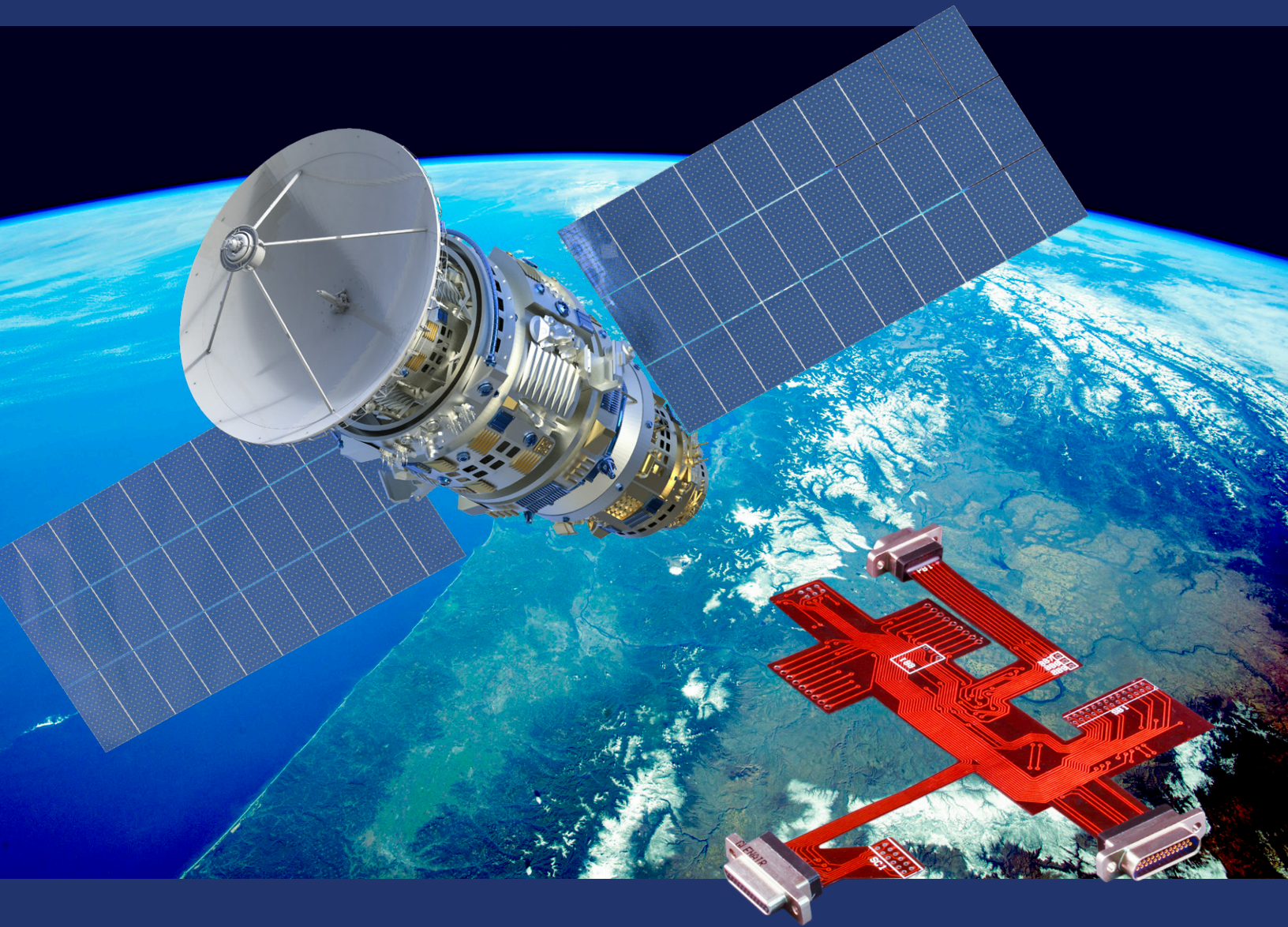


MISSION-CRITICAL
**INTERCONNECT
SOLUTIONS**



IPC-6012/6013 CLASS III, TYPES 1-4

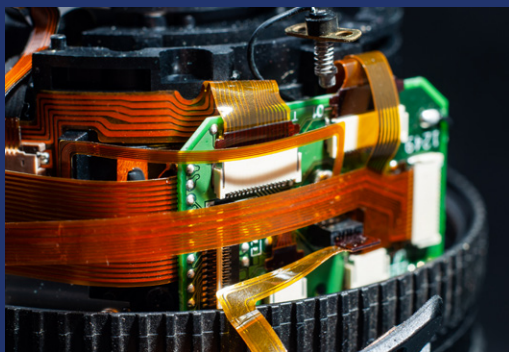
Flex Circuit Assemblies: Turnkey, Connectorized PCB Solutions

Flex Circuit, Rigid Flex Circuit, PCBA, and Optical Flex Assemblies

JUNE 2024

AEROSPACE-GRADE SuperFlex™ PCB/FLEX CIRCUIT ASSEMBLIES

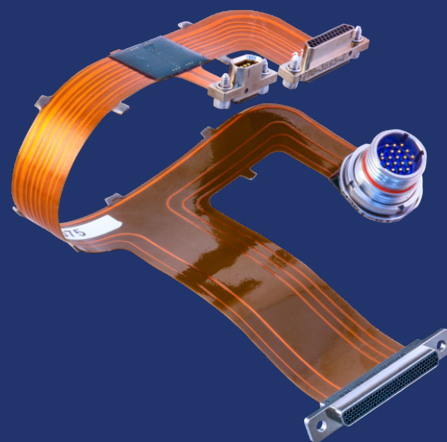
Turnkey connectorized flex, rigid flex, and rigid PCB assemblies incorporating Glenair's broad range of innovative small form-factor circular and rectangular PC-tail connector solutions for optimized ease-of-assembly and SWaP



Flex circuits—metallic layers of traces, usually copper, bonded to a dielectric layer, like polyimide—are used to interconnect embedded electronic packages, displays, backplanes, and other PCB components. Flex and rigid-flex circuits are frequently superior to conventional wiring as they can be easily routed in three dimensions, are lighter and smaller than discrete wires, and

offer virtually unlimited flex cycles in articulated applications. Flex and rigid-flex circuits are commonly deployed within avionic LRUs and other complex electronic systems, as well as between articulating components, such as disk drive, robotic arms, and other electro-mechanical devices.

Compared with conventional wiring, compact flexible printed circuit assemblies reduce system complexity and assembly time as well as enhance reliability. Due to their low mass and high circuit density, flex circuit assemblies are less susceptible to impact and vibration damage than conventional wire harness assemblies, making them an ideal choice in satellite applications such as articulated solar arrays, sensors, and antenna.



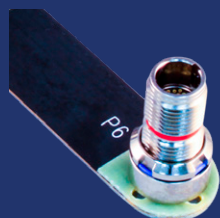
IPC 6012/6013 Class I, II, III,
Types 1–4 Certified Production

Glenair recommends commercial customers specify IPC-6012/6013 standards of workmanship, which are fully supported by Glenair. Military customers may alternatively cite specifications IAW MIL-PRF-31032.

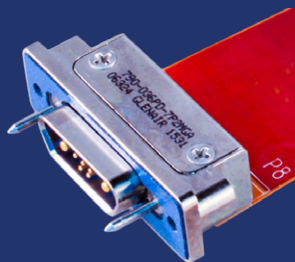
GLENAIR SIGNATURE PC-TAIL CONNECTOR TYPES AVAILABLE IN TURNKEY FLEX ASSEMBLIES



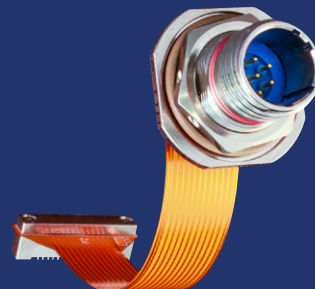
Series MWD Micro-D and
spring-contact AlphaLink



Series 88
SuperFly

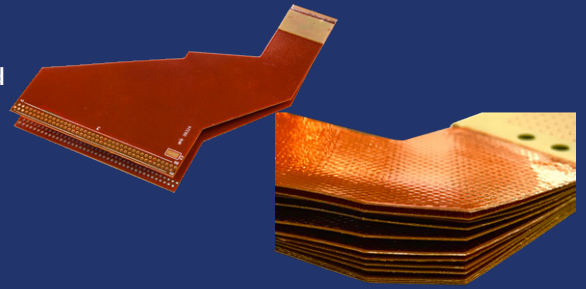


Series 79
Micro-Crimp



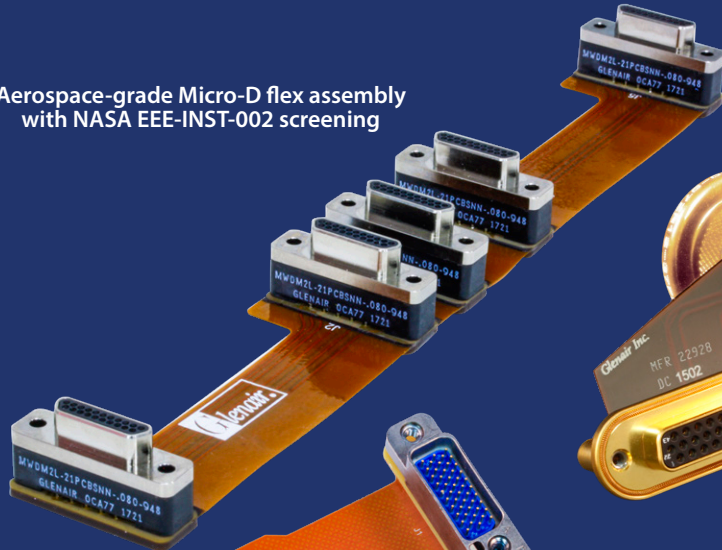
SuperNine MIL-DTL-38999 type
flexi with board connector

Glenair SuperFlex turnkey connectorized flex, rigid flex, and rigid PCB assemblies begin with our signature flex circuit fabrication and innovation. All SuperFlex assemblies are optimized with ground planes and shields, strain relief features, mounting points for improved resistance to vibration and shock, and are available in multi-layer and double-sided configurations. All terminations backpotted for compliance with conformal coating processes. Optical and electrical solutions available. Special long-length assemblies up to 12 feet.



MULTIBRANCH SUPERFLEX ASSEMBLIES WITH GLENAIR SIGNATURE CONNECTORS

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



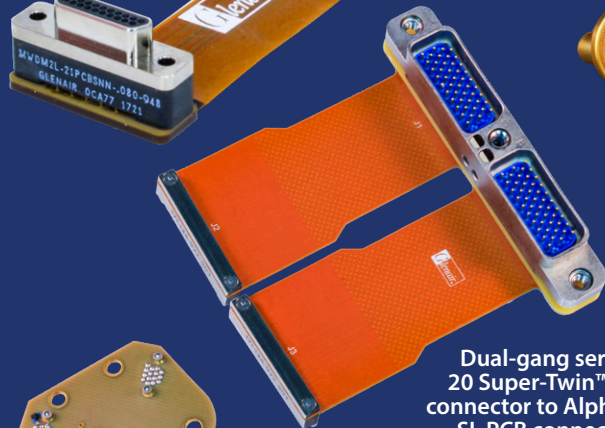
High-shock matched-impedance Mighty Mouse assembly with flex circuit



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



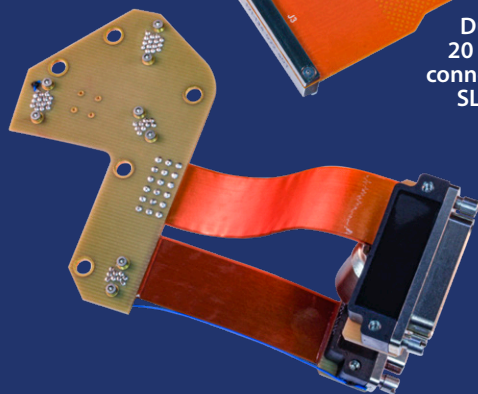
Dual-gang series 20 Super-Twin™ I/O connector to AlphaLink SL PCB connector



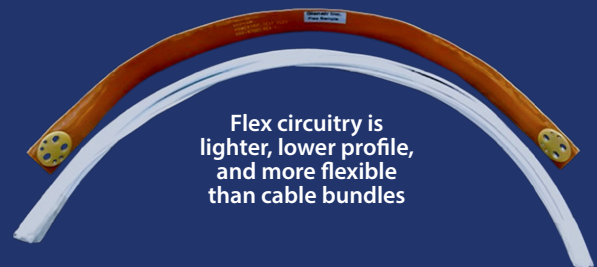
Hybrid flex/rigid flex multibranch Micro-D and Series 23 SuperNine flex assembly with discrete RF circuits



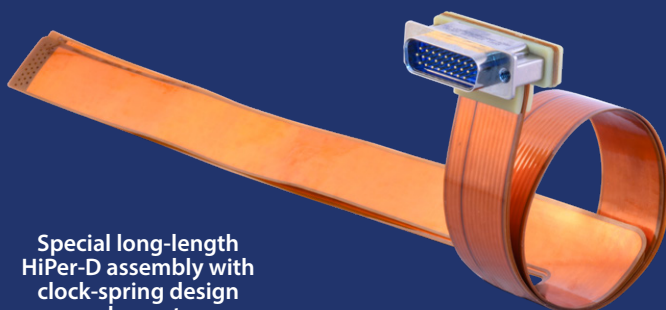
Stacked Micro-D I/O connectors with flex jumper to rigid PCB assembly



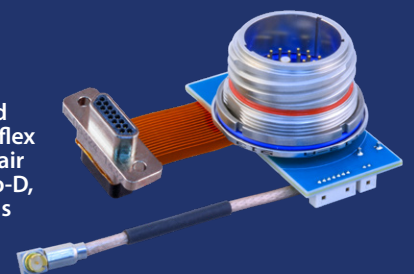
Flex circuitry is lighter, lower profile, and more flexible than cable bundles



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



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



Flex and rigid flex specification standards

GLENAIR FLEX AND RIGID-FLEX



Manufacturing Formats and Specifications

The following tables describe, in brief, Glenair flex and rigid-flex manufacturing formats and specifications. Glenair recommends commercial customers specify IPC-6012/6013 standards of workmanship which are fully supported by Glenair. Military customers may alternatively cite specifications IAW MIL-PRF-31032.

FLEX ASSEMBLIES	
Design Formats	PADS • PADS PRO • Pro E / Creo • SolidWorks • Autodesk Inventor • CAM 350 • Altium • Valor • POLAR • XPedition
Manufacturing Formats	DXF • Gerber • ODB++ • IPC 2581
Layer Count	Max typ. up to 8
Termination	Thru hole • Straddle-mount • ZIF • Surface-mount
Conductor Width/Space	Lines: .003" • Spacing: .003" (dependent on copper weight)
Bend Radius (military)	Single Metal Layer: 4–6X overall flex thickness • Double Metal Layers: 6–10X overall flex thickness • Multi Layer Metal: 12–15X overall flex thickness
Materials / Tg	Substrate: DuPont™ Kapton® adhesive and adhesiveless -60°C to 125°C, Panasonic Felios Cover layer: DuPont™ Kapton®, Panasonic Felios Stiffener: FR4 or DuPont™ Kapton® (metal stiffeners available upon request) Conductor: Copper, Constantan High-temperature materials and more available
Surface Finish	ENIG • HASL • Immersion Tin and Silver • Soft and Hard Gold
Specs and Quality Management	IPC-6013 Class I, II, III, types 1-3 • ISO 9001, AS 9100J-STD-001 Space
RIGID-FLEX ASSEMBLIES	
Design Formats	PADS • PADS PRO • Pro E / Creo • SolidWorks • Autodesk Inventor • CAM 350 • Altium • Valor • POLAR • XPedition
Manufacturing Formats	DXF • Gerber • ODB++ • IPC 2581
Max Panel Thickness	Range of thicknesses from .010" to as thick as .250"
Layer Count	27 +
Via Technology	Blind • Thru hole • Filled (conductive and non-conductive)
Conductor Width/Space	Lines: .003" • Spacing: .003" (dependent on copper weight)
Materials / Tg	Substrate: Nelco 4000, Rogers, Megtron, Polyimide, and more
Surface Finish	ENIG • HASL • Immersion Tin and Silver • Soft and Hard Gold
Specs and Quality Management	IPC-6013 Class I, II, III, type 4 • ISO 9001, AS 9100, J-STD-001 Space

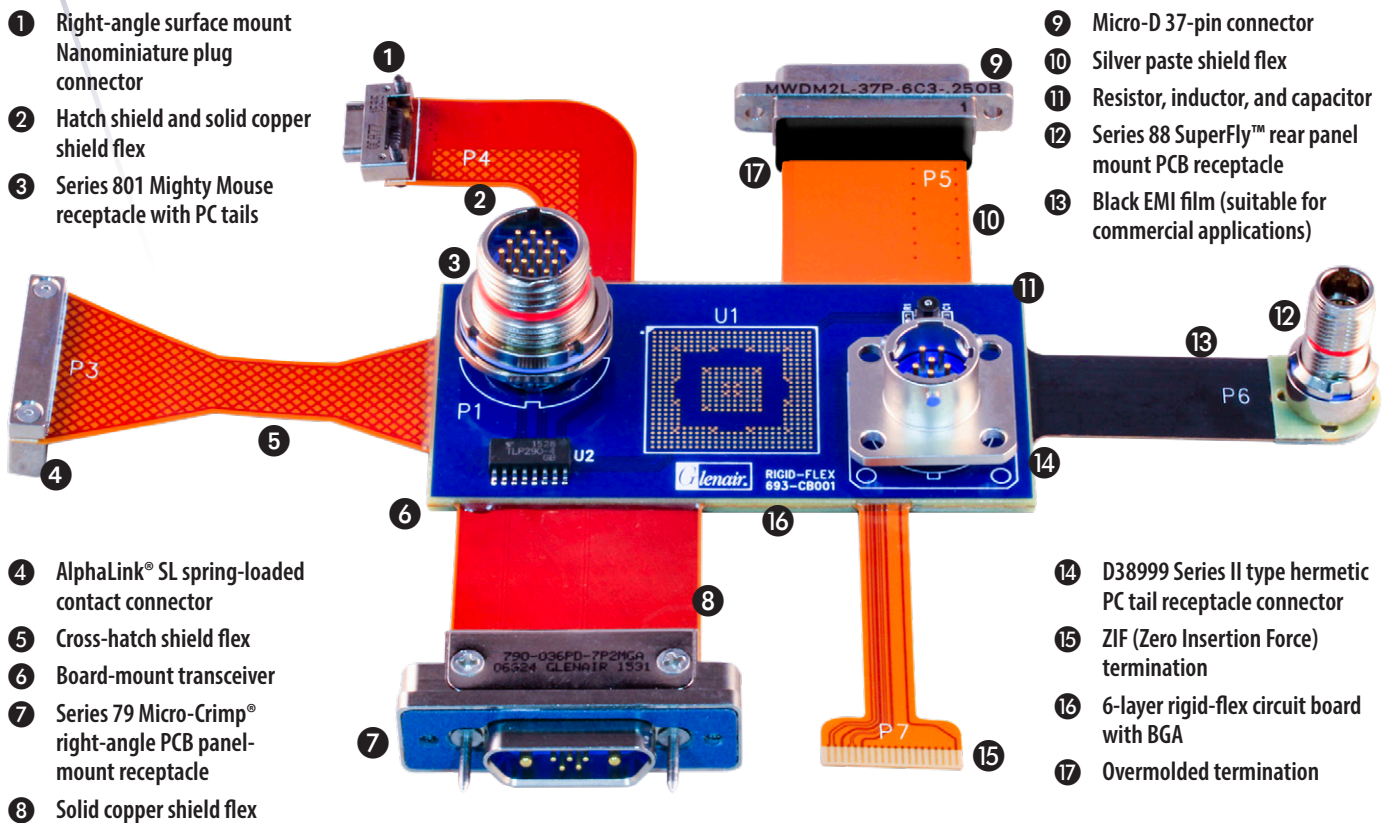
DuPont™ and Kapton® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company.

Design options, flex, rigid flex, and rigid PCB

STANDARD
DESIGN OPTIONS

Integrated Flex / Rigid-flex assemblies

Properly designed flex and rigid-flex assemblies offer significant space and weight savings compared to wire harnesses. Many design options are available, including integrated stiffeners, shielding, factory forming, selective bonding, termination, layer count and so on.

OPTIMIZED
SPACE-SAVING

Packaging and Integration

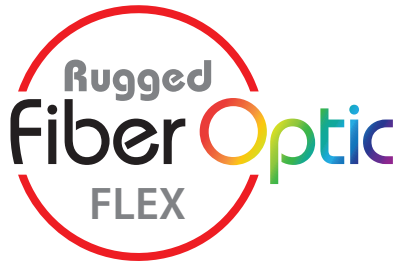
Flex and rigid flex circuit assemblies are ideal for space-constrained electronic packages and enclosures, or for interconnect systems that are required to flex in 3 axes during normal use. Flex and rigid flex circuitry offers complete freedom to design boards and wiring for even the most densely-packed electronic enclosures. In mission-critical applications, the ability to reduce or even eliminate discrete wiring and FR-4 boards in favor of flex circuitry helps designers make the most efficient use of available space.



