

# Ursalink Significantly Improves Environment Monitoring in Building Smarter Labs in UAE



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Laboratories store research samples, bacterial cultures, blood, professional equipment and other invaluable scientific materials in many different ways, from standard refrigeration units to specialized cryogenic environments. Thus, a proper operation environment is a necessary safeguard for all laboratories since the monitoring of temperature, humidity monitoring, PIR motion and brightness will definitely help maintain and secure the environment of laboratory 24/7, providing work surface disinfection when there is no lighting and no personnel activity.

To successfully introduce an Internet of Things (IoT) system in the laboratory environment, this case is aimed at monitoring the temperature and humidity changes as well as the personnel activity detection through implementing on-premises sensors, gateways and cloud-based Ursalink Cloud system.

### CHALLENGES

- Temperature of equipment in a laboratory that requires temperature measurements, such as freezers and refrigerators is checked daily by manually reading of installed mercury thermometers
- Laboratory temperature and humidity are managed in specific areas by a separate system
- No motion detection sensor to check the presence of staff in the lab and automate switch-on for UVC lamp to disinfect the lab or work surface
- No timely alarming system

### PROJECT

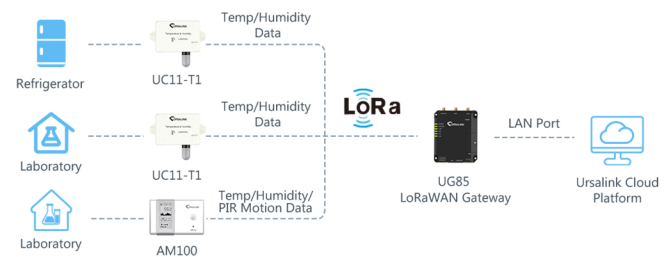
We are committed to providing smart environmental monitoring solutions for research or clinical labs to collect, analyze and report data wirelessly on demand – including alarm notification and historic records.



## SOLUTION

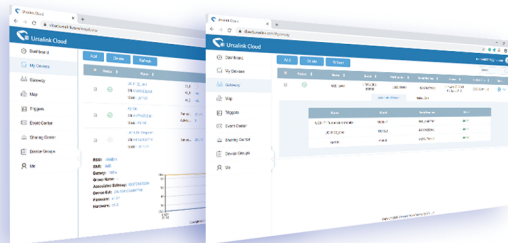
In this application, several LoRaWAN sensors were deployed in different machines and zones in the laboratory, like the UC11-T1 sensor in the deep freezers and the AM100 ambience monitoring sensors on many corners of the lab. Then they sent the data collected to the UG85 LoRa gateway that deployed in the office next-door.

The built-in battery design makes it easy to deploy sensors on any place you want. In this case, UG85 acts as a forwarder to transmit data smoothly into Ursalink Cloud platform, where you can easily check all the data from multiple sources in this centralized management platform.



## DEPLOYMENT

Data collected from each sensor were transmitted every 30 minutes to the gateway. When the temperature and humidity fell outside of the preset tolerance limitation in the Ursalink Cloud, an alert was sent by email or to the smart-phone application.



## BENEFITS

- Monitor equipment and ambient air in laboratory 24/7/365
- Sends alerts via email or App push if laboratory temperatures, humidity and light brightness are not in the proper range.
- A secure web-based data managing tool allows you to monitor, detect and review data of each sensor, logs, perform custom actions. Available from any internet access point.
- Automate control of the UVC lamp to disinfect the lab or work surface when there is zero PIR motion.

## ABOUT GWT

Gulf & World Traders (GWT), a member of the Belhoul Group was established in 1969 as the flagship of the today' s Belhoul Group with the vision of its founder Dr. Juma Khalfan Belhoul Al Falasi, to provide United Arab Emirates, and neighbouring GCC countries with the most advanced hi-tech health care related products.



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