



Rudra Venkata Narasimha Reddy

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Summary

Dedicated professional with a strong focus on advancing expertise in embedded systems. Actively seeking engagement in dynamic work environments to further cultivate knowledge, skills, and experience. Committed to leveraging these assets for personal and organizational advancement. Poised to contribute effectively to innovative projects.

Experience

Yolotech88 Pvt. Ltd.	2023-12 - Preset
Embedded Software Engineer	Hederabad

Devar CXL Memory Expansion Project - Renesas Electronics

- Worked on WDT Driver development**
 - Developed a Watchdog Timer (WDT) driver, implementing the necessary APIs for configuration, resetting, starting, and stopping the WDT counter.
 - Implemented a comprehensive Watchdog Timer (WDT) test plan and developed driver test cases to verify the functionality of the WDT driver across various scenarios.
- Worked on integration of peripheral drivers with Uboot**
 - Integrated peripheral drivers such as SPI, WDT, UART, and Mbox with U-Boot, ensuring seamless initialization and configuration of hardware components during the boot process.
- Worked on PCIe DVSEC Driver development**
 - Developed a DVSEC driver for PCIe, enabling the implementation of vendor-specific capabilities such as enhanced security features, custom configuration options, and firmware identity, which are not covered by the standard PCIe specification.

Post-Silicon Validation of RH850 U2B16 and U2B24 Microcontrollers Project- Renesas Electronics

- Worked on Product test specifications and test patterns**
 - Created product test specifications for AC timings of the RH850 U2B16 microcontroller and developed test patterns for wafer-level testing, ensuring thorough validation and quality assurance at the early stages of production.
- Worked on Post silicon functional validation of DFA IP of RH850 U2B24 MCU**
 - Developed code for the post-silicon functional validation of the Data Flow Architecture (DFA) IP of the RH850 U2B24 microcontroller. I then tested it on the board by debugging, during which I found and addressed some hardware bugs to ensure proper functionality and performance.

DRDO	2018-5 - 2018-6
Internship student	Hyderabad

A Study on Missile Technology and its Sub Systems

Education

Vector India Pvt Ltd.	04-2023 - 11-2023
Advanced Course In Embedded Systems	Training

TU DARMSTADT	1-2021 - 3-2023
Information And Communication Engineering	Master of Science
Dropout	

K L University	06-2016 - 05-2020
Electronics And Communication Engineering	Bachelor of Technology
8.31	

Jupiter Junior College	6-2014 - 4-2016
MPC	Intermediate
94%	

SASI E/M HIGH SCHOOL	6-2013 - 5-2014
9.7GPA	SSC

Projects

VEHICLE CONTROL SYSTEM IMPLEMENTATION USING CAN PROTOCOL

The main aim of this project is to display the engine temperature, fuel percentage and control the indicators using CAN protocol with the knowledge of Embedded-C programming and Thorough understanding of the LPC2129 Architecture, General purpose I/O Interface, ADC & CAN interface, interrupts mechanism.

Skills

C Programming

Embedded C

Linux internal

OS concepts

API Design

Communication Protocols

SPI,UART,CAN,LIN

PCIe

GNU Debugger

KIEL 4

Visual Studio

Source and Version control

git, github

JIRA

Certifications

Wireless Communications for Everybody	08-2019
Coursera	

🔗 <https://www.coursera.org/account/accomplishments/records/Y8NKFD8BM54L>

Fundamentals of Network Communication	10-2019
Coursera	

🔗 <https://www.coursera.org/account/accomplishments/records/NFXDEFC924CZ>

Publications

Design of Monopole Antenna with L-shaped Slits for ISM and WIMAX Applications	03-2020
INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH	

🔗 <https://www.ijstr.org/final-print/mar2020/Design-Of-Monopole-Antenna-With-L-shaped-Slits-For-Ism-And-Wimax-Applications.pdf>

In this paper, A Monopole antenna was designed which comprises a Tower shaped radiating element in the Patch and was mounted on a conducting ground plane. A dual-band of the Monopole antenna is presented for the Wi-Max and Ism applications. The design consists of L slit and T shape monopole antenna. The simulated -22 dB isolation factor has been proposed with the resulting frequencies for WiMax at 3.3 GHz, Ism at 5.8GHz. This parametric study was made to comprehend the proposed antenna characteristics.

Design and Analysis of Circularly Polarized Dual Element MIMO Antenna with DGS for Satellite Communication, Fixed Mobile, ISM, and Radio Navigation Applications	04-2020
International Journal of Advanced Science and Technology	

🔗 <http://sersc.org/journals/index.php/IJAST/article/view/7017>

In this paper a dual element compact size Multi-Input Multi-Output (MIMO) antenna is proposed for satellite communication, Fixed mobile, ISM and Radio navigation applications, which are presented and experimentally validated. The proposed MIMO antenna has a footprint of 20mm×40mm and is fabricated on FR-4 substrate with relative permittivity of 4.4 and loss tangent value of 0.02 and having a thickness of 1.6mm. The patch contains two radiating elements with inverted L slots to achieve high isolation and resonate at lower frequency bands of fixed mobile and ISM band applications. The ground structure is iterated with full, half, step size ground structure to achieve lower operating bands and circular polarization. The performance of the antenna was evaluated in terms of reflection coefficient, radiation patterns, surface current distributions and axial ratios