High fiber count, small form-factor optical flex circuits for rugged defense, aerospace, and space applications

SHUFFLE CIRCUITS AND OPTICAL FIBER CROSSOVER DESIGNS

High data rate **Optical** assemblies

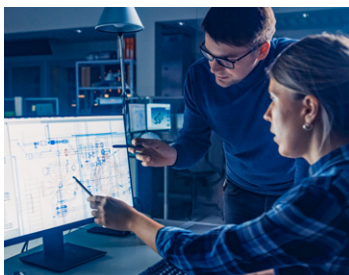
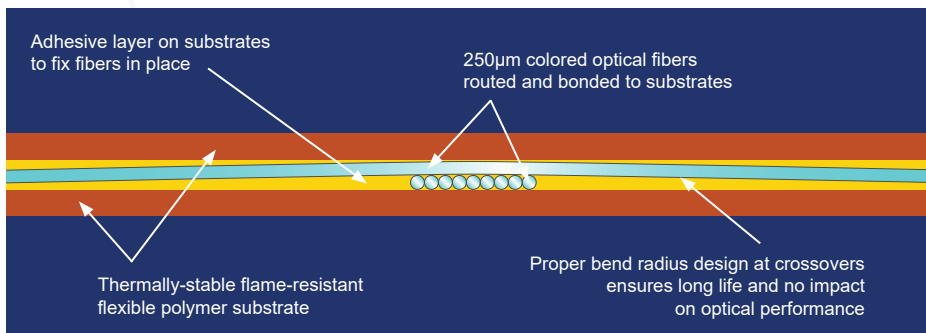


FEATURES

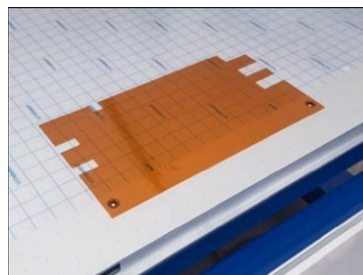
- Connectorized optical harness assemblies and breakouts, SM and MM
- Shuffle circuits with low-loss multimode fiber
- Ribbonized MT leads up to 12 inches and longer

BENEFITS

- Reduced installation / termination time and improved reliability
- Superior fiber management
- Complex fiber routing in minimal space
- Controlled routing lengths (low-skew)
- Controlled bend radius for minimized bend loss



3D layout and routing designs in Fusion 360



Build-to-print per customer specifications

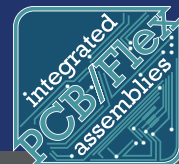


Single- and multimode fiber bonding

- Optical fiber bonded to a flame-resistant Kapton substrate—rad-hardened and outgassed assemblies available
- High-density fiber-to-fiber spacing: 250 µm
- Optimized fiber layouts, bend radius, and routing for high fiber-count applications
- Industry-standard connector terminations including FC, SC, LC, and others plus Glenair Signature F/O terminations including MT, GC, GHD, GFR, Eye-Beam, and others

Optical Fiber Nominal OD	250µm
Fiber Types	Singlemode/Multimode
Operating Temperature	-40° to +100°C
Typical Minimum Bend Radii	0.5 inch
Circuit Thickness	.018 inch
Flat and 3D Designs	Yes
Flame Resistance	UL-V1 or Better
Shuffle Circuits	Yes
Substrate	Kapton

Optical Flex Circuit Assemblies

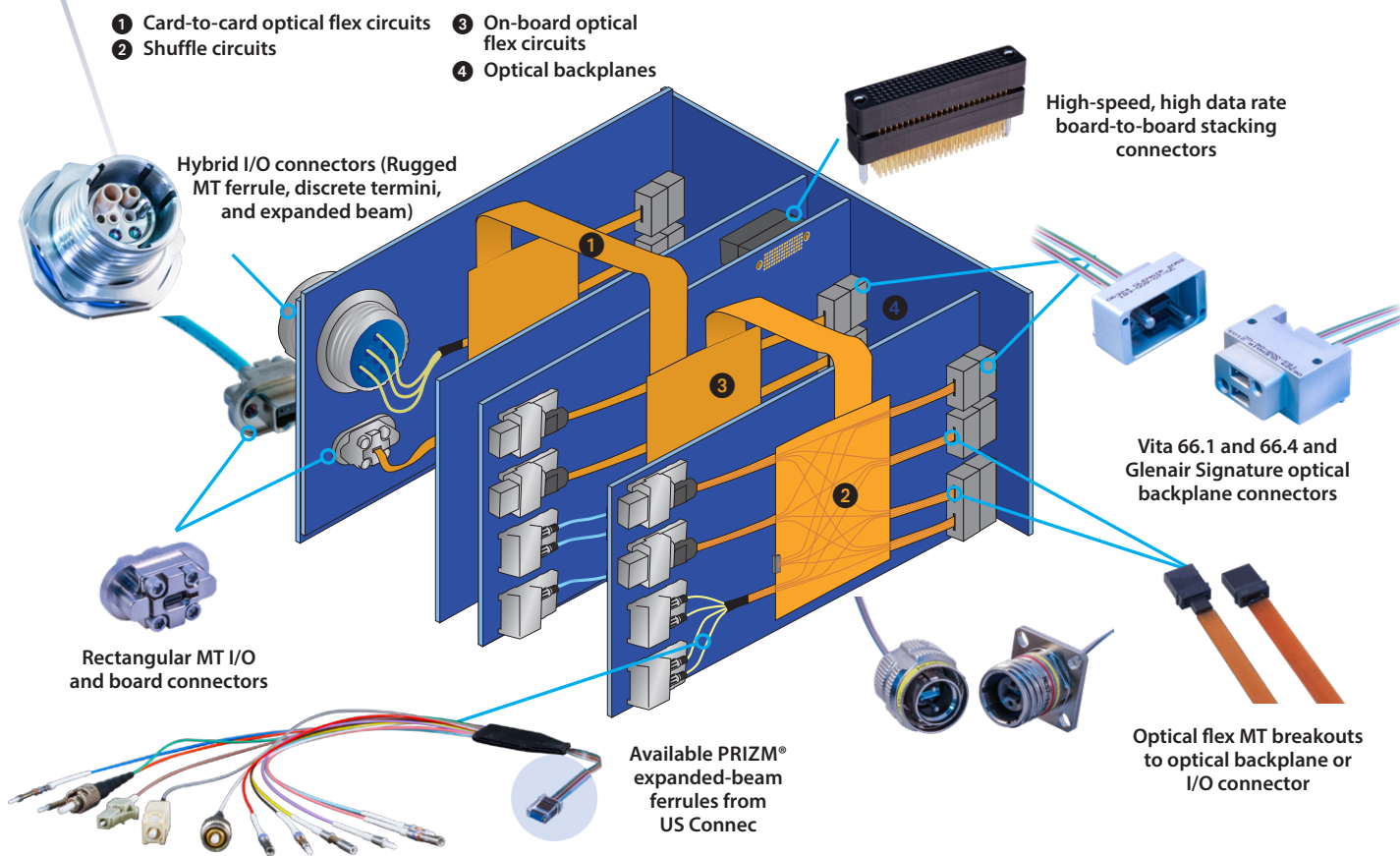


High fiber count, small form-factor optical flex circuits for rugged defense, aerospace, and space applications

OPTICAL FLEX ECOSYSTEM

Integrated SM and MM Optical Flex assemblies

Ecosystem includes MTP®/MPO transceiver interface connectors, turnkey fiber optic breakout cables, and ruggedized MT ferrule-equipped I/O connectors—circular and rectangular.



TURNKEY OPTICAL FLEX JUMPERS



Optical flex jumpers terminated to MT fiber optic ferrules, PRIZM MT expanded-beam ferrules, and standard Fiber Optic connectors, as well as Glenair signature environmental I/O fiber optic connectors, are available as catalog items.

SPACE- AND MIL-
AERO GRADE FPC
IPC-6012 / 6013
SPECIALIZING IN
CLASS III, TYPES
1-4

Fairway-Flex™

LONG-LENGTH FLEX ASSEMBLIES

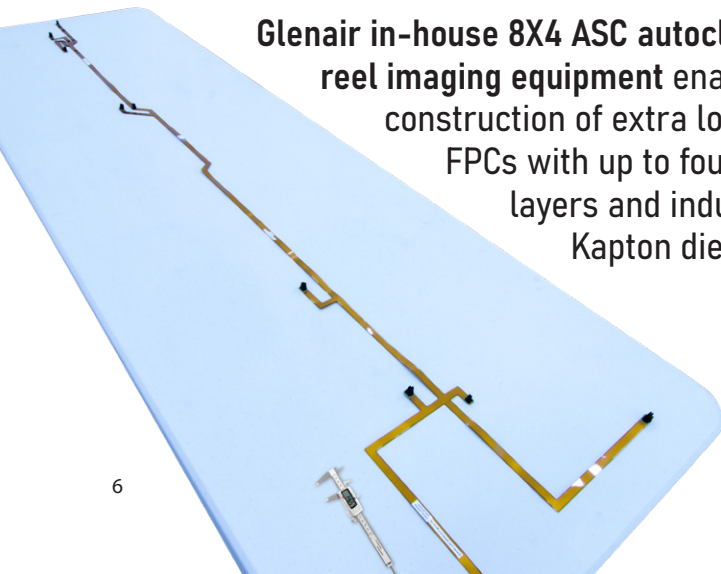
Long-Length Flexible Printed Circuit Assemblies, 3 to 8 feet



Glenair Fairway-Flex™ is a long-length, space- and mil-aero grade flexible printed circuit solution incorporating Glenair's broad range of innovative small form-factor circular and rectangular PC-tail connectors.

Glenair in-house 8X4 ASC autoclave and reel-to-reel imaging equipment enables one-piece construction of extra long "Fairway-Flex" FPCs with up to four layers circuit layers and industry-leading Kapton dielectric substrates.

- **Turnkey:** from design to prototype to volume production
- **Rapid prototype process** includes 3-D "paper doll" fit-check mockups with copper-clad DuPont™ Kapton® to simulate actual flexibility
- **EMI/RFI Shielding** with solid or patterned shield planes, and/or with shielded I/O interconnects
- **Configurations include** single-sided, double-sided, and multilayered
- **Point-to-point and multibranch assemblies**
- **ISO 9001, AS9100 certified**

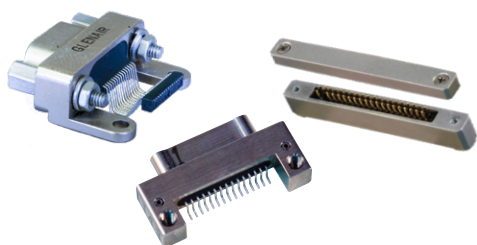
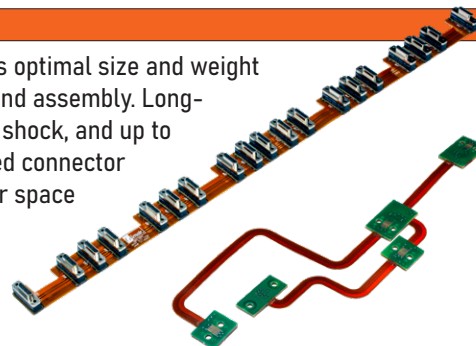


Fairway-Flex™ Signature Long-Length FPC

TECHNOLOGY OVERVIEW: FAIRWAY-FLEX

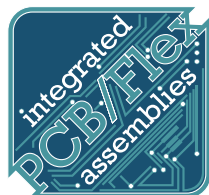
Replacing long-length wire bundle assemblies with high-density flex circuitry ensures optimal size and weight reduction, eliminates wiring errors resulting in faster, error-free on-site installation and assembly. Long-length Fairway-Flex assemblies offer better resistance to high levels of vibration and shock, and up to 1 million flex and duty cycles. Fairway-Flex designs offer both single- and double-sided connector mounting and 3D circuit routing within equipment enclosures, LRUs, and the aircraft or space fuselage. Typical max length is up to 96 inches. Consult the factory for longer designs.

Fairway-Flex assemblies may be equipped with **hard mount points and stiffeners** as required, as well as the ability to implement flex-to-install designs that combine PCB boards and flex circuitry



A key step in the conceptualization of most flex assemblies is the **selection of I/O and board-level PCB connectors**. Glenair manufactures the industry's most complete range of rectangular and circular PCB connectors for turnkey incorporation into flex assembly designs. Note that this lineup includes both industry-standard solutions such as D-Subs, Micro-Ds and Nanos, but also Glenair signature solutions such as the Series 79 Micro-Crimp, that offer better-than-QPL performance.

INTEGRATED PCB/FLEX SPECIFICATION STANDARDS



The following tables describe Glenair Fairway-Flex **manufacturing formats and specifications**. Glenair recommends commercial customers follow IPC-6012/6013 specification standards. Military customers may alternatively cite specifications IAW MIL-PRF-31032. 5. Vias for interconnect mounting and signal translation between layers to be located on far ends of extended length flex. For vias in center body of extended length flex—or for other non-standard requirements, consult factory.

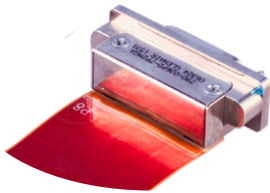
Fairway-Flex™ Assemblies

Design Formats	PADS • PADS PRO • Pro E / Creo • SolidWorks • Autodesk Inventor • CAM 350 • Altium • Valor • POLAR • XPedition
Manufacturing Formats	DXF • Gerber • ODB++ • IPC 2581
Layer Count	Max typ. up to 4
Termination	Thru hole • Straddle-mount • ZIF Termination
Conductor Width/Space	Lines: .010" • Spacing: .010" (design-dependent)
Bend Radius (military)	Single Metal Layer: 4–6X overall flex thickness • Double Metal Layers: 6–10X overall flex thickness • Multi Layer Metal: 12–15X overall flex thickness
Materials / Tg	Substrate: DuPont™ Kapton® adhesive and adhesiveless -60°C to 125°C, Panasonic Felios Cover layer: DuPont™ Kapton®, Panasonic Felios Stiffener: FR4 or DuPont™ Kapton® (metal stiffeners available upon request) Conductor: Copper, 1/4 ounce to 2 ounce High-temperature materials and more available
Surface Finish	ENIG • HASL • Immersion Tin and Silver • Soft and Hard Gold
Specs and Quality Management	IPC-6013 Class I, II, III, types 1-3 • ISO 9001, AS 9100J-STD-001 Space

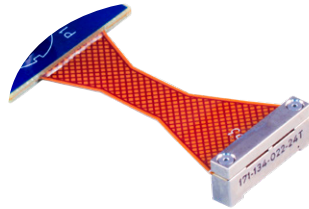
Application / design options

GROUND PLANES AND SHIELDS

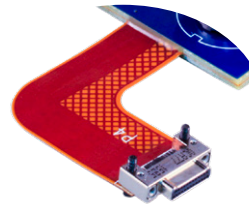
Managing EMI emissions and signal line impedance are critical aspects of flex circuit design. Effective use of ground / shield planes, appropriate connector interfaces, and matched-impedance flex circuits delivers optimal high-speed signal integrity.



Full copper shield



Cross-hatch mesh shield



Hybrid solid/mesh



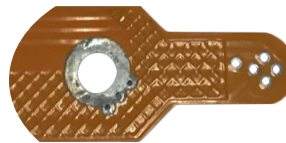
Silver epoxy



Connector-to-flex shielding
(soldered pin insert)



Stitched vias



Polyimide-based
for contact grounding



Black Tatsua

STRAIN RELIEF OPTIONS FOR FLEX AND RIGID FLEX



Reinforcing "wings"



Stiffeners at
critical assembly points

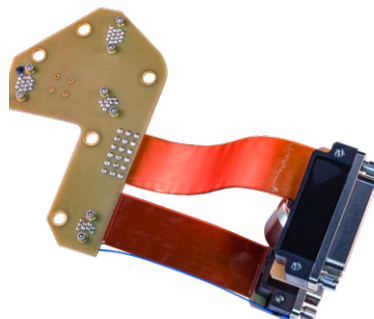
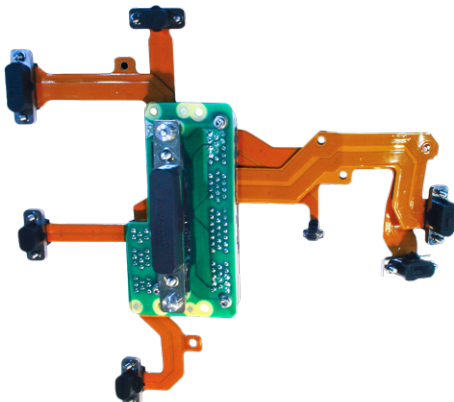


Reinforced solder joint
with potting



Molded epoxy
encapsulant

RIGID FLEX MOUNTING POINTS FOR IMPROVED VIBRATION AND SHOCK RESISTANCE



Typical examples of rigid flex
mounting points in connectorized
flex circuit assemblies

Application / design options

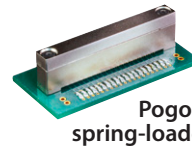
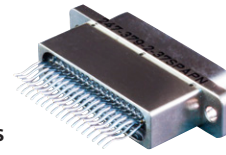
FLEX, RIGID FLEX, AND PCBA CONNECTOR TERMINATION OPTIONS



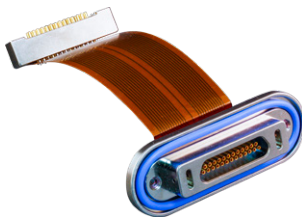
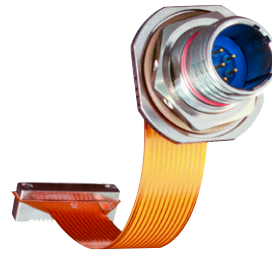
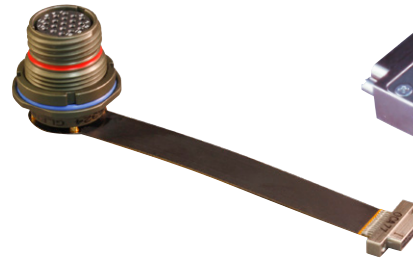
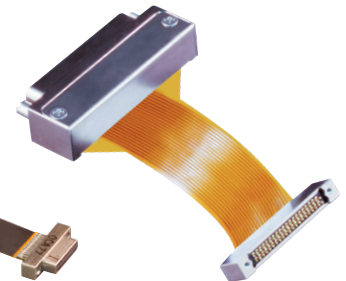
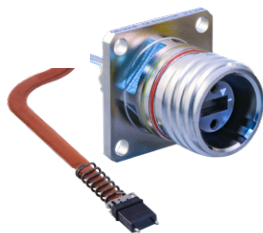
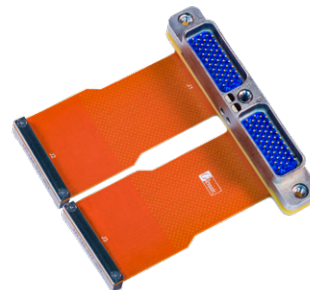
Thru-hole



Surface mount

Pogo pin /
spring-loaded contactsStraddle
mountCompliant
pinsDirect
terminationEncapsulating
potZIF (zero
insertion force)

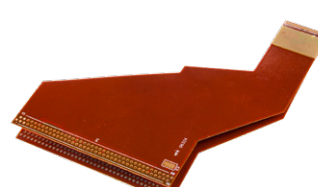
FLEX AND RIGID FLEX I/O CONNECTOR OPTIONS

Environmentally sealed
rectangular I/O interfaceMilitary aerospace grade
circular: SuperNine D38999Micro miniature aerospace-
grade circular: Mighty MouseEMI shrouded precision-
machined M2430Ruggedized MT fiber optic
I/O circularDual-gang modular I/O:
Series 20 Super-TwinSeries 970 PowerTrip
power connector I/OMicro miniature
push-pull QDC I/O

MULTILAYER AND DOUBLE-SIDED FLEX AND RIGID-FLEX DESIGN OPTIONS



Multilayer rigid-flex circuit assemblies—up to 27 layers—offer increased circuit density while still maintaining the medium's dynamic 3D flex characteristics



Double-sided flex circuits increase circuit density and power handling

Rectangular PC-tail connectors potted, sealed, and conformal-coating compatible

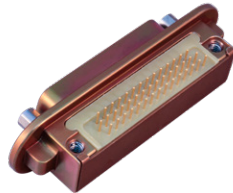
SERIES 28 HIPER-D M24308 HIGH-PERFORMANCE ENVIRONMENTAL PCB CONNECTORS



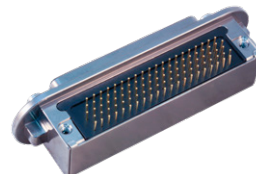
280-022
straight PC tail
pin connector



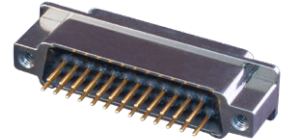
280-023
straight PC tail
socket connector



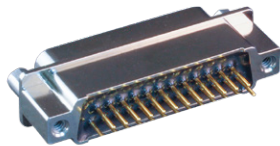
280-024
right-angle PC tail
pin connector



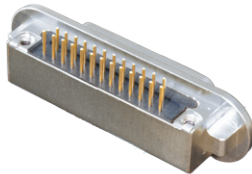
280-025
right-angle PC tail
socket connector



280-026
straight PC tail
pin connector, low-profile



280-027
straight PC tail
socket connector, low-profile



280-028
right-angle PC tail
pin connector, low-profile



280-029
right-angle PC tail
socket connector, low-profile



280-050
combo straight PC tail
pin connector



280-051
combo straight PC tail
socket connector



280-052
combo right-angle PC tail
pin connector



280-053
combo right-angle PC tail
socket connector



280-054
combo straight PC tail
pin connector, low-profile

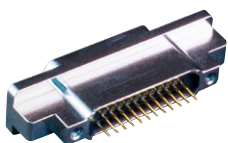


280-055
combo straight PC tail
socket connector, low-profile

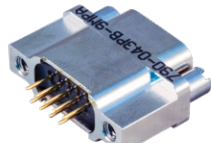


280-056
combo right-angle PC tail
pin connector, low-profile

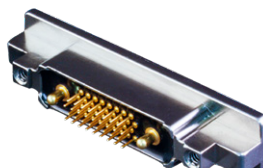
SERIES 79 HIGH-PERFORMANCE MICRO-CRIMP ENVIRONMENTAL PCB CONNECTORS



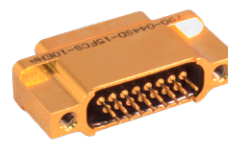
790-028
straight PC tail
panel receptacle



790-043
straight PC tail
free-standing receptacle



790-029
straight PC tail
panel plug



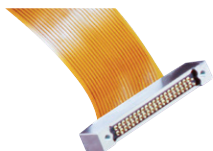
790-044
straight PC tail
free-standing plug



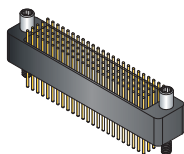
790-042
Right angle PCB
panel-mount hybrid coax

Rectangular PC-tail connectors potted, sealed, and conformal-coating compatible

ALPHALINK • SERIES 791 • SERIES 792 HIGH-PERFORMANCE RECTANGULAR PCB ENVIRONMENTAL CONNECTORS



171-134
AlphaLink SL connector with
spring-loaded contacts



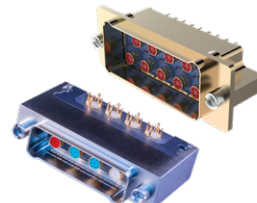
GSTT-PF
HD Stacker
top-of-stack flex



GTBA/GTBB-SF
MIL-DTL-55302 type
flex vertical PCB

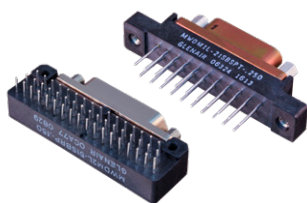


791-015/-011
Series 791 straight and 90°
scoop-proof panel-mount
with grounding fingers

