First step in securing a time and delivery quote from Glenair is to communicate basic information regarding the flex assembly, including quantity requirements, number of layers, overall size, special features such as factory forming, stiffeners and so on. Accordingly, here is a five step flex design guide, beginning with I/O interconnect selection.

Note: all Glenair PCB I/O connectors are potted/sealed and certified parylene compatible.

**STEP 1: SELECT FLEX/RIGID FLEX ASSEMBLY I/O CONNECTOR(S)**

- **HiPer-D 24308** is a high-performance, precision machined, shielded alternative to commercial-grade D-subminiatures
- **HiPer-D Combo** straight and 90°

- **Series 79 Micro-Crimp** is Glenair’s high-density .075” contact center crimp- and shielded-contact, mil-aero grade rectangular
- **Series 90** straight and 90° PC tail panel plugs and receptacles
- high-speed datalink and rack-and-panel versions

- **Series MWDM (MIL-DTL-83513)** high-density microminiature .050” contact spacing mil-aero grade Micro-D subs
- **HiPer-D 24308** straight and 90°

- **Series 89 (MIL-DTL-32139)** ultra high-density .025” contact spacing mil-aero grade nanominiature
- **HiPer-D Combo** straight and 90°

- **SuperNine “better than QPL” advanced performance D38999 Series III type connectors**

- **Ultra high density .075” contact center mil-aero solution for size and weight reduction**

- **SuperSeal field RJ45/USB** straight and 90°
- **SuperSeal** dual flange receptacle

- **High-speed El Ochito octaxial contacts**

- **SuperSeal field RJ45/USB** dual flange receptacle

- **Series 89 circular nanominiature connectors**

- **New Series 806 for SWAMP-zone applications**
TURNKEY  
Flex, Rigid Flex, and PCB Assemblies  
Interconnect I/O and termination design guide

The termination of flex and rigid flex assemblies to backplane and motherboard PCBs may be accomplished with a variety of interconnect technologies and flex design features. Glenair flex engineers have deep fluency in the maintenance and protection of signal continuity from the I/O interface to the board, including high-speed, matched impedance signal management, EMI/RFI shielding and so on.

**STEP 2: DEFINE STYLE OF PCB / FLEX TERMINATIONS**
- Thru-hole
- Surface mount
- Pogo pin / spring-loaded contacts
- Straddle mount
- Nail head pins
- Direct termination
- Encapsulating pot
- ZIF (zero insertion force)

**STEP 3: DEFINE MECHANICAL SCHEMATIC**
- Customer-supplied 3-D file to determine “keep out areas”
- “Napkin sketch” with rough idea of routing
- Customer-supplied 2-D DXF

**STEP 4: DEFINE ELECTRICALS**
- To approximate layer count, we need a wiring diagram complete with signal types, currents, and shielding requirements
- Used to determine ROM pricing

**STEP 5: DEFINE VALIDATION TEST REQUIREMENTS**
Glenair offers complete circuit design and generation of PCB/flex fabrication data packages including component level documentation. Most flex customers specify a certain level of validation testing as a required part of the documentation package. Tests may include DWV/IR, continuity, impedance (eye pattern), and others.