

Narayana Vallepu

Embedded Software Engineer

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Professional Summary

Experienced as an Embedded Software Engineer with prior experience working with Embedded Systems. I am proficient in C programming, Linux kernel internals, and ARM-based SoCs. Expertise in debugging, multi-threaded programming, and creating reliable driver solutions for peripherals and subsystems. Experienced in working with cross-functional teams to develop high-quality embedded software solutions. Capable of working independently while also being a good team player. I am looking for challenging tasks and am open to new technologies and environments to contribute to organisational growth and advance my career.

Skills

Programming Skills: C, Data Structures , Embedded C, ARM-7(LPC2129).

Communication Protocols: UART, SPI, I2C, CAN.

Operating System : Linux.

Tools : Keil ,Flash Magic.

Concepts : Multi-threading, IPC, RTOS concepts, Linux Kernel Internals ,Device drivers.

Architectures: ARM32/64, RISC-V

Experience

INTEREX DATA Center Board Management Card work Experience (2024 – 2025)

Interex Semiconductors (2024 - 2025)

Associate Engineer.

The INIBMX2401 is a Board Management Controller, it is powered by the INTX2401 complies with the OCP DC-SCM standard, making it ideal for datacentres. Our INIBMX2401 combines silicon, advanced AI security with data collection, and software into a compact, power-efficient INIBMX2401 with unique AI functionality explicitly designed for security, safeguarding cloud datacentres and network subsystems. TCU is Asymmetric Multiprocessing system (Arm Cortex-A53 quadcore, Arm Cortex-M55 Quad multiprocessor, and Arm Cortex-M7) including, MALI-G10, PCIe-Gen4, Usb3.1, I3C, SGPIO, I2C, GPIO, MIPI-CSI & DSI interfaces. and AIML subsystem and Advanced Boot Security Subsystem.

Responsibilities:

- Involved in Linux and u-boot bring-up on Virtual and Silicon Platform.
- Implemented Bare Metal for driver from the scratch for UART, SARADC.
- Involved in driver bring up in Linux Platform for UART , SARADC.
- Implemented Platform Device driver for SARADC & UART.

Instrument Cluster in Car

- Designed vehicle information like speed, engine RPM, fuel levels, and warning lights monitoring system using the ECU and CAN protocol.
- Developed client-server communication for data transmission and visualization.

Embedded Linux System Development Using Buildroot

- Customized Linux systems for ARM boards using Buildroot.

Education

Yogananda Institute of Technology & Science

Aug 2019-March 2023

Bachelor of Technology in Electronics and Communication Engineering, AP, India.

National Junior College

June 2017- May 2019

Secondary School of Education

May 2017