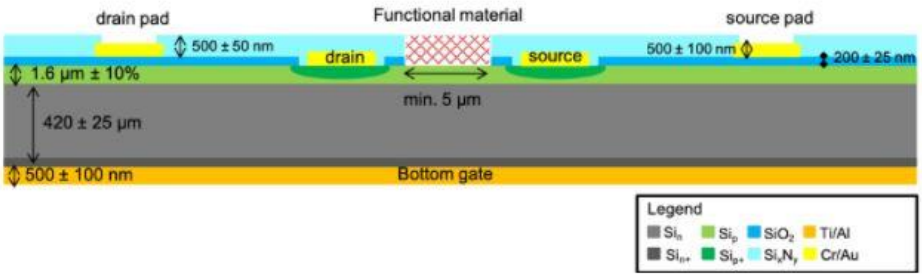
Electronic Sensor Platform (ESP)

ESP is a signal conditioning platform for converting trapped charges into a voltage signal. Charges are trapped on the surface by a functional material applied by the user, such as graphene, biomolecules, or quantum dots. The platform is useful for the implementation of solid-state high-performance detectors.



Features

- Silicon junction field effect transistors with unpassivated gate, enabling user-deposition of sensor material
- 1 metal routing layer, silicon substrate
- Up to 10 copies per design (10 x 10 mm). Available as bare die or packaged parts

Reference Designs

- Ambient gas/radiation sensor
  - Standard ceramic package
- Microfluidic sensor
  - Polymer microfluidic channels bonded to ESP platform
  - Standard fluidic ports and electrical connectors
- Design data at GitHub/cmcmicrosystems
- Reference chips available

Services

- Multi-project wafer runs for fabrication of custom designs
- Cloud design environment (includes design guide, layout template, reference designs, and simulations)
- DRC and engineering support for sensor design
- Sub-dicing
- Mounting and wire bonding in ceramic pin grid array package
- Integration with microfluidics
- Reference chips available

Applications

- Ambient gas/radiation sensor
- Multiplex detectors for different functionalized coatings

About CMC

Enabling innovation across Canada's National Design Network

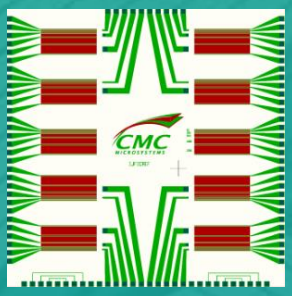
CMC Microsystems delivers a nationwide, shared platform of tools and services to Canada's micro-nano innovators, helping to create the economy of the future.

Contact Us

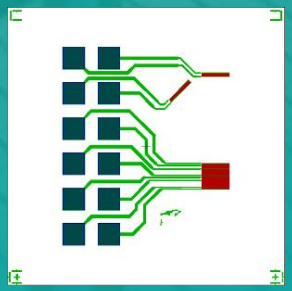
For more information please contact:

sales@cmc.ca

Ambient Sensor



Fluidic Sensor



www.CMC.ca/ESP