

Communication Technologies

(FEIM – Future Electronics for Industry 4.0 and Medical 4.0 project)

Objectives of the Project

The project will produce new outcomes in the form of software libraries, software, and prototypes implementing state of the art communication technologies (5G, IoT and radio-optical transmission systems).

Topics covered by the Project

- Implementation of 5G-IoT communication technology for industrial physical sensors
 - Use of IoT application protocols to transfer data from sensors and systems to cloud storage
 - Cloud-based surveillance system for multi-level management of IoT devices
 - Secure low-power IQRF wireless communication technologies, IQMESH wireless network virtualization and translation between IQRF and established industrial communication protocols
 - Analog mode radio-optical transmission system based on radio over fibre technology and photonic mmW signal generation
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What will the Project Results enable?

- Industrial sensors with primary focus on environmental monitoring and pressure sensor that send data to cloud storage using 5G-IoT technologies
 - Connection of devices equipped with IQRF wireless mesh technology to standardized industrial automation protocols
 - A cloud-based monitoring solution designed to connect large number of device running at end-user locations and their remote monitoring of those devices to improve end user experience with product
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Selected Results

- A modular platform for pressure sensors equipped with IoT communication
- A low power platform for environmental sensors integrating 5G technology
- Firmware for communication gateways implementing IQRF and Modbus/BackNet
- Complete system enabling remote monitoring of fragrance units installed in public transportation vehicles as well as units installed at commercial facilities (hotels, shops, gas stations, etc.)
- A platform for transmission of millimeter wave signals for 5G networks over optical infrastructure



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Partners involved:



More about FEIM project can be found on [projects webpage](#).