

# **Gary Christiansen -- 10208 Aviary Dr, San Diego, CA, 92131 – 732-673-6186**

## **PCB Design/Layout Engineer**

### OBJECTIVE

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

### SUMMARY

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Thirty+ continuous years in the Electro-mechanical design and manufacturing field • Development of ECAD software • 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 • Reputation for excellence resulting in increased lead of responsibility • 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

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- 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 Board
- HDTV Development
- Under-Sea Equipment
- Capacitor Charging Power Supplies
- Broadband Chipsets
- Circuit Modules, MCM's

### CADENCE ALLEGRO DESIGN EXPERT

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- 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

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- Backplanes
- Power Supplies
- Heavily constrained Large 20-layer blind and buried via Mother boards.
- Small scale HDI (0.4mm BGA) designs utilizing via-in-pad technologies.
- RF and Antenna board Layouts.
- Mixed signal designs, Analog / Digital.
- Backplanes with 10 Gb/s data transmission lines.
- System in Package layout (SIP / MCM)
- Satellite electronics. Class 3 PCB standards

## PROFESSIONAL EXPERIENCE (gchrisdesign LLC)

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### **Layout Consultant; Freelance, San Diego, CA** 03-2009 -- 2023 (present)

Perform PCB Layout/Design and manage multiple projects for various products and technologies. Adhering to many unique company standards and vendor requirements. Designs created in Cadence Allegro 17.x

**Apple:** Breakout and Devise Under Test boards (DUT).

### **Space Micro and Bluemarle 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.

**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.

**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

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### **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 buss structures. SIP 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