weight savings compared to glass-to-metal seal Kovar/stainless steel solutions. Non-outgassing CODE RED (IAW NASA/ESA) provides durable hermetic sealing with 1×10^{-7} leak rate performance. Gold-plated copper contacts deliver outstanding low-resistance current carrying capacity.



SERIES 806 MIL-AERO PLUG



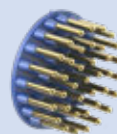
SERIES 806 MIL-AERO RECEPTACLE



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



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

SUPERFLY DATALINK



The Nano miniature Shielded Octaxial
Interconnect for High-Speed Datalink Protocols



High speed, harsh environment SuperFly[®] Datalink connectors—shielded for 10Gb Ethernet, SuperSpeed USB, HDMI, SATA, and DisplayPort protocols—deliver outstanding signal integrity and save significant size and weight compared to Quadrax solutions.

PANEL MOUNT CONNECTOR



Panel mount SuperFly Datalink receptacles feature straight or right angle printed circuit board terminals. SuperFly Datalink board mount jacks are epoxy-sealed and are compatible with conformal coatings.



Quick Disconnect



Threaded Coupling



Straight PC Tails



Right Angle PC Tails

The high-speed nano miniature connector for harsh environment defense applications

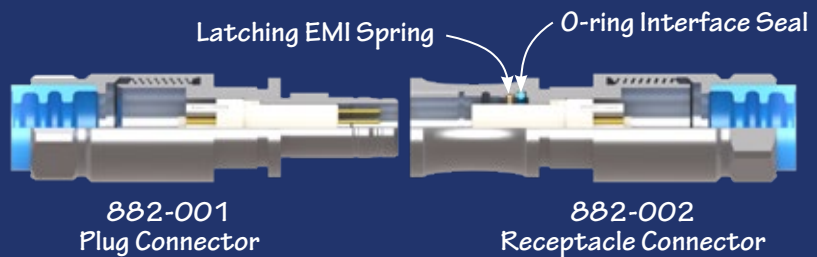
SUPERFLY DATALINK

The High-Speed Ultraminiature Connector for Harsh Environments



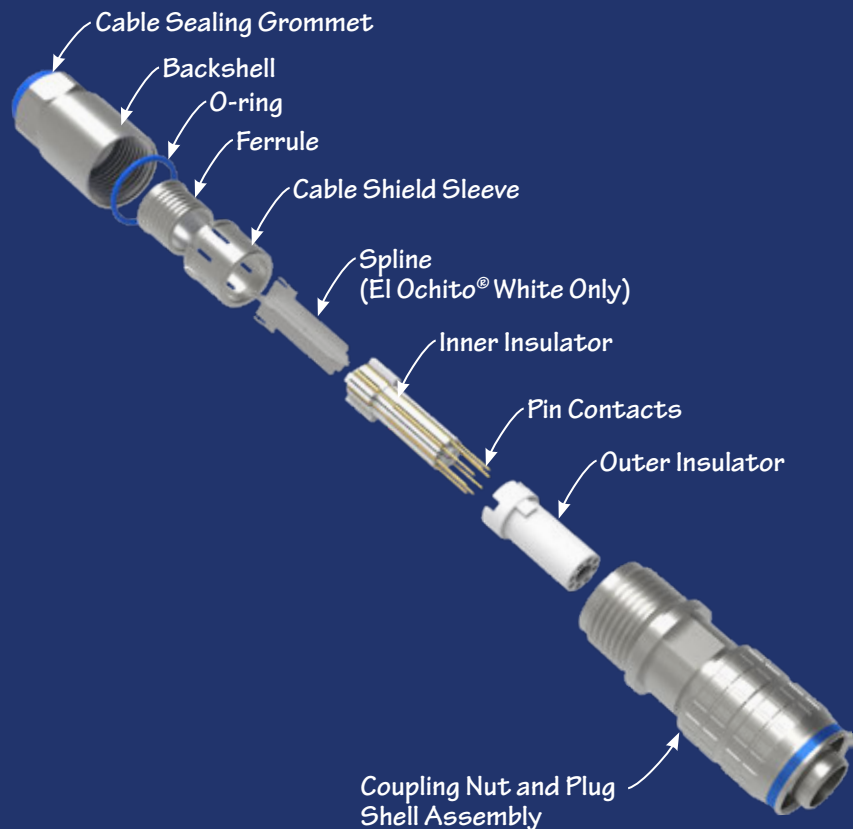
- Ultra-small size
- Shielded Octaxial contacts
- Combo arrangement for HDMI 2.0 and DisplayPort 1.2
- 40Gb Ethernet, SATA and SuperSpeed USB
- Up to 10 Gbps per pair
- PCB or cable termination
- Threaded or Quick-disconnect
- Environmentally protected
- Aerospace-grade performance
- Panel-mount connectors fully-sealed for compatibility with conformal coatings used in board assembly

Push-Pull Quick-Disconnect



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

Threaded Coupling Cable Connector



Cable connectors feature gold-plated crimp contacts, precision insulators, integral backshell, sealing grommet and machined shells. Cable connectors are available as unassembled kits or ready-to-use factory-terminated cordsets.

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

 **SuperNine[®]**

The advanced-performance MIL-DTL-38999
Series III type connector



SuperNine[®] is a “Better-than-QPL” MIL-DTL-38999 series connector with outstanding durability, sealing, ease of shield termination, broad range of PC tail configurations, environmental and hermetic bulkhead feed-throughs, connector savers, as well as off-the-shelf EMI/EMP filter connectors and more—all with Glenair’s legendary service, support, and product availability

**ALSO AVAILABLE: D38999
SERIES I AND SERIES II
BAYONET-LOCK CONNECTORS**



D38999 Series I (scoop-proof) and Series II (low-profile) bayonet-lock connectors in Class G space-grade configurations

SERIES 23

SuperNine®

MIL-DTL-38999 Series III Type

Advanced performance aerospace / defense connectors



RUGGED, HIGH VIBRATION AND SHOCK COUPLING AND MATING TECHNOLOGY



Anti-decoupling, high vibration ratcheting coupling nut for ultimate safety and reliability



Triple-start stub ACME mating thread profile for fast mate and demate during maintenance cycles



Special-purpose high-voltage in MIL-DTL-38999 Series III packaging

BROAD RANGE OF PC TAIL STANDOFF DESIGNS FOR I/O-TO-BOARD APPLICATIONS



Dual standoff design for superior resistance to vibration and shock

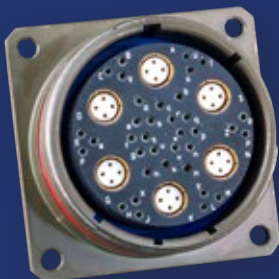


EMI / RFI planar-array filter connector for critical avionic systems



Ultra low-profile flat configuration for reduced package size applications

HIGH-SPEED AND RF DESIGNS FOR SENSORS AND SATELLITE UPLINK DATA COMMS



Industry-standard Quadrax-equipped layouts for signal and high-speed data



Ultra-light weight Octaxial contacts for 10Gb data transfer per contact



High-frequency RF designs for satcom communications

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

MIL-DTL-38999 Series IV Breech-Lock Connectors for Optimal Anti-Decoupling Vibration and Shock Resistance



Designed for vertical launch fire-control, tracking, and multi-target missile systems, the Glenair DLA qualified MIL-DTL-38999 Series IV connector is the ultimate solution for positive and reliable breech-locking connector performance. The heart of the Series IV connector is its coupling nut/locking technology which provides rock solid breech-lock mating augmented with both primary and secondary locking mechanisms. Environmentally sealed, EMI grounded, and outfitted with pin-to-pin mating protection to prevent circuit shorts and mechanical damage.

- QPL manufacturer of MIL-DTL-38999 Series IV Class F, W and G connectors
- Optimized for SWAMP area applications
- Quick-disconnect 90° breech coupling mechanism
- Visual, audible and tactile full-mate indicators
- Integrated EMI grounding fingers
- -65°C to 200°C operating temperature range



Series IV solutions are available in environmental and hermetic class configurations in shell sizes from 11–25 supporting a popular range of MIL-STD-1560 insert arrangements

Glenair's complete Series IV solution includes support for power, signal and hybrid insert arrangements including shielded coax, #22, #20, #16 and #12 contacts

QPL QUALIFIED AND COTS EQUIVALENT MIL-DTL-38999 Series IV, Breech Coupling

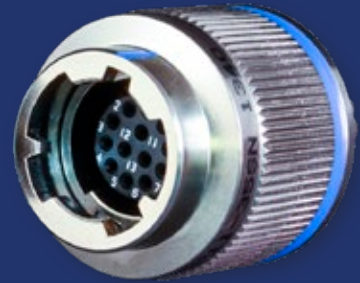


Anti decoupling, vibration and shock resistant
DLA qualified

MECHANICAL, ENVIRONMENTAL AND ELECTRICAL PERFORMANCE

MIL-DTL-38999 Series IV (Glenair Series 234-105) offers outstanding interconnect performance for high shock and vibrate military and commercial applications.

- **Breech locking connectors available with crimp contacts**
- **Electromagnetic compatibility (EMC):** plug grounding fingers, and conductive shell finishes deliver excellent shielding performance up to 65 dB at 10 GHz. Grounding before engagement of contacts
- **Environmental performance:** interfacial and wire grommet seals deliver IP67 level sealing, even at high altitude
- **Contact protection:** scoop-proof design prevents inadvertent damage to pin contacts during mating
- **Mating:** breech-lock system provides fast and secure, quarter turn mating that resists decoupling even under extreme shock and vibrate conditions
- **Supported contacts:** from size #22D signal to #8 twinax contacts
- **Commercial equivalent:** Glenair COTS equivalent connectors deliver mil-spec performance with material/finish options not available in QPL parts



CONNECTOR CLASSES FINISH



Electroless Nickel

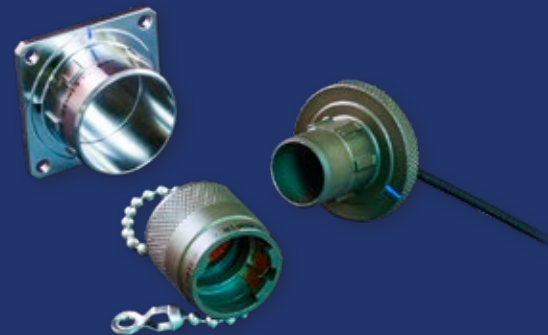
Conductivity +++++
Corrosion Resistance ⓧ ⓧ ⓧ ⓧ ⓧ
-65° to +200°C
Glenair Code ME
D38999 Class F, G



Cadmium Olive Drab

Conductivity +++++
Corrosion Resistance ⓧ ⓧ ⓧ ⓧ ⓧ
-65° to +175°C
Glenair Code NF
D38999 Class W

38999 SERIES IV ACCESSORIES



Glenair offers a full range of QPL D38999 accessories, contact the factory for details

SUPPORTED CRIMP-CONTACT SHELL STYLES



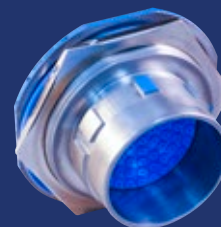
Plug



Wall-Mount Receptacle



Box-Mount Receptacle



Jam-Nut Receptacle



In-Line Receptacle

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

**POWER
LOAD™**

Advanced power connector
design for higher voltage,
higher altitude, and higher
frequency applications

TURNKEY
turboflex
Flexible Cable Assemblies



The aircraft industry's most advanced power distribution interconnect

Electrical power generation technology in aircraft has evolved to meet modern requirements for higher power and lighter weight systems. Growing electrical power needs on military aircraft—particularly for generator applications—have caused major changes in power system architectures to accommodate peak-load stress factors in electrical wire interconnect (EWIS) cabling.

