TEK07053 (Altium - 7 yrs)
📘 Diploma in EEE

Highlights

- PCB Layout Design.
- Schematic Capturing & verifying.
- Gerber Edition & Layout QC using CAM350, Valor, View mate, Altium, EasyEDA.
- Knowledge of Design of Manufacturing (DFM)/Design of Assembly (DFA).
- Knowledge & experience of electronic components and their Package Information Like BGA, QFN, SOT.
- Experience in concern Areas like Aerospace, IoT, Embedded designs, Power Electronics, Industrial Automation.
- Develop and maintain a component database, including schematic symbol library and footprint library.
- Basics of Signal Integrity (SI)/Power Integrity (PI) Analysis.
- Coordinating between Hardware and Testing Teams for Product Validation and Documentation

Skills

Primary Skills

- laying out Routing
- PCB footprints
- Routing differential pairs

Secondary Skills

- high-current designs
- high-speed designs
- microcontroller-based hardware designs

Other Skills

- Layout: Zuken's CADSTAR, Mentor Graphics Layout Vx2.6/Vx2.3
- Gerber & QC: Valor, View mate, CAM350, Altium, EasyEDA.
- Schematic Entry: Orcad, DxDesigner, Design Capture
- Documentation: Fablink Vx2.6/Vx2.3

Projects

Project-1 - IT Industry (20 months)

EMBEDDED ENGINEER

Instrument Cluster for Electric Vehicles: Reading all the data (RPM, Indicators, Head light, different modes, SOC, SOH, battery voltage, temperature and current) from Motor Controller of electric vehicle and BMS of the battery using different protocols like CAN, RS232, UART, RS485. Making the required Calculations according to the data provided and displaying it on the cluster using a microcontroller, and also sending the data to cloud using MQTT Protocol.

Home Automation: Making homes completely automated using Microcontroller and MQTT protocol. Can be controlled by both switches and through app.

Bluetooth Module for controlling Pedal Assist in e-Bikes: To control and manipulate the Speed of the Pedal

Assist in e-Bikes using a Bluetooth App and a microcontroller.

GPS tracking for e-Bikes: Developed a GPS tracking Module using Neo6m and sim800l to track the location of the e-Bikes for Delivery Partners

Project- 2 - IT Industry (20 months)

PCB DESIGN ENGINEER

- Preparing detailed specifications PCB models and design documentations with Checklists.
- Performed PCB Designs for Serial Interfaces Like UART, USB, I2C, SPI, CAN, PCIe.
- Design the Boards combination of PTH & SMT components with automatic and manual routing, Fanout for Fine Pitch BGA design.
- Ground and supply Split planes for analog and digital designs, also well experienced in noise reduction techniques (EMI, EMC, ESD Protection).
- Experience to Design the PCBs of Linear power supply design, Regulated and adjustable voltages. DC/DC Converters, Battery Chargers, High current, and High Voltage rating. Performed Single layer, Double` layer, and multi-layer.

Project-3 - IT Industry (48 months)

QUALITY ENGINEER

Quality of LED & LCD display of TV's:

- Flatness: the surface flatness of the LED display should be within ±1mm to ensure that the displaying image without distortion.
- Brightness and viewing angle: to ensure the normal work of the LED display,
- The reducibility of color: it means the reduction of color on the LED display, which is that the color displayed on the LED display should be highly consistent with the color of the playback source, to ensure the authenticity of the image.
- If there is a color block on the LED display: the color block refers to the obvious color difference between adjacent modules, and the color transition is based on the module. The color block phenomenon is mainly caused by the poor control system, low gray level and low scanning frequency.

Project 4 - IT Industry (17 months)

ELECTRICAL MAINTENANCE

- install power supply wiring and conduit for newly installed machines and support equipment.
- Connect power supply wiring to machines and support equipment, and all cabling and wires between machines/equipment.
- Diagnoses malfunctioning equipment such as transformers 11kv/440v.
- Will be responsible of all 3 phase 480/230v equipment's.
- Replace faulty electrical components on machines such as relays, switches, and motors, and position sensing devices, and faulty electronic components, such as printed circuit boards.
- Repair and maintain equipment, in accordance with operation manuals, and other manufacturer's specifications.
- Maintain inventory of spare parts and material. Maintain tools and equipment for maintenance work.

Awards

N/A