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Objective

"If the dreams are big enough the facts don't count"

To establish myself as a successful person with excellence in terms of achievement, creativity and dedication and to work for an organization, which provides opportunities to learn, grow and improve the scope for implementing my skills thereby contributing to the growth of the organization.

PROFFSIONAL SUMMERY: 10+ YEARS

- Relevant 9+ Years working Experience in **Embedded Hardware design and Testing Products.**
- **Proficient in Server HW Verification and Validation** (Electrical Verification, system Stress Testing, I/o Stress Testing, Power Cycle Testing, Temperature and Humidity Testing).
- Proficient in Testing and Validation Of Arm m3 cortex, 8051 and communication channel like one wire protocol, UART, I2C ,RS232,SPI, Max485, SATA, USB3.0 host, NAND controller, Zig bee, Modbus RS485, Ethernet_Xport and USB and, Arinic 429,Mill15553.
- Experience in schematic level design, BOM creation, PCB cading and board design, fabrication.
- Component procurement supporting production house in assembly and testing and customer support.
- Exposure of complete development cycle of product right from the study of system spec, information gathering, H/W design, documentation till product support.
- Worked on live project named speed sensor Radar for Indian railways.
- Worked for SU-30 AIRCRAFT BLACK BOX (HAL). Knowledge of programming through SPS to LIVE aircraft.
- Good Knowledge in Product Validation, Integration of HW with SW, PCB Layout Guidelines, and all stages of Hardware lifecycle.

Education

- B.tech (Electronics and Telecommunication) from KSOU Mysore University.
- Diploma in electronics (Nettur technical training foundation (NTTF) 2003-2006.

Skill Set

Hardware

Hardware Platforms:	i.MX6, Omap35x, AT91RM9200, MCS 51 and its variants (P89C51RD2, AT89C51, AT89C1051, TUSB6250, AT89C5132, C8051F320), PIC18F97J60, x86
Programmable Logic:	XC95xx CPLD, Cool runner II CPLDs XC2C64, XC2C128, SpartanIII, Spartan 6
Devices used in Design:	Power Management Units like DA9053/TPS65903, Li-Ion Chargers, 16 bit Audio Codecs, Memories (DDR3 @400MHz, NAND, NOR, Mobile DDR/SDRAM, SRAM), external Ethernet Controllers from SMSC, TFT LCDs from Sharp, Kyocera, Power view and Hantronix, alphanumeric LCDs, white LED drivers, video encoder, video

	decoder, video DAC, isolation amplifiers and specialized op-amps, DC-DC converters (Isolated and non-isolated), Touch screen controllers
EDA Tools:	Cadence SPB 16.6 (Or CAD 16.6 and Allegro PCB Editor), Xilinx ISE 7.1 onwards, PADS 2007/2009 Suite, MPLAB IDE, CAM 350 Gerber viewer
Hardware Debuggers:	Lauterbach debugger for Arm Cortex-A8, Hitachi Debugging Interface, Emulator, ICD2 debugger and programmer, XDS100V2
Hardware Connectivity:	SPI, I2C, I2S, USB, SD/MMC/SDIO, CompactFlash, Ethernet, SATA, Compact Flash/PATA, LVDS, HDMI, PCI E Gen2.
Hardware Tools:	Le-croy, Agilent Infinium 9254 MSO, DDR3 BGA probes, Techtronic's DSO, DMM, and Soldering rework station, Signal Generator

Software

Architectures:	Intel x86, MCS 51, Arm Cortex-M4
Development Tools:	Kiel micro vision, Win8051IDE, GCC (SH3 and ARM),
Operating Systems:	Embedded Linux, Windows, WinCE Compact7

Working knowledge of OEM Modules

GSM/GPRS, GPS, 802.11b/g, USB-Ethernet bridges, Zigbee, Capacitive Touch Panels

Work experience.

- Working as Technical lead product development in HARMAN CONNCTED SERVICES from FEB 2016 till this date.
- Working as Sr.hardware Engineer Mobodexter software (client SanDisk India).
- Working as Sr.hardware Engineer for Grassroot (Symphony teleca).
- Working as Sr.Hardware Design Engineer in **Think circuit Technologies Pvt. Ltd.**
- Working as Embedded Engineer (Development) in **SLN Technologies Pvt. Ltd**.

