

## JOIN OUR EXCLUSIVE 5-DAY HANDS-ON 5G TRAINING!

### Unlock the Future of Connectivity with Real-World 5G Applications

Are you ready to step into the future of wireless technology?

Gain practical, hands-on experience with cutting-edge 5G infrastructure and real-world applications in our immersive training program!

Work directly with a 5G Testbed deployed in an integrated agriculture farm environment and elevate your expertise.

### What You'll Experience?

- Master end-to-end 5G architecture with expert guidance
- Witness a live demonstration on a real 5G testbed
- Set up and configure 5G connectivity on your own
- Work on a 5G-based project to deepen your understanding
- Earn certification upon completion

### Who Should Attend?

- Engineers, researchers, and students eager to explore 5G/6G technology
- IoT developers and professionals seeking to leverage 5G/6G applications
- Tech enthusiasts passionate about next-generation connectivity

### Location

BaSig Wireless Laboratories India Pvt. Ltd.  
68/5, Keelaparasalur, Melakattalai, Arupathy, Tharangambadi Taluk,  
Mayiladuthurai District, Tamil Nadu - 609 309.

### Registration Details

Contact us at [prabhu@basigwireless.com](mailto:prabhu@basigwireless.com)

### Dates

Contact us to book your date for the next schedule.

### Fee

INR 10,000 + 18% GST

# Workshop Contents

## Understanding 5G Architecture

- Overview of 5G Standalone (SA) architecture
- 5G New Radio - RAN Protocol stack (PHY, MAC, RLC, PDCP, SDAP)
- Core Network Components: AMF, SMF, UPF, NRF, AUSF, NSSF, UDR, UDM, BSF, PCF

## Hands-on: End-to-End 5G Connection Setup

- Configure and activate 5G Core modules, gNB and UE
- Connect a 5G phone to the network
- Measure signal strength, bandwidth usage, and coverage analysis
- Explore how data flows through the 5G network
- Understand the UE Registration, De-registration, Service Request, and PDU Session Establishment.
- Perform latency & throughput analysis
- Authentication & call flow analysis using PCAP files
- Understand 5G protocols: GTP, NAS, HTTP2, PFCP, and NGAP

## Hands-on: 5G-Enabled IoT Applications

- Connect IoT bridge and IoT devices to the 5G network
- Real-world use cases: Weather monitoring, Livestock tracking, Irrigation control, Electric vehicle control and navigation

## Demonstration: Network Slicing

- Setup the 5G network slicing using multiple virtual machines
- Dynamically switch UEs between different user planes (UPFs) to get different speed & bandwidth according to slice configurations

## Demonstration: Multi-Access Edge Computing (MEC)

- Implement object detection using machine learning
- Distribute processing loads across worker edge nodes for efficiency

