MOBILE ROUTER FOR ODOUR DETECTOR & MONITORING SYSTEM

HIGHLIGHTS

- Lab Service Analytica is an Innovative Italian SME producer and distributor of environmental solutions complying with reference methods and standards in the field of environmental monitoring.
- For its integrated automatic odour sampling and monitoring system, the OdorPrep odour detector, Lab Service Analytica needed a reliable mobile router for data transmission and remote monitoring and management capabilities.
- The chosen device was Teltonika's RUTX11 cellular router. A trio of RUTX11 works alongside RMS to ensure OdorPrep fires on all cylinders when it comes to remote operations, thereby enhancing the value of this product.

THE CHALLENGE – THE CHALLENGE – MONITORING THE ODOUR MONITOR

In 2023, the market size of odour control systems was valued at $7.6 billion. It is projected to grow $13.17 billion by 2030, at a CAGR of 7.5%. Behind these numbers lies the unavoidable truth of all sectors and industries: smells matter.

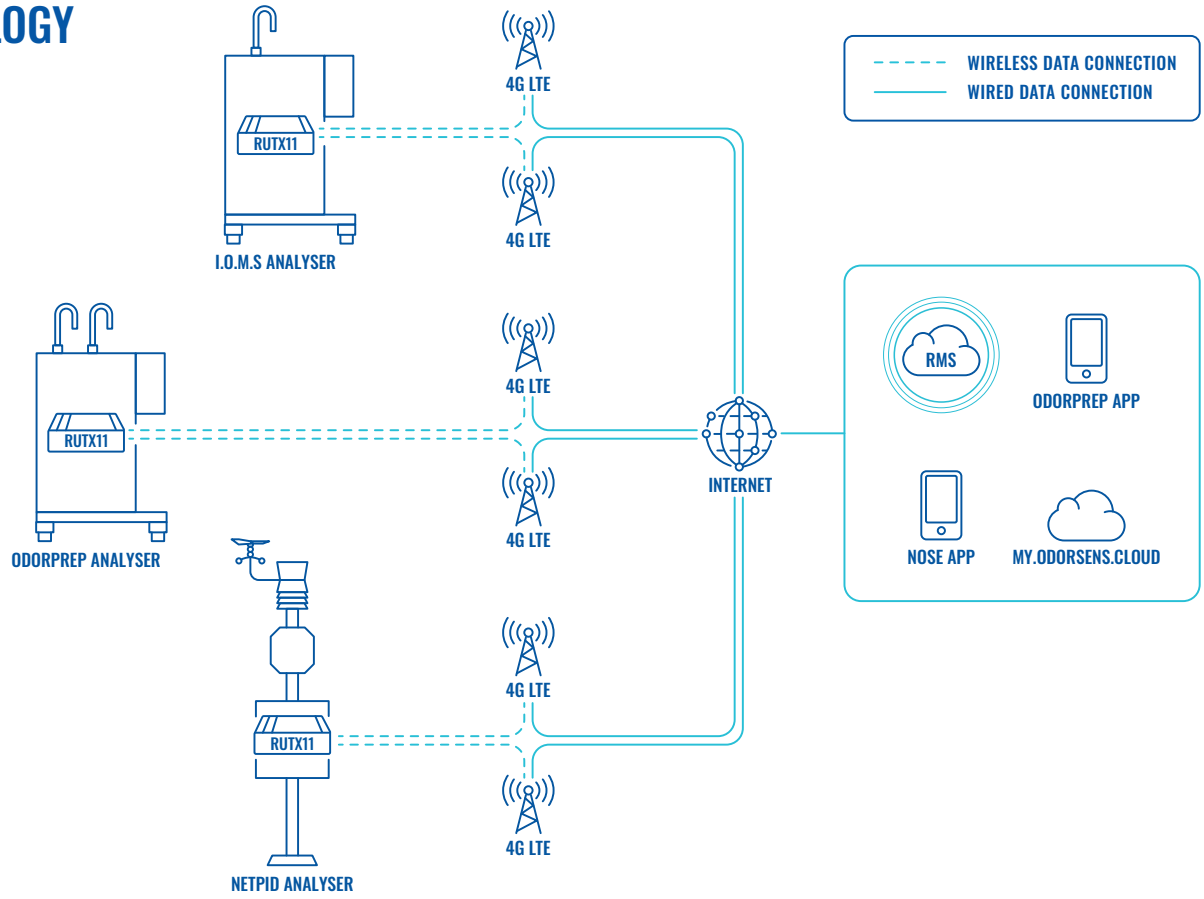
In addition to being an indicator of air quality and its health implications, odour is also an environmental parameter used to determine a variety of chemical emission-related factors in industrial environments, such as landfills, water treatment plants, mills and the food industry. In such locales, the difference between a chemically hazardous environment and one adhering to safety regulations is one of detectable odours.

