

Foundry Interface Engineer

Location: Lowell, MA

Team: CTO Organization – Foundry Technology

About Sangtera

Sangtera is building a new class of precision actuators based on microhydraulic and electrowetting technologies, enabling high-force, high-bandwidth, and fine-position control for next-generation robotics. Our platform is designed to unlock dexterous manipulation at scale—powering robotic hands, precision grippers, and compact actuation systems that combine strength with micron-level control.

We are a small, deeply technical team operating at the intersection of MEMS, microfluidics, materials, and mechatronics/manufacturing. We work with global manufacturing partners to translate breakthrough device physics into scalable production, with a long-term goal of enabling millions of robotic systems, while building a new manufacturing stack that shifts the balance of precision and throughput.

Role Overview

We are hiring a **Foundry Interface Engineer** to lead the integration of Sangtera’s microhydraulic actuator technology into large-scale manufacturing at panel and semiconductor foundries. This role sits at the critical boundary between advanced R&D and high-volume manufacturing, working directly with external foundry partners in Asia and internally with product, process, and reliability engineering.

This is not a purely coordination role. You will be deeply technical—owning process integration strategy, troubleshooting fabrication issues, and driving iteration cycles across organizations. You will translate Sangtera’s device architecture into manufacturable process flows and ensure successful transfer, scaling, and optimization at the foundry.

This role requires frequent travel to Asia and close engagement with world-class manufacturing partners.

What You Will Do

- Lead technical interface with foundry partners for process development and integration
- Coordinate foundry process development efforts between the external foundry integration team and Sangtera to ensure effective development of a manufacturing process that meets product needs
- Coordinate process splits, and experimental design for rapid learning cycles with the foundry integration team
- Participate directly in fab activities during development phases, including on-site debugging and qualification
- Drive process iteration cycles, including root-cause analysis of yield, performance, and reliability issues
- Translate Sangtera device designs into manufacturable process flows within panel or semiconductor foundries
- Support photomask design iterations
- Ensure alignment between device requirements and foundry capabilities, constraints, and design rules
- Coordinate across internal teams (product design, advanced R&D, reliability) and external foundry teams

Required Qualifications

- Bachelor's, Master's, or PhD in Electrical Engineering, Materials Science, Mechanical Engineering, or related field
- 5+ years of experience in:
 - LCD panel process integration, OR
 - MEMS process integration, OR
 - Semiconductor process integration
- Hands-on experience in cleanroom fabrication environments
- Strong understanding of MEMS processing, including:
 - dielectric deposition and etch
 - photolithography
 - cleaning processes
 - contact and metal layer formation
- Experience working directly with external foundries or manufacturing partners
- Willingness and ability to travel frequently to Asia

Preferred Qualifications

- Experience interfacing between a small company (or R&D team) and a large foundry, especially panel foundries
- Experience with:
 - polyimide materials
 - hydrophobic coatings or surface treatments
 - microfluidic MEMS systems
- Familiarity with panel-scale manufacturing (e.g., LCD or similar large-area processes)
- Experience with process integration across multi-layer, multi-physics devices

Additional Skills

- Experience with GDS layout and mask design workflows
- Python-based mask generation or process automation
- Familiarity with GDS tools (e.g., KLayout or similar)
- Strong analytical and problem-solving skills in process debugging
- Excellent communication skills for cross-functional and cross-cultural collaboration
- Working proficiency in Mandarin or Korean

Why This Role Matters

This role is central to Sangtera's transition from breakthrough device technology to scalable manufacturing. You will directly shape how our microhydraulic actuators are realized at production scale, working at the intersection of device physics, process engineering, and global manufacturing.

You will work closely with the CTO and engineering leadership to ensure that our technology is not only functional—but manufacturable, scalable, and robust.

We value rigor, curiosity, and people who like building real things. If you enjoy turning complex, coupled physical systems into robust products, we'd love to talk.