- **PowerLoad™, the high-vibration, high-temperature interconnect optimized for higher-voltage, higher-altitude, and higher-frequency**
- **TurboFlex®, the Glenair signature high-flexibility power cable solution**
- **Crown Ring crimp, bus bar, and lug style contacts, optimized for high current carrying, high temperature performance.**

A GLENAIR SIGNATURE SOLUTION: CONNECTORS, CONTACTS, CABLES, ACCESSORIES, AND ASSEMBLIES

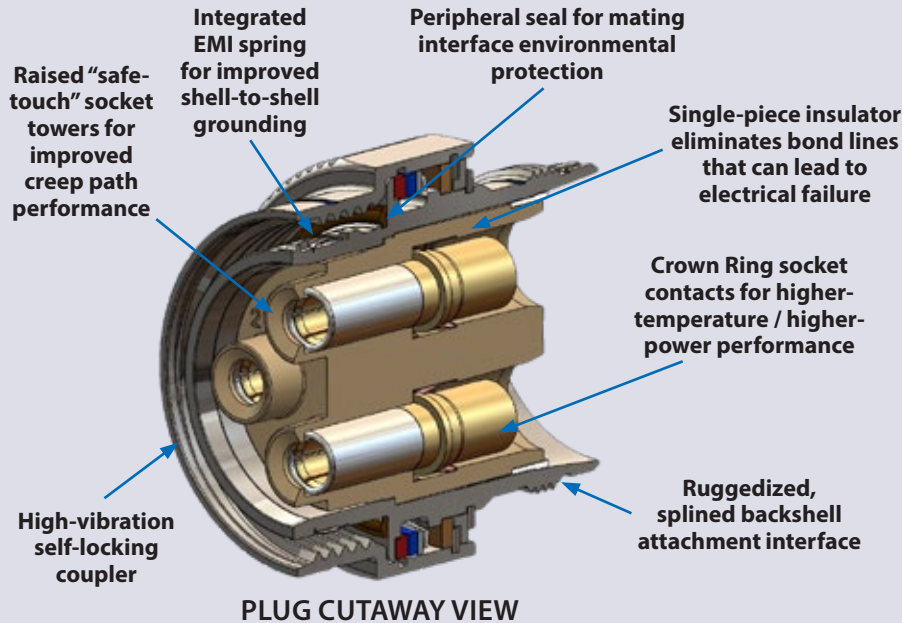
- **For applications up to 2000 VAC / 1500 Hz, and from 150 – 800 Amps.**
- **200°C maximum operating temperature connectors (stainless steel bodies and shells)**
- **TurboFlex® rope lay power cables optimized for PowerLoad™ connectors, from 8 AWG to 4/0**
- **Ultra-flexible cable configurations with ruggedized Duraelectric or FEP jacketing:**
- **Single-wall hookup wire**
- **Dual-wall jacketed interconnect cabling**
- **High-temperature Crown Ring contact technology**
- **Heavy-duty accessory interface**

HIGH PERFORMANCE PowerLoad™ Series



for generators and other
high-power-demand applications

POWERLOAD™: KEY CONNECTOR AND CONTACT DESIGN FEATURES



GLENAIR SIGNATURE CROWN RING CONTACTS



- Crimp, bus bar, and lug wire termination
- Precision-machined high conductivity copper alloy
- Up to 60% lower contact resistance than equivalent AS39029 contacts
- Higher operating temperature resistance compared to other specialized high-power contacts
- Gold-plated for enhanced high-vibration durability

TURBOFLEX® ULTRA FLEXIBLE / RUGGED POWER CABLES WITH DURALECTRIC OR FEP JACKETING

TurboFlex, Glenair high-flexibility power cabling has been optimized for use with PowerLoad connectors, and is supplied with either industry-standard FEP or Glenair signature Duralectric jacketing material, which is optimized for fluid immersion, caustic chemical exposure, temperature extremes, and UV radiation. Both materials are available in a broad range of colors including safety orange.



Available with cable gauge selections from 8 AWG to 4/0, to provide suitable margins for DWV, frequency derating, and peak-load performance.

Abrasion Resistance	Good
Wear Resistance	Good
Flame Resistance	Excellent
Sunlight Resistance	Excellent
Flex Resistance	Excellent

TURBOFLEX® WITH DURALECTRIC™ JACKETING: ENVIRONMENTAL PERFORMANCE

Temperature rating: -60°C to 200°C
 Halogen free per IEC 60614-1
 Accelerated weathering and simulated solar radiation at ground level per IEC 60068-2-5; 56 Days exposure, suitable for greater than 50 years of service in direct sunlight
 Flame resistant per IEC 60614-1
 Flame resistant per UL 1685, section 12 (FT4/IEEE120), vertical-tray fire-propagation and smoke release test
 Flame resistant per FAR 25.853 (A) amendment 25-116, appendix F part I (A) (1) (i), 60 second vertical burn test
 Limiting oxygen index of 45 per ISO 4589-2:1999
 Low smoke per NES 711, smoke density of 11.75
 Smoke density class F1 per NF F 16-101 IAW DIN EN 60695-2-11:2011

Low smoke toxicity per NES 713, tested value of 1.9
 Fungus rating of 0 per MIL-STD-810g method 508.5, Does not support fungal growth
 ASTM D624, die B tear strength, 150 pounds per inch minimum on jacket material
 Low outgassing per ASTM e595 after post curing, TML .06%, CVCM .006%, WVR .02%
 Resistant to fluids per MIL-STD-810F, method 504
 JP-8 per MIL-DTL-83133 (NATO type 34)
 MIL-H-5606 hydraulic fluid
 MIL-PRF-23699 lubricating oil
 MIL-C-85570 cleaner
 TT-I-735 Isopropyl alcohol
 AMS 1432 potassium acetate deicing/anti-icing fluid
 MIL-C-87252 coolant
 Amerex AFF fire extinguishing foam

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



**POWER
TRIP™**

**Series 970 PowerTrip™
reduced size and weight
power connectors for extreme
environments**



TURNKEY
turboflex
Flexible Cable Assemblies

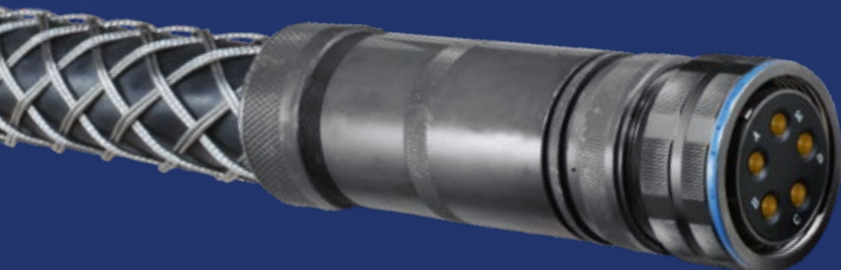
Reduced size and weight power connectors



Lightweight plug with ratcheting coupling nut and LouverBand contacts



Keyed receptacle with superior sealing and EMI shielding



- 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

SERIES 970 PowerTrip™ Connectors and Cables



The power connector for extreme environments

SERIES 970 POWERTRIP™ CONNECTOR STYLES



Plug
970-001



Square Flange
Receptacles
970-003



Jam Nut Receptacles
970-004



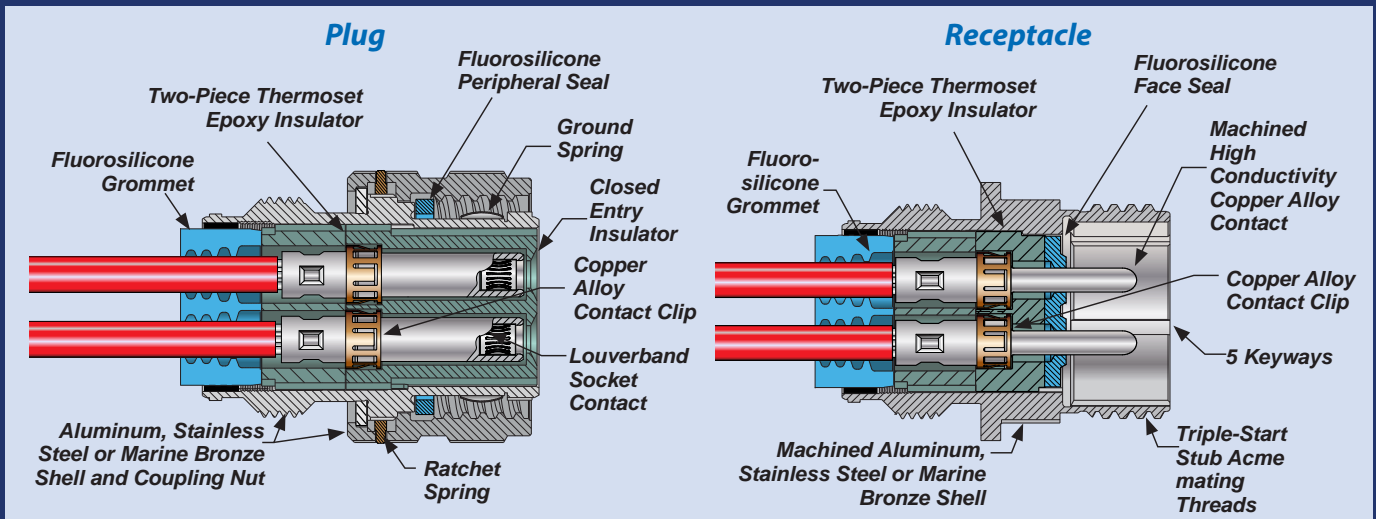
Cable Receptacles
970-005



Feed-Thru Bulkhead
970-006

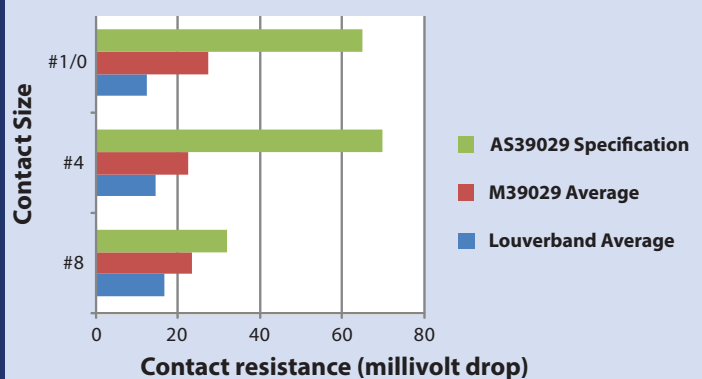


Hermetic Feed-Thru
Bulkhead
970-007



Series 970 PowerTrip™ Specifications	
Current Rating	Up to 225 A.
Dielectric Withstanding Voltage	2000 VAC
Insulation Resistance	5000 megohms minimum
Operating Temperature	-65° C. to +200° C.
Shock	300 g.
Vibration	37 g.
Shielding Effectiveness	65 dB minimum from 1GHz to 10GHz.
Durability	2000 mating cycles