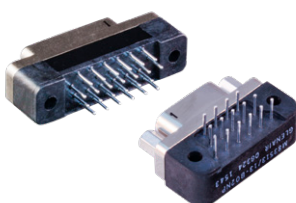


792-006, -010
Straight and 90°
high-speed El Ochito

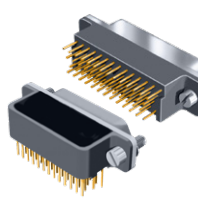
MIL-DTL-83513 MICRO-D AND HIGH-SPEED MICRO-D ENVIRONMENTAL PCB CONNECTORS



MWDM-B
MWDM-BR
vertical and 90° mount
thru-hole PCB



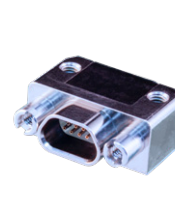
MWDM-CBS
MWDM-CBR
vertical and 90° mount
thru-hole condensed PCB



GMR75
GMR75C
Condensed board, .075" pitch
vertical and 90° PCB

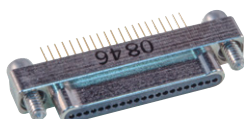


GHS4-M
VersaLink
high-speed Micro-D
right angle PCB

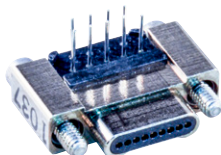


GHSM-HBR
High-Speed Micro-D
right angle PCB

MIL-DTL-32139 NANOMINIATURE AND GMMD ENVIRONMENTAL PCB CONNECTORS



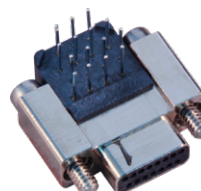
890-006/-007
single-row vertical PCB
plugs / receptacles



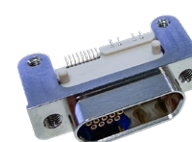
890-008/-009
single-row right angle PCB
plugs / receptacles



891-006/-007
dual-row vertical PCB
plugs / receptacles



891-008/-009
dual-row right angle PCB
plugs / receptacles



GMMD
high-speed micro with nano
TwistPin contacts

HERMETIC RECTANGULAR GLASS-TO-METAL SEAL PCB CONNECTORS



790-066
Series 79
hermetic PCB connectors



280-012H
HiPer-D
hermetic PCB connectors



177-140H
Micro-D solder-mount
hermetic PCB connectors



177-705H
Micro-D rear panel-mount
hermetic PCB connectors



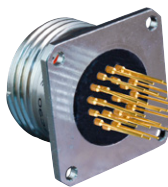
QPL M24308/9
D-Subminiature straight
thru-hole PCB hermetic

Circular PC-tail connectors
potted, sealed, and conformal-coating compatible

SUPERNINE® D38999 SERIES III ENVIRONMENTAL PCB CONNECTORS



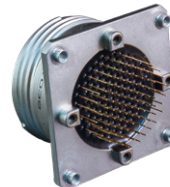
233-207
flush-flange receptacle



233-208
stepped contact receptacle



233-209
short standoff receptacle



233-210
threaded standoff receptacle



233-211
dual flange receptacle

SUPERNINE® D38999 SERIES III ENVIRONMENTAL PCB SPECIALS



233-218
high-speed hybrid
with threaded standoffs



233-218
high-speed wall mount
with El Ochito® contacts



240-383D
dual-flange wall-mount
EMI filter connector

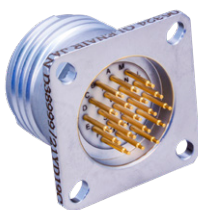


050-335
opto-electronic jam nut
with threaded standoff



257-859
PCB receptacle with
compliant pin contacts

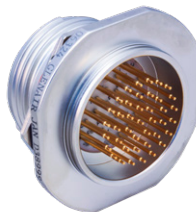
SUPERNINE® D38999 SERIES III GLASS- AND LIGHTWEIGHT ENCAPSULANT-SEALED PCB HERMETICS



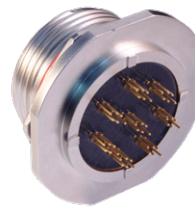
233-100-H2
box mount receptacle



233-100-H5
solder mount receptacle



233-100-H7
jam nut mount receptacle

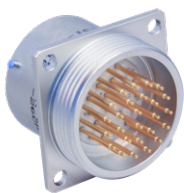


233-254
high-speed hermetic
jam nut receptacle

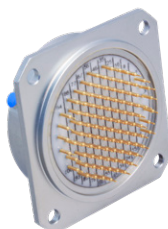


233-250
CODE-RED lightweight
hermetic jam nut receptacle

MIL-DTL-38999 SERIES I, II, III, AND IV QPL GLASS-SEALED PCB CONNECTORS—CLASS N, Y, AND H (SPACE-GRADE) HERMETIC



231-100-H0, H7, H5
Series I scoop-proof bayonet



232-100-H0, H2, H5, H7
Series II low-profile bayonet



233-100-H2, H5, H7, H8
Series III triple-start



234-100-H2, H7, H5, H8
Series IV scoop-proof breech-lock

Circular PC-tail connectors potted, sealed, and conformal-coating compatible

SERIES 80 MIGHTY MOUSE MICRO MINIATURE ENVIRONMENTAL PCB CONNECTORS



Series 800
UN thread



Series 801
double-start thread



Series 803
bayonet-lock

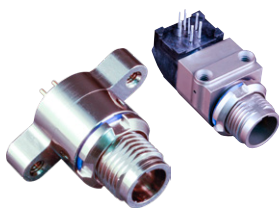


Series 804
push-pull QDC



Series 805
triple-start

SERIES 88 SUPERFLY AND M32139-TYPE NANOMINIATURE CIRCULAR ENVIRONMENTAL PCB CONNECTORS



SuperFly
880-041R • 880-037R
QDC vertical and 90° receptacle



SuperFly
881-019R • 881-020R
threaded vertical and 90° receptacle



Nanominiature
893-008 • 893-009
breakaway and threaded straight



Nanominiature
893-010 • 893-011
breakaway and threaded right-angle

SERIES 806 MIL-AERO MICRO MINIATURE ENVIRONMENTAL PCB CONNECTORS



806-021 • 806-022
Environmental



806-058
High-frequency coax



806-039 • 806-040
High-speed El Ochito



240-806-21
EMI/RFI filter



806-025, -026 glass
806-028, -043 lightweight
Hermetic

SUPERSEAL RJ45 / USB ENVIRONMENTAL PCB CONNECTORS



MIL-DTL-38999 Sr. III
SuperSeal



Series 80 Mighty Mouse
SuperSeal



Series IPT 26482 type
SuperSeal



Series ITS 5015 type
SuperSeal



MIL-DTL-28840
SuperSeal



Lightweight, small form-factor MT fiber optics in Glenair Signature SuperNine® and Series 79 connectors: The aerospace-grade I/O connector solution for use with Glenair parallel optical transceivers and MT optical flex circuits

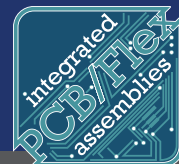
**TWO STYLES OF HIGH-DENSITY MT FERRULES SUPPORTED:
STANDARD MT PHYSICAL CONTACT FERRULE AND LOW-LOSS
PRIZM® LENS EXPANDED BEAM**



Both ferrule styles are easily inserted with common tools, and may be equipped with an engineered spring member for precise axial alignment in high vibration and shock applications.

- **Small form-factor, high-density MT fiber optic solutions** for rugged space and mil-aero applications
- **Optimized for use** with parallel optic transceivers and optical flex circuitry
- **Singlemode, multimode and specialty fiber** including radiation-tolerant for space applications
- **Temperature tolerance** from -40°C to +85°C
- **Designed for optimal low insertion loss performance** in high vibration and shock environments
- **IP67 Environmental sealing**, IP68 available at interface

SPACE AND MIL-AERO GRADE MT Fiber Optic Connectors



for use with optical flex circuits

CIRCULAR
AND RECTANGULAR

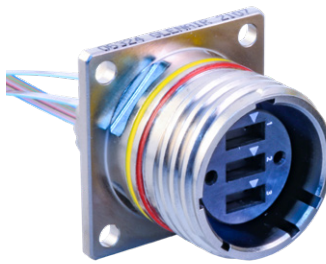
Ruggedized MT I/O Connectors



Plug with EMI/RFI ground spring
Shell size-insert arrangement
11-1, Up to 24 fibers
(1 MT ferrule)



In-line receptacle
Shell size-insert arrangement
13-2, Up to 48 fibers
(2 MT ferrules)



Panel-mount receptacle
Shell size-insert arrangement
15-3, Up to 72 fibers
(3 MT ferrules)



Jam nut receptacle
Shell size-insert arrangement
17-4, Up to 96 fibers
(4 MT ferrules)



Single-ferrule MT
Series 79 plug
up to 24 fibers



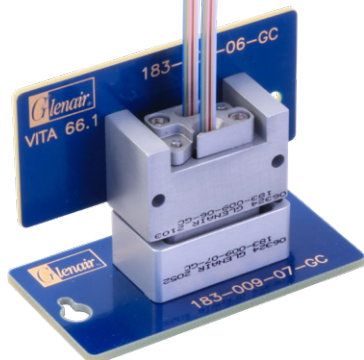
Single-ferrule MT
Series 79 receptacle
up to 24 fibers



Series 79 supports both
ribbon and round cable,
as well as standard and
expanded-beam
MT ferrules

VITA 66.1 AND 66.4 MT FERRULE RUGGED OPTICAL BACKPLANE CONNECTORS FOR VPX BACKPLANE APPLICATIONS

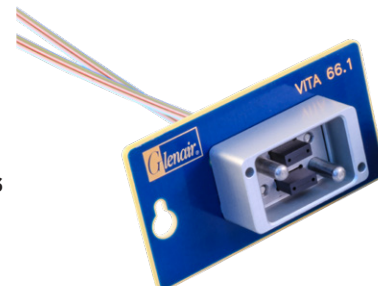
Right-angle
configurations
for motherboard
to daughtercard
applications



- VITA 66.1 and 66.4 spec compliant for use with optical backplanes
- 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

IDEALLY SUITED FOR

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



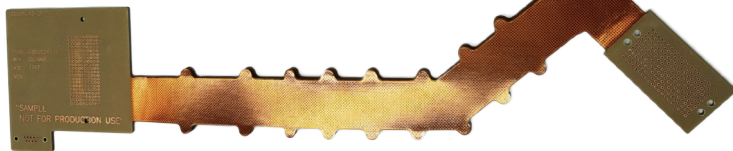
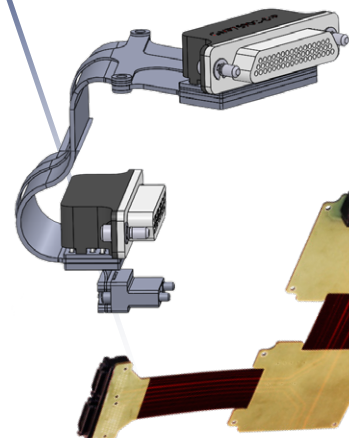
SolidWorks modeling · 3D printed prototyping

MODELING AND 3D PRINT

Optimized for **Rapid** Prototyping

- 3D representation of flex assemblies using SolidWorks
- 3D printed “paper doll” outline mockups for fit checks with copper clad DuPont™ Kapton® to simulate actual flexibility
- Incorporation of customer-supplied wiring diagram and chassis information in laser-cut mechanical samples

Example SolidWorks and 3D printed paper doll prototype mockups produced by Glenair's Integrated Flex Assembly team—typical turnaround 2–3 days upon receipt of request for most application designs

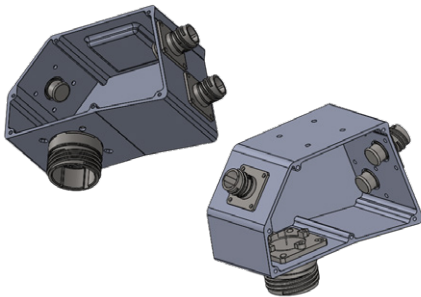


Complimentary quick-turn mockups produced by by Glenair: 28-layer rigid flex, and 12-layer multibranch rigid flex



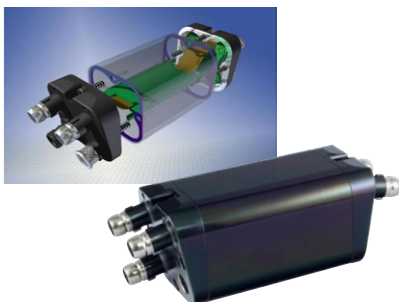
HD Stacker board-to-board connector/flex mockup

3D MODELING OF BOX BUILDS FOR OPTIMAL INTEGRATION OF I/O INTERCONNECTS AND FLEX CIRCUIT ASSEMBLIES



- Customer-supplied STEP file of box with panel cutouts
- Glenair value-added 3D model with connector size and flange modifications

In this example, customer supplied a STEP file of a box enclosure with existing panel cutouts. The Glenair engineering team used SolidWorks to design a specially-modified connector flange, enabling the use of a smaller, higher-density connector, for significant size-and weight-savings.

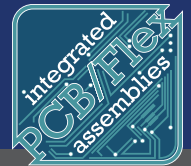


- Electronic box builds are supported by software-based design and prototyping of I/O connectors and integrated flex circuits
- Process leads to optimized location and routing of internal assembly and I/O interface

This integrated system enclosure, complete with printed circuitry, I/O connectors, and power modules was designed and modeled in SolidWorks prior to production manufacturing.

DuPont™ and Kapton® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company.

FAST TURNAROUND 3D Modeling and Rapid Prototyping



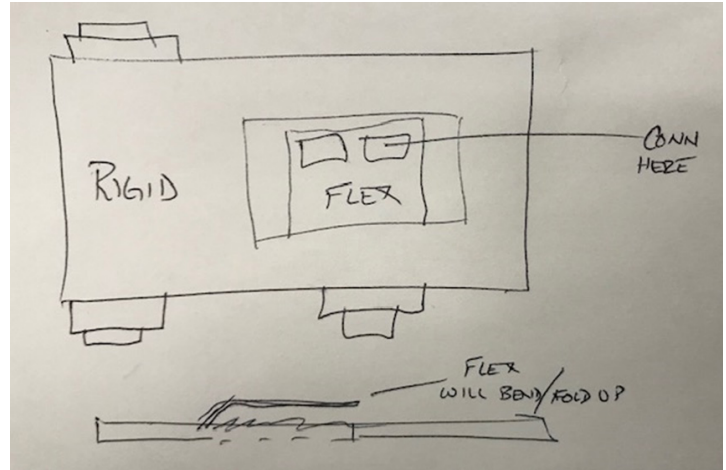
Typical design and production process

GLENAIR INTEGRATED PCB/FLEX ENGINEERING

The **mechanical schematic design** process typically takes one of two forms: either the customer presents a fully-realized mechanical design, or as is often the case, the process begins with a "napkin sketch" of the project. Here is an example of just such a rough design that kicked off a rigid-flex circuit assembly development process.

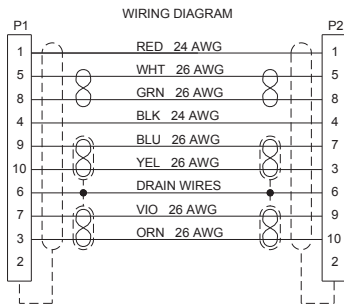
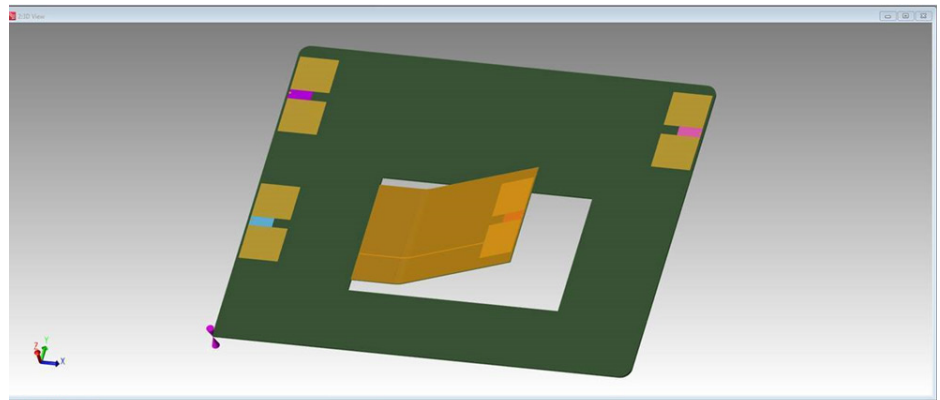


From Concept to Design

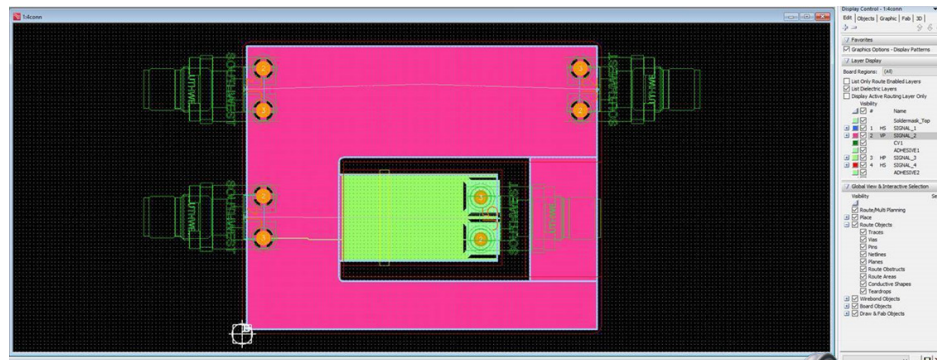


Glenair engineers utilized our **Altium** software to create a functional and problem-free mechanical design for customer review and modification prior to starting the build.

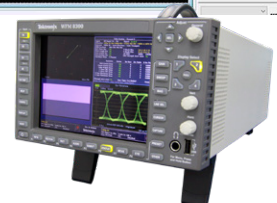
Altium



Electricals: The next step is to define the electricals. To approximate layer count, we need a wiring diagram "schematic" complete with signal types, currents, and shielding requirements. This is also used to determine ROM pricing. In this project, work to this point was completed in just 3 weeks. With the final design approved, we were ready for production manufacturing.



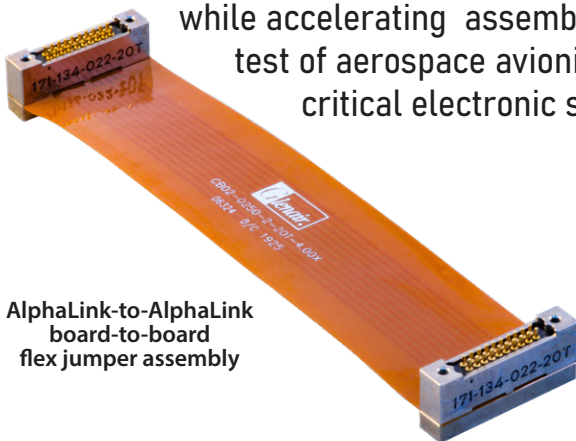
Validation test requirements: Glenair offers complete generation of PCB/flex fabrication data packages including component-level documentation. Most flex customers specify validation testing as a required part of the documentation package. Tests may include DWV/IR, continuity, impedance (eye pattern), and others.



Rugged I/O to spring-pin contact 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 jumper assemblies reduce system size and weight while accelerating assembly qualification and test of aerospace avionics and other mission-critical electronic systems.



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

A high-availability, fast-turnaround catalog solution, Glenair AlphaLink flex jumpers offer superior electrical and mechanical performance compared to conventional wire harnessing

- 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

Rugged I/O to spring-pin contact flex assemblies

POINT-TO-POINT JUMPER SELECTION GUIDE

AlphaLink® SL Solder-Free I/O-to-Board



Series 89 Circular Nanominiature-to-AlphaLink SL flex jumper with breakaway or threaded I/O coupling in 6 contact arrangements



Series 88 SuperFly-to-AlphaLink SL flex jumper with quick-disconnect or threaded I/O coupling in 7 contact arrangements



Series 801 Mighty Mouse-to-AlphaLink SL flex jumper with double-start ACME thread I/O coupling in 8 contact arrangements



Series 804 Mighty Mouse-to-AlphaLink SL flex jumper with push-pull quick-disconnect QDC I/O coupling in 8 contact arrangements



Series 89 Rectangular Nanominiature-to-AlphaLink SL flex jumper (rear-panel-mount plug or receptacle) in 7 contact arrangements



High-reliability Micro-D MIL-DTL-83513 type rectangular-to-AlphaLink SL flex jumper in 7 contact arrangements



Series 79 Micro-Crimp advanced-performance rectangular-to-AlphaLink SL flex jumper in 7 contact arrangements



Series 28 HiPer-D-to-AlphaLink SL flex jumper (MIL-DTL-24308 intermateable rectangular) in 6 contact arrangements

CB02-0250: AlphaLink® SL connector double-ended flex assembly



HOW TO ORDER						
Sample Part Number	CB02-0250	-2	-20	T	-6.00	X
Basic Part Number	Flex jumper: AlphaLink® connectors					
Connector Material / Finish	2 = Aluminum Alloy / Electroless Nickel 5 = Aluminum Alloy / Gold					
Number of Nets / Pins	See PCB Layout table below					
Hardware / Thru-Hole	T = Threaded thru hole Omit for thru hole					
Assembly Length	In Inches					
Connector Configuration	X = Same Side Y = Opposite Sides					

ALPHALINK PRINTED CIRCUIT BOARD LAYOUT - SPRING-PIN SIDE					
4 CONTACTS	8 CONTACTS	10 CONTACTS	12 CONTACTS	16 CONTACTS	
20 CONTACTS	24 CONTACTS	28 CONTACTS	30 CONTACTS		
32 CONTACTS	36 CONTACTS	40 CONTACTS			

ALPHALINK FLEX JUMPERS

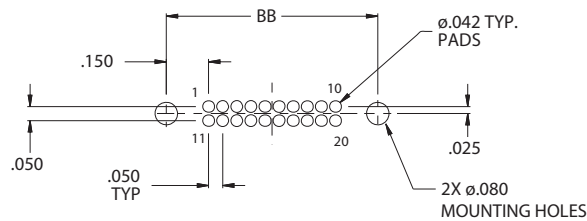
AlphaLink® board level connectors available in 6 contact arrangements, terminated to rugged polyimide-based flex

FLEX PERFORMANCE

- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Flex cables are terminated from the I/O to B/L connector on a 1 to 1 connection (unused B/L contacts are not connected)
- Workmanship shall be IAW IPC-6013, Class 2.

