

CELLULAR ROUTER FOR REMOTE AIR QUALITY MONITORING

HIGHLIGHTS

- ✓ [Orion SRL](#) is an Italian designer of integrated networking solutions in the sphere of environmental parameters, ensuring top-notch and continuous measurement of chemical-physical variables of industrial processes.
- ✓ For its automated and remote air quality monitoring solution, Orion needed a cellular router with FTP support to establish remote access and management capabilities.
- ✓ It chose the Teltonika Networks RUT241 cellular router, relying on its uninterrupted connectivity via automatic WAN failover.

THE CHALLENGE – AIR QUALITY ASSURANCE

Human innovation isn't free – it comes at the cost of pollution that harms the quality of our air. To offset this cost, air quality monitoring is a sector that is gaining momentum in recent years. It [collected](#) \$4.7 billion in 2022 and is forecasted to reach a market size of \$8.6 billion in 2032, at a CAGR of 6.4%.

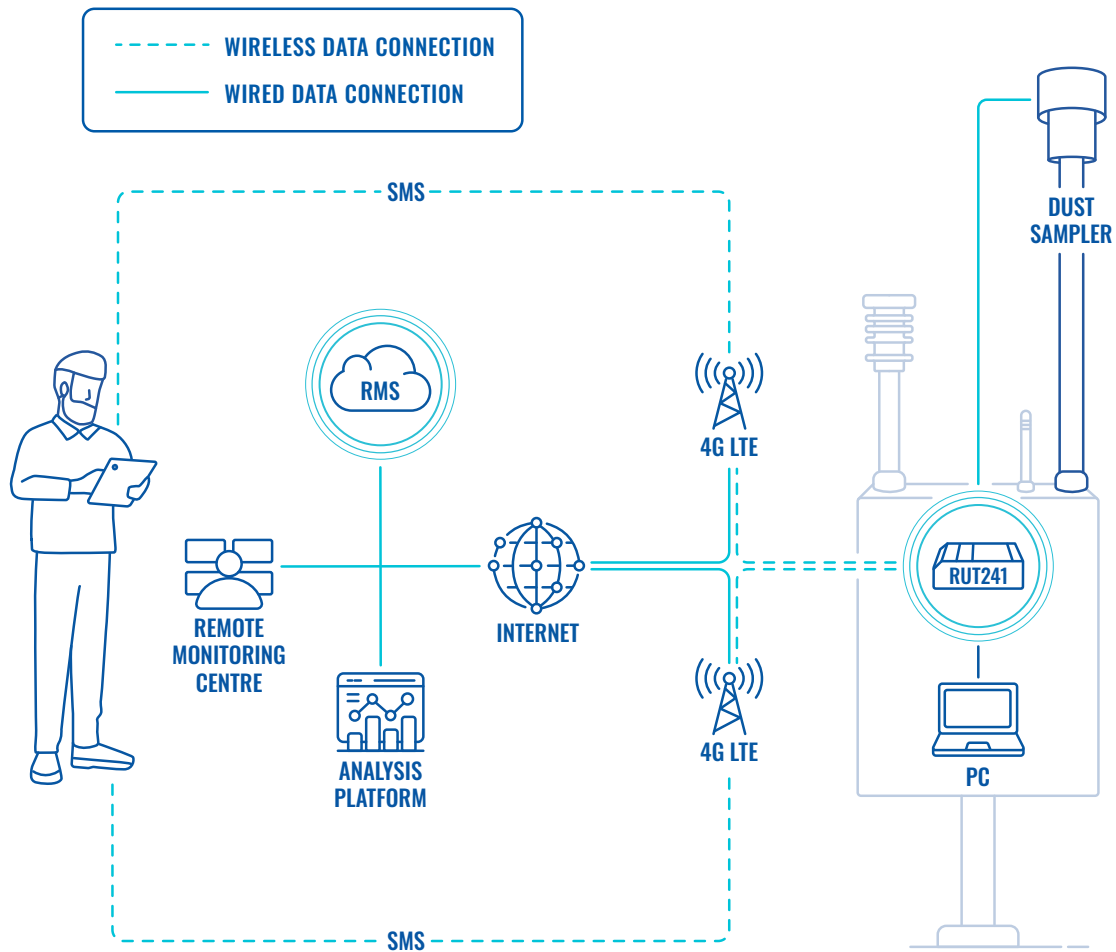
Our partners at Orion take part in this growth with their effective air quality monitoring solution. Using state-of-the-art analysis equipment and capitalising on automation, their customisable mobile and stationary air quality monitors ensure strict and optimal adherence to air pollution standards.

However, excellent air quality monitors by themselves are not enough to compete in an increasingly saturated market, especially when the European Union had decreed the neutralisation of gas emissions by 2050.

This is why Orion chose to implement remote access and management capabilities in its solution. Remote management optimises all facets of the air quality solution's operation, minimises costs, and ultimately offers a higher-value product to its end clients.

Remote management capabilities aren't free either, though. They demand uninterrupted connectivity. In other words, Orion needed to include an industrial cellular router in its air quality monitor setup. After searching for the best device for the job, they turned to Teltonika Networks.

TOPOLOGY



THE SOLUTION – CELLULAR ROUTER FOR REMOTE MANAGEMENT

Orion chose the Teltonika Networks RUT241 cellular router for its automated and remote air quality monitoring solution. In each deployed air quality monitor, the router is connected via Ethernet to a dust sampler, which measures exposure to dust particles in the solution’s vicinity.

Data from the dust samplers is then sent from this 4G router to Orion’s cloud analytics platform and monitoring centre, where the company can ensure operations are running smoothly. The data is collected and transmitted at LTE Cat 4 speeds using the FTP protocol – a staple of computer file transfer.

In addition, the FTP protocol allows Orion to send SMS messages to its networking solution to check its status at any given time and receive real-time updates. This eliminates the need for its engineers to travel to the solution’s location and access the solution in person – and all associated costs.

Integral for any remote management solution is connection reliability, and Orion’s air quality monitor is no exception. The RUT241 cellular router is equipped with automatic WAN failover, which switches to an available backup connection in case of disruption, thereby maintaining stable connectivity.

This cellular router’s sturdy aluminium housing and resistance to extreme temperatures from -40 °C to 75 °C mean that no industrial environment is too much for it to handle.

Orion knew that the right cellular router was paramount for its solution’s remote access and management capabilities. With the RUT241, they can rest assured.

