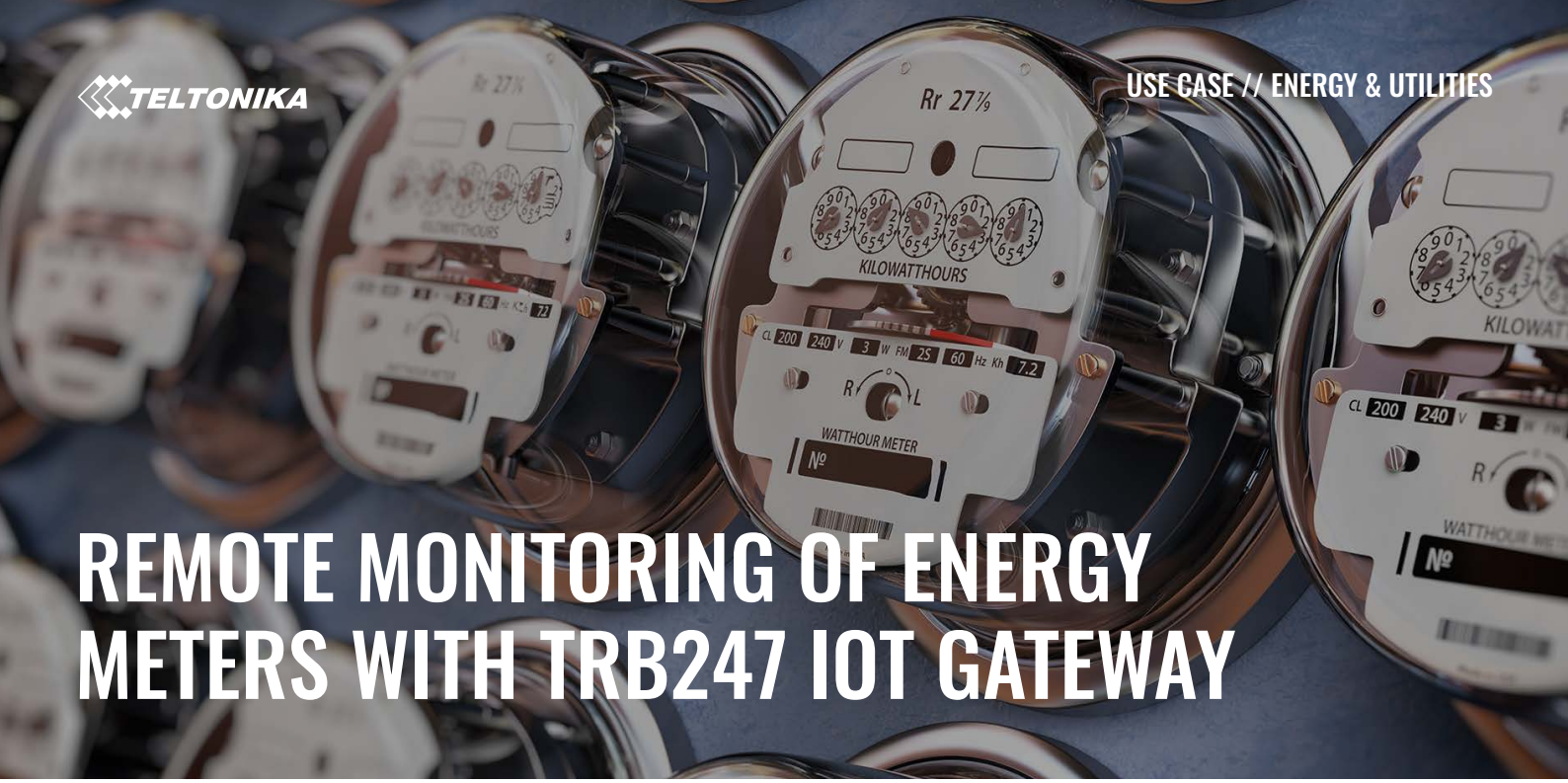


REMOTE MONITORING OF ENERGY METERS WITH TRB247 IOT GATEWAY

HIGHLIGHTS

- The new TRB247 industrial Cat 1 bis gateway provides real-time data and peak efficiency for energy companies, bridging legacy systems with modern cloud platforms using interfaces like I/Os, RS232, RS485, and Ethernet.
- LTE Cat 1 bis connectivity with dual SIM and eSIM failover ensures a reliable and uninterrupted network signal in any location.
- Native support for industrial protocols like Modbus, DNP3, and DLMS enables quick integration and efficient M2M communication. Data-To-Server feature allows data from industrial equipment to be sent directly to cloud platforms via protocols like MQTT and HTTPS.
- Compatibility with Teltonika's Remote Management System (RMS) simplifies setup and allows for continuous remote monitoring and alerts.