NOTES

- Contacts mapped 1-to-1. For alternative wire schedules, please consult factory.
- AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

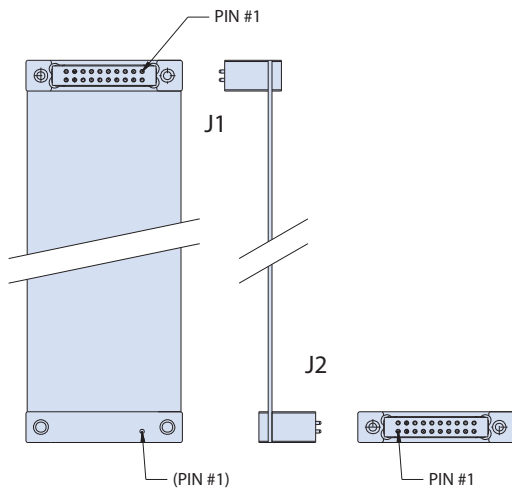


RECOMMENDED PCB LAYOUT
(MATES TO SLC SIDE OF CONNECTOR)

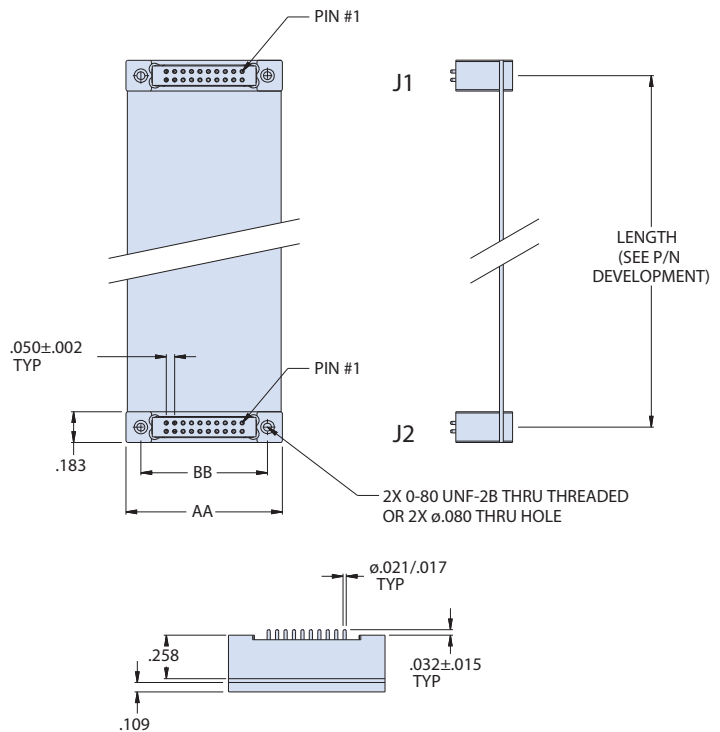
CB02-0250: AlphaLink® SL connector double-ended flex assembly

TABLE II: LAYOUT AND DIMENSIONS

"Y" CONNECTOR CONFIGURATION



"X" CONNECTOR CONFIGURATION



No. of contacts	AA	BB
4	0.527 (13.4)	0.350 (8.9)
8	0.627 (15.9)	0.450 (11.4)
10	0.677 (17.2)	0.500 (12.7)
16	0.827 (21.0)	0.650 (16.5)
20	0.927 (23.5)	0.750 (19.1)
28	1.127 (28.6)	0.950 (24.1)
32	1.227 (31.2)	1.050 (26.7)
40	1.427 (36.2)	1.250 (31.8)

CB02-0298 Micro-D MWDM-CBS Vertical Board-Mount double-ended flex assembly

MICRO-D FLEX JUMPERS

Glenair MWDM vertical board-mount Micro-D connectors available in 12 contact arrangements, terminated to rugged polyimide-based flex.

FLEX PERFORMANCE

- Flex fabricated IAW IPC-6013, Class 3, and assembled IAW J-STD-001, Class 3, using SN63/PB37 solder.
- Flex cables are terminated from the I/O connector to the B/L connector on a 1-to-1 connection (extra pin on B/L connector not connected)
- Nets/connections rated for 100mA max. current
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Bend radius is 6X to 10X flex thickness.

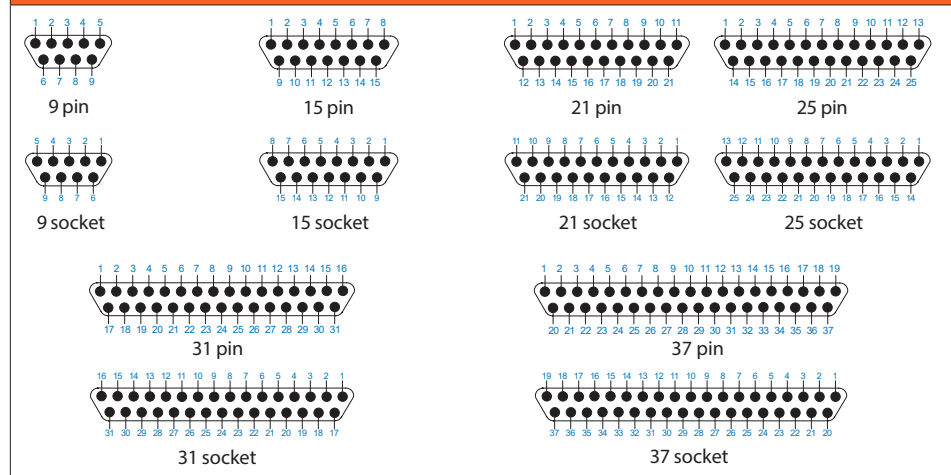
NOTES

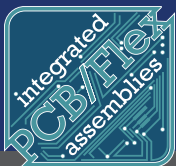
- MWDM-CBS vertical board-mount Micro-D connector, designed to meet performance requirements and interface dimensions of MIL-DTL-83513.
- Contacts mapped 1-to-1. For alternative wire schedules, please consult factory.

HOW TO ORDER

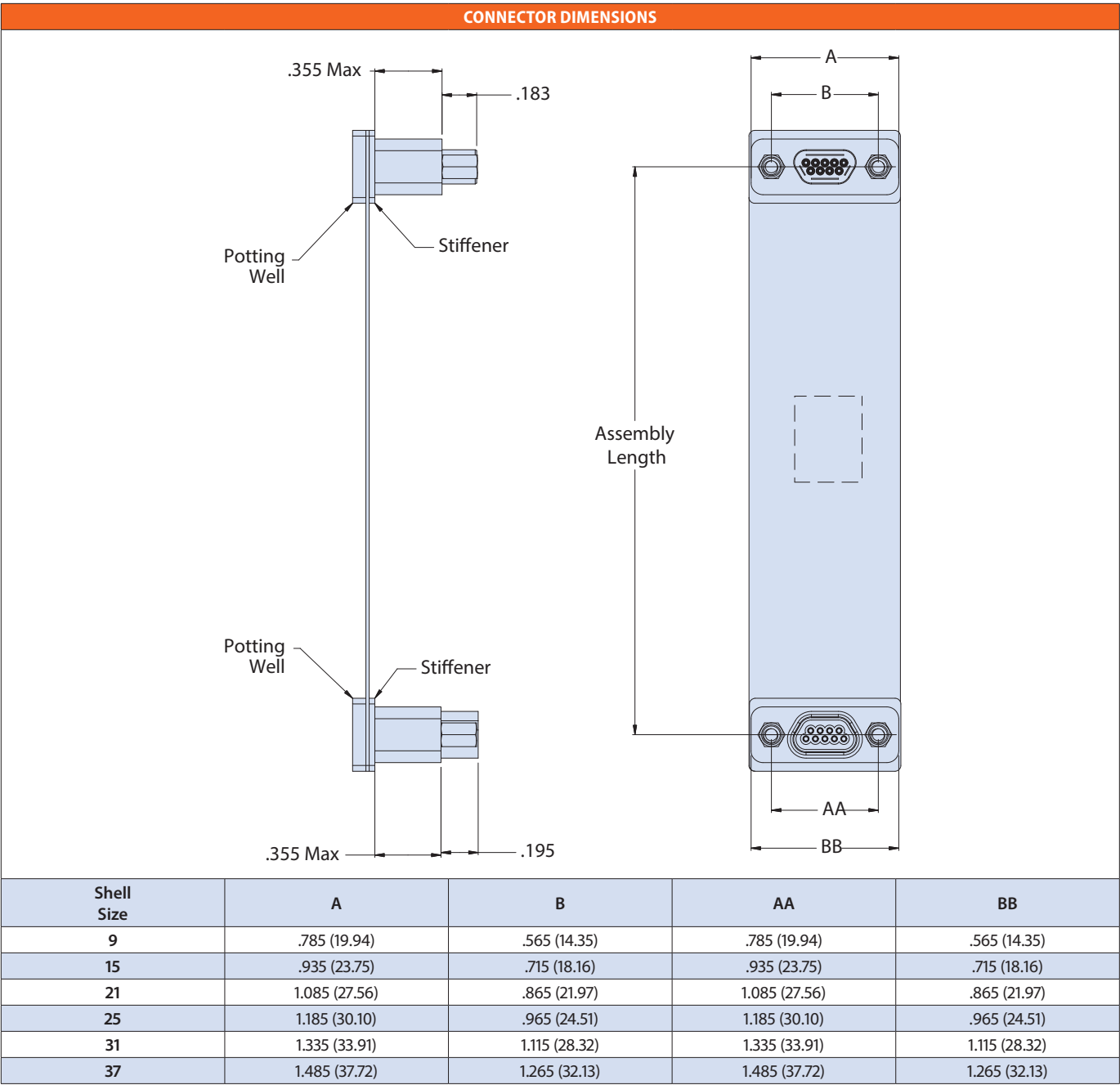
Sample Part Number	CB02-0298	-2	-9	PU	3	-S
Basic Part Number	Flex Jumper: MWDM-CBS Vertical Board-Mount Micro-D I/O connector double-ended flex assembly					
Connector Material / Finish	2 = Aluminum / Nickel 3 = Stainless Steel / Passivated 4 = Aluminum / Black Anodize 5 = Aluminum Alloy / Gold					
Connector Shell Size	-9, -15, -21, -25, -31, -37					
Hardware Option	PU = Jackpost with Threaded Insert NU = Threaded Insert only M = Hex Head Jackscrew Omit for through-hole					
Assembly Length	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches					
Shielding	-S = Shielded assembly Omit = unshielded					

MICRO-D CONTACT ARRANGEMENTS





CB02-0298 Micro-D MWDM-CBS Vertical Board-Mount
double-ended flex assembly



CB02-0299 Micro-D MWDM-CBR Right-Angle Thru-Hole double-ended flex assembly

HOW TO ORDER						
Sample Part Number	CB02-0299	-2	-9	P	3	-S
Basic Part Number	Flex Jumper: MWDM-CBR Right-Angle Thru-Hole Micro-D I/O connector double-ended flex assembly					
Connector Material / Finish	2 = Aluminum / Nickel 3 = Stainless Steel / Passivated 4 = Aluminum / Black Anodize 5 = Aluminum Alloy / Gold					
Connector Shell Size	-9, -15, -21, -25					
Hardware Option	P = Jackpost Omit for none					
Assembly Length	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches					
Shielding	-S = Shielded assembly Omit = unshielded					

MICRO-D FLEX JUMPERS

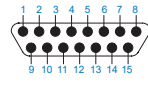
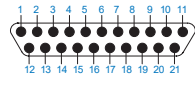
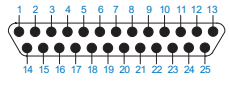
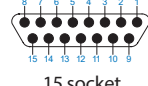
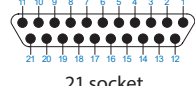
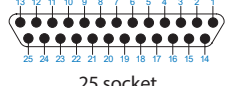
Glenair MWDM right-angle thru-hole Micro-D connectors available in 12 contact arrangements, terminated to rugged polyimide-based flex.

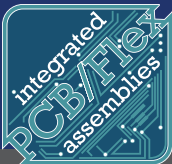
FLEX PERFORMANCE

- Flex fabricated IAW IPC-6013, Class 3, and assembled IAW J-STD-001, Class 3, using SN63/PB37 solder.
- Flex cables are terminated from the I/O connector to the B/L connector on a 1-to-1 connection (extra pin on B/L connector not connected)
- Nets/connections rated for 100mA max. current
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Bend radius is 6X to 10X flex thickness.

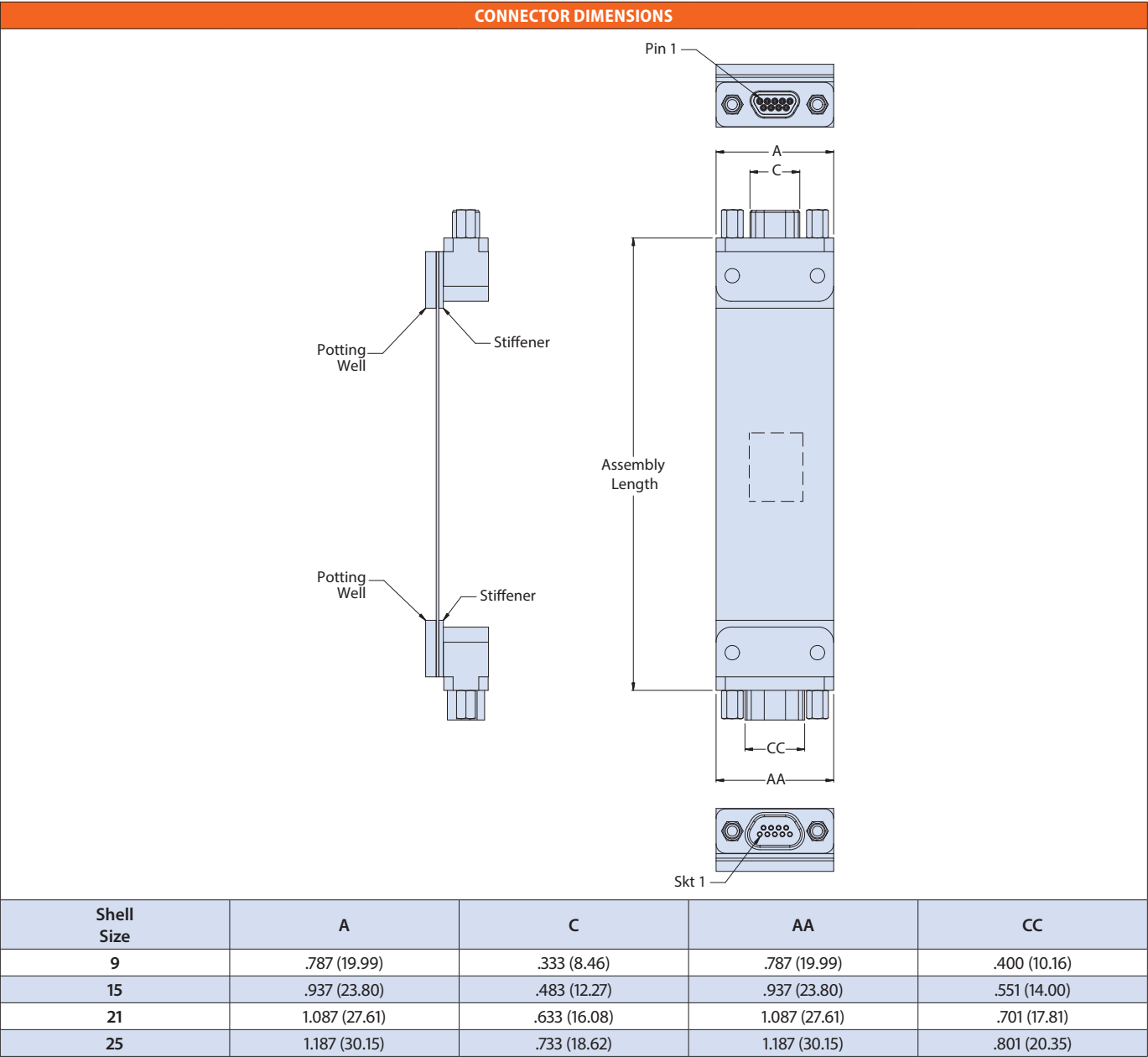
NOTES

- MWDM-CBR right-angle thru-hole Micro-D connector, designed to meet performance requirements and interface dimensions of MIL-DTL-83513.
- Contacts mapped 1-to-1. For alternative wire schedules, please consult factory.

MICRO-D TO ALPHALINK CONTACT ARRANGEMENTS			
 9 pin	 15 pin	 21 pin	 25 pin
 9 socket	 15 socket	 21 socket	 25 socket



CB02-0299 Micro-D MWDM-CBR Right-Angle Thru-Hole
double-ended flex assembly



CB02-0300 GRPM rear-panel-mount Micro-D I/O to AlphaLink® SL board-level assembly



MICRO-D FLEX JUMPERS

Glenair GRPM Micro-D connectors available in 6 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

- Flex fabricated IAW IPC-6013, Class 3, and assembled IAW J-STD-001, Class 3, using SN63/PB37 solder.
- Nets/connections rated for 100mA max. current
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Bend radius is 6X to 10X flex thickness.

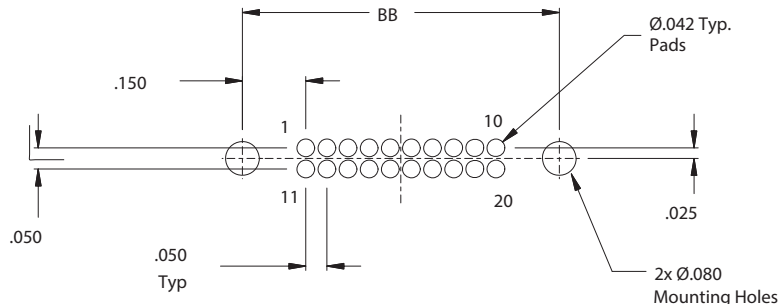
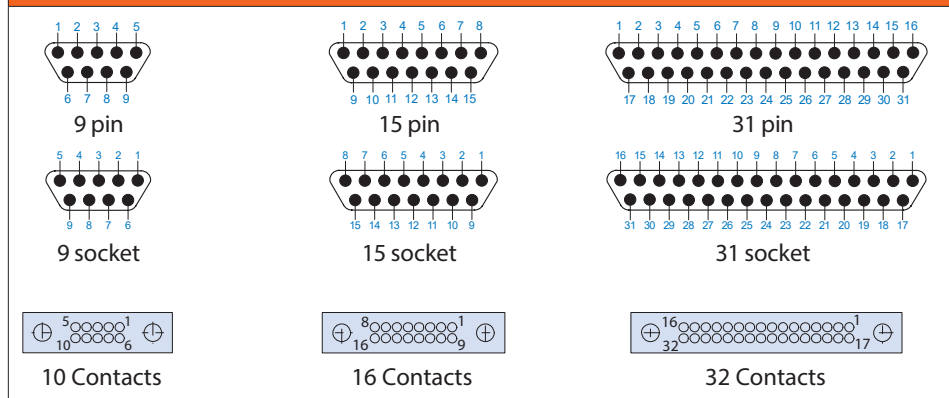
NOTES

- I/O GRPM rear-panel-mount Micro-D connector, designed to meet performance requirements and interface dimensions of MIL-DTL-83513.
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

HOW TO ORDER

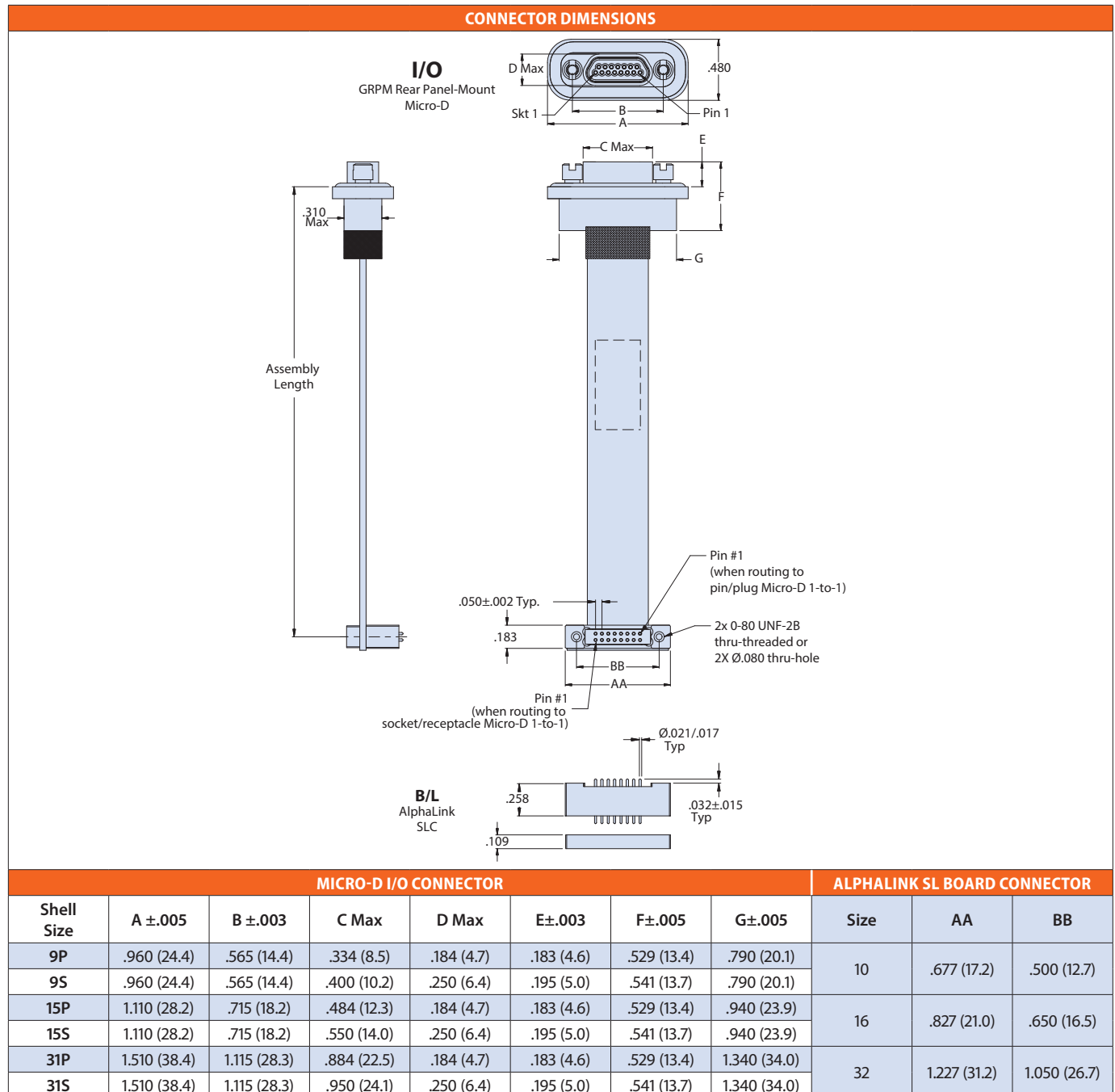
Sample Part Number	CB02-0300	-2	-15	S	R1	-2	T	-6
Basic Part Number	Flex Jumper: GRPM Panel-Mount Micro-D I/O connector to Series 171 AlphaLink® SL B/L connector							
I/O Connector Material / Finish	1 = Aluminum Alloy / Cadmium 2 = Aluminum Alloy / Electroless Nickel 3 = Stainless Steel / Passivated 5 = Aluminum Alloy / Gold 33 = Aluminum Alloy / Nickel/PTFE							
I/O Connector Shell Size	-9, -15, -31							
I/O Contact / Connector Gender	P = Pin/Plug S = Socket/Receptacle							
I/O Hardware Option	R1 = Jackpost for .032" panel R2 = Jackpost for .047" panel R3 = Jackpost for .062" panel R4 = Jackpost for .093" panel R5 = Jackpost for .125" panel R6 = Jackpost for .080" panel							
AlphaLink B/L Connector Material / Finish	2 = Aluminum Alloy / Electroless Nickel 5 = Aluminum Alloy / Gold							
AlphaLink Thru-Hole/ Hardware Option	T = Threaded thru hole Omit for thru hole							
Assembly Length	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches							

MICRO-D TO ALPHALINK CONTACT ARRANGEMENTS



Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). Consult Glenair for alternative wire schedules.

