Hrvoje Škrnjug

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About me:

Results-driven Electronics Engineer and Technical Lead with 9 years of expertise in the e-mobility industry, guiding complex product development from initial proof-of-concept (PoC) through to mass production.

Currently leading a team of Embedded Hardware Engineers within the HMI & VCU department at Porsche E-Bike Performance.

Professional Experience:

Embedded Hardware Team Lead – HMI & VCU | Porsche E-Bike Performance d.o.o., Zagreb, Croatia
12/2022 - Present

- Technical lead and mentor to a team of 6 embedded hardware engineers, managing task allocation and technical delivery.
- Architected and developed a next-generation eBike VCU hardware platform, integrating LTE-M/NB-IoT, BLE, and high-precision GNSS for anti-theft tracking and precise ride-session telemetry.
- Oversee the development of an low-power, coin-cell-operated BLE HMI (Control Button Cluster).
- Engineered products to achieve full EMI/EMC compliance across global markets, including North America, EMEA, and APAC.
- Cross-functional collaboration with software, mechanical, product and system teams to meet system integration and product requirements.
- Define laboratory equipment requirements, manage budget allocations, and oversee tool sourcing.
- Manage technical communication with EMS partners and component sub-suppliers; defined and implemented End-of-Life (EOL) processes at manufacturing sites.

Keywords: Technical Leadership, Engineering Management, Budgeting, Agile & Waterfall Methodologies, Jira, RF Design, DFM, FMEA, Altium Designer, LTspice, TINA-TI, QucsStudio, Compliance & Certification.

Senior Embedded Hardware Engineer | Greyp Bikes d.o.o., Zagreb, Croatia
03/2020-12/2022

- Led the hardware development of an advanced, integrated VCU for high-end eBikes based on an i.MX6 Quad-Core CPU + STM32 Cortex-M4 architecture, featuring LTE Cat 4, Wi-Fi, BLE, GNSS, and CAN interfaces.
- Successfully integrated VCU with third-party eBike ecosystems.
- Mentored junior engineers and conducted schematic and PCB layout reviews.

Keywords: High-Speed HDI Design, DFM, Signal & Power Integrity, RF Design & Validation, Altium Designer, LTspice, TINA-TI, Jira, Git.

Embedded Hardware Engineer | Greyp Bikes d.o.o., Zagreb, Croatia
10/2017-03/2020

- Developed a wired (CAN bus) HMI Control Button Cluster.
- Designed a handlebar-mounted VCU incorporating Display and LTE/Wi-Fi/Bluetooth/GNSS/CAN bus connectivity.
- Developed an End-of-Life (EOL) automated test station for Battery Management Systems (BMS) PCBA.
- Performed hands-on hardware validation and EMI/EMC compliance testing.
- BOM Optimization.

Keywords: High-Speed HDI Design, DFM, Signal & Power Integrity, RF Design & Validation, Altium Designer, LTspice, TINA-TI, Jira, Git.

Education:

- Master of Science in Electrical Engineering, Zagreb University of Applied Sciences (TVZ) (2015 - 2017)
- Bachelor of Science in Electrical Engineering, Zagreb University of Applied Sciences (TVZ) (2013-2015)
- Undergraduate study in Electrical Engineering, Faculty of Electrical Engineering and Computing (FER) (2010-2013)
- 1st Technical School Tesla (09/2006-05/2010)