THE CHALLENGE – CONNECTING ENERGY METERS WITHOUT COMPROMISE

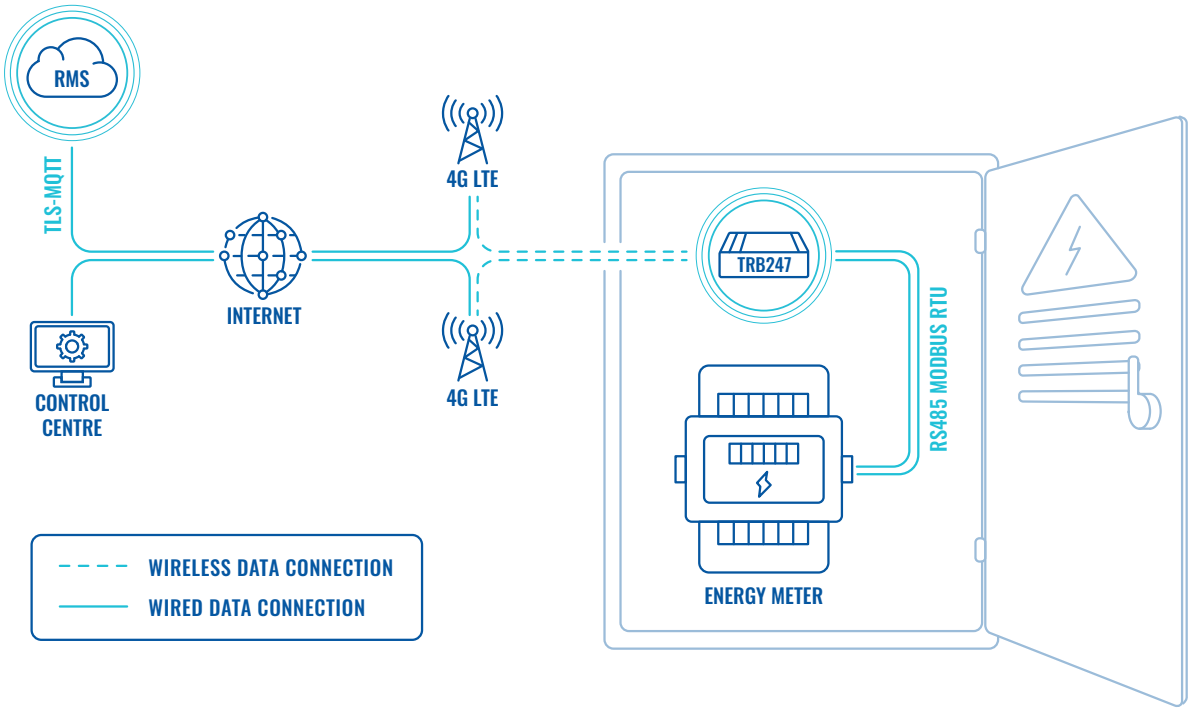
In the modern energy landscape, utility companies are leaning on smart energy meters more than ever to squeeze out every drop of efficiency. These clever devices let them get precise measurements of electricity flow, manage energy consumption, and proactively tackle maintenance issues to save costs and keep things running smoothly.

But here's the rub: all that theoretical promise can go bust without the right networking device. For these meters to be a true asset, the device connecting them to the control centre must tick a few crucial boxes: it needs to support industrial protocols, offer robust connectivity, and enable seamless remote monitoring.

The challenge is real, especially when you consider the various types of utilities machinery and metering infrastructures out there. The ability to communicate between machines (M2M) is entirely dependent on the right industrial protocols and interfaces.

Then, you have the issue of location. Some meters are tucked away in rural areas where reliable wired connectivity is more of a dream than a reality – and a costly one at that. To get that essential real-time data flowing for remote monitoring, you need a rock-solid, uninterrupted network signal. The solution has to be tough enough to handle anything the field throws at it while being smart enough to manage it all from afar.

TOPOLOGY



THE SOLUTION – THE TRB247 IOT GATEWAY TICKS ALL THE BOXES

When it comes to remote energy meter monitoring, the TRB247 industrial IoT gateway is the perfect device. It's designed to tackle the connectivity and management challenges head-on, ensuring IoT solutions run without a hitch. This compact powerhouse doesn't just connect devices; it makes them smarter and more manageable.

The TRB247's versatility is a game-changer, boasting a variety of interfaces, including RS232, RS485, and Ethernet. In this scenario, it connects to the energy meter via RS485, providing a robust network connection for the metering infrastructure.

But its true genius lies in its native support for multiple industrial protocols like DNP3, DLMS, and Modbus. This means TRB247 IoT Gateway can integrate seamlessly with different devices, enabling rapid, real-time data decryption and exchange. Plus, its Data-To-Server feature allows you to effortlessly collect and send data directly to cloud platforms using protocols like MQTT or HTTPS, bypassing the need for complicated setups.

Connectivity is another area where the TRB247 IoT gateway shines. It features LTE Cat 1 bis with dual SIM and eSIM capabilities, a feature that is essential for remote locations where a stable signal is often a luxury.

On a regular day, it uses your main mobile SIM card, but if that connection falters – and in rural areas, it will – the TRB247 can automatically switch between up to seven different eSIM profiles, guaranteeing a truly uninterrupted Internet connection. This advanced failover provides far more resilience and is the backbone of the entire remote monitoring and management solution.

For a truly hassle-free experience, the TRB247 IoT gatweway integrates with Teltonika's Remote Management System (RMS). RMS provides a centralised dashboard for device remote access, control, and monitoring.

With RMS, you can continuously monitor both the TRB247 Cat 1 bis gateway and any end devices connected to it, simplifying setup processes, reducing operational costs, and even managing things like firmware updates or troubleshooting remotely. You can even set up predefined alarms to be sent whenever energy values go outside the norm, allowing for a quick response to potential issues without ever leaving your desk.

The TRB247 isn't just a networking device; it's a future-proof, all-in-one edge solution. Its rugged aluminium housing and wide operating temperature range ensure it can handle the toughest industrial environments, making it a reliable choice for any deployment.

By processing data locally and ensuring secure remote access with features like VPNs and firewalls, it reduces risks and ensures maximum uptime. This combination of robust connectivity, intelligent features, and simplified management makes the TRB247 IoT gateway the smart choice for bridging your field equipment to the cloud.