NICHIN K. SREEKANTASWAMY

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PROFESSIONAL EXPERIENCE

Meta (Facebook), Menlo Park, CA, USA
Hardware System Design Engineer *Dec. 2020 – May 2025*

- Focusing on Architecture, Power and System integration of the next generation of Meta Smart Glasses.

Apple, Cupertino, CA, USA
Hardware System Design Engineer *Dec. 2020 – May 2025*

- Immersed in hardware design of the next generation of iPhones on the System EE team from early stage prototyping to product market launch. As an EE generalist, I have owned different sections of the motherboard and flexible PCBs inside the iPhone and worked on seamlessly integrating different modules. Also, collaborated closely with external contract manufacturers in Asia on FATP line setup & yield, comprehensive product testing and failure analysis.
- Expertise in system architecture, schematic design, PCB layout, rigid and flexible board DFx (Design for manufacturing, test, cost), SI/PI analysis, hosting team design reviews, prototype bring-up, validation testing, root causing and fixing system level issues (coexistence, functional, reliability, etc.) with DOE (Design of Experiments). Highly experienced in collaboration with cross functional teams (ME/PD, SW/FW, Ops, etc.) on design decisions and prototype build iterations.
- iPhone 16 & 16 Plus: Served as the charging and battery lead being directly responsible for sections of the MLB, wireless coil flex, Battery flex tail, novel BMU (Battery Management Unit) SiP design- protection and gas gauge, end-to-end power budget analysis to achieve system target of 30W wired USB-C and 25W MagSafe charging. Proud to have owned the integration, electrical characterization and testing for a novel battery adhesive that un-sticks with the application of voltage, leading to improved unit repairability. Also owned other subsystems like camera strobe LED driver, studio MEMS microphones, magnetometer and other sensors. Solved a few high impact Audio and N&V coexistence issues.
- iPhone 14 Pro & Pro Max: Involved in design of dev boards (iPhone early prototype), Lighting port + Cellular and WiFi antenna flex, wired charging, rear camera flex, Taptic module, bottom speaker and various sensors. Worked through factory test station data analysis, reliability and stress FA, RF coexistence issues, various SI/PI validation, design improvements over build cycles and post-launch field failure analysis.
- iPhone 13 & 13 Mini: Contributed to coexistence testing, EMI & thermal optimization and factory test FA.
- Gained a deep understanding of speaker design, thiele small parameter model & simulation, EQ tuning for performance enhancement & 2-way speaker crossover design during a 3-month rotation on Macbook Pro Speaker design team.

Axon, Scottsdale, AZ, USA
Electrical Engineer- Video Camera Division *Jun. 2017 - Dec. 2020*

- Spearheaded the design from scratch for the exceptional point-of-view camera on police body worn camera 'AB4' with a first of it's kind low power fiber optic 6 Gbps MIPI (CSI-2) video SERDES to stream 4K video to the main unit and audio integration with police LMR radios. Achieved a light and supple POV wearable camera design.
- Successfully launched 'AB3' by contributing to image sensor flex, MIPI video interface noise mitigation, PCBA re-design for RF noise mitigation, image sensor fixed pattern noise mitigation, USB 2.0 SI, mics and speaker characterization, GNSS performance (CEP and Time-to-First-Fix), RF shielding, PCBA DFM and component second sourcing.
- Designed the battery charging & ethernet data offload stations *Docks* from scratch for 'AB3' camera. Handled the complete architecture design, component selection, schematic capture, BOM cost management, PCB layout guidance, DFM, functional testing and debugging of finished prototype. Very familiar with USB 2.0 & 3.0, USB PD, Qualcomm Quickcharge 3.0, USB to Ethernet bridge, Buck/Boost regulators, RJ45, MDI/MII ports.
- Worked closely with the contract manufacturer in Mexico to setup the assembly line, test fixtures, and setup supply chain networks for all the required electronics, plastics, metals, labels and packaging.
- Design of battery charging and data aggregators *Docks* for 'Taser7'. Worked on Li-Po battery charging, active multi-cell balancing, battery protection circuit and implemented the charging/balancing algorithm in Embedded C. Modified the *Docks* design to pass ESD compliance IEC61000-4-2.

PUBLICATION

Gois P., Sreekantaswamy N., et al., (2016). "Development and Validation of Blue Ray, an Optical Modem for the MEDUSA class AUVs", IEEE 3rd Underwater Communications and Networking Conference, La Spezia, ITALY

INTERNSHIPS

Barn Owl LLC, Colorado Springs, CO, USA
Product Development Lead *Jun. 2016 - Aug. 2016*
Instituto Superior Tecnico, Lisbon, PORTUGAL
Research Student at DSOR (Dynamical Systems and Ocean Robotics) Laboratory *Jan. 2015 - Jun. 2015*
California Institute of Technology, Pasadena, CA, USA
Research Fellow at LIGO (Laser Interferometer Gravitational wave Observatory) Laboratory *Jun. 2014 - Aug. 2014*
Indira Gandhi Centre for Atomic Research, Kalpakkam, INDIA
Summer Research Intern at NDE (Non Destructive Evaluation) Laboratory *May 2013 - Jul. 2013*

EDUCATION

University of Pennsylvania, USA	M.S., Electrical Engineering	2017
Birla Institute of Technology and Science -Pilani, INDIA	B.E.(Hons.), Electrical and Electronics Engineering	2015