

# TINH HO

## Hardware Design Engineer

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📍 Ho Chi Minh City



### SUMMARY

Hardware Designer with 7 years of hands-on experience in crafting reliable circuit boards for various applications. Proficient in multilayer PCB design, high-speed circuits, and wireless communications. Experienced in the entire hardware development cycle from concept, design, debugging, prototype testing, to BOM management and PCBA assembly manufacturing. Leader in guiding small engineering teams to deliver complex hardware projects on schedule.

### EXPERIENCE

#### Hardware Design Engineer

##### HBQ Technology

⌚ 12/2019 - Present 📍 Ho Chi Minh City, Vietnam

- Participated in hardware design for electrical and electronic products, including schematic design, PCB layout, component selection, and design optimization for manufacturability and cost.
- Gathered customer requirements, proposed solutions, and supported product installation and operation.
- Responsible for preparing complete manufacturing documentation, including BOM, Gerber files, test procedures, and assembly and quality inspection guidelines.
- Supported and monitored prototype manufacturing, testing, and hardware debugging.
- Designed multilayer PCB boards, high-density PCBs tailored for specific application requirements.
- Power supply design which includes DC-DC converters such as Buck, Boost, AC-DC converters Flyback, battery management, and energy efficiency optimization.
- Experienced with industrial standard interfaces and communication protocols, including RS485, RS422, CAN, 4-20 mA, 0-10 V, and digital I/O.
- Experience in RF and wireless communication design, including Wi-Fi, Bluetooth, cellular, GNSS, LoRa, and Zigbee.
- Experience with MCUs and interface as SPI, I<sup>2</sup>C, UART, RMII/MII, FMC/FMC and LTDC.
- Experience in carrier board design for SoMs, SoCs, and mini PC platforms with high-speed design including Memory, PCIe, MIPI, USB 3.0, HDMI, and Ethernet.
- Firmware programming for hardware functionality testing.

### INDUSTRY EXPERTISE

#### Schematic



#### Layout PCB



#### Prototype - Testing



#### PCBA Assembly - Manufacturing



### STRENGTHS

#### Adaptability

Successfully adapted to changing project requirements and tight deadlines, ensuring timely completion of tasks.

#### Collaboration

Collaborated effectively with cross-functional team members to achieve project goals and deliver high-quality designs.

#### Problem Solving

Utilized analytical and critical thinking skills to identify and resolve complex circuit design challenges, resulting in improved product performance.

### SKILLS

Altium Designer      High Density

High-Speed      Signal Integrity

RF Engineering      Power Management

C/C++      Python