CONTACT RESISTANCE AFTER 1000 MATING CYCLES



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

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

PowerPlay™

Glenair Signature high-power
connectors and cables



PowerPlay is a high-ampacity single-pole and multi-pole connector series that combines the proven performance of Glenair Crown Ring contact and dielectric insert technology with our highest-performance aerospace-grade connector packaging. Capable of 2000VAC working voltage, PowerPlay utilizes a crimp-removable, low insertion force power contact series optimized for higher current carrying capabilities, lower contact resistance, and superior vibration resistance compared to LouverBand, hyperboloid, and other designs. Four standard connector packages are available in both circular and rectangular formats.

- 2000 VAC working voltage
- High current, low resistance, superior vibration resistance
- Safe-touch finger proofing
- Integrated band platform shield termination
- Compatible with TurboFlex high-flexibility cable
- Support for busbar and other wire terminations
- Multi-Pin arrangements for size 8 and 4 AWG contacts. Single-Pole arrangements for 2, 1/0, 2/0, and 4/0 contacts. Options for 20 AWG interlock contacts on all sizes

SERIES 973

PowerPlay Lightweight, High Vibration and Shock-Resistant Power Connectors

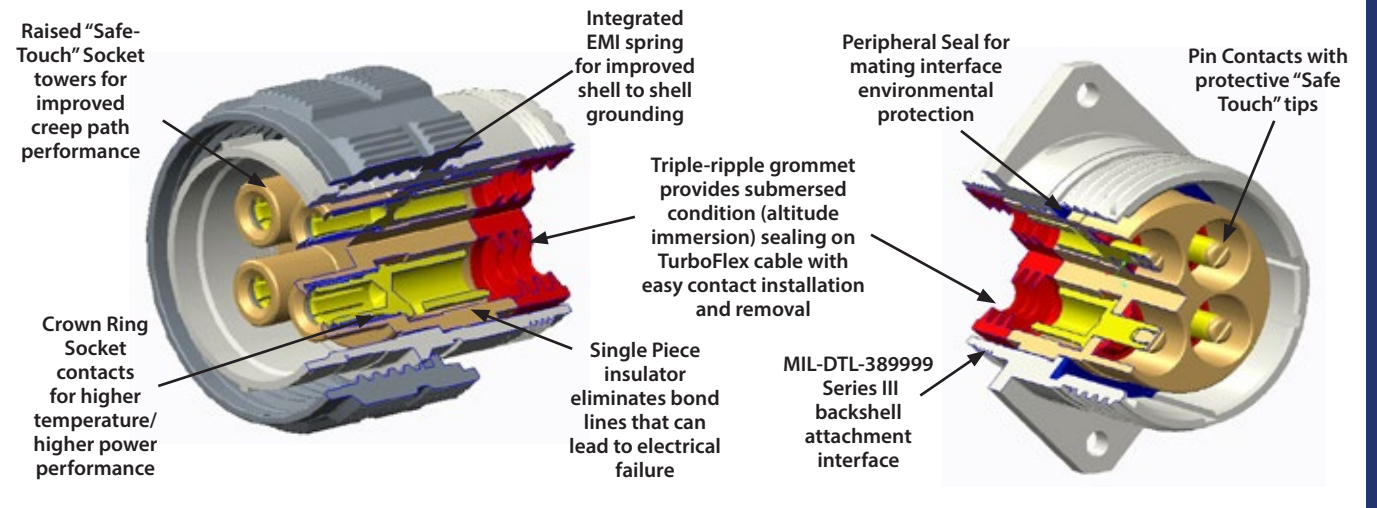


Rugged, life-of-system durability

POWERPLAY SIGNATURE HIGH-POWER CONNECTOR PACKAGE SELECTION GUIDE



THE TURBOFLEX ECOSYSTEM: COMPATIBLE CONNECTOR DESIGNS WITH OPTIMIZED ELECTRICAL AND ENVIRONMENTAL PERFORMANCE



BATTERY PLANT-TO-INVERTER-TO-ELECTRIC MOTOR CONNECTORS AND CABLES FOR eVTOL POWER DISTRIBUTION AND PROPULSION APPLICATIONS



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Best-of-Class Hermetic Seal
Connector Design



Resolve gas, moisture and particle
ingress problems with
conventional glass-sealed
hermetic or advanced
CODE RED lightweight
encapsulant-sealed
designs



ALL SOLUTIONS DELIVER

- Superior pressure resistance to 32,000+ PSI
- Higher resistance to extreme operating temperatures to 260°+ C
- Superior mechanical strength
- No material breakdown or aging over time
- Helium leak rate 1×10^{-7} cc/sec to 1×10^{-10}

CODE RED

LIGHTWEIGHT HERMETIC SEALING

Lightweight hermetic encapsulant sealing solution with 1×10^{-7} leak rate performance. Available today in Mighty Mouse 806 Mil-Aero, M24308/9 D-Sub and D38999/23



Aluminum shell CODE RED hermetic connectors and copper contacts reduce weight and improve electrical performance compared to heavier-duty glass-to-metal seal hermetic solutions

ADVANCED PERFORMANCE

Glass-Sealed Hermetic Connectors

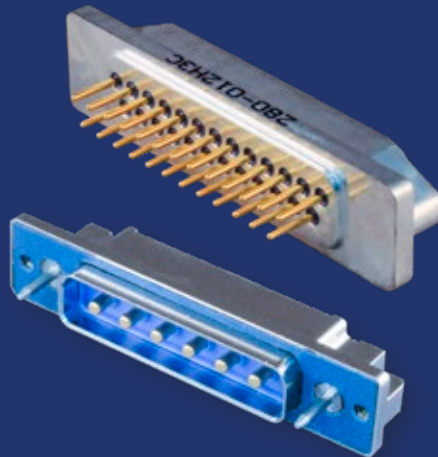


Thousands of same-day-availability part numbers

UNIQUE HERMETIC OFFERINGS AND CATALOG (COTS) SOLUTIONS



Coax, Triax, Quadrax and hybrid-contact layouts



Rectangular hermetics including Series 28 HiPer-D and Series 79



E1 Ochito high-speed octaxial contacts in a lightweight CODE-RED sealed bulkhead feed-thru



Triax hermetic



Hermetic Sav-Con Feed-thrus and Gender Changers



Dual-flange PC tail hermetic



Hermetic with crimp-removable contacts

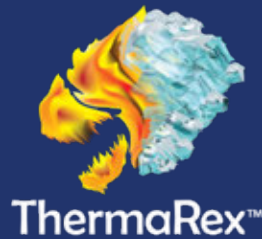


Hermetic bulkhead penetrators

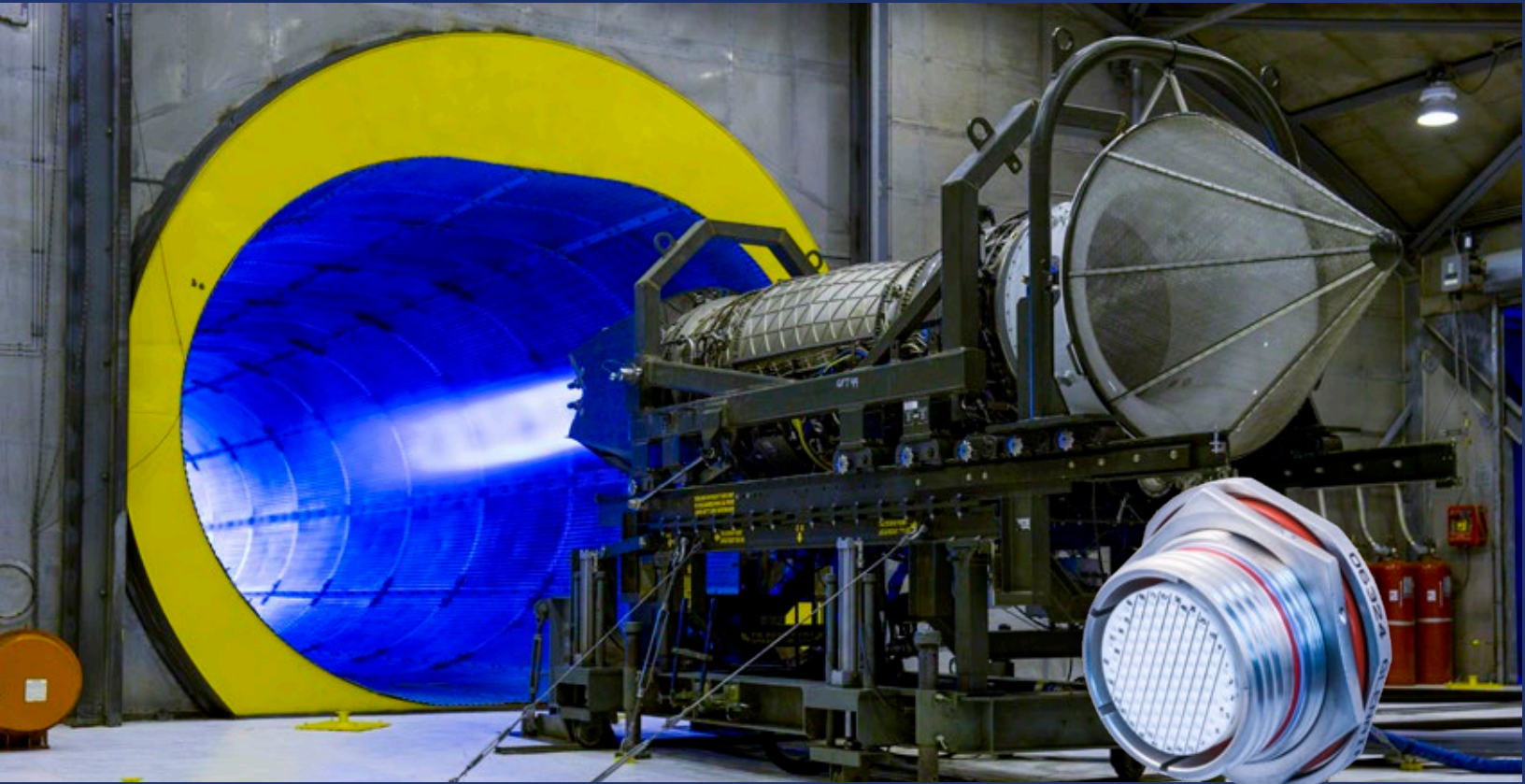


Hermetic receptacles with integrated band porch

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Cryogenic and high-
temperature tolerant
connectors, cables, and
conduit systems