Enter the OdorPrep odour detector—an integrated automatic odour sampling and monitoring system developed by our Italian partner, Lab Service Analytica. This EN13725-compliant system is automatically activated, either by instantaneous recognition of characteristic pollutants via its NetPID monitoring system, or by odour recognition via its instrumental odour monitoring system (I.O.M.S).

However, such an excellent odour control system cannot perform without reliable connectivity and remote management capabilities. The nature of this industrial solution means the OdorPrep odour detector is deployed in a variety of different locations, many of which aren't easily accessible.

In order to access and analyse the OdorPrep's data, as well as enable remote monitoring and management and minimising the risk of downtime, a reliable mobile router must be part integrated into the system itself.

TOPOLOGY



THE SOLUTION – ODOUR TO JOY

Lab Service Analytica chose our RUTX11 industrial cellular router to provide connectivity and enable remote monitoring and management capabilities in this IoT solution.

Connected to the NetPID and I.O.M.S sensors and the OdorPrep PLC via LAN are three RUTX11: one for each end device. These mobile routers transmits the data sampled by them to a dedicated cloud server via the MQTT protocol. There, the data is readily accessible to end users via the OdorPrep app, where automated notifications and reactive measures can be configured to ensure prompt responses.

The RUTX11 4G router is perfect for this solution. The connectivity it provides is LTE Cat 6, featuring cellular speeds up to 300 Mbps with carrier aggregation. The transmission to the cloud server is done wirelessly via the RUTX11's 802.11ac Wave-2 dual band Wi-Fi.

To ensure a reliable connection, this mobile router also features dual SIM cards with auto-failover, backup WAN and other switching scenarios. This means that if one of the SIM cards is interrupted for any reason, the router will automatically switch to the second SIM card, eliminating this risk of downtime.

This 4G router has a few other tricks up its sturdy aluminium sleeve. GPS support for device geolocation, Bluetooth LE, a wide range of support protocols, including DNP3 and Modbus TCP, and four RJ45 Gigabit Ethernet ports all make the RUTX11 a versatile mobile router ready for future adaptations of this IoT solution.

In addition, this cellular router can withstand operating temperatures from -40 °C to 75 °C and operating humidity from 10% to 90% (non-condensing). This makes it a reliable role player in any industrial environment, further adding to its ease of deployment.

In addition to the RUTX11, this industrial IoT solution also make great use of Teltonika's Remote Management System (RMS). Using this remote management tool, Lab Service Analytica is able to remotely monitor and manage both the fleet of RUTX11 mobile routers integrated into OdorPrep systems, and, via RMS Connect, remotely access the WebUI of other end equipment comprising the system.

Such remote functionality is invaluable in a remote solution such as this. Any routine operations, from firmware updates and password changing to providing support to end clients, can be done entirely remotely. This eliminates travel costs of engineers and enables Lab Service Analytica to provide faster and more efficient support to its end clients, enhancing the value of its product.

Don't miss out on the value offered by connectivity-powered remote capabilities—deploy the RUTX11 mobile router alongside our RMS remote management tool in your odour control systems and odour detectors.