IoT-Demonstrator SmartAgriculture

The IoT Demonstrator for Smart Agriculture is a proof-of-concept platform that illustrates how IoT technologies integrate with environmental sensors to enable a data-driven, digital approach to agricultural management.

The Platform Enables

- Researchers and industry partners to integrate and test their novel sensors in real-world scenarios
- End users to monitor and analyze key environmental parameters such as temperature, light intensity, air humidity, and soil moisture etc. and to take actions based on the collected data.

Upcoming Enhancements

- Integration of a control system
- Edge AI capabilities
- A mobile app for real-time data visualization and remote control of systems (e.g., lighting, irrigation).
- 5G connectivity for seamless data transfer from LoRa devices to the mobile app
- Additional use cases to expand applicability

Key Application Areas

- Greenhouse automation
- Environmental monitoring
- Real-time monitoring for livestock and poultry farms
- Automated irrigation for houseplants

What You Get

- A demo application for real-time monitoring of agricultural environmental data via the LoRaWAN protocol, using three sensor sets: ST's IKS4A1 sensor board, the BME280 temperature / humidity / pressure sensor, and Seeed's Grove capacitive soil moisture sensor
- Step by step instructions on how to build the reference design with off-the-shelf components, including ST's STM32WL55JC and Nucleo-F746ZG with LRWAN-GS-HF1 module
- A computer-based user interface for real-time data visualization
- Support from CMC to customize the platform: integrate with new sensors and/or add new application features

FABrIC

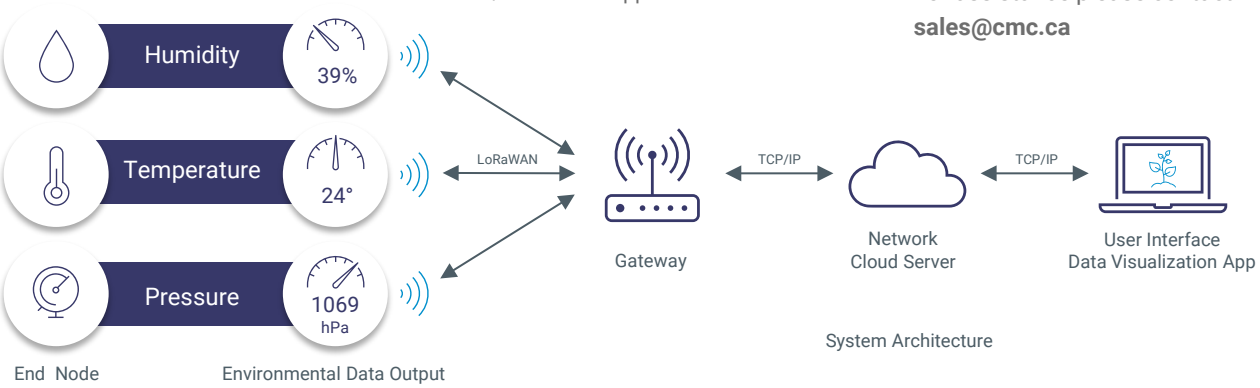
FABrIC accelerates the development of made-in-Canada IoT products and semiconductor manufacturing processes, trains Canadian talent, strengthens supply chains, and builds connections across the Canadian semiconductor ecosystem.

Powered by CMC Microsystems

Funded by the Government of Canada | Canada

Connect with Us

For assistance please contact:
sales@cmc.ca



System Architecture