Sensor devices in aerospace engine applications are increasingly exposed to higher temperature operating environments. Rugged sensors in FADEC equipment—an extreme high temperature environment—are also exposed to temperature extremes well beyond the capabilities of conventional interconnect devices. Glenair ThermaRex interconnect solutions are designed to survive and excel in high continuous operating temperature application environments up to 600°C. The ThermaRex product family includes connectors, cables, and wire protection conduit systems.

300°C THERMAREX HT CONNECTOR



- Service rating up to 300°C
- Vibration-resistant threaded coupling
- High-temperature ceramic insulators and silicone seals
- Durable stainless steel construction
- Available in Mighty Mouse, or SuperNine® D38999
- Utilizes Glenair Crown Ring contacts

600°C THERMAREX UHT CONNECTOR



- 300°C to 600°C service range
- Vibration-resistant threaded coupling
- Specialized contacts, laser welds, and metal seals
- Utilizes ultra-high temperature-tolerant Mineral Insulated cable
- Ideal for nuclear and other extreme temperature applications

HIGH-TEMPERATURE TOLERANT ThermaRex Interconnect Solutions



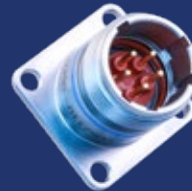
High-temperature and cryogenic

-150°C THERMAREX CRYO CONNECTOR



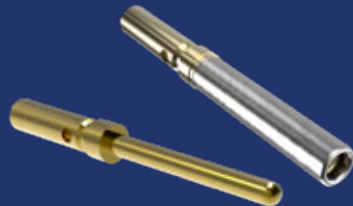
- Dynamic cryogenic connector
- Vibration at -150°C
- Ultra low-temperature Duralectric K seals

THERMAREX HIGH-TEMPERATURE HERMETIC



- High-temperature sealing technology maintains 1×10^{-7} leak-rate performance at 300°C

CROWN RING CONTACTS



- Crimp removable contacts
- Suitable for use at 300°C or higher while maintaining low electrical resistance
- Stainless steel Crown Ring provides compression force on the socket
- Superior vibration resistance
- Higher current carrying capabilities, lower contact resistance

300°C THERMAREX WIRE



P/N 961-047 -
Single Wire
P/N 960-2371 -
Twisted, Shielded,
Jacketed Pair

- Special nickel-coated copper alloy conductors
- 300°C continuous service
- 24 to 8 AWG, 10 colors of insulation
- Single-wires plus jacketed, shielded, twisted pair available

300°C THERMAREX POLYMER-CORE CONDUIT



P/N 120-100,
Material Code R

- High-temperature-tolerant flexible polymer-core conduit
- All standard colors: Black, clear, orange, blue, yellow
- Qualification test report GT-17-261 available
- 300°C continuous service
- Available with high-temperature braid shield and/or jacket

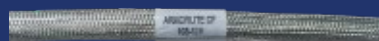
300°C THERMAREX METAL-CORE CONDUIT



P/N 750-216,
Jacket Code R

- Flexible passivated stainless steel core conduit
- High-temperature-tolerant ThermaRex jacket
- .127" to .250" outer diameter sizes
- 300°C continuous service

ARMORLITE CF HIGH-TEMP, CORROSION-RESISTANT BRAIDED SHIELDING



Stainless steel over copper
microfilament EMI shield
P/N 103-126

- High temperature -80°C to 300°C
- Corrosion / harsh environment resistant
- 1000 hour salt spray testing completed
- 70% reduced weight vs. standard braid
- Superb electrical resistance and shielding performance

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Ultra high-performance
military-aerospace
grade interconnect
technologies



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

INDUSTRY-STANDARD WEAPONS STORES, UMBILICALS, AND MISSILE-LAUNCH INTERFACE CONNECTORS



MIL-DTL-1760 type

Problem-solving derivatives of industry-standard launch system interconnects

Discrete connectors and assemblies

IN-HOUSE HERMETIC CONNECTOR DESIGN AND MANUFACTURE



Rectangular configurations

Bulkhead feed-thrus

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

SPACE-GRADE INTERCONNECTS



VG 95328 (M26482 type) connectors with outgassing processing

SUPERNINE PWM



Pulse Width Modulation 3kV connectors

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

Pneumatic Rotary Gas Joints for High-Pressure Pure-Air / Argon Applications and Systems



Glenair high-pressure Pure-Air/Argon Rotary Joint solutions are designed and performance-tested for use in a wide variety of defense and aerospace applications, including cooling of infrared detectors, missile seekers and all high-pressure pneumatic actuation systems. These compact, lightweight rotary devices incorporate small-bore pipe assemblies for low friction and low external-leakage for pure air / argon rotary applications.

These high-pressure, low-torque devices are designed for direct incorporation into Joule Thompson (JT) cryogenic systems and all applications which require reliable pressurization, blow down, actuation, and IR Cooling. The components are designed to meet the broad range of military / aerospace performance requirements and specifications including high and low temperature tolerance, vibration, shock, altitude immersion, and more.

One of the variants shown, can be connected by an M6 nut and nipple to a sealed-for-life or rechargeable gas supply system, the coupling transfers the high-pressure gas axially through small bore tube, to a rotating assembly. All Rotary Gas Joint components are precision machined and manufactured to our drawings and designs.

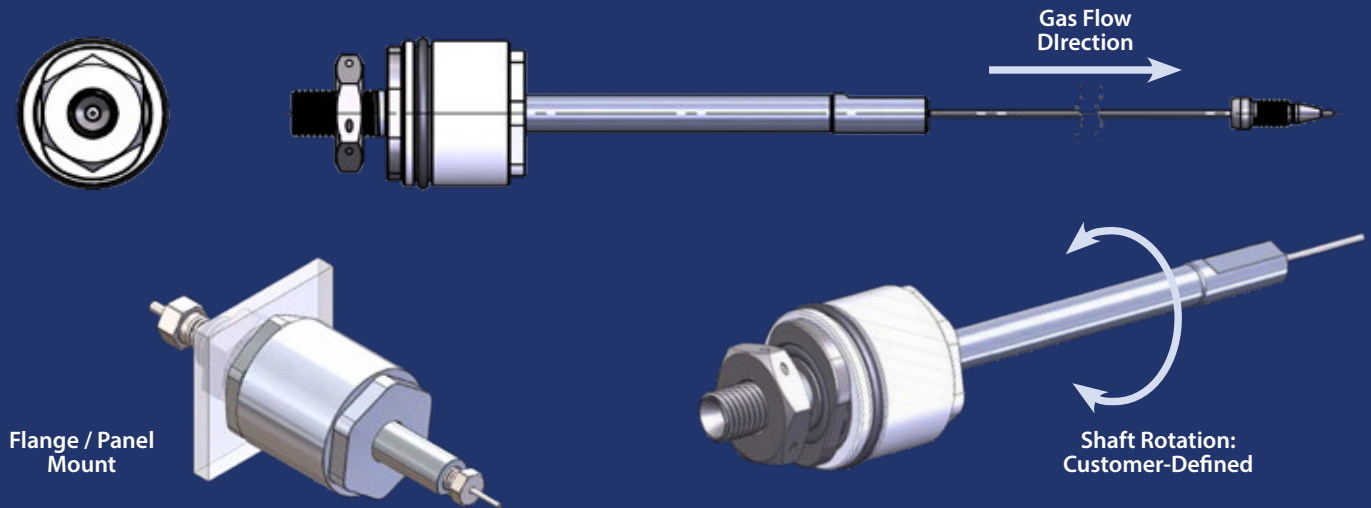
- Single passage, compact, low-torque pneumatic rotary unions / joints for pressurized pure air and argon (DEF STAN 58-96) cooling systems
- Small-bore stainless steel pipework located inside a compact housing for low leakage and low friction rotary couplings.
- Flange / panel mounting

PURE AIR / ARGON

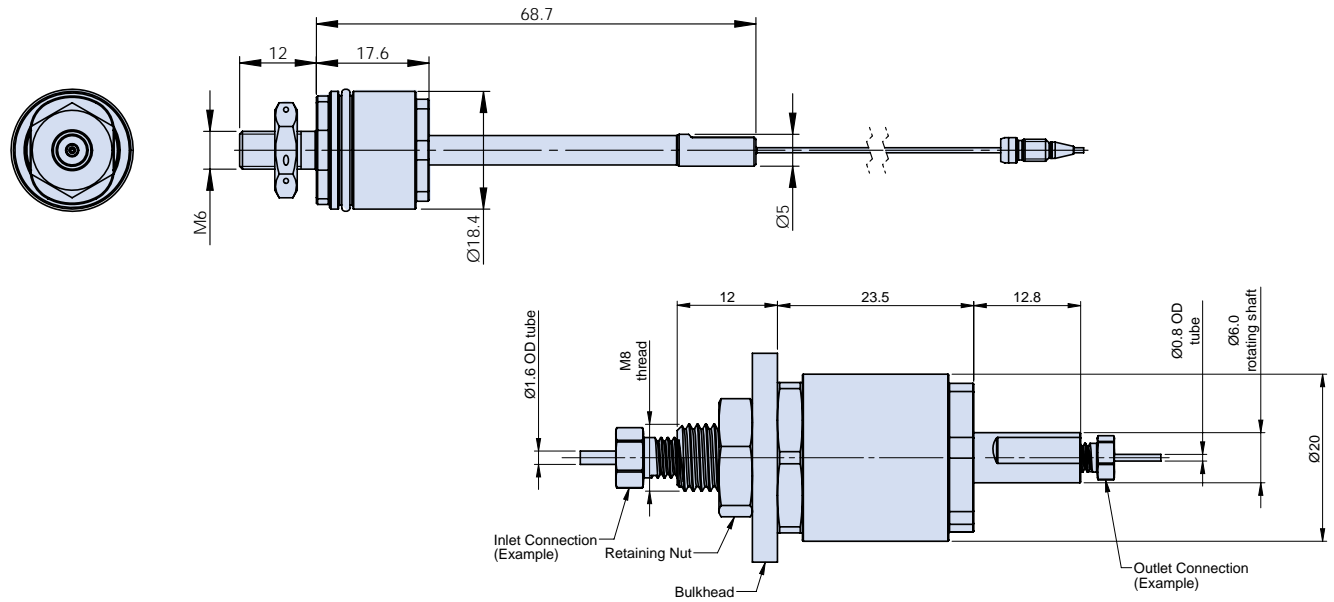
Single-Passage Pneumatic Rotary Joints for Guided Weapons Cooling



