

Khaza Faisal Haque

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CAREER SUMMARY

Firmware Developer | PCB Designer | Innovator | Project Manager

- Experience in developing firmware and hardware with RedDot Digital Ltd., Walton and APLOMBTECH BD LTD.
- Electronics Development and PCB Design experience in Consumer electronics and high-speed designs.
- Skilled in Project management and Teamwork.

EDUCATION

BSc in Electrical and Electronic Engineering

Daffodil International University, Bangladesh

KEY SKILLS

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|-------------------------------|------------------|---------------------------------|
| ▪ PCB Design | ▪ Embedded Linux | ▪ Low power IoT Design |
| ▪ Firmware Development | ▪ C/C++, Python | ▪ Firmware & Hardware Debugging |
| ▪ Embedded System Development | ▪ RTOS | ▪ Documentation |
| ▪ VHDL | ▪ FPGA | |

PROFESSIONAL EXPERIENCE

RedDot Digital Ltd., Dhaka, Bangladesh

JUNE 2023 – present

A Robi Axiata Company Serving Cutting Edge & Homegrown IT Solutions.

Lead Engineer(IOT and embedded system)

- Hardware and firmware development of OpenWRT Based RMS(Remote Monitoring System) IOT gateway for Telecom Base Station.
- As the Lead IoT Engineer, I spearheaded the software team in the development of innovative IoT software solutions tailored for RMS(remote monitoring systems), driving the project from conception to implementation with a focus on reliability, scalability, and cutting-edge technology integration.
- In my capacity as Lead IoT Engineer, I guided both the software and AI teams in pioneering the development of an AI-driven early fault detection system for power plants, leveraging advanced algorithms and machine learning techniques to enhance operational efficiency and minimize downtime through proactive fault identification and resolution.

Walton Digi-Tech Industries Ltd., Dhaka, Bangladesh

MAY 2021 – JUNE 2023

The largest electronics manufacturer in Bangladesh with \$850 Million annual revenue and exports to 19 countries.

First Senior Deputy Director(Hardware and Firmware Development Team Lead)

- Spearheaded the development of an OpenWRT Based 1200 Mbps Gigabit Router with built-in NAS and MQTT Server, serving as a Walton IoT gateway.

- Directed the hardware and firmware development of an OpenWRT Based 300 Mbps Gigabit router with a built-in MQTT Server, offering access to Walton IoT services at a 15% reduced cost.
- Engineered an Air Conditioner (AC) with a Bangla Voice Recognition Module, facilitating hands-free access for native speakers and seamless integration with the Walton IoT network.
- Led the development of an Access Control device utilizing RFID & Fingerprint-based authentication, with an Embedded Linux server and employee management software tailored for small organizations, eliminating extra subscription fees and ensuring fair wage distribution.
- Orchestrated the upgrade of conventional Rice Cookers to Smart IoT Multi-Cookers, integrating Walton IoT services at a 13% reduced cost without compromising features, utilizing STM8 Value line MCU.
- Designed a 150W Bluetooth Speaker system with a Class D Amplifier, alongside firmware development for controlling DSP, Display, IR, and Button inputs.
- Engineered a Smart Web Connected (WiFi) Biometric Safe system, featuring a Capacitive touch keypad and ultra-low-power operation with 700 days of battery life, complemented by a redundant external power input through USB-C.

APLOMBTECH BD LTD. Dhaka, Bangladesh**2018-2021**

High Tech Companies in Bangladesh which produce various electronic products and services including Civil Drones, Smart Home Automation, Smart energy Meter, Indoor Positioning System, Tele Health Care.

Embedded System Engineer

- Designed PCB and developed Firmware for an Industrial IO Card For SCADA based Control System, which Communicates through MODBUS & MQTT with Dhaka WASA server to control & monitor regional water pump stations to ensure water production, efficient energy uses.
- Designed PCB and developed Firmware for Smart Energy Meter to upgrade the National Electricity Billing system (Smart E-Meter).
- Developed Smart Energy meter calibration software using python and Energy Meter Test Bench.
- Developed boot-loader for OTA Firmware update over GPRS Data transfer protocol from a FTP server for 8-bit Microcontroller used in Smart Energy Meter.

TECHNICAL SKILLS

Firmware Development	C/C++, Python, LUA, RTOS, Embedded Linux, STM32, STM8, AVR, ESP32-IDF
PCB Designing	Altium, Eagle –Embedded System, High Speed, Mixed Signal
Project management	GIT - Version Control, Scheduling & Time management, Team Work

LANGUAGE SKILLS

Bengali	Native proficiency
English	Professional proficiency

Hindi, Urdu

Verbal (listening and speaking) communicative proficiency