CB02-0300 GRPM rear-panel-mount Micro-D I/O to AlphaLink® SL board-level assembly



CB02-0301 Nanominiature Dual-Row I/O to AlphaLink® SL board-level assembly



NANO FLEX JUMPERS

Glenair Series 89 Nanominiature connectors available in 6 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

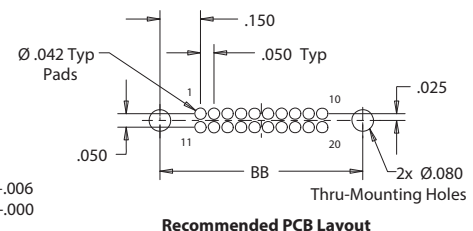
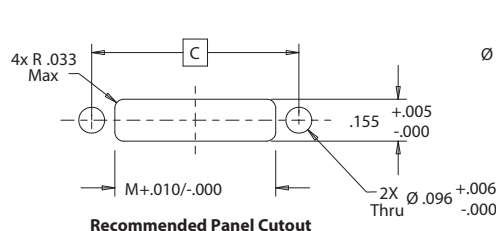
- Flex fabricated IAW IPC-6013, Class 3, and assembled IAW J-STD-001, Class 3, using SN63/PB37 solder.
- Nets/connections rated for 100mA max. current
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Bend radius is 6X to 10X flex thickness.

NOTES

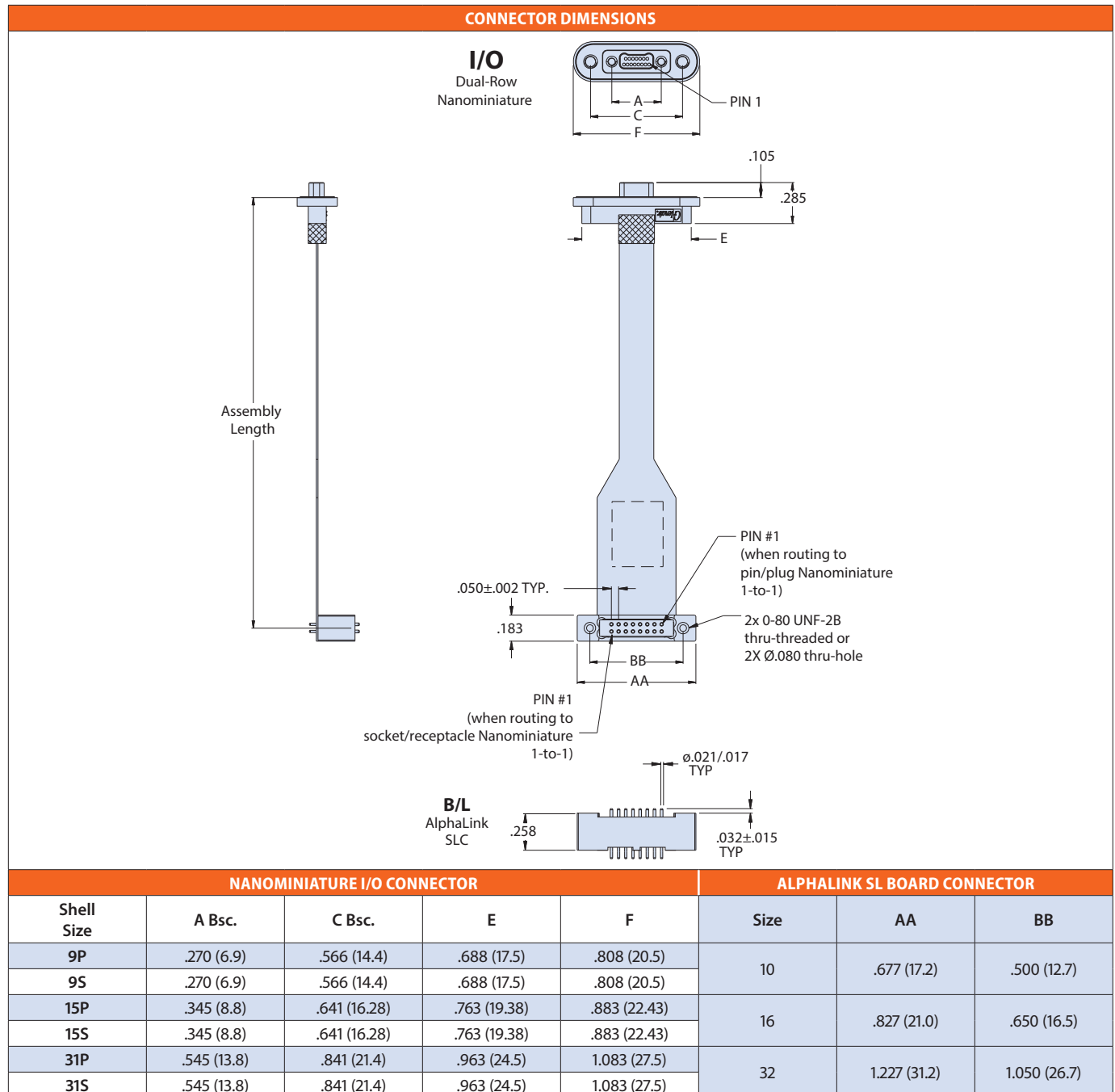
- I/O Series 89 receptacle performance IAW MIL-DTL-32139
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

HOW TO ORDER									
Sample Part Number	CB02-0301	-S	-15	P	01	-1	T	-6	
Basic Part Number	Flex Jumper: Nanominiature Dual-Row I/O connector to Series 171 AlphaLink® SL B/L connector								
I/O Connector Material / Finish	T = Titanium / Unplated S = Stainless Steel / Passivated								
I/O Connector Shell Size	-9, -15, -31								
I/O Contact / Connector Gender	P = Pin/Plug S = Socket/Receptacle								
I/O Gasket Material	00 = No Gasket 01 = Fluorosilicone IAW MIL-DTL-25988, Type II, Class I, Grade 70 02 = Passivated Silver-Plated Aluminum-filled Fluorosilicone IAW MIL-DTL-83528 03 = Nickel-plated Aluminum-filled Fluorosilicone (CHO-SEAL 6503 or equivalent)								
AlphaLink B/L Connector Material / Finish	2 = Aluminum Alloy / Electroless Nickel 5 = Aluminum Alloy / Gold								
AlphaLink Thru-Hole/ Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								

NANOMINIATURE TO ALPHALINK CONTACT ARRANGEMENTS			
9P	15P	31P	
9S	15S	31S	
10 Contacts	16 Contacts	32 Contacts	



CB02-0301 Nanominiature Dual-Row I/O to AlphaLink® SL board-level assembly



893-012 Circular Nanominiature breakaway rear-panel-mount receptacle connector to AlphaLink® SL flex jumper

NANO FLEX JUMPERS

Glenair Series 89 Circular Nanominiature connectors available in 6 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

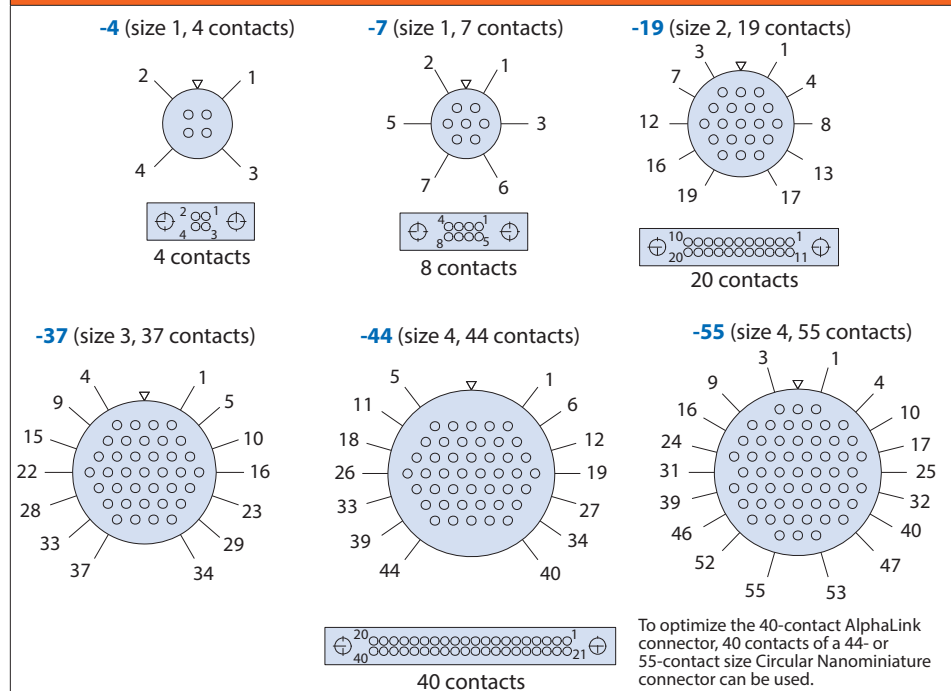
- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

NOTES

- I/O Series 89 receptacle performance IAW MIL-DTL-32139
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

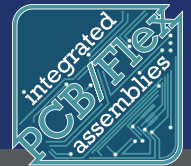
HOW TO ORDER										
Sample Part Number	893-012	-19	N	A2	-20	2	T	-12	S	
Basic Part Number	Series 89 Circular Nanominiature Breakaway I/O receptacle to Series 171 AlphaLink® SL									
I/O Contact Arrangement	-4, -7, -19, -37, -44, -55									
I/O Polarization	N = Normal A = Alternate									
I/O Shell and Spanner Nut Material and Finish	A2 = Aluminum / Electroless Nickel A5 = Aluminum / Gold over Nickel S1 = Stainless Steel / Zinc Cobalt (Black) S2 = Stainless Steel / Passivated									
AlphaLink® Layout	-4, -8, -20, -40									
AlphaLink® Finish	2 = Nickel 5 = Gold									
AlphaLink Thru-Hole/Hardware Option	T = Threaded thru hole Omit for thru hole									
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches									
Optional Shielding	S = With shielding Omit for none									

CIRCULAR NANOMINIATURE TO ALPHALINK CONTACT ARRANGEMENTS

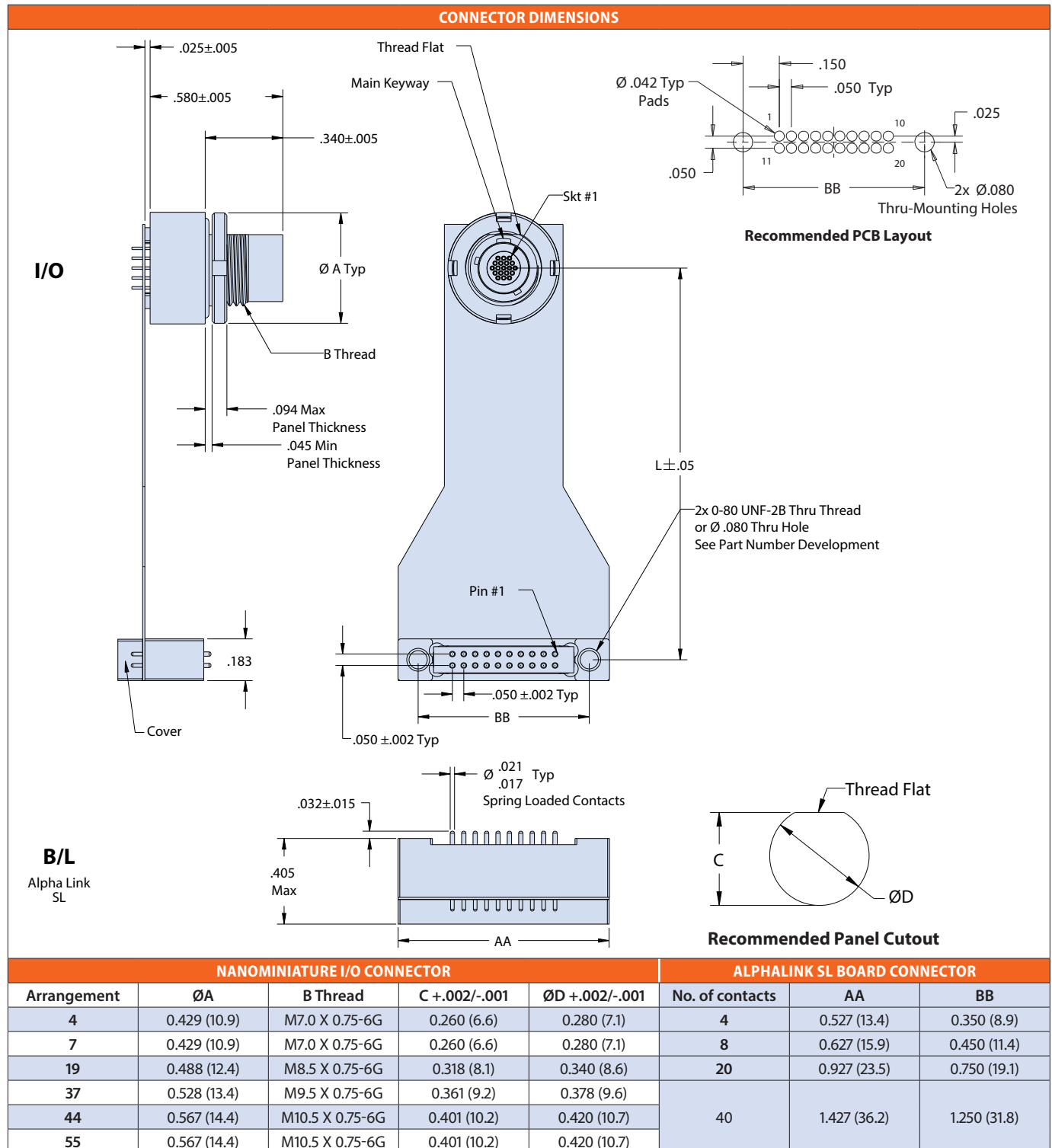


POLARIZATION POSITIONS							
Layout	Polarization	A°	B°	Layout	Polarization	A°	B°
1-4	N	150	210	3-37	N	150	210
	A	75	210		A	75	210
1-7	N	95	230	4-44	N	150	210
	A	140	275		A	75	210
2-19	N	150	210	4-55	N	95	230
	A	75	210		A	140	275

TURNKEY Flex Jumper Assemblies



893-012 Circular Nanominiature breakaway rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



893-013 Circular Nanominiature threaded coupling rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



NANO FLEX JUMPERS

Glenair Series 89 Circular Nanominiature connectors available in 6 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

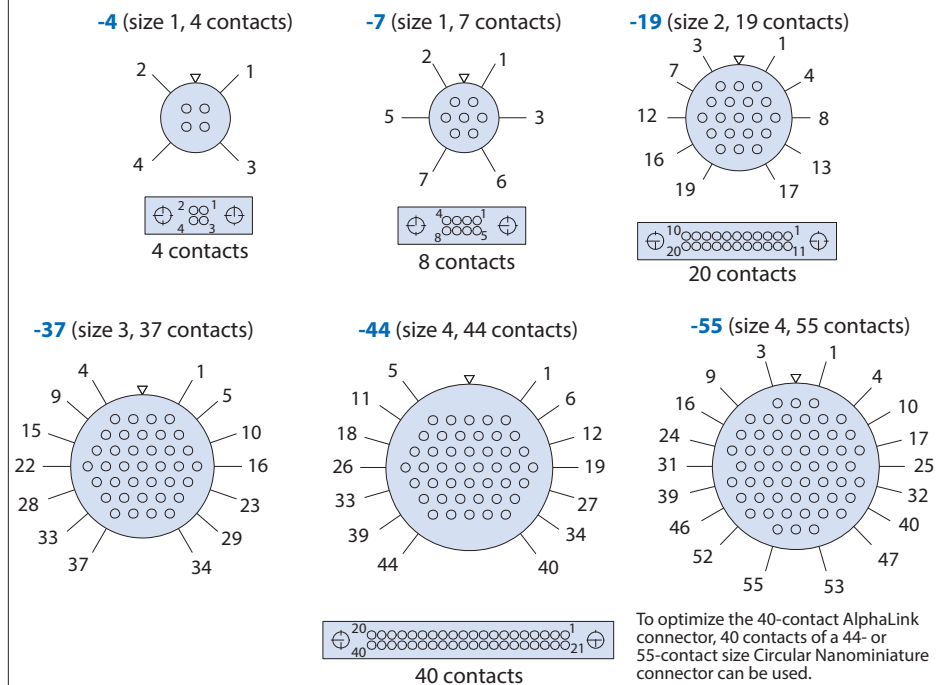
NOTES

- I/O Series 89 receptacle performance IAW MIL-DTL-32139
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

HOW TO ORDER

Sample Part Number	893-013	-19	N	A2	-20	2	T	-12	S
Basic Part Number	Series 89 Circular Nanominiature Threaded Coupling I/O receptacle to Series 171 AlphaLink® SL								
I/O Contact Arrangement	-4, -7, -19, -37, -44, -55								
I/O Polarization	N = Normal A = Alternate								
I/O Shell and Spanner Nut Material and Finish	A2 = Aluminum / Electroless Nickel A5 = Aluminum / Gold over Nickel S1 = Stainless Steel / Zinc Cobalt (Black) S2 = Stainless Steel / Passivated								
AlphaLink® Layout	-4, -8, -20, -40								
AlphaLink® Finish	2 = Nickel 5 = Gold								
AlphaLink Thru-Hole/Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								
Optional Shielding	S = With shielding Omit for none								

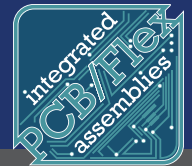
CIRCULAR NANOMINIATURE TO ALPHALINK CONTACT ARRANGEMENTS



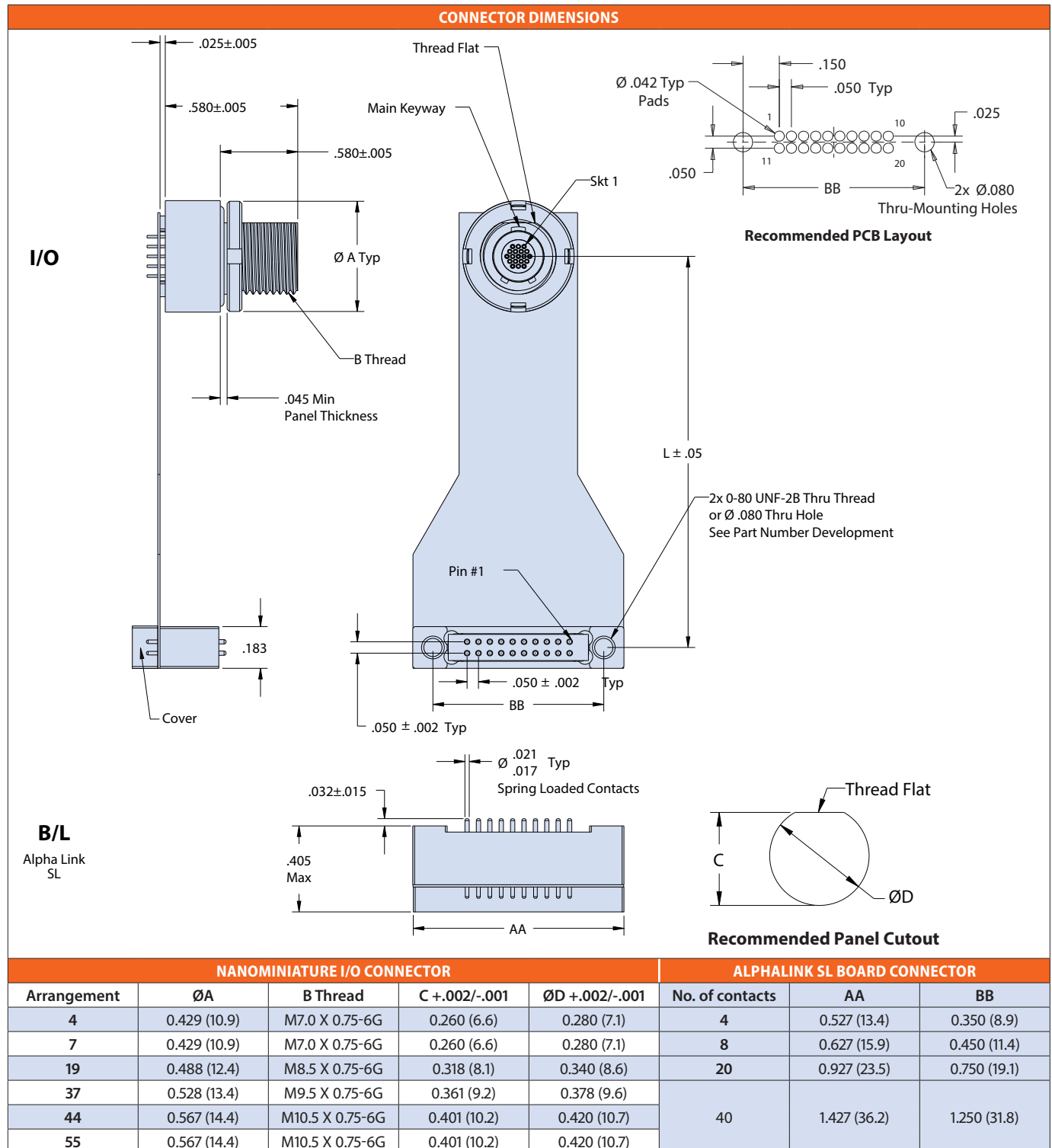
POLARIZATION POSITIONS

Layout	Polarization	A°	B°	Layout	Polarization	A°	B°
1-4	N	150	210	3-37	N	150	210
	A	75	210		A	75	210
1-7	N	95	230	4-44	N	150	210
	A	140	275		A	75	210
2-19	N	150	210	4-55	N	95	230
	A	75	210		A	140	275