Technical and dimensional specifications



DIMENSIONAL DRAWINGS, CUSTOM DESIGN (TOP) AND GENERIC CONFIGURATION



Technical Performance	
Nominal Operating Pressure	480 bar at 20°C
Maximum Operating Pressure	600 bar at 60°C
Operating Temperature	-40°C +60°C for all applicable mechanical requirements
Normal Rotation Speed	100 RPM; increasing to 800 RPM
Typical Mass	34 grams

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

Pure Air/Nitrogen Cooling Systems: Complete systems and ancillaries for IR guided weapons and weapons ejection applications



Brazed stainless steel pipework

Glenair high pressure Pure-Air/Nitrogen gas solutions are designed and performance tested for use in a wide variety of Defence and Aerospace applications, including cooling of infrared detectors, missile seekers and all high pressure pneumatic actuation and deployment systems. Products include, Sealed for Life Gas Supply Systems, Re-chargeable Gas Supply Systems, High Pressure Solenoid Valves (miniature & low voltage), Small Bore pipe Assemblies, Relief Valves, Integrated Manifold Assemblies, Charge Valves and High Pressure Vessels. All Systems and Ancillaries are designed for direct incorporation into Joule Thompson (JT) cryogenic systems and all applications which require reliable pressurization, blow down, actuation, and IR Cooling. Glenair Pure-Air and High Pressure Systems and components are designed to exact customer requirements and specification.



- Ultraminiature and lightweight pneumatic components and sub-assemblies
- Pure air and nitrogen (DEF STAN 58-96)
- High-pressure cylinders, solenoid valves, manifolds, and complete sub-assemblies

Lightweight Modular Cooling and Actuation Systems

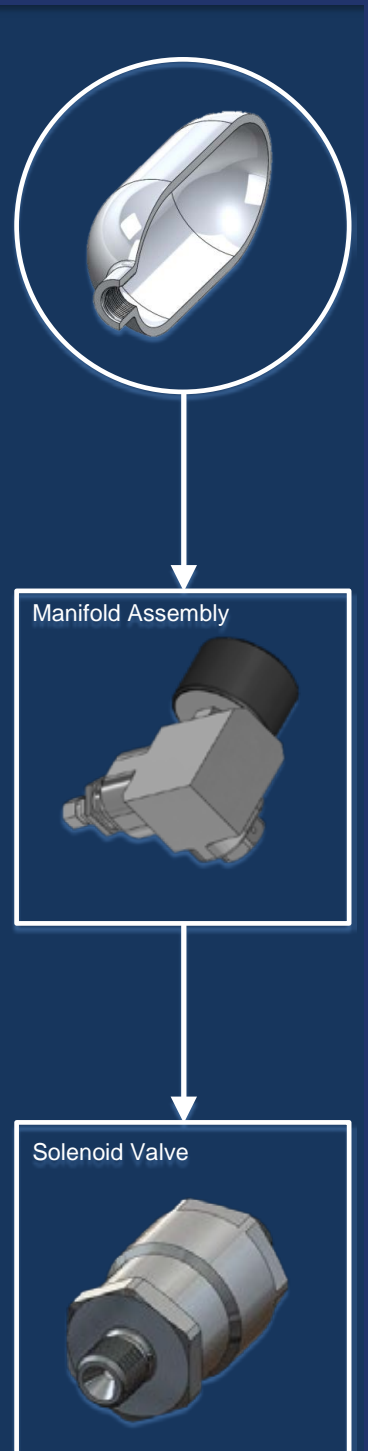


Glenair pure gas/nitrogen systems and sub-assemblies provide passage of nitrogen and other pure, pressurized gases through precision-machined components such as pressure regulating valves, solenoids, and Joule-Thompson cryogenic cooling systems. Assemblies feature precision stainless steel pipeworks and tubing which are fabricated using a flux-free brazing process and are ultrasonically cleaned and packaged in a sealed, dust-free environment. Electromechanical components are also precision-machined with material properties and dimensional attributes per customer specifications.

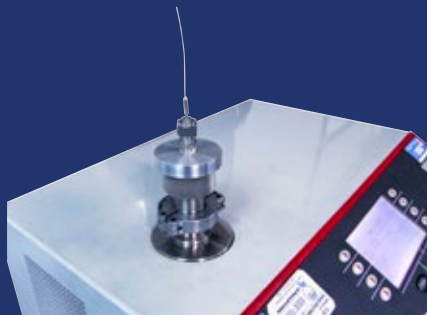
- **Manifold Assemblies – including Charging Valves, Relief Valves or Burst Discs, Pressure Gauges, Control Valves**
- **Pipework Sub-Assemblies connecting cylinders to manifolds or components**
- **Pressure Regulating Valves**
- **Solenoid Valves – manifold or in-line; single or two-stage**
- **Manifolds to other sub-assemblies**

Typical Performance	
Flow Rate	Typical Flow Rate is 5 liters per minute (lpm) @ 150 PSI.
Operating Temperature	-65°C +175°C for all applicable mechanical requirements.
Physical Shock	No loosening of parts, cracking or other deleterious results hindering further part operation after 300 G's in each of 3 mutually perpendicular planes.
High Impact Shock	All components withstand high impact shock per MIL-S-901.
Vibration	All components withstand high-vibration with no evidence of cracking, breaking or loosening of parts.

Solutions built to exact customer requirements and specifications



Pressure test rig



Gas tube helium leak test equipment



Pure air compatibility test equipment



Brazing control panel

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

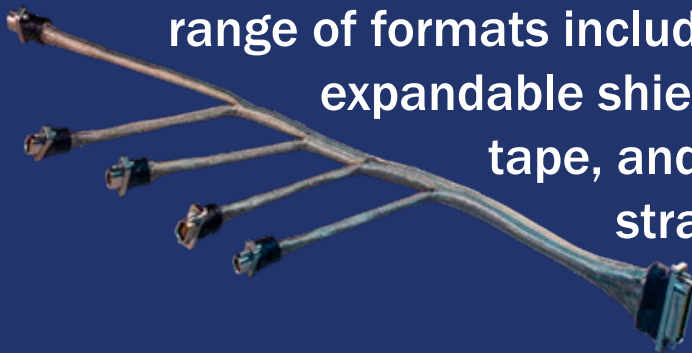
ARMORLITE™

Microfilament nickel-clad expandable
stainless steel EMI/RFI braided shielding



ArmorLite™ is an expandable, flexible, high-strength, conductive stainless-steel microfilament braid material designed for use as EMI/RFI shielding in high-performance wire interconnect systems. ArmorLite™ is packaged in a wide range of formats including bulk expandable shielding, mesh tape, and ESD bond straps.

- Ultra-lightweight EMI/RFI overbraiding for EMC and solar radiation applications
- Microfilament stainless steel: 70% lighter than NiCu A-A-59569/QQB575
- Lightweight, flexible ESD bond straps
- New ArmorLite™ CF with configuration with enhanced temperature tolerance
- Superior flexibility and “windowing” resistance: 90 to 95% optical coverage
- 70,000 psi (min.) tensile strength
- Flight-grade solution with proven TRL 9 performance



LIGHTWEIGHT, FLEXIBLE
ArmorLite™ Microfilament Braid
for EMI/RFI Shielding Applications



Lightweight · non-windowing · corrosion-resistant · high-temp

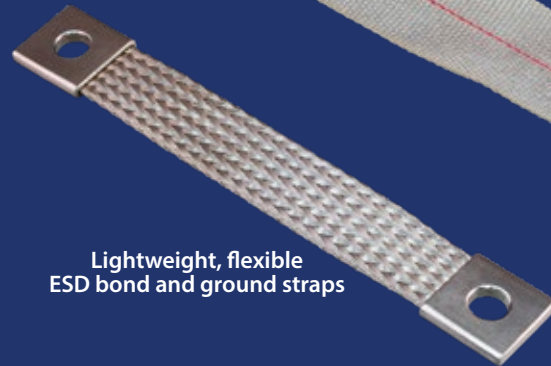
ARMORLITE™ SHIELDING SOLUTIONS AND PACKAGING



Factory overbraided



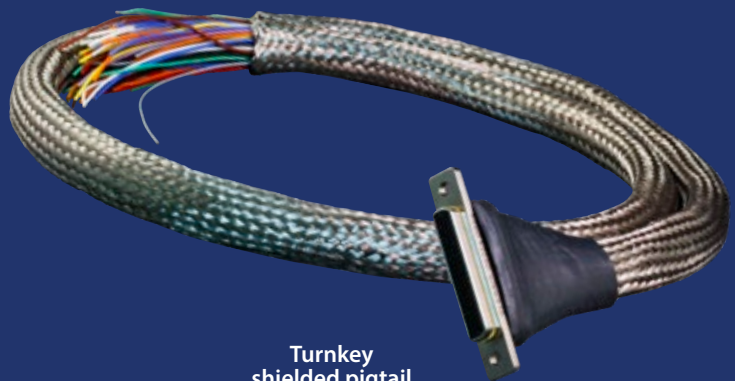
Mesh tape



Lightweight, flexible
ESD bond and ground straps

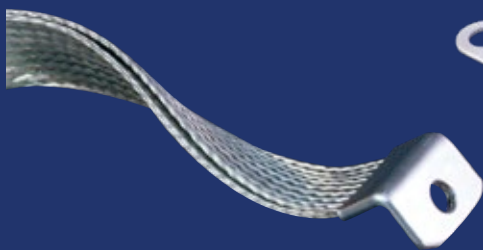


Integrated shield sock



Turnkey
shielded pigtail

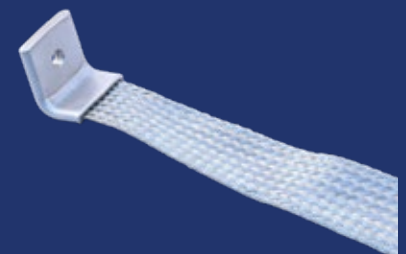
LIGHTWEIGHT GROUND STRAPS AND ESD BONDS FOR AIRFRAME APPLICATIONS



Single-layer and dual-layer ground
straps for lightning strike protection



Lightweight microfilament ESD flexible bonds
for equipotential maintenance



Straight, single right-angle, and
dual right-angle configurable lugs

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

Band-Master® ATS

EMI/RFI Shield Termination System



Quick, easy, cost-effective and highly reliable termination of braided metallic shielding or fabric braid to connectors and backshells

Band-Master ATS® is the advanced termination system for interconnect cable shielding. The unique low profile and smooth inside diameter of the one-piece type 304 austenitic stainless steel clamping band virtually eliminates RFI/EMI/EMP leakage paths. The lock maintains constant tension under extreme environmental conditions. Band-Master ATS® bands have passed severe shock, vibration and thermal cycle testing with negligible deterioration of shell conductivity and have been approved and added to the specifications for the world's largest aircraft manufacturers.

