Interconnect
Design
Solutions

PWB Design & Mechanical
Engineering Contract Services

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Introduction:

Interconnect Design Solutions is a Printed Wiring Board (PWB) and Mechanical Engineering (ME) consulting firm that provides engineering solutions throughout the aerospace, automotive, telecom, and consumer electronics industries.

Interconnect Design Solutions can help you achieve your design goals as a complete outsource solution, an extension of your in-house design team in periods of peak demand or as a sub-contractor to be called upon as needed without added overhead costs of having a full time staff.

PWB Service Offerings

Interconnect Design Solutions PWB contract services offers front-end engineering support from logic symbol modeling, schematic capture (based on your companies logic input), physical footprint modeling, PCB layout & routing for Rigid and FLEX PCB's, documentation output for bare board fabrication & SMT assembly, complete Bill of Materials and even bare board fabrication (upon request).

Logic Symbol Creation - Using our Component Information Portal (CIP) via Component Information System (CIS), Interconnect Design Solutions will model all parametric component data as provided by the component manufacturer.

Intelligent Schematic Capture via OrCAD-Capture CIS offering a fully integrated system to CIP and our PCB layout tools.

PCB Footprints required for any given layout are IPC-7351 compliant, using OrCAD Apps such as "Footprint Gen" (provided by EMA Design Automation) to quickly & consistently create physical land pattern geometries and customized padstack shapes.

PCB Layout & Routing is tightly integrated with Capture-CIS, using OrCAD-PCB Designer Suite. To further enhance accuracy of mechanical geometries, Orcad-PCB has the ability to import / export EMN, IDF and DXF data from an array of mechanical engineering tools.

Functional Data typical for PCB fabrication such as ODB++, NC Drill Files, Netlist, Drill & Trim Drawings are all provided for a hassle free fabrication experience. Interconnect Design Solutions will even have bare bards fabricated and drop shipped to the assembler of your choice to mitigate logistical errors.

<u>Typical List Of Deliverables:</u>

- Library of logic and physical component data
- Schematic database (Native format)
- Searchable PDF of schematics
- Bill Of Materials (B.O.M.)
- PCB Layout File
- ODB++ File (or Gerber format if preferred)
- NC Dill & Back drill Data (Excellon Format)
- IPC-D-356 Netlist
- PCB Fabrication Drawing
- PCB Assembly Drawing
- Test Prep Reports for ICT.

Mechanical Engineering Services Offerings

Interconnect Design Solutions enables our customers to have access to complete mechanical engineering services as added value. Services are often coupled to PWB related engineering; however as we also offer packaging / chassis & cable design, 3D modeling, thermal analysis, vacuum forming, injection molding, rapid prototyping (stereo lithography and laser sintering), laser cutting, sheet metal fabrication, machining and even reverse engineering via 3D scanner technology

(Model shown: Wireless Extender – Cell phone signal booster marketed under "ZBoost"brand)

Software Tools

- SolidWorks-solid/parametric modeling
- Rhinoceros-surface modeling
- ProEngineer-solid/parametric modeling
- FloTherm-CFD thermal analysis

3D Scanner Technology

Using NextEngine's 3D Scanner captures real life objects in full color with multi-laser precision. Once scanned, the object is transposed into a CAD model that can be modified, retrofitted, scaled, adapted for machining or molding and even reverse engineering!

Contact *Interconnect Design Solutions* for your next PWB or Mechanical Engineering needs.

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