TURNKEY Flex Jumper Assemblies



893-013 Circular Nanominiature threaded coupling rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



880-034 SuperFly quick-disconnect rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



SUPERFLY FLEX JUMPERS

Glenair Series 89 SuperFly™ nano miniature connectors available in 7 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

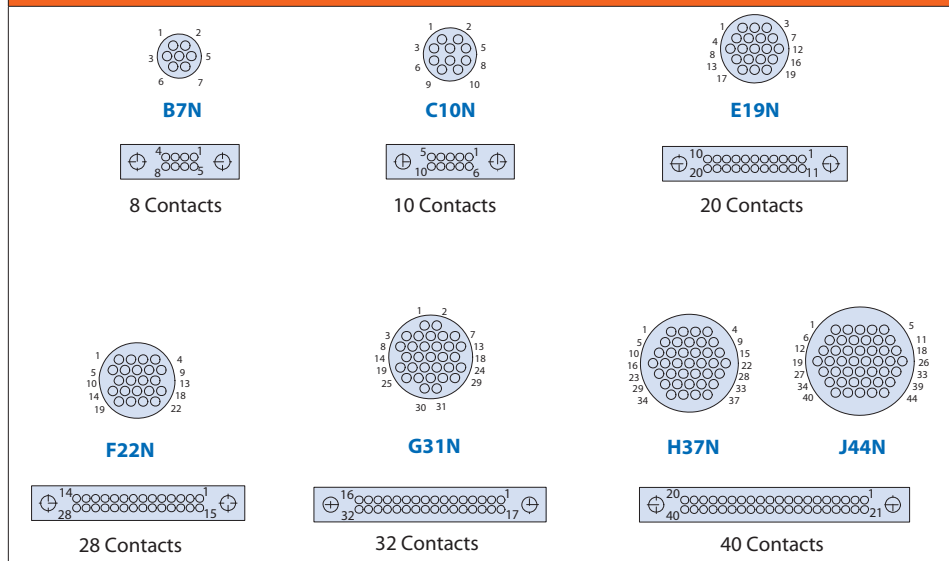
NOTES

- I/O Series 88 QDC receptacle
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

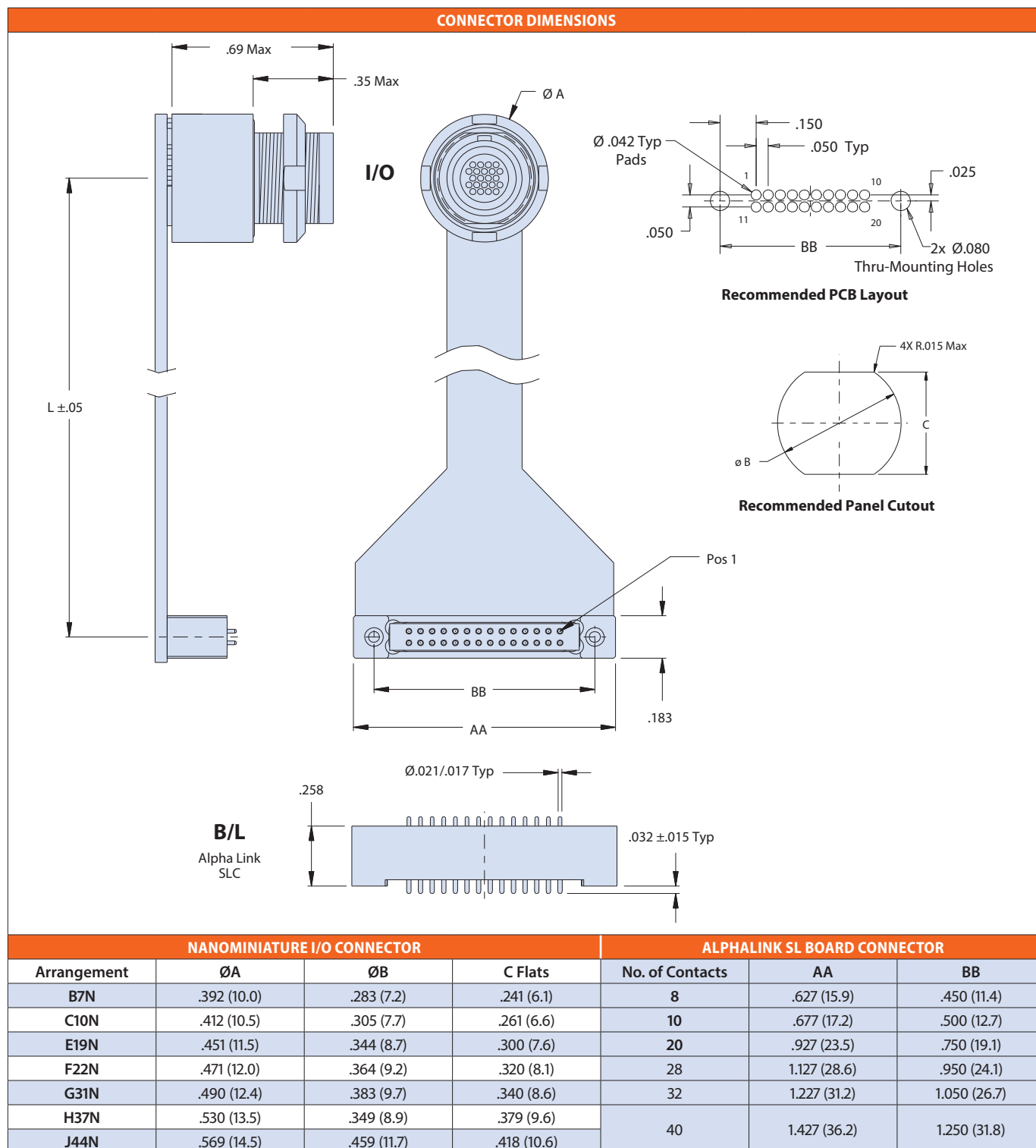
HOW TO ORDER

Sample Part Number	880-034R	A	-F22N	-M	-2	T	-12	S
Basic Part Number	Series 88 SuperFly QDC I/O receptacle to Series 171 AlphaLink® SL							
I/O Insert Configuration	A = Unshrouded Nano socket contacts B = Shrouded Nano TwistPin contacts							
I/O Shell Size / Contact Arrangement	B7N, C10N, E19N, F22N, G31N, H37N, J44N							
I/O Shell Material/Finish	M = Aluminum / Electroless Nickel ZR = Aluminum / Black Zinc Nickel over Electroless Nickel MT = Aluminum / Nickel-PTFE NF = Aluminum / Olive Drab over Cadmium ZC = Stainless Steel / Zinc Cobalt (Black) ZK = Stainless Steel / Passivated ZMT = Stainless Steel / Nickel Fluoropolymer							
AlphaLink® Finish	2 = Nickel 5 = Gold							
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole							
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches							
Optional Shielding	S = With shielding Omit for none							

SUPERFLY TO ALPHALINK CONTACT ARRANGEMENTS



880-034 SuperFly quick-disconnect rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



881-021 SuperFly threaded rear-panel-mount receptacle connector to AlphaLink® SL flex jumper

SUPERFLY FLEX JUMPERS

Glenair Series 89 SuperFly™ nano miniature connectors available in 7 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

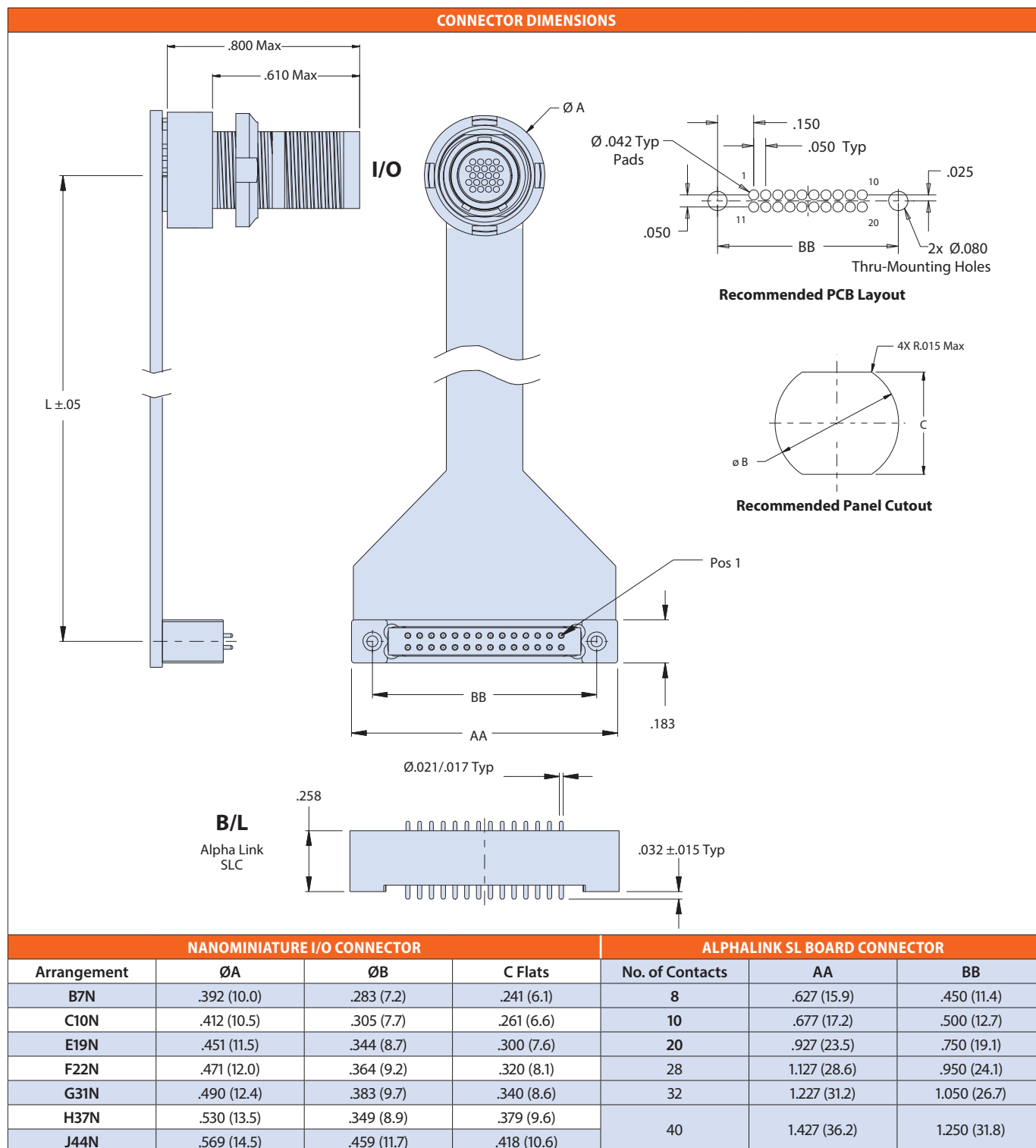
NOTES

- I/O Series 88 threaded receptacle
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

HOW TO ORDER									
Sample Part Number	880-021R	A	-F22N	-M	-2	T	-6	S	
Basic Part Number	Series 88 SuperFly Threaded I/O receptacle to Series 171 AlphaLink® SL								
I/O Insert Configuration	A = Unshrouded Nano socket contacts B = Shrouded Nano TwistPin contacts								
I/O Shell Size / Contact Arrangement	B7N, C10N, E19N, F22N, G31N, H37N, J44N								
I/O Shell Material/Finish	M = Aluminum / Electroless Nickel ZR = Aluminum / Black Zinc Nickel over Electroless Nickel MT = Aluminum / Nickel-PTFE NF = Aluminum / Olive Drab over Cadmium ZC = Stainless Steel / Zinc Cobalt (Black) ZK = Stainless Steel / Passivated ZMT = Stainless Steel / Nickel Fluoropolymer								
AlphaLink® Finish	2 = Nickel 5 = Gold								
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								
Optional Shielding	S = With shielding Omit for none								

SUPERFLY TO ALPHALINK CONTACT ARRANGEMENTS			
 B7N 8 Contacts	 C10N 10 Contacts	 E19N 20 Contacts	
 F22N 28 Contacts	 G31N 32 Contacts	 H37N 40 Contacts	 J44N 40 Contacts

881-021 SuperFly threaded rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



801-110 Mighty Mouse rear-panel-mount environmental double-start ACME thread connector to AlphaLink® SL flex jumper



MIGHTY MOUSE FLEX JUMPERS

Series 801 double-start ACME threaded micro miniature connectors available in 8 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

NOTES

- I/O Series 801 threaded receptacle, square-flange or jam nut mount
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

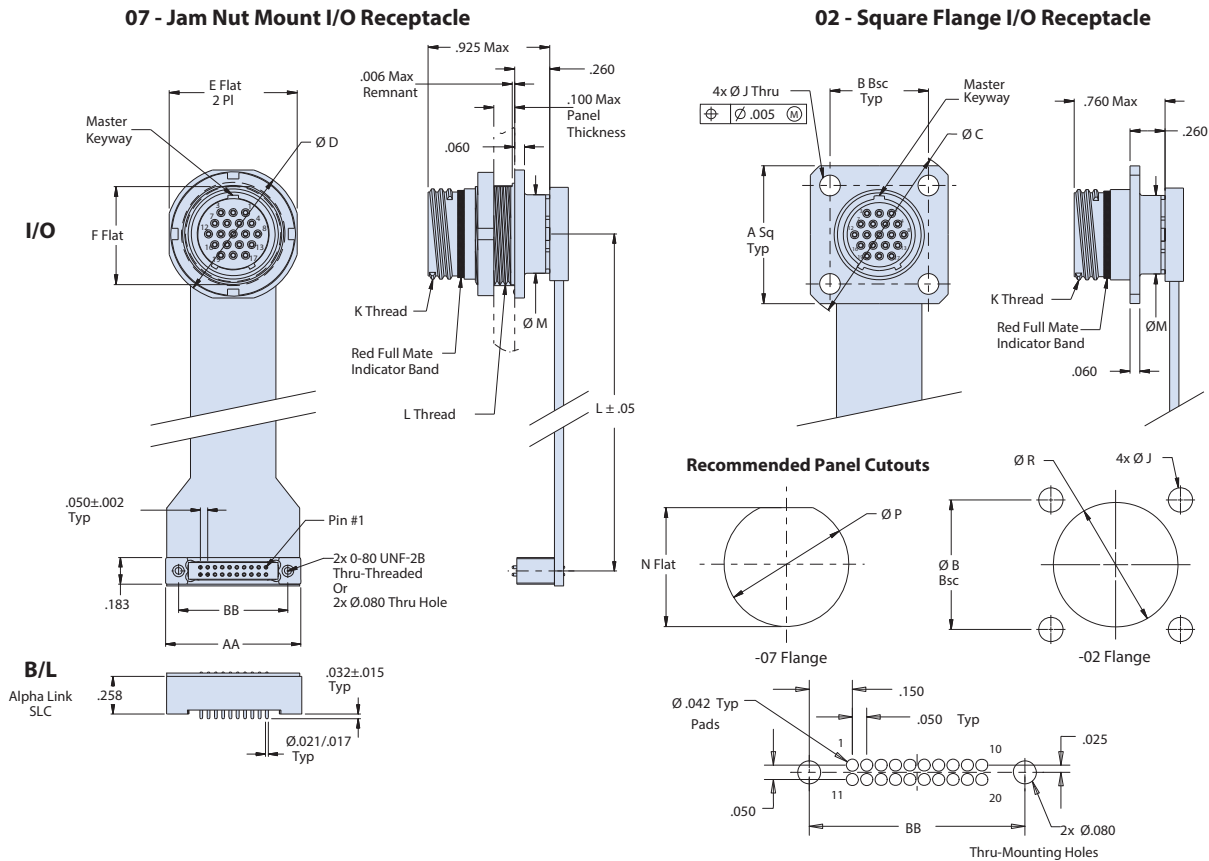
HOW TO ORDER									
Sample Part Number	801-110	-07	NF	10-26	P	A	-2	T	-6 S
Basic Part Number	Sr. 801 Mighty Mouse I/O receptacle to Series 171 AlphaLink® SL								
I/O Connector Style	02 = Square flange receptacle 07 = Jam nut receptacle								
I/O Shell Material/Finish	C = Aluminum / Black Anodize M = Aluminum / Electroless Nickel NF = Aluminum / Olive Drab over Cadmium ZN = Aluminum / Zinc Nickel Olive Drab ZNU = Aluminum / Zinc Nickel Black MT = Aluminum / Nickel PTFE Z1 = Stainless Steel / Passivated								
I/O Insert Arrangement	6-4, 6-7, 7-10, 8-13, 9-19, 10-26, 11-31, 13-37								
I/O Contact Gender	P = Pin S = Socket								
I/O Alternate Polarization	A, B, C, D, E, F (See Table VII)								
AlphaLink® Finish	2 = Nickel 5 = Gold								
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								
Optional Shielding	S = With shielding Omit for none								

MIGHTY MOUSE TO ALPHALINK CONTACT ARRANGEMENTS			
6-4 4 Contacts	6-7 8 Contacts	7-10 10 Contacts	8-13 16 Contacts
9-19 20 Contacts	10-26 28 Contacts	11-31 32 Contacts	13-37 40 Contacts

ALTERNATE KEY/KEYWAY POSITION		
Position	A°	B°
A	150°	210°
B	75°	210°
C	95°	230°
D	140°	275°
E	75°	275°
F	95°	210°

801-110 Mighty Mouse rear-panel-mount environmental double-start ACME thread connector to AlphaLink® SL flex jumper

CONNECTOR DIMENSIONS



07 MIGHTY MOUSE JAM NUT I/O CONNECTOR

ALPHALINK SL B/L CONNECTOR

Arrangement	ØD	E Flat	F Flat	K Thread	L Thread	Ø M	N Flat	Ø P	No. of Contacts	AA	BB
6	.635 (16.1)	.595 (15.1)	.410 (10.4)	.3750-.05P-.1L-2A	.4375-28 UNEF-2A	.330 (8.4)	0.418 (10.6) 0.414 (10.5)	.448 (11.4)	4	.527 (13.4)	.350 (8.9)
7	.755 (19.2)	.723 (18.4)	.536 (13.6)	.4375-.05P-.1L-2A	.5625-32 UN-2A	.432 (11.0)	0.544 (13.8) 0.540 (13.7)	.573 (14.6)	8	.627 (15.9)	.450 (11.4)
8	.755 (19.2)	.723 (18.4)	.536 (13.6)	.5000-.05P-.1L-2A	.5625-32 UN-2A	.493 (12.5)	0.544 (13.8) 0.540 (13.7)	.573 (14.6)	10	.677 (17.2)	.500 (12.7)
9	.830 (21.1)	.790 (20.1)	.596 (15.1)	.5625-.05P-.1L-2A	.6250-28 UN-2A	.551 (14.0)	0.604 (15.3) 0.600 (15.2)	.635 (16.1)	20	.927 (23.5)	.750 (19.1)
10	.890 (22.6)	.855 (21.7)	.658 (16.7)	.6250-.05P-.1L-2A	.6875-28 UN-2A	.620 (15.7)	0.668 (17.0) 0.664 (16.9)	.698 (17.7)	28	1.127 (28.6)	.950 (24.1)
11	.960 (24.4)	.925 (23.5)	.718 (18.2)	.6875-.05P-.1L-2A	.7500-28 UN-2A	.662 (16.8)	0.728 (18.5) 0.724 (18.4)	.760 (19.3)	32	1.227 (31.2)	1.050 (26.7)
13	1.078 (27.4)	1.044 (26.5)	.845 (21.5)	.8125-.1P-.2L-2A	.8750-28 UN-2A	.703 (17.9)	0.853 (21.7) 0.849 (21.6)	.885 (22.5)	40	1.427 (36.2)	1.250 (31.8)

02 MIGHTY MOUSE SQUARE FLANGE I/O CONNECTOR

ALPHALINK SL B/L CONNECTOR

Arrangement	A Sq	B Bsc	ØC	J Holes	K Thread	Ø M	Ø R	No. of Contacts	AA	BB
6	.590 (15.0)	.423 (10.7)	.750 (19.1)	.096 (2.4) .091 (2.3)	.3750-.05P-.1L-2A	.330 (8.4)	.390 (9.9)	4	.527 (13.4)	.350 (8.9)
7	.650 (16.5)	.483 (12.3)	.850 (21.6)		.4375-.05P-.1L-2A	.432 (11.0)	.450 (11.4)	8	.627 (15.9)	.450 (11.4)
8	.712 (18.1)	.545 (13.8)	.938 (23.8)	.130 (3.3) .126 (3.2)	.5000-.05P-.1L-2A	.493 (12.5)	.510 (13.0)	10	.677 (17.2)	.500 (12.7)
9	.850 (21.6)	.607 (15.4)	1.125 (28.6)		.5625-.05P-.1L-2A	.551 (14.0)	.575 (14.6)	20	.927 (23.5)	.750 (19.1)
10	.890 (22.6)	.670 (17.0)	1.188 (30.2)		.6250-.05P-.1L-2A	.620 (15.7)	.640 (16.3)	28	1.127 (28.6)	.950 (24.1)
11	.935 (23.7)	.715 (18.2)	1.250 (31.8)		.6875-.05P-.1L-2A	.662 (16.8)	.700 (17.8)	32	1.227 (31.2)	1.050 (26.7)
13	1.030 (26.2)	.812 (20.6)	1.375 (34.9)		.8125-.1P-.2L-2A	.703 (17.9)	.825 (21.0)	40	1.427 (36.2)	1.250 (31.8)

