

Electrical Engineer: Systems and Sensor Design

Location: Windsor, California

About Micro-Vu

Micro-Vu designs automated 3D measuring machines. These machines use 3D software, image processing, precision mechanics and motion control, lasers, tactile probes, and 3D sensors to measure mechanical dimensions on various parts to accuracies of a micron.

Micro-Vu manufactures these machines in a highly-automated factory at its campus in Northern California. Customers purchase Micro-Vu machines to measure their parts for quality control and assurance. Cell phone manufacturers, medical device and aerospace companies, and many smaller industries use Micro-Vu machines in their facilities around the world.

Micro-Vu has 115 employees and is located in Windsor, California near the Russian River. Micro-Vu was established in 1959, and has become a leader in automated 3D industrial measurement. Engineers must be highly-motivated and passionate about bringing the best possible products and technologies to the market.

Job Summary

The applicant will be responsible for embedded hardware design of PCBs for sensor and actuator control in automated machines. Tasks may include but are not limited to:

- Design and test highly integrated analog and digital circuits.
- Schematic design, layout, routing, and DFMs and DFAs of complex PCBs.
- Full lifecycle development, including specification, documentation, design, debug, and verification of products
- Design integrated opto-electromechanical devices such as cameras, lighting, and 3D sensors for measurement
- Implementation of software cores and design and debug of specialized FPGA cells.
- Implementation of low-level embedded firmware for device and peripheral control.
- Work closely with mechanical, firmware, and software engineers on design requirements and planning.

Education

MS or BS in Electrical or Electronics Engineering, Computer Engineering, or equivalent. PhD considered.

Minimum Qualifications

- Experience and discipline designing complex circuitry and large PCBs
- Experience designing with MCUs and SoCs
- Proficiency with electronics design analysis and EDA
- Experience designing with MCUs or SoCs
- Fluency in HDLs and C language, embedded design patterns, and common pitfalls
- Problem-solving ability, quick learning, and attention to detail
- Ability to work independently as well as collaboratively in a team environment
- Self starter, being able to manage a project by oneself

Preferred Qualifications

- Experience with ARM-based MCUs and SOCs
- Experience with design for high speed signaling
- Experience designing PCBs and cabling for EMC
- Experience with designing power electronics
- Experience designing drives for electromechanical actuators such as brushless motors
- Understanding of modern control theory and applicable control algorithms
- Experience with USB, Ethernet, or PCI-E
- Experience and discipline in writing firmware
- Proficiency with programming, software development techniques, and version control