



## FAÏÇAL EL HANI

### M.Eng in Electronics and Telecommunications Engineer

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Driver's License (Category B)

**PROFESSIONAL SUMMARY :** Electronics and Telecommunications Engineer with over 9 years of experience in hardware architecture, embedded systems, and complex multi-layer PCB design. Expert in schematic capture and professional component selection based on rigorous datasheet analysis, parametric optimization, and supply chain reliability. Highly proficient in Altium Designer, with specialized expertise in high-speed routing and Signal Integrity (SI). Versatile professional skilled in driving systems from rapid prototyping through to full-scale industrial production.

## PROFESSIONAL EXPERIENCE

**Electronics & Telecommunications Engineer / National Defense Administration** Rabat, Morocco | June 2016 -Present

- **Hardware Leadership:** Drafted technical specifications and statements of work (SOW) for sovereignty-focused engineering projects.
- **Hardware Design:** Calculated and dimensioned analog/digital circuits; developed optimized PCB layouts
- **Industrialization:** Managed production lifecycles, coordinated with manufacturers, and generated Bills of Materials (BOM) and manufacturing packages (Gerber, NC Drill).
- **Expert Analysis:** Conducted signal integrity diagnostics and advanced hardware debugging on prototypes.

**PCB Design Engineer (Freelance)**

**International** | 2019 – Present

- **Achievements:** Successfully delivered over 50 projects for international startups and SMEs.
- **IoT Hardware:** Developed custom hardware solutions with an emphasis on miniaturization and Bill of Materials (BOM) cost optimization.
- **Tools:** Expert utilization of Altium Designer to ensure industrial reliability prior to manufacturing.

**Electronics Design Engineer / AVEROS**

**Casablanca, Morocco** | August 2015 – June 2016

- **Design:** Selected critical components; developed schematics and PCB designs utilizing Altium Designer.
- **Validation:** Executed circuit simulations via Multisim to validate design concepts and minimize prototyping iterations.

## EDUCATION

- **Mohammed VI International Academy of Civil Aviation** | 2012 – 2015  
M.Eng in Electronics and Telecommunications
- **Classes Préparatoires aux Grandes Écoles d'Ingénieurs (Option TSI)** | 2009 – 2012
- **Technical Baccalaureate ( Mechanical Sciences and Technologies )** | 2009

## TECHNICAL SKILLS

- **PCB Design & Hardware:** Multi-layer layout, High-Speed Design, Controlled Impedance, SI/PI (Signal & Power Integrity), Thermal Analysis, DFM/DFA (Design for Manufacturing / Assembly).
- **Embedded Systems:** C/C++ Programming, STM32 (ARM Cortex-M), ESP32, Nordic nRF52 (BLE), Atmega, SAMD21.
- **Wireless & Protocols:** LoRa/LoRaWAN, BLE, Wi-Fi, Zigbee, SPI, I2C, UART, CAN Bus.
- **Instrumentation & Testing:** Oscilloscopes, logic analyzers, signal generators, spectrum analyzers

## CORE COMPETENCIES

- End-to-end electronic project management (from initial concept to functional prototype).
- Technical requirements analysis and statement of work (SOW) drafting.
- Technical documentation authorship and test report engineering.
- Cross-functional, multidisciplinary teamwork.

## LANGUAGES & SOFTWARE

- **Languages:** French (Fluent), English (Technical Proficiency), Arabic (Native).
- **Software Suite:** Altium Designer (Expert), KiCad, Multisim, PSpice, SolidWorks (ECAD/MCAD integration), Microsoft Office, Project Management (Agile methodologies).
- **Interests:** Travel, Swimming, DIY.