## Demonstration: 5G Service-Based Architecture

- Explore real-world API interactions with REST-based 5G services



5G Connected EVehicle



Weather Station



BaSig Wireless - Branch Office



Crop Monitoring



5-Nines Radio TX/RX



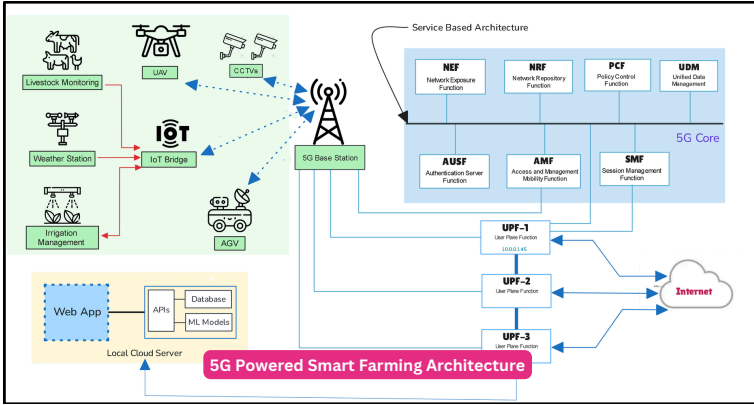
5G Connected Drone



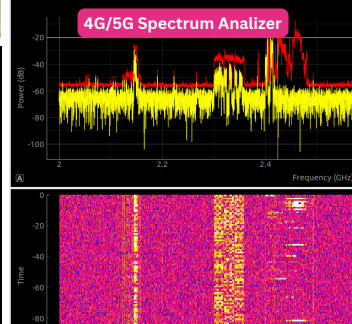
Saro Farms - Fishery Unit



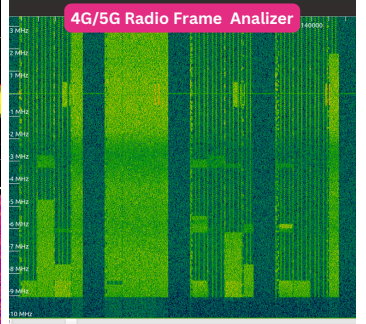
Cow Health Monitoring Sensor



5G Powered Smart Farming Architecture



4G/5G Spectrum Analyzer



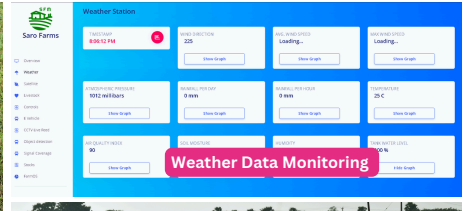
4G/5G Radio Frame Analyzer



Saro Farms - 5G Laboratory



Calf Monitoring



Weather Data Monitoring



5G IoT Bridge



Saro Farms - Banana Field



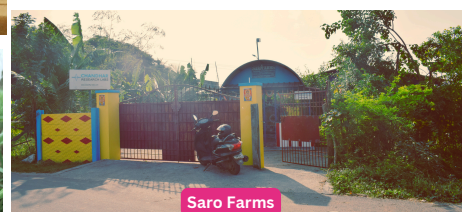
5G Operated EVehicle



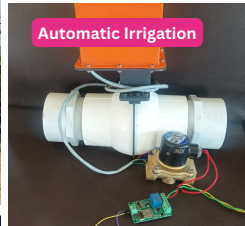
BaSig Wireless Main Office



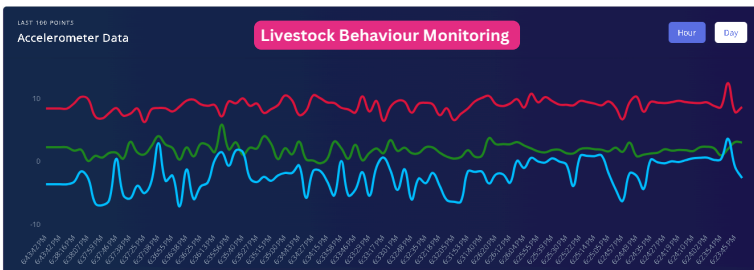
Crop Monitoring



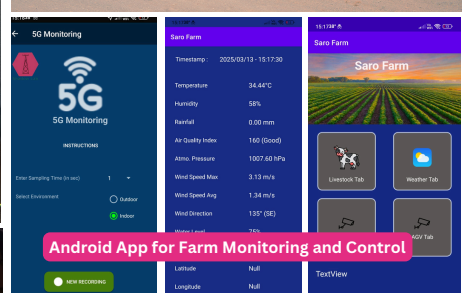
Saro Farms



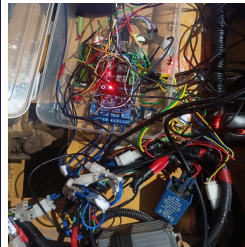
Automatic Irrigation



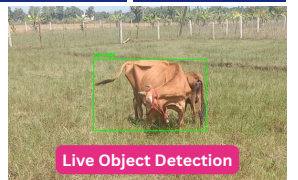
Livestock Behaviour Monitoring



Android App for Farm Monitoring and Control



Weather Sensors



Live Object Detection