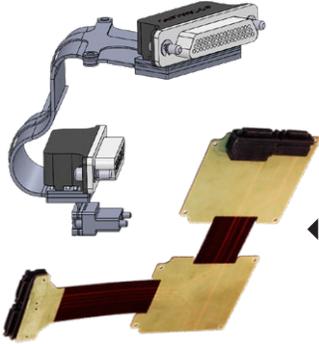




MODELING AND 3-D PRINT RAPID PROTOTYPING



- 3-D representation of flex assemblies using SolidWorks
- 3-D 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 3-D printed paper doll prototype mockups produced by Glenair’s Integrated Flex Assembly team—typical turnaround 2–3 days upon receipt of request, unless extraordinary requirements are requested (e.g. loose leaf, cross-hatch shielding on 5+ layers)

▶ Here, a custom 3-D printed model is mated to a plug connector to check form and fit before actual part production

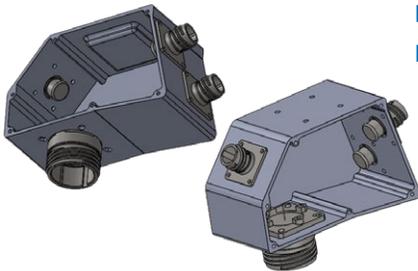


▲ Complimentary quick-turn mockups produced by by Glenair: 28-layer rigid flex (close-up and full-length), and 12-layer multibranch rigid flex



▲ HD Stacker board-to-board connector/flex mockup

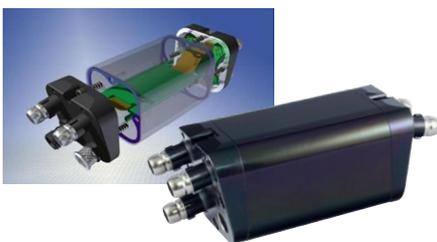
SOLIDWORKS 3-D PROTOTYPING: “VIRTUAL” CONNECTOR MODIFICATIONS



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

◀ In this example, customer supplied a STEP file of a box enclosure with panel cutouts. The Glenair engineering team used SolidWorks to design a specially-modified connector flange, allowing the customer to take advantage of our signature size-and weight-saving circular connector, the Series 80 Mighty Mouse.

3-D MODELING FOR CONNECTORIZED INTEGRATED SYSTEMS

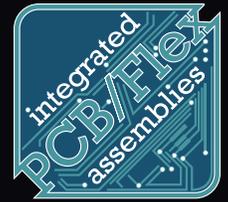


- Turnkey connector manufacture and interconnect cable / flex harnessing
- Electronic box builds supported by software-based design and prototyping
- Turnkey integration of harness technologies, boxes, and mechanisms

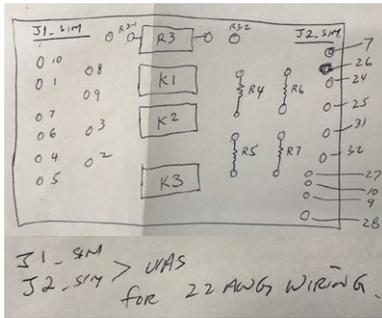
◀ This integrated system enclosure, complete with printed circuitry, I/O connectors, and power modules was designed and modeled in SolidWorks prior to actual manufacture.

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

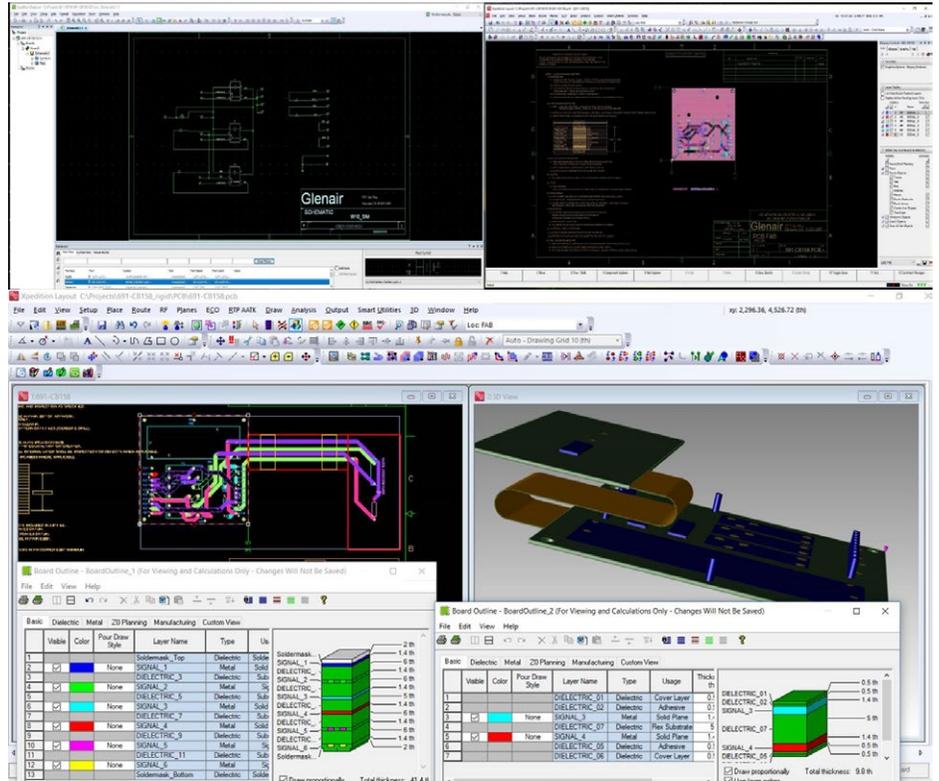
FAST TURNAROUND 3-D Modeling and Rapid Prototyping XPedition software with Rigid Flex license



GLENAIR INTEGRATED PCB/FLEX ENGINEERING: FROM 'NAPKIN SKETCH' CONCEPT TO DESIGN



▲ From a limited initial “napkin sketch” concept (top), Glenair specialists utilized Xpedition software with the Rigid Flex license to create a fully functional 3D model (right) ▶



▶ Another example of Glenair’s quick-turnaround PCB/Flex design service: The rough concept for this design was sketched out during a meeting. Glenair engineers utilized Rigid Flex / Xpedition software to create an accurate and functional visual tool for reviewing, modifying, and adjusting the design prior to starting the build. Just 3 weeks later, the design was approved and ready for prototype manufacturing.