- Precision hand-held tools and termination bands—both from a single supplier
- Innovative Slim Standard and Nano bands reduce weight and improve safety (no buckle cuts)
- Clamp both small and large diameters easily and reliably

BAND-MASTER ATS® ADVANCED TERMINATION SYSTEM



New Micro-Max higher tensile strength with calibration counter



High-volume pneumatic tool for bench use



Save time and tool maintenance costs with the Glenair band tool calibration system

BAND-MASTER ATS® EMI/RFI Shield Termination System



The advanced EMI/RFI shield termination system
for interconnect cabling

Band-Master ATS® Manual Tool Selection



601-100 Hand Tool for Standard Bands

The 601-100 Standard Band-Master ATS® Tool weighs 1.18 lbs., and is designed for standard .24" width clamping bands in a tension range from 100 to 180 lbs. Calibrate at 150 lbs. ± 5 lbs. for most shield terminations. Tool and band should never be lubricated.



601-109 Hand Tool for Slim Standard Bands

The 601-109 Slim Standard Band-Master ATS® Tool weighs 1.2 lbs., and is designed for slim standard .24" width clamping bands in a tension range from 50 to 100 lbs. Calibrate at 100 lbs. ± 5 lbs. for most shield terminations. Tool and band should never be lubricated.



NEW 601-122 Hand Tool for Micro Slim Bands

The 601-122 Micro Slim Band-Master ATS® Tool weighs 1.2 lbs., and is designed for micro slim .125" width clamping bands in a tension range from 50 to 100 lbs. Calibrate at 82 lbs. ± 3 lbs. for most shield terminations. Tool and band should never be lubricated.
Consult factory for band weights and performance specifications.



601-101 Hand Tool for Micro Bands

The 601-101 Micro Band-Master ATS® Tool weighs 1.18 lbs., and is designed for micro .120" width clamping bands in a tension range from 50 to 85 lbs. Calibrate at 80 lbs ± 5 lbs. for most shield terminations. Tool and band should never be lubricated.



601-108 Hand Tool for Nano Bands

The 601-108 Nano Band-Master ATS® Tool weighs 1.18 lbs., and is designed for nano .075" width clamping bands in a tension range from 20 to 50 lbs. Calibrate at 50 lbs. ± 3 lbs. for most shield terminations. Tool and band should never be lubricated.



3 lengths and 3 widths of EMI braid termination bands plus new Slim Standard bands for size and weight savings—50% lighter and lower-profile than standard bands. Terminated "Slim" style bands have a tighter, smoother buckle with no sharp edge to injure assembly technicians. Plus, say goodbye to protective tape wrapping!

Band-Master ATS® Band Selection

Bands	Length		Part Number		Fits Diameter	
	in.	mm.	Flat	Pre-Coiled	in.	mm.
Short Standard Band	9.0	228.6	601-005	601-006	1.0	25.4
Medium Standard Band	14.0	355.6	601-040	601-041	1.8	47.8
Long Standard Band	18.0	457.2	601-049	601-050	2.5	63.5
Short Micro Band	5.0	127.0	601-024	601-025	0.5	12.7
Medium Micro Band	8.0	203.2	601-060	601-061	.88	22.4
Long Micro Band	14.0	355.6	601-064	601-065	1.8	47.8
Short Nano Band	6.0	152.4	601-500	601-501	.60	15.2
Medium Nano Band	9.0	228.6	601-504	601-505	.94	23.9
Long Nano Band	14.0	355.6	601-508	601-509	1.8	47.8
Short Slim Standard Band	9.0	228.6	601-570	601-571	1.0	25.4
Medium Slim Standard Band	14.25	362.0	601-572	601-573	1.8	47.8
Short Micro Slim Band	8.125	206.4	601-600	601-601	.88	22.4
Medium Micro Slim Band	14.25	362.0	601-602	601-603	1.8	47.8

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Circular backshell and
accessory designs for
weight reduction, life-of-
aircraft durability, and
optimal reliability



Innovative solutions to EWIS environmental sealing, wire management, strain relief, and EMC shield termination

Glenair is the go-to design partner for innovative solutions to electrical wire interconnect system (EWIS) problems in airframe applications. Our backshell and connector accessory design engineers are responsible for more problem-solving innovation in our industry than every other connector accessory supplier combined. Take our extensive composite thermoplastic connector accessory series, for example. Glenair can supply the lightest weight solution for all EWIS cable routing, shield termination, environmental sealing, and cable strain relief applications—all in conductively-plated engineering thermoplastic.



Composite thermoplastic backshells and strain reliefs reduce weight and improve durability

GLENAIR: MASTERS OF THE BACKSHELL UNIVERSE

- High-performance circular connector accessories for every environmental, mechanical and electromagnetic shielding requirements
- Tens of thousands of innovative part numbers in inventory ready for same-day shipment
- Fast turnaround on made-to-order accessories, typically only two to three weeks
- Constant, relentless backshell innovation

NEW INNOVATIONS IN Circular Backshells and Accessories



Unique, problem-solving backshells and connector accessories for aerospace applications

HIGH-TEMP, LIGHTWEIGHT COMPOSITE THERMOPLASTIC ACCESSORIES



Split-shell and snap-lock banding backshells

Dummy stowage shorting plugs and receptacles

Piggyback boot Band-in-a-Can

Drop-in EMI/RFI shield termination configurations

PRESSURE BOUNDARY, FIREWALL, AND SPLIT-SHELL FEED-THRU



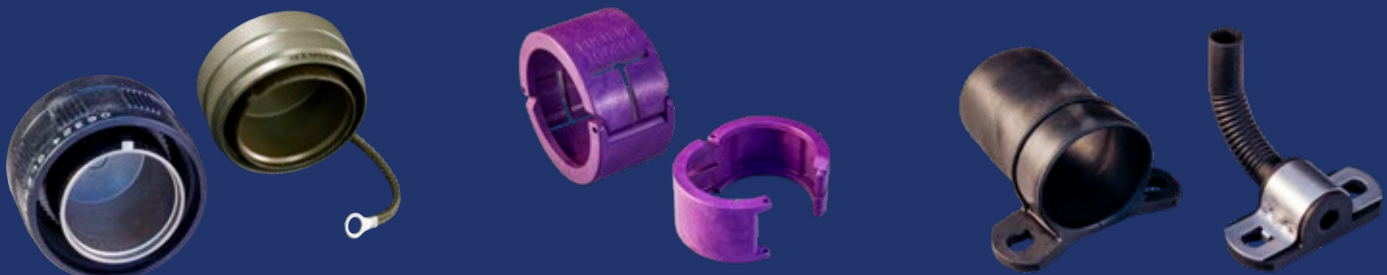
Pressure boundary composite feed-thru

Firewall pressure boundary feed-thru

EMI/RFI split-shell metal 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 porch
- O-ring sealed panel and box mounting interface