PROJECTS PROFILE:

1. Nurse call system (client: Honeywell)

Developing a new Hardware up gradation to current technology with touch panel module, NFC transponder.

Initially It consists with manual switch for the nurse to operate whenever her visit to patience room. The hardware designed earlier was not compact and looks like odd device to operate. So in order to make it good product the changes has to be done with current cutting edge technology…

1	**Nurse call system**
Title/Description	**Nurse call system**
Role	Team HW
Responsibilities	Hardware design and development
Tools	Xpedition Enterprise X-ENTP VX.1.2 (32-bit)
Team Size	6
Contribution	Developing new hardware with current module interfaces.

2. **Company**: **SANDISK INDIA DEVICE DESIGN CENTRE** (Payroll OF –Mobodexter software Bangalore).

   Implementing Different Test case for new **Firmware** for different Memory Drives. Involved in CHZ, DVT, and Manual & Automation Testing of USB products.

2	**USB 2.0 & 3.0**
Description	Reliability testing on usb products
Role	HW verification & validation
Responsibilities	Board bring up & debug activity on fault drives. Lead the design documentation and product market release documentation activity
EDA Tools	OrCAD 15.7 Capture CIS, DC/Expedition Flow.
Platform	SanDisk
Team Size	3 HW, 2 SW, 40 test engineers
Contribution	• Implementing Different Test case for new **Firmware** for different Memory Drives. Involved in CHZ, DVT, and Manual & Automation Testing of USB products. • Define & setup Test Environment • Create test estimation and schedules • Defect logging and verification • Plan, design and document various performance test types (Load, Stress, Endurance tests) as well as other non-functional requirements.

3. **<u>LENOVO 520I 6 Gbits SAS/SATA to PCI Express.</u>**
   Client: LSI logic

3	**LENOVO 520I 6 Gbits SAS/SATA to PCI Express**
Description	These card support all the industry standard SAS/SATA to PCI Express
Role	HW verification & validation
Responsibilities	Finalizing the specification with marketing and requirements scoping, Board bring up & debug activity Lead the design documentation and product market release documentation activity
EDA Tools	OrCAD 15.7 Capture CIS , DC/Expedition Flow, Hyperlynx 8.1, PADS 2007,
Platform	LSI SAS2208-R ROC ASIC
Team Size	3 HW, 4 SW
Contribution	• Authored Product Requirement Specification, Hardware Requirements Specification Created High level design • Calculating power budget of the whole system • Designed 2 POC boards using PADS single handed from schematic to layout.

4. **LENOVO 520I 6 Gbits SAS/SATA to PCI Express Automation**.
   Client: LSI logic

4	**LENOVO 520I**
Title/Description	**LENOVO 520I 6 Gbits SAS/SATA to PCI Express Automation**
Role	Team HW
Responsibilities	Automation
Tools	COMMAND EXPERT NI
Team Size	2
Contribution	• Controlling all the equipment's using GPIB, USB, and ETHERNET. • Writing scripts to capture the log files with screen shot. • V&V On regulator used in board.

5. **Project Title: DOPLER EFEECT SPEED RADAR FOR INDIAN RAILWAYS.**

5	**DOPLER EFEECT SPEED RADAR**
Title/Description	**DOPLER EFEECT SPEED RADAR**
Role	Team HW
Responsibilities	Hardware design and development with arm controller lpc1768
Team Size	4
Contribution	• Hardware design and development with arm controller lpc1768. • Analyzing project requirements. • Writing the design document. • Hardware and Software integration testing. • Helping the CAD team in placement and Routing

6. **Project Title: X MAPPER (G3 PLC) TRANSFORMER MONOTERING SYSTEM**

6	**X MAPPER**
Title/Description	**X MAPPER TRANSFORMER MONOTERING SYSTEM** It consists of G3 plc controller and the main idea behind this is to know the theft of power from where exactly it is happening sitting in main substation only. The challenge was it was a 3 phase 11kv line on 1 side of the transformer and other side is 440v.So for one transformer there might be n numbers of loads connected to 440v side and this way we have to monitor and send back to 11kv side so that the data will be moved to substation. Critical challenge here is putting data from 440v to 11kv line.
Role	Team HW
Responsibilities	Hardware design and development with arm controller ,G3PLC, Teridian chip
Team Size	4
Contribution	• Hardware design and development maxim chip and Teridian chip, SIM5216 GSM AND GPRS MODEM for transmitting the data. • Analyzing project requirements. • Writing the design document. • Hardware and Software integration testing.

