

Head of Systems Integration Engineering (NPI)

About Lidwave

Lidwave is a Jerusalem-based deep-tech startup building the sensing layer for Physical AI. We develop the world's first and only 4D coherent LiDAR-on-a-chip, using our proprietary FCR™ technology on a Silicon Photonics platform - giving machines the ability to perceive the world in four dimensions at chip scale. Our Odem™ product family targets automotive, security and industrial markets. We're building the next generation of machine perception.

The role

We are looking for a Systems Integration Engineer who will bring our ODEM sensor into production - from understanding the system at the component level today, to a repeatable, validated build. In the first phase the job will be hands-on: you'll build, bring up, calibrate and debug the coming batches of ODEM sensors yourself, while the product is still maturing, and you'll turn what you learn into the build, calibration and test process the team will run. You'll work directly with our optics physicists and our mechanical and software engineers.

You'll bring a strong engineering head and real systems understanding - you'll understand each part of the system down to the photon/electron level and its effect on the whole sensor. Within a few months, once you know the system, you'll design the jigs and test stations, build calibration and test automation with AI coding tools, and set the technical standard for the assembly and test team as it grows.

Key responsibilities

Hands-on bring-up, calibration & debug - first phase

- You'll assemble and integrate complete ODEM sensors - chip-level components, electronics, optics and optomechanics - into a sealed, working module.
- You'll do precision work in a cleanroom: optical alignment, adhesive bonding, sub-micron tolerances.
- You'll run measurements, calibration and tests through automated, software-driven sequences (range and velocity, beam pointing, channel equalization, thermal), and write the calibration procedures and the software behind them.
- You'll characterize and debug the sensor: optical-beam characterization, on-chip amplifier (SOA) output power, detector noise floors, and failure analysis along the TX/RX path - root-causing across optics, photonics, electronics, thermal, mechanics and firmware.
- You'll build the first jigs, fixtures and test stations as you go.
- You'll run final QC against spec and drive first-pass yield up.

Make it repeatable - the coming months

- You'll turn the hand-built process into a documented, repeatable one a technician can follow.
- You'll mature the jigs, fixtures and test/calibration stations from one-off to repeatable.
- You'll develop processes - wire bonding, die attach, optical alignment, and others as needed.

- You'll write the assembly procedures, work instructions and drawings, and define how each unit is tested and traced.
- You'll build internal test, calibration and data-analysis automation with AI coding tools.
- You'll set the technical standard for the assembly and test technicians who join, and mentor them on the build.

Requirements

Must have

- B.Sc. or M.Sc. in Optics/Mechanical/Electrical Engineering, or similar fields.
- 5+ years hands-on in electro-optical or optomechanical integration, bring-up or assembly - semiconductor packaging, optical-module manufacturing, or security/aerospace electro-optics.
- A passion for building with your hands, and a real grasp of how materials behave and how to build complex electro-optical modules.
- Exceptional manual dexterity and precision; comfortable at micron-level tolerances.
- Strong systems thinking - you see the whole sensor, understand why each tolerance exists, and can isolate a root cause across domains.
- Comfortable with measurement, calibration and the signal concepts behind them; able to script and analyze data in Python or MATLAB.
- Resourcefulness with AI tools - using AI coding assistants to build internal tools, scripts and automation.
- Proven ability to work independently - identify problems, troubleshoot, and find solutions without being told what to do, with the product still maturing.
- Working proficiency in English.

Nice to have

- Experience with Silicon Photonics.
- Die attach, wire bonding, fiber attach, or free-space-to-chip coupling.
- Coherent detection, LiDAR, or laser / interferometric systems.
- Startup or early-stage production ramp-up / NPI.
- Opto-mechanical and athermal assembly.
- Quality and environmental standards (ISO 9001, IPC, MIL-STD-810, ISO 16750).

Location & contact

Location: full-time, on-site, Har Hotzvim, Jerusalem.

Contact: Sari Heyman, sari@lidwave.com