INNOVATIVE NEW EWIS TECHNOLOGIES



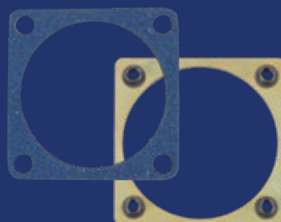
Self-locking protective covers

Connector coupling ring safety sleeve for F/O applications

Heat shrink boot / wire routing clamp assembly



Leonardo's ProSeal spring-loaded protective covers



Circular and rectangular connector EMC gaskets and conductive nut plates

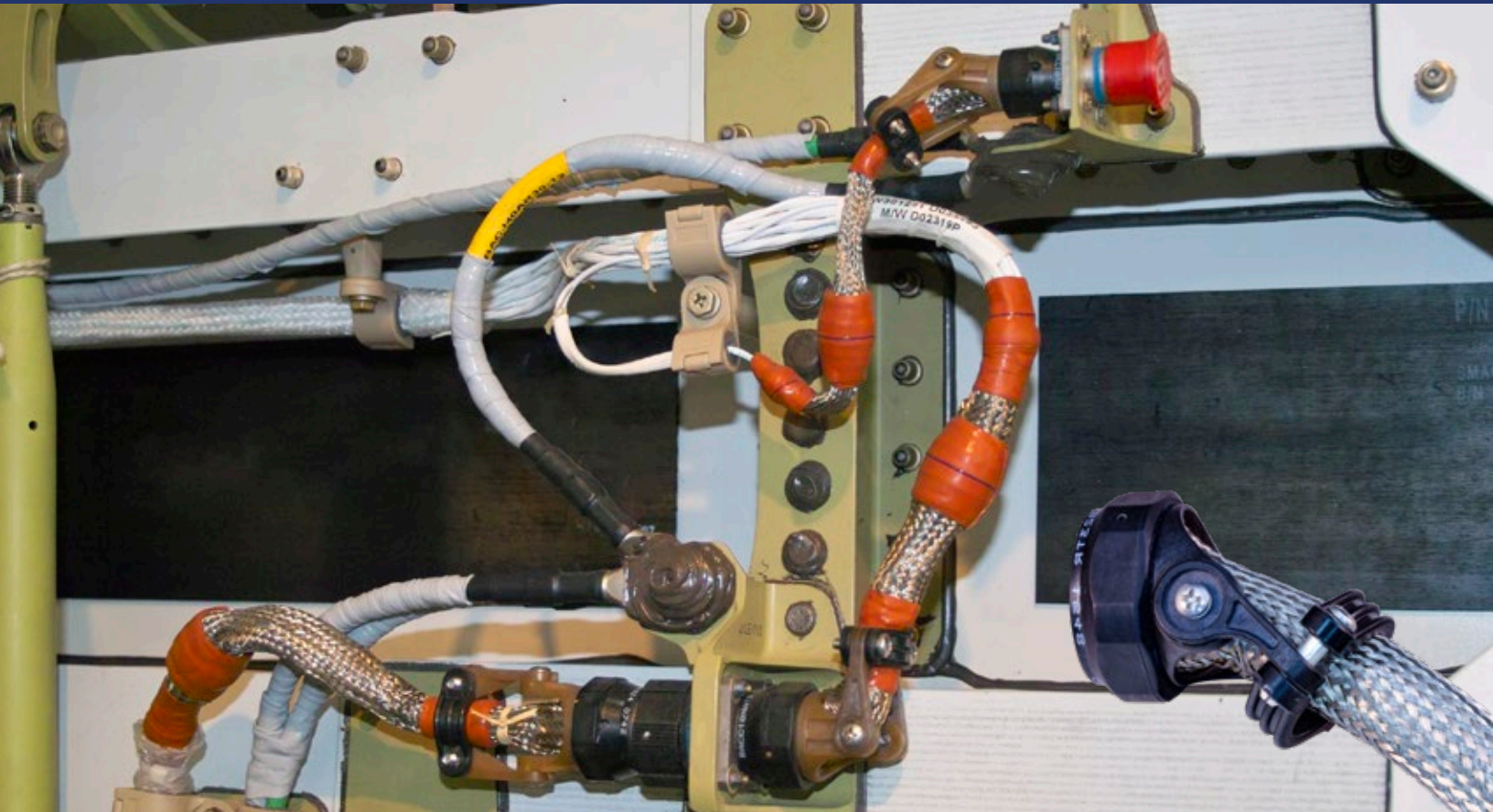


Lightweight Dummy Contact Sealing Plugs (DCSP)

MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS

SWING ARM®

3-in-1 lightweight composite clamp with
optional drop-in braid termination follower



Glenair's composite Swing-Arm® is a lightweight and corrosion-free cable clamp with cable shield termination options for a wide range of EWIS applications. This innovative articulating strain relief has become the standard shield termination device for weight reduction in both military and commercial airframe applications. Made from temperature-tolerant composite thermoplastic, rugged Swing-Arm® clamps offer easy installation, long-term performance, and outstanding weight and SKU reduction. Performance tested to stringent AS85049 mechanical and electrical standards and available for all commonly-specified mil-standard and commercial cylindrical connectors including MIL-DTL-38999, SuperNine, and Series 806 Mil-Aero.

Introducing Swing-Arm FLEX®, Glenair Next- Generation Composite Swing-Arm® Strain Relief

- Significant weight reduction: no saddle bars or hardware
- Rapid assembly: cable self-centers on bundle, little or no wrapping tape required
- Braid sock and drop-in band termination follower versions for EMI/RFI applications
- Internal conductive ground path



SWING ARM®
COMPOSITE THREE-IN-ONE BACKSHELL
FLEX

User-configurable straight, 45°, and 90° cable routing

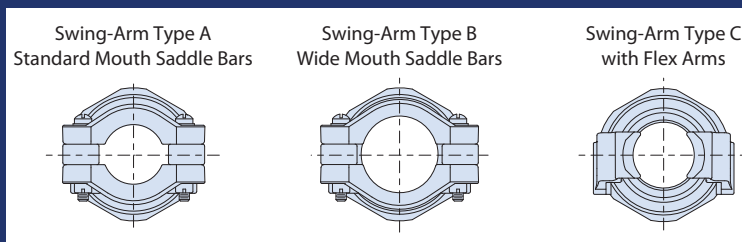
SWING-ARM 3-IN-1 LIGHTWEIGHT

Composite thermoplastic strain-relief and EMI/RFI shield termination device



THREE STYLES OF SWING-ARM STRAIN RELIEF CLAMPS

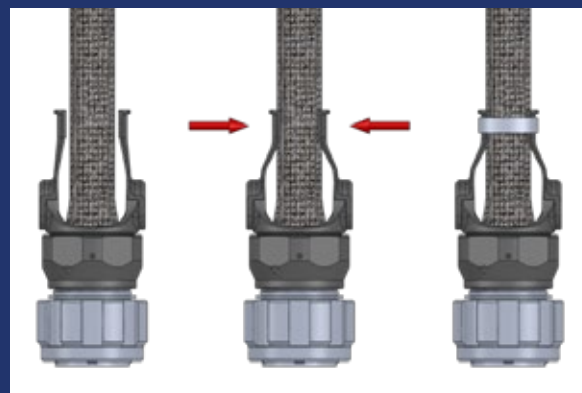
- Style A - standard mouth, rigid saddle bars
- Style B - wide mouth (for larger cable diameters), rigid saddle bars
- Style C Swing-Arm FLEX - no saddle bars, self-centering round cable strain relief



SWING-ARM VERSATILITY: FROM SIMPLE CABLE STRAIN RELIEF TO EMI/RFI SHIELD TERMINATION



Fast and reliable termination of individual wire and overall EMI cable shielding with industry-standard Band-Master ATS® tools and straps. New slim profile bands eliminate sharp strap cutoff for improved safety.



DROP-IN FOLLOWER FOR DIRECT TERMINATION OF OVERALL OR INDIVIDUAL WIRE SHIELDING

Two drop-in-follower designs, solid and slotted are available for all Swing-Arm styles (A, B, and C).



SWING-ARM AND SWING-ARM FLEX WITH OPTIONAL INTEGRATED SHIELD SOCK

For fast and reliable EMI/RFI shield termination of individual wire and overall cable shielding



SWING-ARM SHIELD SOCK TERMINATION OPTIONS, STANDARD SPLIT RING OR STARSHIELD STAR



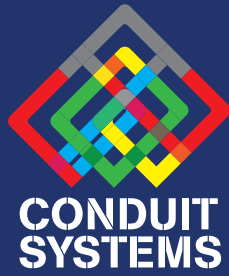
Termination of shield sock to cable shield with split support ring



Termination of shield sock to individual wire shields with auxiliary "flex shield" HST and StarShield™ Star



MISSION-CRITICAL
INTERCONNECTS
FOR MISSILE AND
LOYAL WINGMAN
APPLICATIONS



Conduit components and
wired assemblies with proven
aerospace performance



Ultra-flexible polymer-
core point-to-point fiber
optic conduit assembly

All of the metal-core conduit and polymer-core convoluted tubing systems we fabricate at Glenair may be wired and assembled at our factory with tamper-proof crimp ring or solder terminations according to customer requirements. Reduced size and weight factory terminated conduit assemblies offer the utmost in environmental ruggedness, reliability and durability. Certified factory assemblers and calibrated tooling guarantee reliable long-term performance. Glenair's expertise in wired conduit systems extends from simple point-to-point jumpers to complex multibranch assemblies as well as turnkey integrated systems and LRUs with flexible conduit interconnect cabling.

TURNKEY FACTORY-TERMINATED CONDUIT ASSEMBLIES



Complex multibranch aircraft electrical
wire conduit assembly with high-
temperature polymer-core conduit

Lightweight multibranch wire protection
conduit assembly with high-temperature
polymer-core convoluted tubing

Crush-resistant commercial aerospace
metal-core conduit assembly

RUGGED

Conduit Wire Protection Systems



Flexible, impact resistant alternatives to lighter-duty jacketed cable assemblies

COMPLEX, MULTIBRANCH ASSEMBLIES WITH INNOVATIVE LIGHTWEIGHT POLYMER-CORE WIRE PROTECTION CONDUITS

Lightweight, halogen-free PEEK wire conduit assembly



Turnkey integrated box assembly and wired polymer-core interconnect system

PEEK, PFA, ETFE, Siltem polymer core and Glenair signature high-temperature polymer core conduit solutions and user-installable fittings



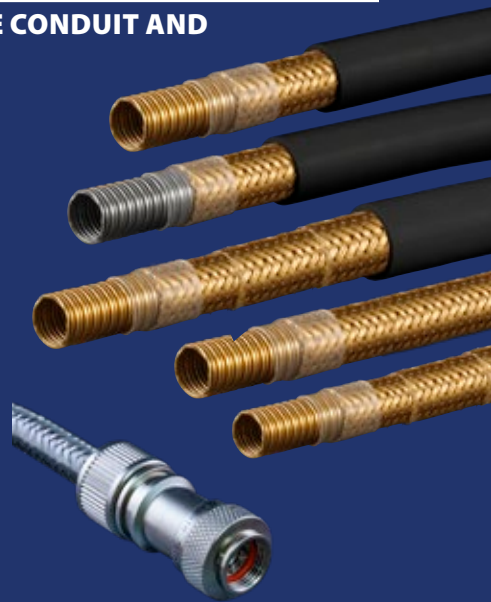
COMPLEX, MULTIBRANCH ASSEMBLIES WITH HEAVY-DUTY METAL-CORE CONDUIT AND OVERBRAIDING WIRE PROTECTION MATERIALS



Turnkey wheel well impact-resistant metal-core conduit assembly



Metal-core conduit wire protection aircraft brake assembly

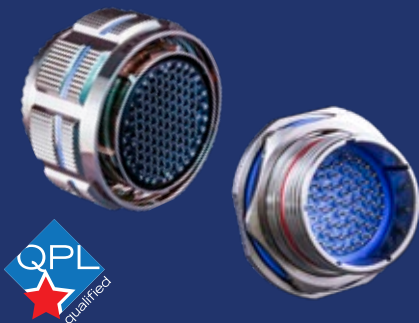


Brass, SST, or nickel-iron metal-core conduit material types with innovative microfilament and drawn filament braiding. Factory terminated or for use with user-installable fittings.

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 NAVSEA and the Defense Logistic Agency of the US government. These certification exercises are multi-year activities that test every aspect of an interconnect component’s performance.