804-110 Mighty Mouse rear-panel-mount environmental push-pull connector to AlphaLink® SL flex jumper

MIGHTY MOUSE FLEX JUMPERS

- Series 804 push-pull micro miniature connectors available in 8 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

NOTES

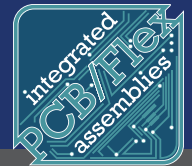
- I/O Series 804 push-pull QDC receptacle, square-flange or jam-nut mount
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

HOW TO ORDER									
Sample Part Number	804-110	-07	NF	10-26	P	A	-2	T	-6 S
Basic Part Number	Sr. 804 Mighty Mouse I/O receptacle to Series 171 AlphaLink® SL								
I/O Connector Style	02 = Square flange receptacle 07 = Jam nut receptacle								
I/O Shell Material/Finish	C = Aluminum / Black Anodize M = Aluminum / Electroless Nickel NF = Aluminum / Olive Drab over Cadmium ZN = Aluminum / Zinc Nickel Olive Drab ZNU = Aluminum / Zinc Nickel Black MT = Aluminum / Nickel PTFE Z1 = Stainless Steel / Passivated								
I/O Insert Arrangement	6-4, 6-7, 7-10, 8-13, 9-19, 10-26, 11-31, 13-37								
I/O Contact Gender	P = Pin S = Socket								
I/O Alternate Polarization	A, B, C, D, E, F (See Table VII)								
AlphaLink® Finish	2 = Nickel 5 = Gold								
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								
Optional Shielding	S = With shielding Omit for none								

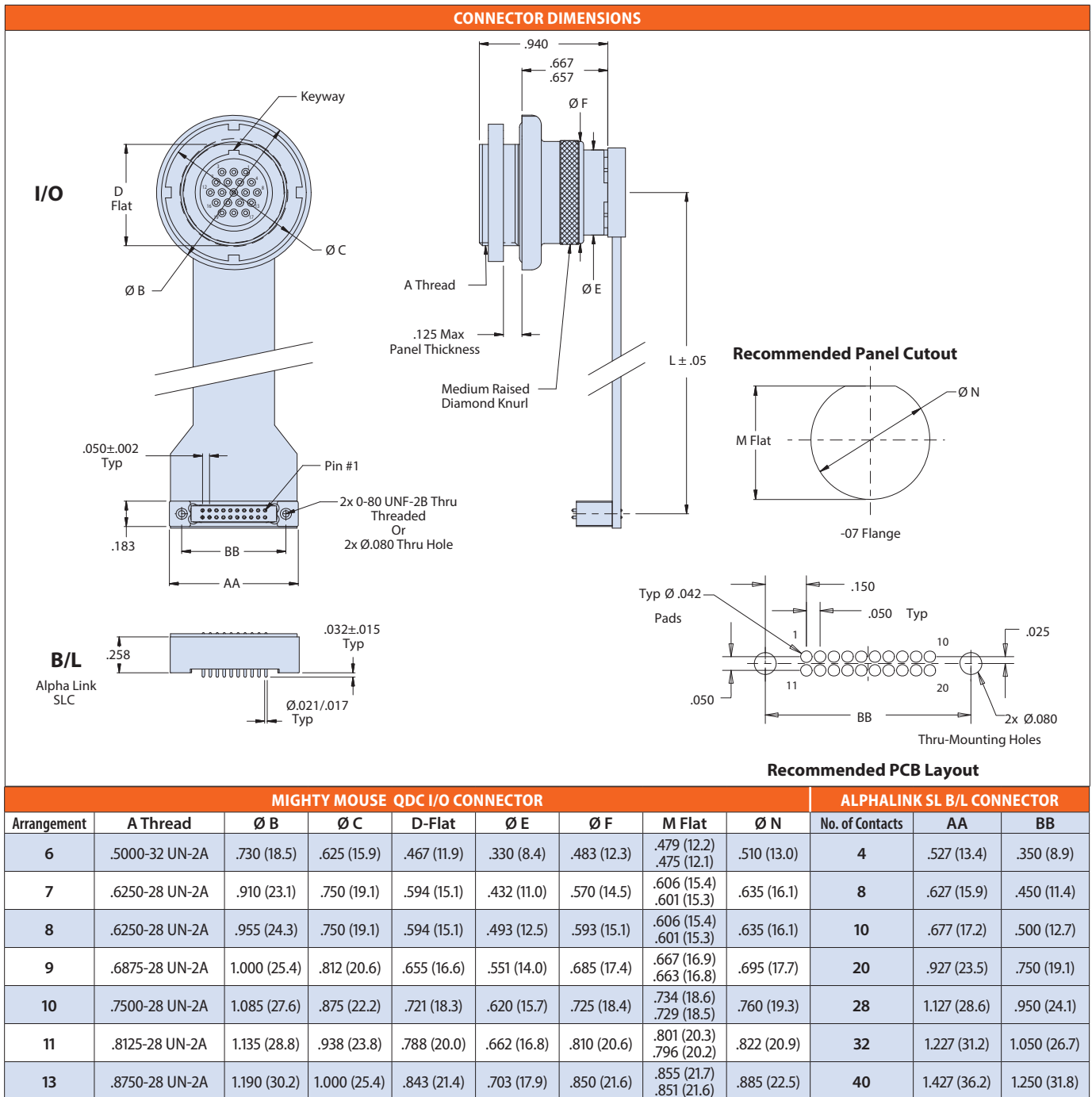
MIGHTY MOUSE TO ALPHALINK CONTACT ARRANGEMENTS			
6-4 4 Contacts	6-7 8 Contacts	7-10 10 Contacts	8-13 16 Contacts
9-19 20 Contacts	10-26 28 Contacts	11-31 32 Contacts	13-37 40 Contacts

ALTERNATE KEY/KEYWAY POSITION		
Position	A°	B°
A	150°	210°
B	75°	210°
C	95°	230°
D	140°	275°
E	75°	275°
F	95°	210°

TURNKEY Flex Jumper Assemblies



804-110 Mighty Mouse rear-panel-mount environmental push-pull connector to AlphaLink® SL flex jumper



286-077P HiPer-D pin connector to AlphaLink® SL flex jumper



HIPER-D FLEX JUMPERS

High-reliability HiPer-D MIL-DTL-24308 intermateable/ intermountable rectangular connectors in 6 contact arrangements, terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

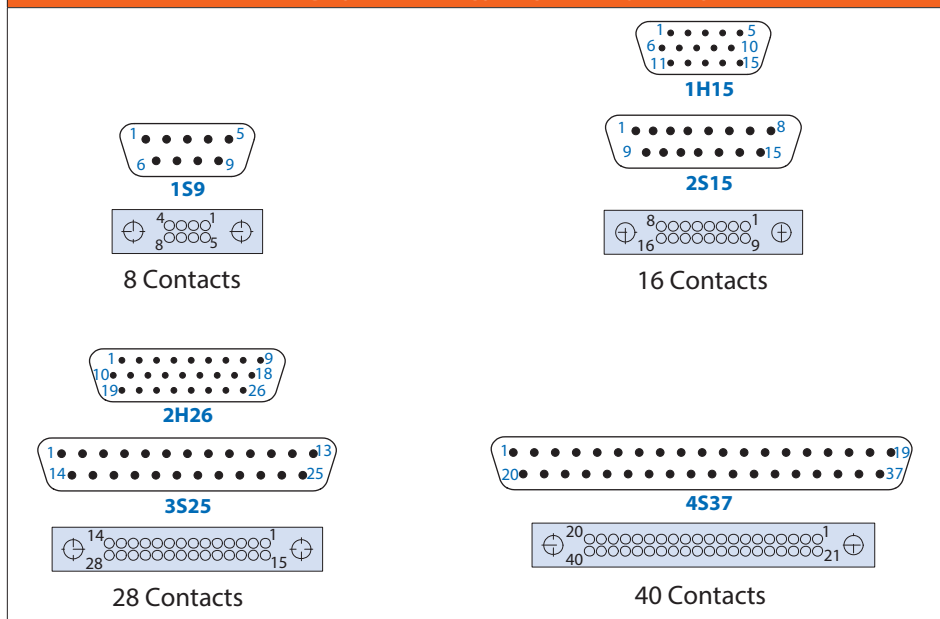
NOTES

- I/O Series 28 HiPer-D right-angle pin-contact connector, rear panel mount with O-ring environmental seal (280-024)
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

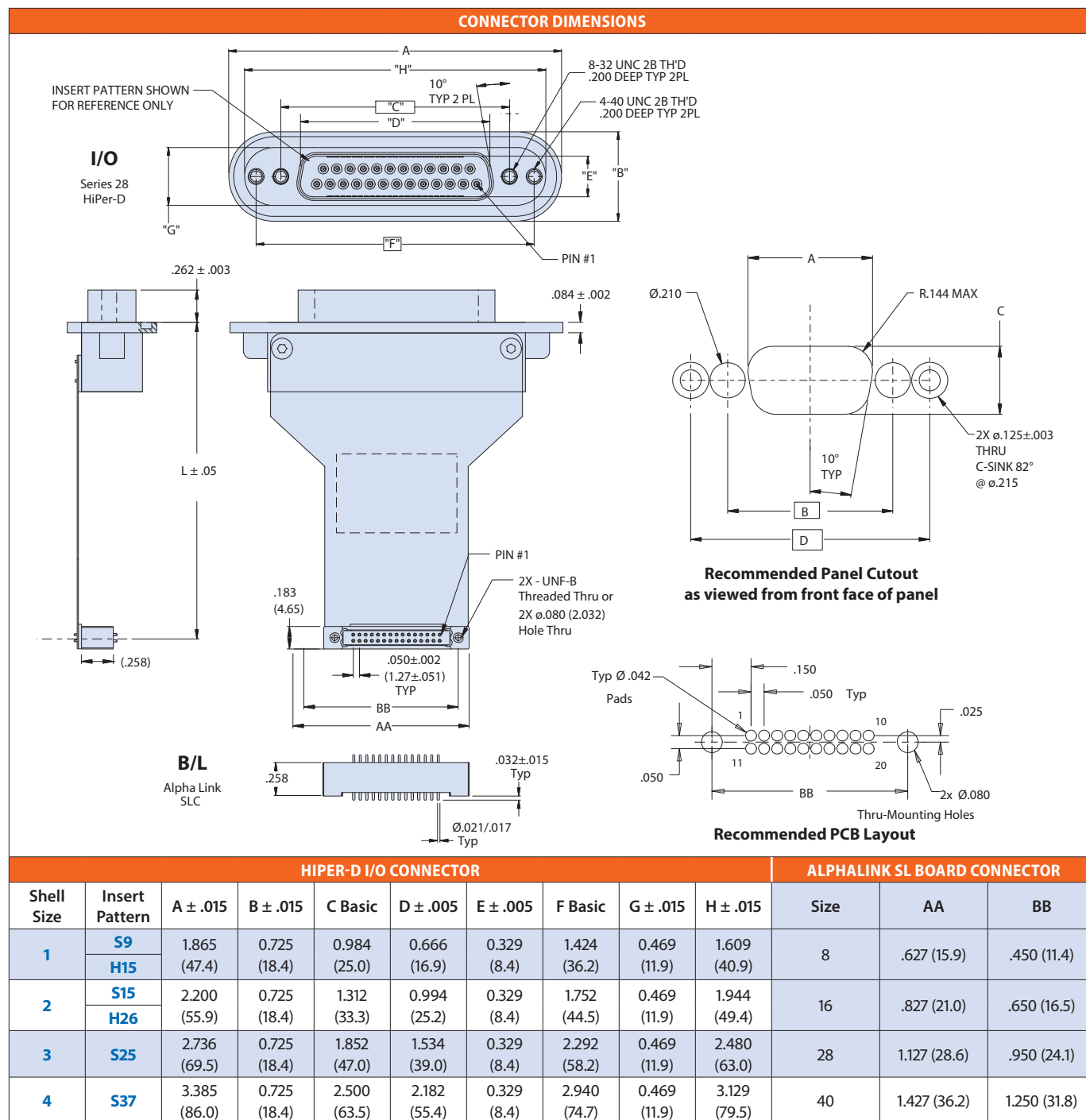
HOW TO ORDER

Sample Part Number	286-077P	-3525	ME	G	N	-2	T	-6	S
Basic Part Number	HiPer-D pin connector to Series 171 AlphaLink® SL								
I/O Insert Arrangement	1S9, 1H15, 2S15, 2H26, 3S25, 4S37								
I/O Shell Material/ Finish	ME = Aluminum / Electroless Nickel Z1 = Stainless Steel / Passivated ZM = Stainless Steel / Electroless Nickel JF = Aluminum / Yellow Chromate over Cadmium								
I/O Grounding Option	G = EMI Grounding N = None								
I/O Hardware Option	N = None (Tapped Hole) P = Female Jackpost G = Guide Pin B = Guide Bushing								
AlphaLink® Finish	2 = Nickel 5 = Gold								
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								
Optional Shielding	S = With shielding Omit for none								

HIPER-D TO ALPHALINK CONTACT ARRANGEMENTS



286-077P HiPer-D pin connector to AlphaLink® SL flex jumper



286-078S HiPer-D socket connector to AlphaLink® SL flex jumper



HIPER-D FLEX JUMPERS

High-reliability HiPer-D MIL-DTL-24308 intermateable/ intermountable rectangular connectors in 6 contact arrangements, terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.

FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

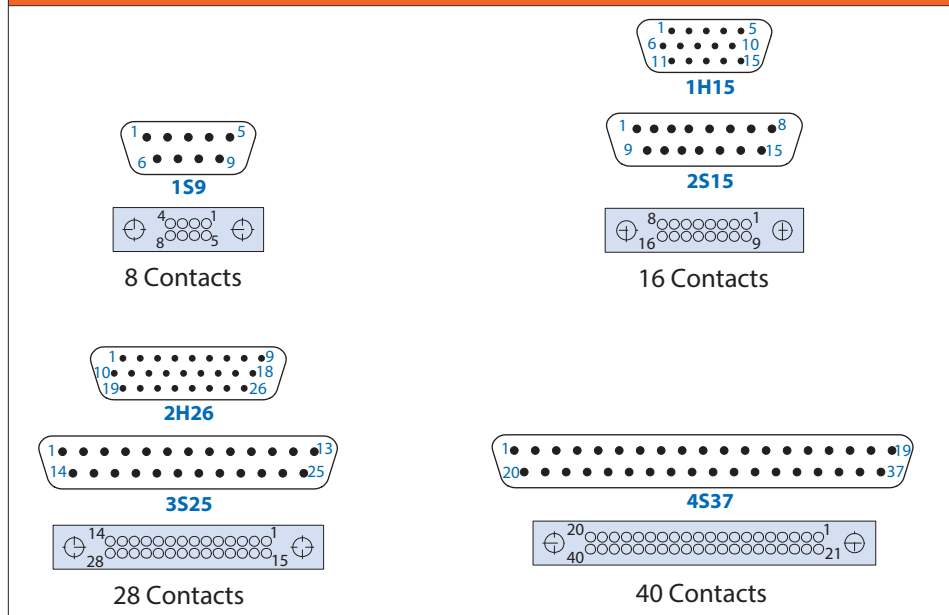
NOTES

- I/O Series 28 HiPer-D right-angle socket-contact connector, rear panel mount with O-ring environmental seal (280-025)
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

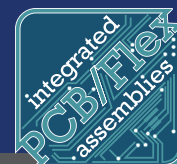
HOW TO ORDER

Sample Part Number	286-078S	-3525	ME	N	-2	T	-6	S
Basic Part Number	HiPer-D pin connector to Series 171 AlphaLink® SL							
I/O Insert Arrangement	1S9, 1H15, 2S15, 2H26, 3S25, 4S37							
I/O Shell Material/ Finish	ME = Aluminum / Electroless Nickel Z1 = Stainless Steel / Passivated ZM = Stainless Steel / Electroless Nickel JF = Aluminum / Yellow Chromate over Cadmium							
I/O Hardware Option	N = None (Tapped Hole) P = Female Jackpost G = Guide Pin B = Guide Bushing							
AlphaLink® Finish	2 = Nickel 5 = Gold							
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole							
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches							
Optional Shielding	S = With shielding Omit for none							

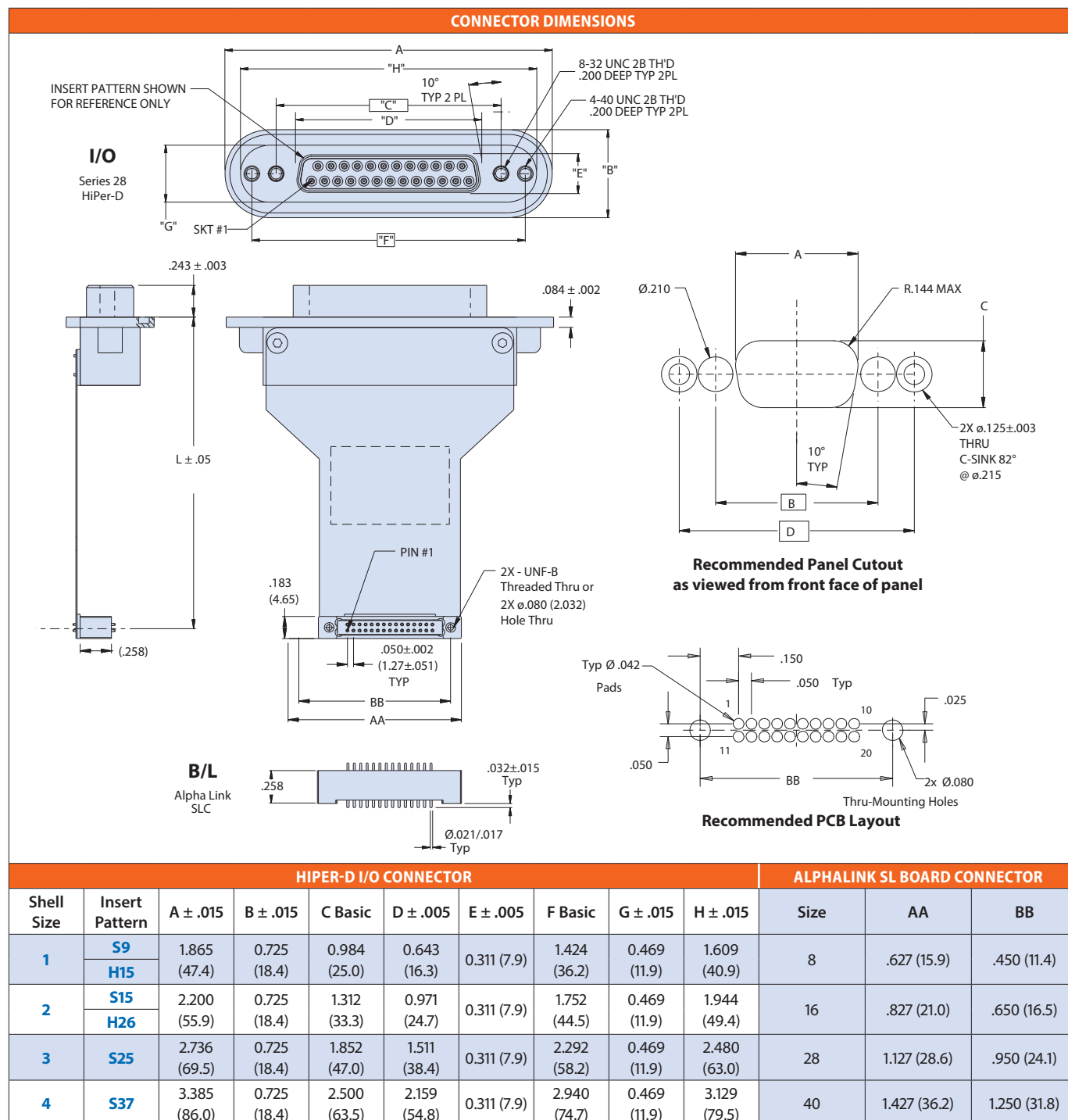
HIPER-D TO ALPHALINK CONTACT ARRANGEMENTS



TURNKEY Flex Jumper Assemblies



286-078S HiPer-D socket connector to AlphaLink® SL flex jumper



796-112 Rear panel mount environmental Series 79 Micro-Crimp pin contact receptacle to AlphaLink® SL flex jumper

SERIES 79 MICRO-CRIMP FLEX JUMPERS

Glenair Series 79 Micro-Crimp advanced-performance rectangular connectors in 7 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

FLEX PERFORMANCE

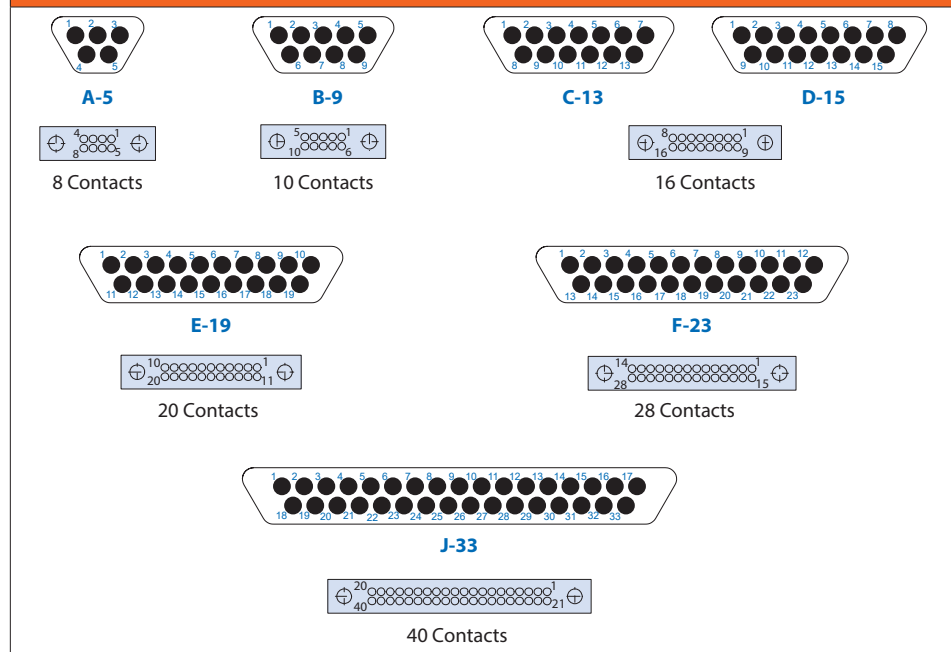
- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