7. Project Title: SU-30MKI AIRCRAFT BLACK BOX

7	**SU-30MKI AIRCRAFT BLACK BOX**
Title/Description	It consist totally 3 units, namely DAU (Data auction unit), RU (Reader unit) & CIU (Central interface unit). Here each unit contains different modules like CPU, memory, communication, audio, discrete and analog cards. The main function of this black box is to download the data when it's taking off and when it lands the data should be downloading to system where the user analyses each and every sec data. More over its required when the aircraft crashes. In order to know the real cause for crash the RU unit is essential because it contains the important data and with the help of this we can analyze
Role	Team HW
Responsibilities	Hardware testing
Team Size	7
Contribution	• Hardware testing on CPU, memory, analog, discrete, motherboard backplane cards. • Analyzing Test cases defined requirements. • Writing the design document for the test verified. • Hardware and Software integration testing.

8. Remote Monitoring of Batt_Alert ,Humidity Alert System

8	**Remote Monitoring of Batt_Alert ,Humidity Alert System**
Title/Description	This project mainly used to monitor Battery condition (voltage, current, and temperature).Here 1 wire protocol is used to detect all the Battery connected in series, and the raw data(voltage, current) is detected by Bus Master and is sent remotely by GPRS based system, and in turn remote monitoring of Battery(Device) is done through web portal.
Role	Team HW
Responsibilities	Hardware testing and installation
Team Size	5
Contribution	• Hardware testing on TC65 processor, voltages sensor, current sensor, LEM module. • Hardware and Software integration testing. • Installation of product in site place.

9. Project Title: MIFARE 13.56 RFID Reader Modules

9	**MIFARE 13.56 RFID Reader Modules**
Title/Description	This Project is based on the MIFARE (ISO-14443A) protocol (MIFARE is read/write tag with 1k, 4k and 512 bit memories), it involves reading the information on the Mifare smart card, execute anti-collision sequence to select one card out of many, authenticating the card to provide secure communication between the reader and the card, then storing the information of the card in external EEPROM.
Role	Team HW
Responsibilities	Hardware testing and installation
Team Size	3
Contribution	• Hardware Testing. • Hardware and Software integration testing.

10. Project Title: RFID 125khz and 13.56mhz Modules

10	**MIFARE 13.56 RFID Reader Modules**
Title/Description	The project involves reception of encoded data from RFID Tag, decode it, retrieve the UID of the Tag, Store the UID in external EEPROM along with time and date read from RTC and provide a set of commands for interfacing with the PC application software.
Role	Team HW
Responsibilities	Hardware testing and installation
Team Size	3
Contribution	• Hardware Testing. • Analyzing project requirements. • Writing the design document. • Hardware and Software integration testing. • Helping the CAD team in placement and Routing.

11. Project Title: Prototype Testing and Board Bring-up

11	**Prototype Testing and Board Bring-up**
Title	Hardware Testing of an educational PDA
Role	Hardware Engineer
Responsibilities	Complete Hardware and Functional Testing of 16 prototypes.
Customer	UK based client
EDA Tools	Hitachi Embedded Workshop, Hitachi Debugging Interface
Hardware Platform	32bit RISC Super Architecture (SH7727)
Team Size	5
Description	Hardware Testing and Functional Testing of educational PDA prototypes 1. Hardware Testing 2. Functional Testing Functional Testing of Modules: 1. USB1.1 Host 2. USB1.1 Device 3. Micron SDRAM 4. Micron PSRAM 5. 500KSPS ADC subsystem

PERSONAL PROFILE.

Date of Birth : 06-03-1985.
Marital Status : Married.
Languages known : English, Hindi, Kannada.
Nationality : Indian.
Pass port number : G5078756
Permanent Address : #461 BASAVA NILYA
2nd cross, 3rd main,
SATTUR EXTENSION,
Rajajinagar,
Dharwad,
Karnataka.

I hereby declare that the information furnished above is true to the best of my knowledge.