

MEMS

Microelectromechanical Systems.

Tiny, smart, powerful and ubiquitous devices.

Microelectromechanical Systems (MEMS) are tiny devices that combine mechanical and electrical components. These miniature systems are usually smaller than a grain of sand and can include sensors, actuators, and other tiny parts. MEMS technology is essential in various everyday applications, from smartphones and cars to medical devices and industrial machines.

Services

Challenge Funding

Challenges grant targeted funding for both Fabrication Process and IoT Commercial Product development.

Training

FABrIC offers many options, from introductory courses to intensive training.

- > Technology for non-techies (TNT) series
- > MEMS Design and Simulation – Tool Specific
- > Advanced packaging technologies for MEMS and Smart Systems
- > Low Temperature Co-Fired Ceramic Design and Fabrication

Affordable Access to Design and Prototyping Services

Available for Canadian post-secondary research and teaching, these services require a paid subscription from CMC. It offers access to cutting-edge design tools and advanced fabrication services, both internationally and domestically, for MEMS devices.

Multi-Project Wafer (MPW)

Services from commercial vendors for prototyping through to high volume.

- > Access process design kits with foundry specific fabrication processes
- > Access design rule checking services to verify designs against foundry constraints

Foundry technologies

- > Science Foundry Piezo MEMS and Poly MEMS Processes
- > Teledyne MEMS MIDIS™ and MEMS MicraGEM-Si™ Platforms

Packaging and Assembly

A wide range of standard and customized packaging services.

Custom Fabrication

- > A network of university-based nanofabrication facilities and not-for-profit research organizations.
- > MicroFAB Access supports custom microfabrication projects at open- access facilities across Canada.



Powered by



FABrIC accelerates the development of made-in-Canada IoT products and semiconductor manufacturing processes, trains Canadian talent, strengthens supply chains, and builds connections across the Canadian semiconductor ecosystem.

FABrIC DELIVERS

- > **Challenge Funding:** Process and product development investments
- > **Revitalized Ecosystem:** Domestic strengths, international connections
- > **Training:** A pipeline of highly qualified people
- > **IP Registry and Repository:** Faster semiconductor research, development, and commercialization
- > **Quantum Readiness:** Early access to quantum technology to propel companies to the forefront
- > **Design and Prototyping Services:** Low-cost access for post-secondary institutions

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