Gary Christiansen

10208 Aviary Dr, San Diego, CA, 92131 – 732-673-6186

PCB Design/Layout Engineer

OBJECTIVE

ECAD support from my home office: Utilizing my Allegro PCB Designer with High Speed and Miniaturization Options Licenses.

SUMMARY

Thirty+ continuous years in the Electro-mechanical design and manufacturing field • Development of ECAD software and Auto Routing • Highly competent with proven skills in all types of Printed Circuit Board and Electronic Packaging • Extensive computer aided software experience utilizing over Eight major CAD systems and software packages. • Progressing from Printed circuits to Mechanical design • delivers extremely fast high-quality work • Sought after for high priority projects • Good understanding of Design for Manufacture (DFM) • Team product development from Concept to Manufacture • Successful CAD Service Business Operator with extensive client base.

PRODUCT EXPERIENCE

- Large volume Consumer Product
- Optical Network Platforms (P-OTS)
- Next Generation WiMAX
- Large and Small Business Phone Systems
- Cell Phone and Wireless Devices
- Medical Devices
- Satellite Modem Boards
- HDTV Development
- Under-Sea Equipment
- Capacitor Charging Power Supplies
- Broadband Chipsets
- Circuit Modules, MCM's

CADENCE ALLEGRO DESIGN EXPERT

- High speed board layout utilizing Constraint Manager and SigXplorer
- Flex and Rigid Flex circuits designs
- Back-drilling
- DDR 2-3-4 memory routing
- Relative propagation delay with T points
- Cadence SIP digital layout experience.
- Orcad CIS and Concept HDL Schematic capture.
- Part Developer and Librarian Expert.
- Specctra Auto Router.
- Orcad Library database management

LAYOUT EXPERIENCE

- Backplanes
- Power Supplies
- Heavily constrained Large 20-layer blind and buried via Mother boards.
- Small scale HDI (0.35mm BGA) designs utilizing via-in-pad /ELIC technologies.
- Antenna board Layouts.
- Mixed signal designs, Analog / Digital /RF.
- Backplanes with 10 Gb/s data transmission lines.
- System in Package layout (SIP / MCM)
- Satellite electronics. Class 3 PCB standards

- High power RF transceivers

PROFESSIONAL EXPERIENCE (gchrisdesign LLC)

Layout Consultant; Freelance, San Diego, CA 03-2009 -- (present)

Perform PCB Layout/Design and manage multiple projects for various products and technologies. Mentor Clients for PCB Standards or Fabrication for error free PCB products.
Adhering to many unique company standards and multiple vendor requirements. Quick turn around while keeping a high bar for quality and workmanship. Designs typically created in Cadence Allegro and OrCAD tools.

Apple: Breakout and Device Under Test boards (DUT).

Voyager Space and Bluemarble Communications: (Satellite electronics)

Technologies to meet military and commercial space requirements. High performance digital, RF, and attitude determination products. Using Class 3 PCB fabrication standards.
Develop 20-layer stack-ups for Space and high temp. PCB assembly process. Design BGA breakout to maintain as great as possible Via aspect ratio for thick PCB situations. Design a standard of Stacking Mico Vias utilizing a buried Via with offset for extreme environments.

Facebook / Oculus: Flex board designs.

FLIR systems: Layout of HDI production level PCB's and Flex boards. Utilizing blind and buried via and micro via in pad. ELIC Layouts for Thermal camera designs.

Taoglas and AVX/Ethertronics: Layout of RF test boards and consumer products for antenna related products including Millimeter Wave development.

Hewlett-Packard: Ridged Flex layouts for consumer products.

Carefusion / BD: Controller boards for Medical Dispensing Machines. Switch mode power supplies with proper layout of high frequency switching paths.

Huawei Technologies:

HDI Layouts of 6-layer PCB for Cellular and Tablet products. Transition from Mentor to Allegro Layout.

Amazon: Footprint symbol / ECAD library work.

Google: PCB Layout and ECAD library work.

Broadcom: Large breakout test boards, high concentrations of BGAs and differential pair connections. Blind and buried Via and back-drill fabrication.

FULL-TIME PERM EMPLOYMENT

Nextwave Wireless, San Diego, CA **Senior Hardware Engineer** 03/2007 - 03/2009

Layout of HDI cellular and Large High-speed designs. Routing multiple 124 node bus structures. SIP design layout.

Ciena, Shrewsbury, NJ **Senior CAD Engineer** 01/2001 - 03/2007

Layout of large high-speed optical networking boards. Utilizing Specctra auto router.
High concentration of FPGA's

Avaya Inc, Holmdel, NJ **Design Associate** 01/1999 - 12/2000
For the group of: AT&T Bell Laboratories / Lucent Technologies / Avaya:
Within these 3 companies I developed expertise in Computer Aided Design. Working with many Main Frame and Unix based CAD systems. (Applicon, Scicards, Cadnetix, Mentor, Cadence…)
Developed ECAD and Auto-routing Software. Progressing to Mechanical Designer using Pro-Engineer for plastic design. Collaborated with and at manufacturing facilities for high volume Office and Consumer Products.

Lucent Technologies, Holmdel, NJ**, Design Associate** 04/1995 - 12/1998
AT&T Bell Laboratories, Middletown, NJ **Senior Designer** 01-/1988 - 04/1995

Concurrent Computer Corp, Tinton Falls, NJ, **Senior Designer** 12/1986 - 01/1988
Large mainframe computer boards Utilizing ASI Prance auto routing software. Buried resistor fabrications.

AT&T Bell Laboratories, Holmdel NJ, **Senior Design Drafter** 12/1982 - 12/1986

Other

Drafting -- Mechanical / Metal Design -- Master Carpenter -- Automotive Fabrication and Restoration