**Curriculum Vitae**

**M. Naresh**

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| **Summary** | Having 3.6 years of working experience in user space application development, shell scripting and drivers, on Linux platform, Good knowledge in C and System programming. |  |  |
| Highlights | Experience in Implementation of wrapper libraries and testing. Worked on I/O control and I2C gpio expander driver and developing API's, Interfaced GPIO Based Qwerty Matrix KEYPAD(8\*8) on Arm cortex A9 Board. |  |  |

# Skills and

# Competencies

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| Current Role | **ASSIstAnt** Engineer |
| Skills | Good understanding of Linux internals and Data Structures.   Hands of working experience in C, Linux Internals, Device driver, debuggers (GDB).  Worked on Linux Kernel Programming and User space programming.  Good at IPC’s i.e. FIFO, Shared Memory, Pipes.  Good knowledge on the Thread Management, process Management, Memory Management.  Good understanding on Linux Kernel, File systems.  Good understanding of I2C, SPI protocols.  Good Knowledge on Interrupts.  Good knowledge on shell scripting.  Worked on Cross compilation of Open source libraries such as opensource libraries, Busy-Box, Linux-3.0.35 kernel.  Experience in Integration & Debugging different types of modules on POS(Point of sale) terminal like I/O control, keypad matrix.   Working experience on Kermit.   Knowledge on building root file system and testing.  Worked on Implementation of wrapper libraries for Hardware peripherals API's.  Knowledge on building Linux kernel and drivers.  Requirement gathering and feasibility analysis.  Knowledge transfer to new team members. |
| Programming Languages/Operating Systems / Platforms / | C,system programming  Ubuntu 16.04, Linux,Linux os. |
| Tools | GCC compiler with freescale tool-chain, vi, kermit. |

# EMPLOYMENT

# HISTORY

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| Jul 2017 - Present | **Linkwell Telesystems Pvt. Ltd**  System Programmer |

# EDUCATION

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| 2016  2013  2010 | B.Tech ( ECE ) in 2016 from CMR College of Engineering &Technology, Hyderabad with 69.50%.  Diploma ( ECE ) in 2013 from Indur institute of engineering and technology, siddipet  with 80.58%.  10th in 2010 from Ravindra High School, siddipet with 86.50%. |

# Project

# Experience

Linkwell Telesystems Pvt. Ltd

EXPERIENCE

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| Project Title#1 | **GPIO Based (8\*8) Qwerty Matrix keypad** |
| **Platform** | (Software) Linux arm ,(Hardware) IMX6 Sololite based board |
| **Architecture Type** | Arm Cortex A9 |
| Industry | Semiconductor |
| Location | Hyderabad |
| Role | System Programmer |
| Responsibilities | * Responisibility is to implement the SHIFT ,FUNCTIONAL,SPECIAL KEY logic operations in driver for the keypad device. * Testing the logic and resolving the issues. * Keymap array arrangement in board init file for proper reporting the key to kernel input subsystem. |
| Description | This project was related to GPIO Based(8\*8) Matrix keypad interface to Arm cortex-A9 board. Myself configured the respective row and columns GPIO’s in BSP file(Board init file),Initialized the row and column keys,Gpio pins in board init file. Calculated the respective hex values for the configured keys and implemented the logic for SHIFT and FUNCTION key operation and special character in matrix keypad driver file present in linux-3.0.35 kernel and to drive the Qwerty matrix keypad. |

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| Project Title#2 | **I/O Control Driver and I2C bus gpio expander driver Implementation** |
| **Platform** | (Software) Linux arm ,(Hardware) IMX6 Sololite based board |
| **Architecture Type** | Arm Cortex- A9 |
| Industry | Semiconductor |
| Location | Hyderabad |
| Role | System Programmer |
| Responsibilities | * Responisibility is to implement the GPIO based I/O control and i2c gpio expander ( pcf8575 ) driver and testing. * Testing the Hardware modules response for the driver from Api. * Wrapper libraries implementation for the I/O drivers for enabling and disabling the pheripherals and testing. Support to the production department. * Giving of patch(shell script) to fix the librarie issues. * Providing support to the clients to develop their application with help of libraries. |
| Description | This driver basically developed for power control of all the modules. This driver was developed for pos machine in which we are accessing the GPIO pins to do the power control of all peripheral.This is compiled with linux-3.0.35 kernel. Myself gone through the schematic of the pos device and wrote the driver by accessing the various gpio pins for the respective peripherals. |

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| Project Title#3 | **Remote Health Management System (RHMS) & Device Management** |
| **Platform** | (Software) Linux arm ,(Hardware) IMX6 Sololite based board |
| **Architecture Type** | Arm Cortex- A9 |
| Industry | Semiconductor |
| Location | Hyderabad |
| Role | System Programmer |
| Responsibilities | * Responsibility is to provide the device firmware and applications to be up-to-date. * Creation and verification scripts for application and firmware patches. * Device Registertion and deregistration in RHMS server. * Documentation for RHMS client and Server Responsibilities. * Finding the Device Communication issues at production and resolving. |
| Description | Upgrading the Firmware of electronic point of sale devices (EPOS) remotely. Establishing client server. Communication between the device and server and updating the status of I/O peripherals of the device to server and  upgrade EPOS firmware field devices. My self developed RHMS and Device Management. |

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| Languages  |  |  | | --- | --- | | Speak | **English, TELUGU** | | Read | **English, TELUGU** | | Write | **English, TELUGU** | |  |  | | |  |  | | --- | --- | | Project Title#2 | **RTC-DS1307 Interfacing with Raspberry PI** | | Description | The Objective of this project is to interface RTC-DS1307 Module to BCM2835 SOC Based Board Raspberry pi. | | Industry | Semiconductor | | Project Timeline | December 2018 to february-2019 | | Team size | 2 | | Location | Hyderabad | | Role | Software Engineer | | Responsibilities | Modifications in the raspberry pi kernel BSP file  Building the custom kernel and cross compiling  writing sample test cases for testing rtc module.  Understanding of i2c Protocol format  Understanding of BCM2835 SOC data sheet | | Key skills/experience gained | C language, Linux Kernel.  Understanding of i2c subsystem in kernel  Driver code flow of RTC module | |