NOTES

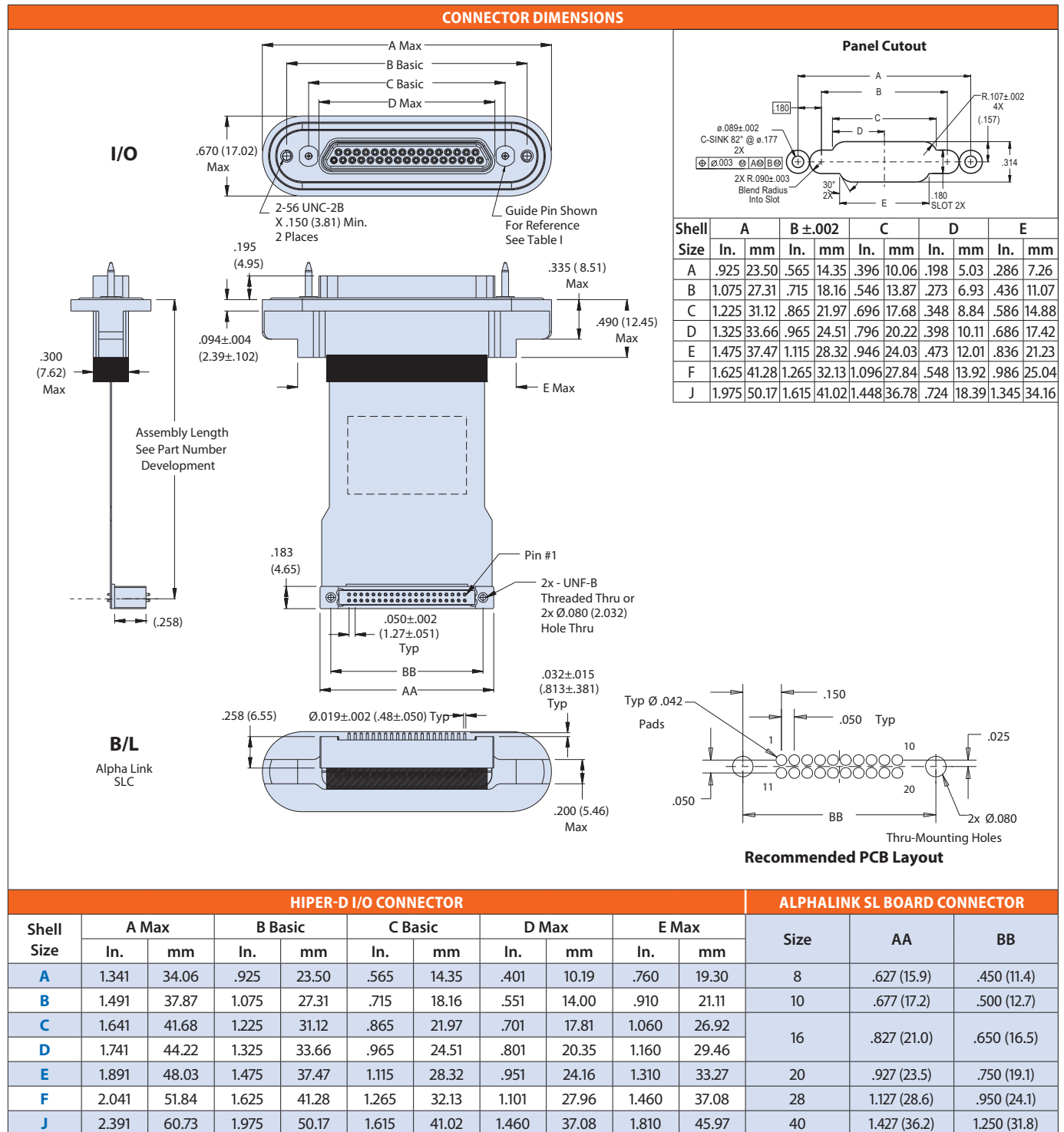
- I/O Series 79 Micro-Crimp receptacle connector, rear panel-mount with O-ring environmental seal
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

HOW TO ORDER									
Sample Part Number	796-112-	9-10	M	G	-2	T	-6	S	
Basic Part Number	Rear Panel-Mount Micro-Crimp I/O receptacle to Series 171 AlphaLink® SL								
I/O Insert Arrangement	A-5, B-9, C013, D-15, E-19, F-23, J-33								
I/O Shell Material/Finish	M = Aluminum / Electroless Nickel MT = Aluminum / Nickel PTFE E = Aluminum / Chem Film Z2 = Aluminum / Gold UC = Aluminum / Zinc Cobalt with Black Chromate J = Aluminum / Yellow Chromate over Cadmium NF = Aluminum / Cad Olive Drab over Electroless Nickel								
I/O Hardware Option	P - Jackposts G - Male Guide Pins S - Female Guide Sockets N - No Mating Hardware								
AlphaLink® Finish	2 = Nickel 5 = Gold								
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole								
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches								
Optional Shielding	S = With shielding Omit for none								

SERIES 79 MICRO-CRIMP TO ALPHALINK CONTACT ARRANGEMENTS



796-112 Rear panel mount environmental Series 79 Micro-Crimp pin contact receptacle to AlphaLink® SL flex jumper



796-113 Rear panel mount environmental Micro-Crimp socket contact plug to AlphaLink® SL flex jumper

SERIES 79 MICRO-CRIMP FLEX JUMPERS

Glenair Series 79 Micro-Crimp advanced-performance rectangular connectors in 7 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

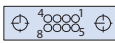
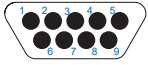
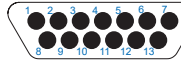
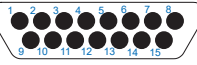
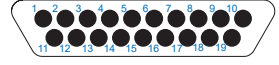
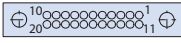
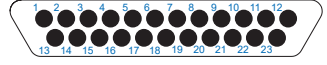
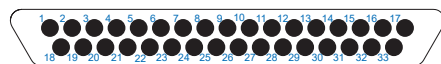
FLEX PERFORMANCE

- EMI shielding film will be used when shielding option is chosen
- Bend radius is 6 to 10 X flex thickness.
- Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.
- Workmanship shall be IAW IPC-6013, Class 2.

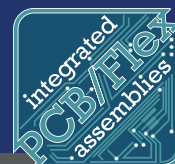
NOTES

- I/O Series 79 Micro-Crimp plug connector, socket contacts, rear panel-mount with O-ring environmental seal. Blind mate ±.030 allowable from centerline
- Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.
- Unused Cavities in connectors to be populated with contacts.
- B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

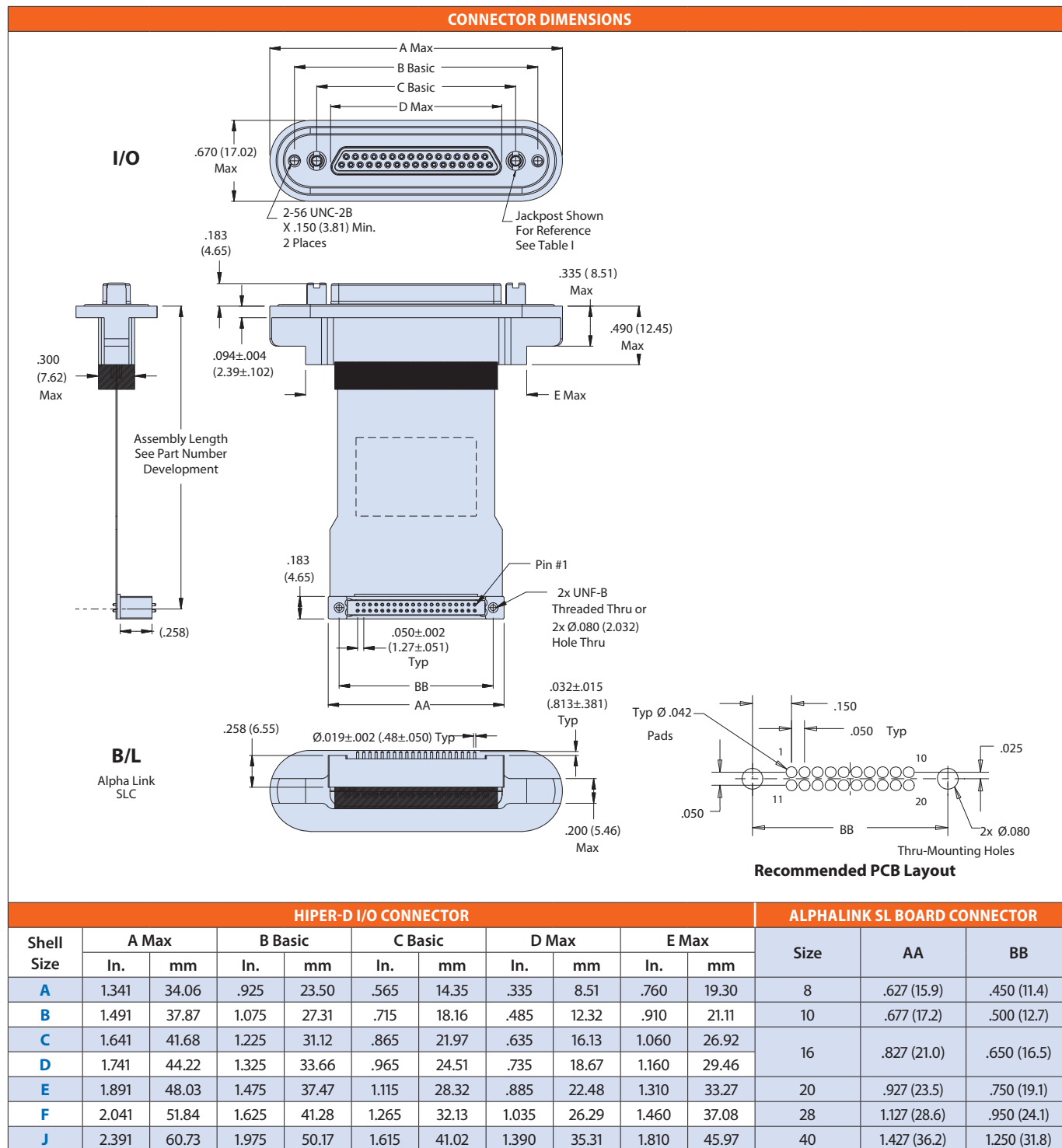
HOW TO ORDER										
Sample Part Number	796-113-	9-10	M	E	G	-2	T	-6	S	
Basic Part Number	Rear Panel-Mount Micro-Crimp I/O Plug to Series 171 AlphaLink® SL									
I/O Insert Arrangement	A-5, B-9, C013, D-15, E-19, F-23, J-33									
I/O Shell Material/Finish	M = Aluminum / Electroless Nickel MT = Aluminum / Nickel PTFE E = Aluminum / Chem Film Z2 = Aluminum / Gold UC = Aluminum / Zinc Cobalt with Black Chromate J = Aluminum / Yellow Chromate over Cadmium NF = Aluminum / Cad OD over Electroless Nickel									
EMI Spring	E = EMI Spring N = No EMI Spring									
I/O Hardware Option	P - Jackposts G - Male Guide Pins S - Female Guide Sockets N - No Mating Hardware									
AlphaLink® Finish	2 = Nickel 5 = Gold									
AlphaLink® Hardware Option	T = Threaded thru hole Omit for thru hole									
Assembly Length (L)	3 = 3.00 ± .05 inches 6 = 6.00 ± .05 inches 12 = 12.00 ± .05 inches									
Optional Shielding	S = With shielding Omit for none									

SERIES 79 MICRO-CRIMP TO ALPHALINK CONTACT ARRANGEMENTS			
 A-5  8 Contacts	 B-9  10 Contacts	 C-13  16 Contacts	 D-15  16 Contacts
 E-19  20 Contacts	 F-23  28 Contacts	 J-33  40 Contacts	

TURNKEY Flex Jumper Assemblies



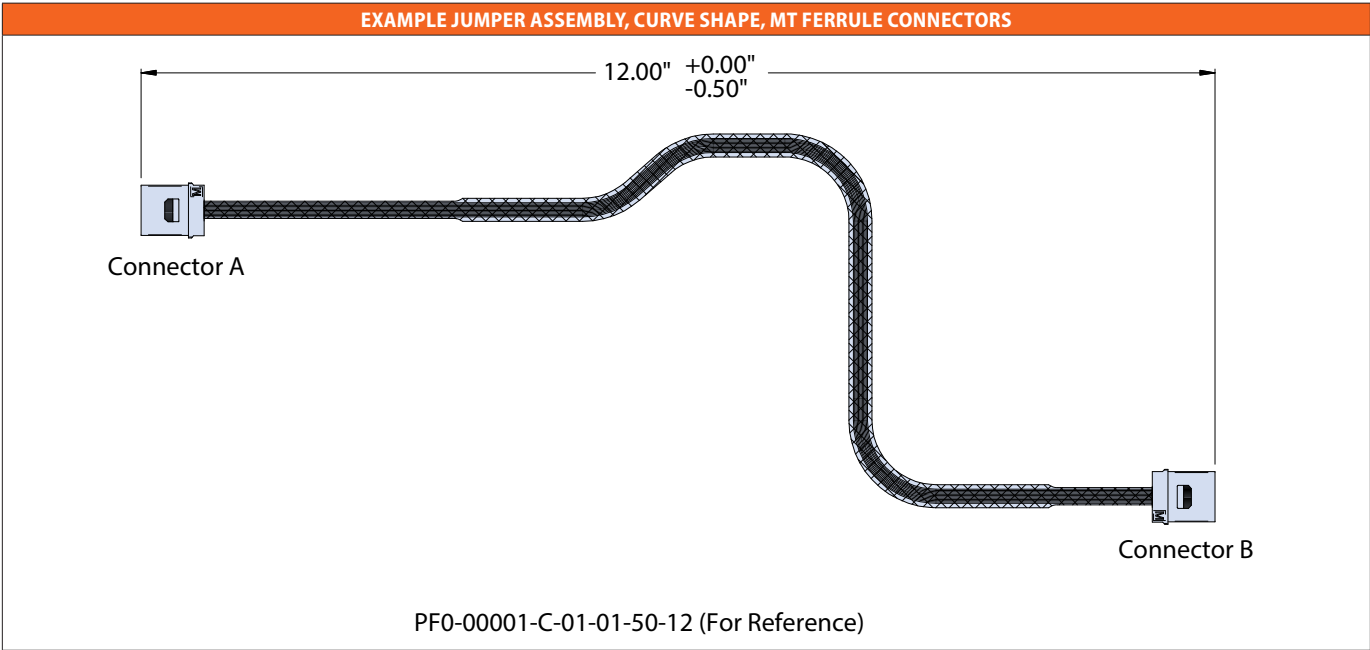
796-113 Rear panel mount environmental Micro-Crimp socket contact plug to AlphaLink® SL flex jumper



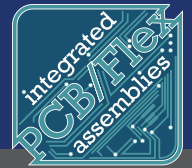
PF0-0001 Optical flex assembly, straight, loopback, or curve, with I/O connector options



HOW TO ORDER							
Sample Part Number		PF0-00001	-C	-01	-01	-09	-12
Basic Part Number	Optical Flex Jumper Assembly						
Shape							
	L = Loopback S = Straight C = Curve						
	Must fit in 12" X 12" area. Consult Glenair for custom design						
Connector A	-01 = MT Ferrule -04 = MPO -02 = SuperNine MT -05 = VITA 66.1 -03 = Series 79 MT -06 = VITA 66.4						
Connector B	-01 = MT Ferrule -04 = MPO -02 = SuperNine MT -05 = VITA 66.1 -03 = Series 79 MT -06 = VITA 66.4						
Fiber Size	-09 = 9.3/12.5µm Singlemode -09R = Radhard Singlemode -50 = 50/125µm Multimode -50R = Radhard Multimode -62 = 62.5/125µm Multimode -62R = Radhard Multimode						
Number of Fibers	-12						
Part numbering is for reference purposes only. A unique Glenair part number will be assigned.							

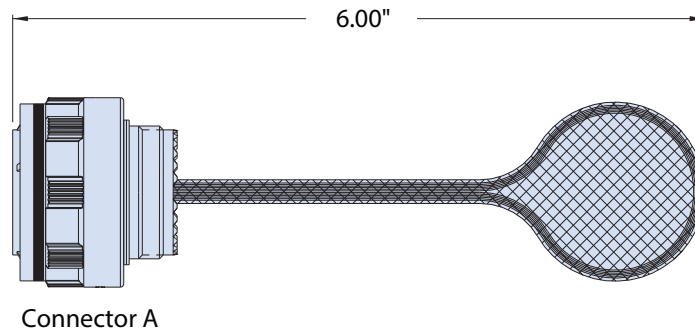


TURNKEY Optical Flex Jumper Assemblies



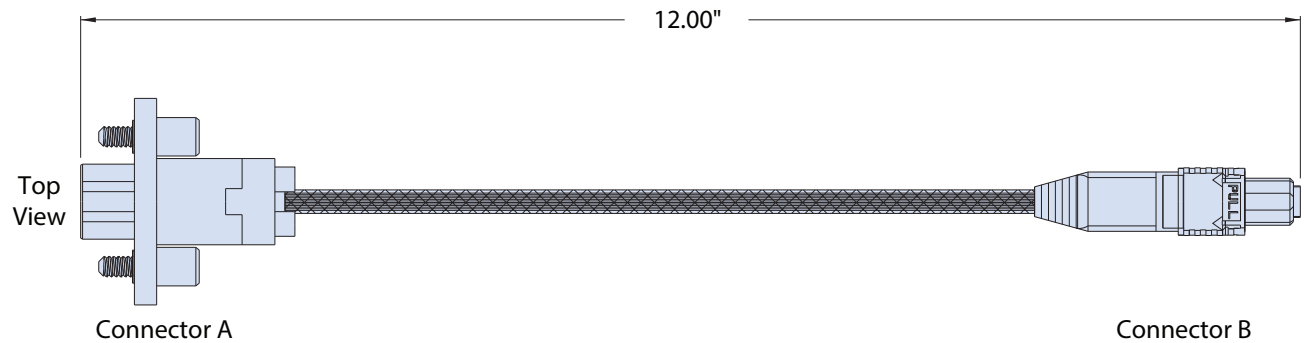
PF0-0001 Optical flex assembly, straight, loopback, or curve, with I/O connector options

EXAMPLE JUMPER ASSEMBLY, LOOPBACK SHAPE, SUPERNINE MT CONNECTOR



PF0-00001-L-02-09-12 (For Reference)

EXAMPLE JUMPER ASSEMBLY, STRAIGHT SHAPE, SERIES 79 MT AND MPO CONNECTORS



PF0-00001-S-03-04-50-12 (For Reference)

TURNKEY Flex, Rigid Flex, and Rigid PCB Assemblies



Production lab

ARCADIA, CALIFORNIA
IPC 6012/6013 Class I, II, III, types 1-4
ISO 9001, AS9100 Certified

Glenair Integrated PCB/Flex assembly production facilities are operated in accordance with commercial and military standards. Staff includes 200+ PCB and cable assemblers with J-STD-001 Space certification for special processes and ESD management.



- High-availability catalog components as well as custom design and manufacture
- No minimums
- We never obsolete parts



ASC Autoclave
enabling continuous
lamination up to 96
inches



Oversized flex
fixturing tables



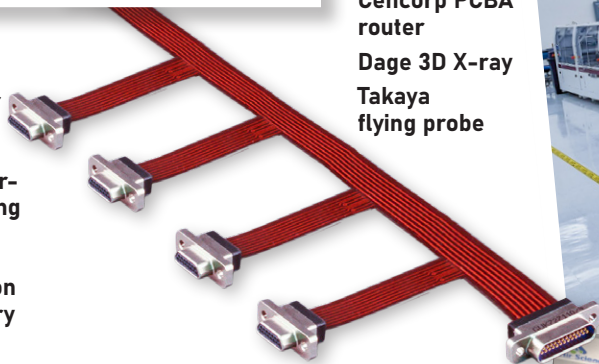
Limata laser direct
imaging system for
extended length flex
circuits



Surface mount technology:
Pillarhouse
selective solder
Cencorp PCBA
router
Dage 3D X-ray
Takaya
flying probe



Glenair's PCB/Flex interconnect team is housed together under one roof. From electrical design to computer-aided manufacturing and assembly, the team has a well-deserved reputation for on-time delivery of even the most complex PCB/Flex assemblies.



Top: Chemical analysis lab for on-site wet processes

Bottom: Alkaline etcher





MISSION-CRITICAL INTERCONNECT SOLUTIONS

Glenair, Inc.

1211 Air Way • Glendale, California • 91201-2497

Telephone: 818-247-6000 • Fax: 818-500-9912 • sales@glenair.com

www.glenair.com

Glenair East

20 Sterling Drive
Wallingford, CT
06492

Telephone:
203-741-1115
Facsimile:
203-741-0053
sales@glenair.com

Glenair UK Ltd

40 Lower Oakham Way
Oakham Business Park
Mansfield, Notts
NG18 5BY England

Telephone:
+44-1623-638100
Facsimile:
+44-1623-638111
sales@glenair.co.uk

Glenair Microway Systems

7000 North Lawndale Avenue
Lincolnwood, IL
60712

Telephone:
847-679-8833
Facsimile:
847-679-8849

Glenair Nordic AB

Gustav III:s Boulevard 42
SE-169 27 Solna
Sweden

Telephone:
+46-8-50550000
sales@glenair.se

Glenair GmbH

Schaberweg 28
61348 Bad Homburg
Germany

Telephone:
06172 / 68 16 0
Facsimile:
06172 / 68 16 90
info@glenair.de

Glenair Iberica S.L.

Av. De Manoteras, 24 – 2º
28050 Madrid
Spain

Telephone:
+34 915 562 687
sales@glenair.es

Glenair Italia S.p.A.

Via Del Lavoro, 7
40057 Quarto Inferiore –
Granarolo dell'Emilia
Bologna, Italy

Telephone:
+39-051-782811
Facsimile:
+39-051-782259
info@glenair.it

Glenair France SARL

7, Avenue Parmentier
Immeuble Central Parc #2
31200 Toulouse
France

Telephone:
+33-5-34-40-97-40
Facsimile:
+33-5-61-47-86-10
sales@glenair.fr

Glenair Korea

6-21Tapsil-ro 58beon-gil
Giheung-gu, Yongin-si
Gyeonggi-do
Republic of Korea

Telephone:
+82-07-5067-2437
Facsimile:
+82-504-375-4549
sales@glenair.kr

Glenair Japan

40F, Nagoya Lucent Tower,
6-1, Ushijima-cho,
Nishi-ku, Nagoya, 451-6040
Japan

Telephone:
+81-52-569-2521
Facsimile:
+81-52-569-2523
sales@glenair.jp