COMPACT 5G ROUTER FOR IN-VEHICLE CONNECTIVITY

HIGHLIGHTS

- Besides cooking appliances, a food truck is filled with network-dependent equipment that needs reliable network connectivity.

- To address challenges like these, Teltonika's RUTM30 5G router and TSW101 automotive switch were chosen.

- The compact 5G router provides robust and secure 5G connectivity while the switch is the one to provide it to all in-vehicle equipment, like CCTV cameras and POS terminals, while keeping them powered with PoE+.

THE CHALLENGE – RELIABLE CONNECTIVITY ON THE ROAD

The food truck industry is projected to grow from $19.4 billion in 2022 to a forecasted $26.3 billion by 2027, and it's no secret why – it's an excellent way to bring locals great food and a unique eating experience right next to the side of the road. This industry also allows truck owners to experiment with different locations and attract new customers for further business development.
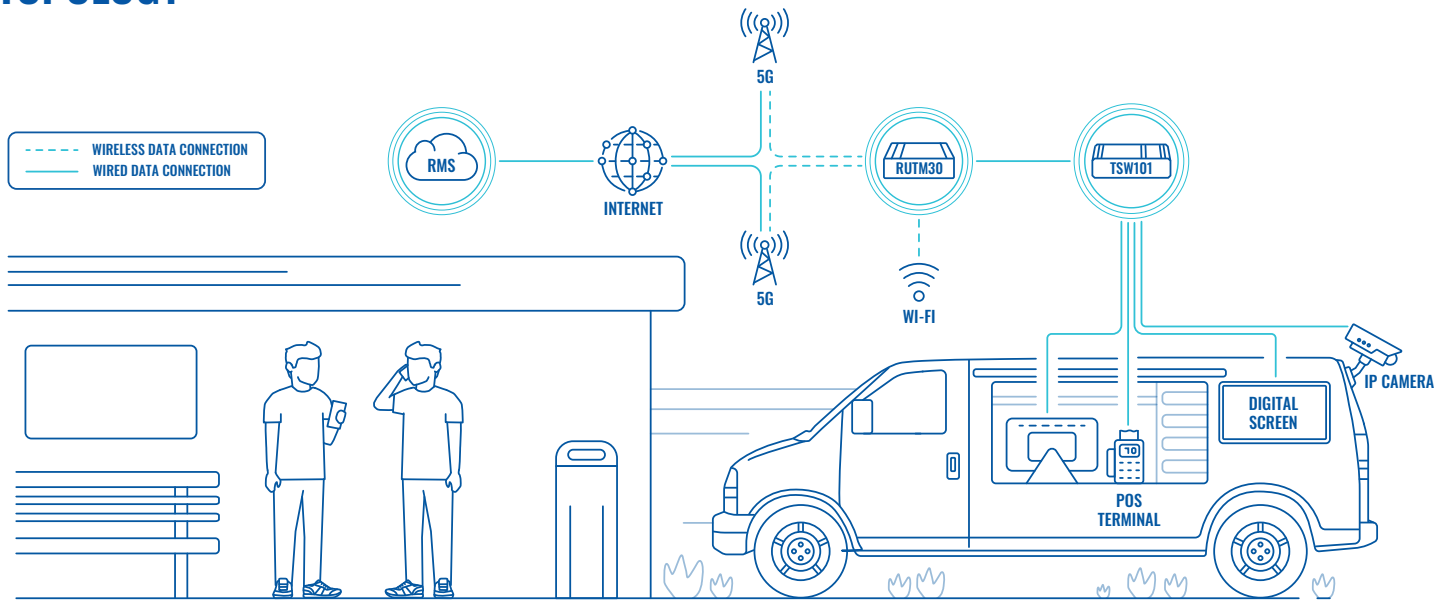
The diner-on-wheels concept doesn't require a ton of investing, making it an excellent food-related venture. However, mobility is not without some challenges, starting with the equipment.

A good cook isn't enough for the food truck to be successful. It requires equipment that ensures efficient working conditions, such as refrigerators, stoves, and ventilators. Additionally, CCTV cameras, POS terminals, computers, and in some cases – digital menu-advertising screens.

All of these network-dependent devices from the technical part of the truck rely on a robust and uninterrupted Internet connection, which is hard to maintain since the food truck wouldn't be called a food truck if it weren't constantly on the go.

It's also worth mentioning that the average food truck, like most vehicles, can power devices with up to 12V or 24V, but only automotive-adaptive devices that have PoE+ feature can distribute power to other appliances without having to install additional power converters.

TOPOLOGY

THE SOLUTION – 5G ROUTER FOR IN-VEHICLE NETWORKING

Teltonika's RUTM30 5G router marks a significant leap in mobile connectivity for commercial vehicles operating in numerous environments. This compact dual SIM router is built to support high-speed, data-intensive applications, making it the perfect solution for mobile businesses such as food trucks, public service vans, and retail vehicles.

Space is a valuable commodity in mobile environments such as service trucks, where every millimetre matters. With dimensions of just 100 × 30 × 93.8 mm and weighing only 319 g, this 5G router is engineered for compact deployment without sacrificing performance. Its small footprint makes it easy to install in tight spaces, helping to maintain a clean and organised setup by reducing cable clutter.

The RUTM30 is deployed to serve as the core connectivity device within a food truck. It connects to the internet via ultra-fast 5G network and offers seamless data redundancy through dual SIM cards with auto-failover functionality, ensuring uninterrupted service even in areas with weak coverage. Thanks to its eSIM™ SGP.22 support, connectivity management is simplified and streamlined, allowing the user to manage profiles without intervention from the service provider.

Inside the vehicle, the 5G router performs two distinct roles: it provides robust Wi-Fi access for wireless devices and establishes a separate wired connection via Gigabit Ethernet to the TSW101 automotive switch.

The switch then delivers stable and high-throughput wired connections to critical devices, including an IP camera, digital display screen, and POS terminal. These connections enable live video monitoring, real-time payment processing, and dynamic content delivery – all supported by a secure, always-on network.

In areas with limited 5G coverage, the router's support for 4G LTE Cat 19 ensures consistent, high-quality connectivity without service interruptions.

You can never be too secure, which is why the RUTM30 is equipped with a comprehensive suite of security features to ensure safe and reliable data transmission. It supports a wide range of VPN protocols, including IPsec, ZeroTier, and L2TP, enabling encrypted communication across various network setups. Moreover, these options provide flexibility to meet diverse security policies and operational requirements.

Furthermore, the solution is fully integrated with Teltonika's Remote Management System (RMS), allowing remote monitoring, configuration, and troubleshooting. As a result, this integration minimises downtime and substantially reduces the need for on-site maintenance.

Whether parked at a busy transit station or moving between locations, this IoT solution guarantees reliable and secure connectivity, unlocking new levels of service efficiency, operational transparency, and customer experience for mobile businesses.

All these advantages and more make the RUTM30 an outstanding choice for IoT solutions requiring a compact yet powerful 5G device. Contact us and order your sample!