

Mahendra Pargi

FIRMWARE ENGINEER

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OBJECTIVE

Results-driven firmware engineer with 2+ years of experience in embedded systems development, specializing in microcontroller programming, communication protocols, testing and quality assurance processes to deliver high-performance solutions.

SKILLS

- Programming: C, C++.
- Serial Communication protocols: UART, SPI, I2C, RS232, RS485, Modbus RTU.
- Networking Protocols: UDP, TCP/IP, SNMP, NTP.
- Tools: Codewarrior, VS Code, Developer Studio, QT Creator, Keil IDE, STM32 Cube IDE.
- Controller/Processor: NXP MCF5225x, STM32L431rht6, WP7608(4G - SOC), sl8082bt(3G - SOC), AT89C51, LPC21xx (ARM7), Arduino UNO.
- Analog Interfaces: Hands-on experience with ADC & DAC in embedded systems.
- Operating Systems: Linux, Windows.
- Good Communication and strong collaboration.

EXPERIENCE

R&D Engineer

AST Udaipur *Mar 2025 - Jul 2025*

junior Firmware Engineer

Lineage power systems Bangalore *Jul 2023 - Mar 2025*

PROJECTS

1. 3G and 4G Modem

Role: Developer

- **Purpose:** Developed and enhanced modem functionality based on customer requirements, enabling reliable and efficient communication between controllers/devices and the modem via RS232/RS485, and between the modem and server using TCP/IP and SNMP protocols.
- **Environment:** Using C in the Leafshell environment on VS Code using the WP7608 SoC, Linux platform.
- **Implementations**
 - TCP/IP, SNMP, NTP, RS232, RS485, GSM/GPRS.

2. Temp Measurment using TC & RTD

Role: Developer

Purpose: Developed a high-precision temperature monitoring and logging system tailored for industrial applications, utilizing different types of thermocouples and RTDs to ensure accurate real-time temperature acquisition and persistent data logging.

- **Environment:** STM32 Cube IDE, Hterm.
- **Features:**

- Multi-sensor Support, High-Precision Data Acquisition, Calibration & Compensation, Data Logging & Storage (EEPROM & Flash).

3. Digital Configuration for Manual Product Information

Role: Developer

Purpose: Developed a user-friendly, GUI-based product management system that streamlined the handling of product information, utilizing SQL databases to ensure efficient data storage, querying, and integrity.

- **Environment:** Linux platform using Qt Creator, SQL.
- **Features:** Add Product Information, Delete Product Information, Sorting Functionality, Search Functionality (Optional Enhancement).

EDUCATION

Bachelors of Technology

Maulana Azad National Institute of Technology Bhopal *Jul 2017 - May 2021*

CERTIFICATE

- Certified in Advanced Embedded systems from Nano scientific research center Hyderabad
- Certified in Autocad from CAD DESK Hyderabad.

DECLARATION

I hereby declare that the information provided above is true to the best of my knowledge and belief.

Date: 02 / 08 / 25

Mahendra pargi