MIL-DTL-38999 Series III Environmental Connectors



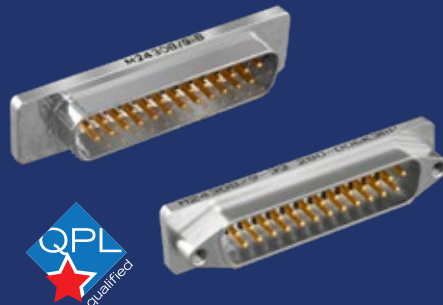
MIL-DTL-38999 Series IV Environmental Connectors



MIL-DTL-28840 Shipboard Connectors and Accessories



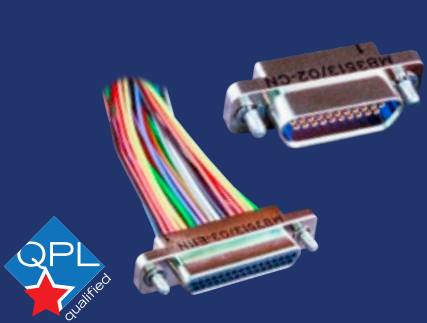
MIL-DTL-38999 Series I, II, III, and IV Hermetic Connectors



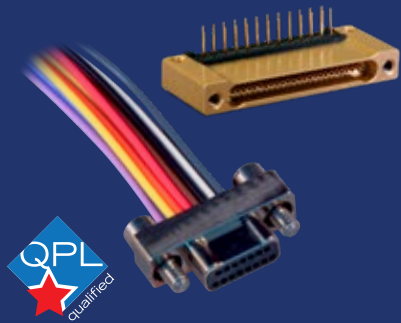
MIL-DTL-24308 Hermetic Connectors



MIL-DTL-28876 Shipboard Fiber Optic



MIL-DTL-83513 Micro-D Connectors and Accessories



MIL-DTL-32139 Nanominiature Connectors and Accessories



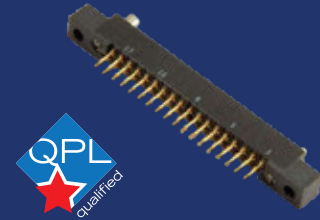
MIL-DTL-29504 Fiber Optic Termini and AS39029 Electrical Contacts



MIL-DTL-55116 Radio / Audio Connectors



807 NW Nett Warrior Qualified Tactical Connectors



MIL-DTL-55302 hyperboloid contact PCB interconnects



M85049 (AS85049) Backshells and Connector Accessories



MIL-DTL-83723 Backshells and Connector Accessories



M81511 (AS81511) Protective Covers and Connector Accessories



M85049/140 TACOM-Approved and Navy-Qualified 5617649 Shrink Boots



MIL-PRF-24758 NAVSEA-Qualified Conduit and Fittings



M85049 Composite Backshells and Covers for MIL-DTL-38999

GLENAIR'S COMMITMENT TO QUALITY

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

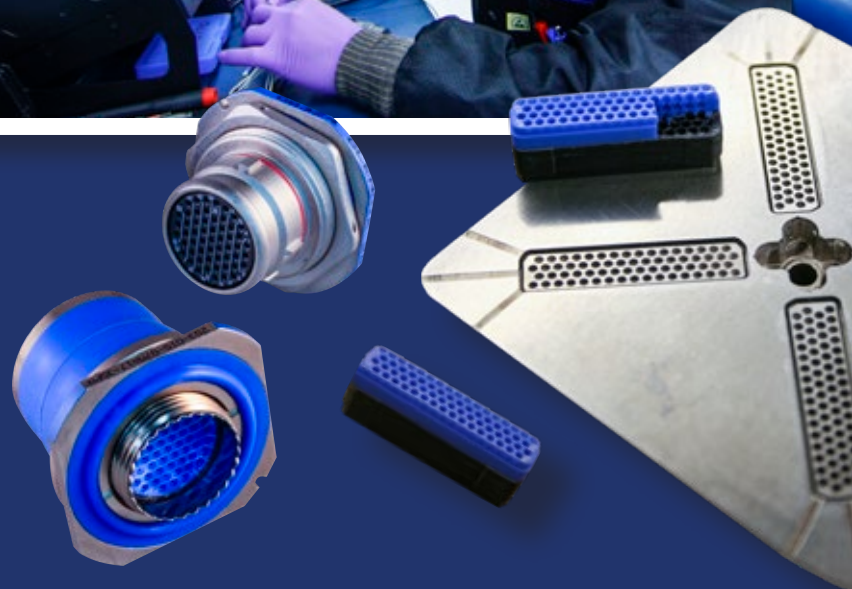


Glenair operates the largest high-reliability interconnect manufacturing operation in the United States, allowing us to fully support our broad range of land, sea, air, and space customers.





Glenair SoCal's most important asset: highly technical staff, fully empowered with all the right facilities and operation resources.





SAME-DAY SHIPMENT STOCKING

Immediate availability for high-demand connectors and tooling.



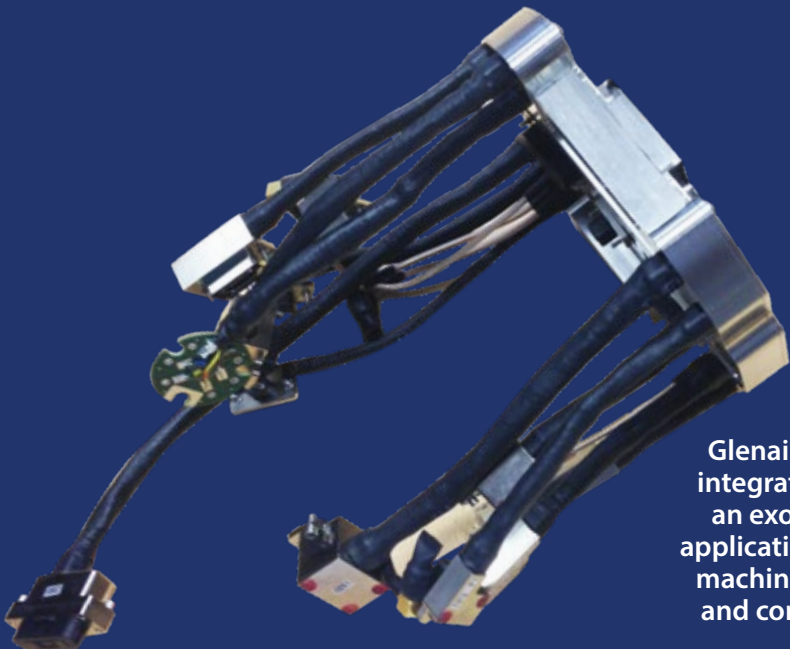
HARNESS ASSEMBLIES

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



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.



Glenair UK complex integrated system for an exoatmospheric application with custom machined connectors and complex cabling





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, and aerospace interconnect technologies for power, high-speed Ethernet, and hermetic seal applications.



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 HERMETIC SEAL AND CONNECTOR PLATING CAPABILITIES

Space-compliant gold and nickel plating performed in-house. Hermetic seal connector fabrication with performance levels to 1×10^{-7} helium leak rates.



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.

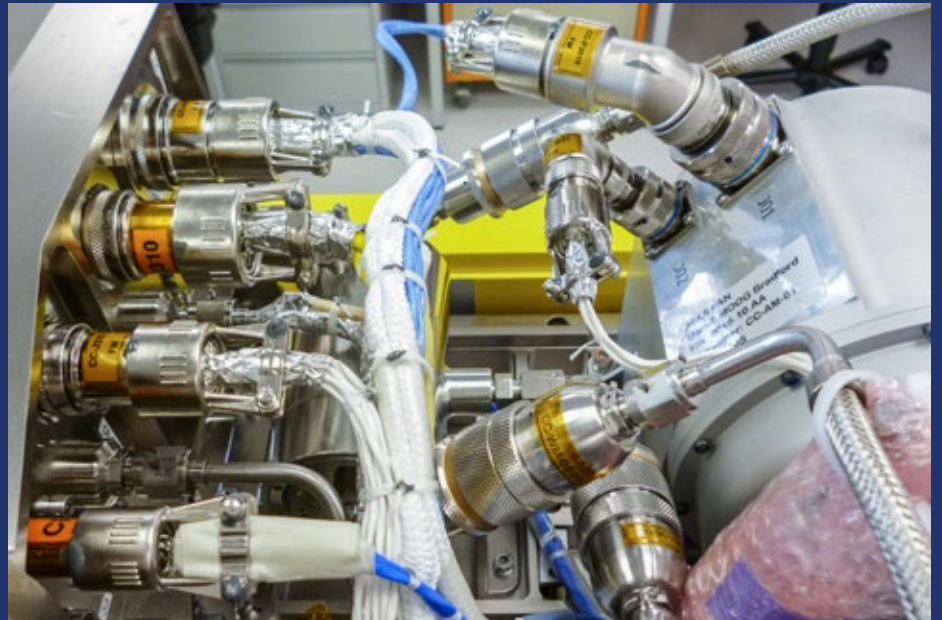


GLENAIR SALEM:

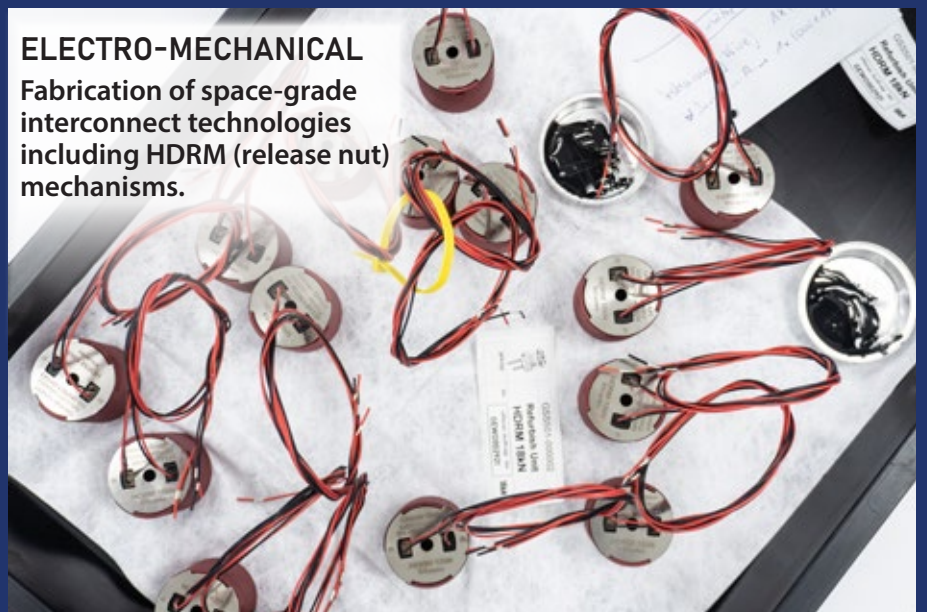
Our space systems business unit in Salem, Germany includes a 600 m² production floor, 300 m² ISO 8 and ISO 6 clean rooms, an ISO 5 flow chamber (certified to ESD Standard 61340-5-1), with ample accommodation for large mock-up and integration projects.



CLEAN ROOM ASSEMBLY
with both environmental
filtering and electrostatic
discharge protection.



SPACE-GRADE HARNESS FABRICATION AND INTEGRATION
In-house or at customer facility.



ELECTRO-MECHANICAL
Fabrication of space-grade
interconnect technologies
including HDRM (release nut)
mechanisms.



MISSION-CRITICAL INTERCONNECT SOLUTIONS

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