WI-FI ROUTER FOR FORMULA 1 GRAND PRIX OPERATIONAL EFFICIENCY

HIGHLIGHTS

- Fiberland Srls is a wireless Internet service provider (WISP) that focuses on telecommunications and quality Internet services, chosen to distribute network connectivity for a point-of-sale (POS) system used in Italy's Formula 1 Grand Prix.
- The Formula 1 Grand Prix, hosting over 300,000 fans eager to watch the race, must ensure that each of the event's POS terminals maintains superb network connectivity for smooth transactions and operational efficiency.
- Our RUTX12 Wi-Fi router, along with a Starlink router acting as a backup, ensures the best connectivity for each POS terminal. Additionally, Fiberland has employed RMS for the remote management of both its Wi-Fi routers and POS terminals.

THE CHALLENGE – CROWDS CONGEST CONNECTIVITY

The Formula 1 Grand Prix stands as one of the world's most renowned competitions, consistently drawing immense crowds. This was particularly evident during the 2023 Italian race, which captivated over 300,000 fans.

With this amount of people, every nook and cranny got filled to the brim with people wanting to not only watch the race but check out the 25 shops for beverages, snacks, and merchandise.

Considering the ratio between the number of attendees and shops, the operational efficiency of the Formula 1 Grand Prix's POS system at these shops must not disappoint. After all, the speed of the POS system and its terminals cannot compromise the speeds of the Formula 1 Grand Prix – the event must have representational consistency!

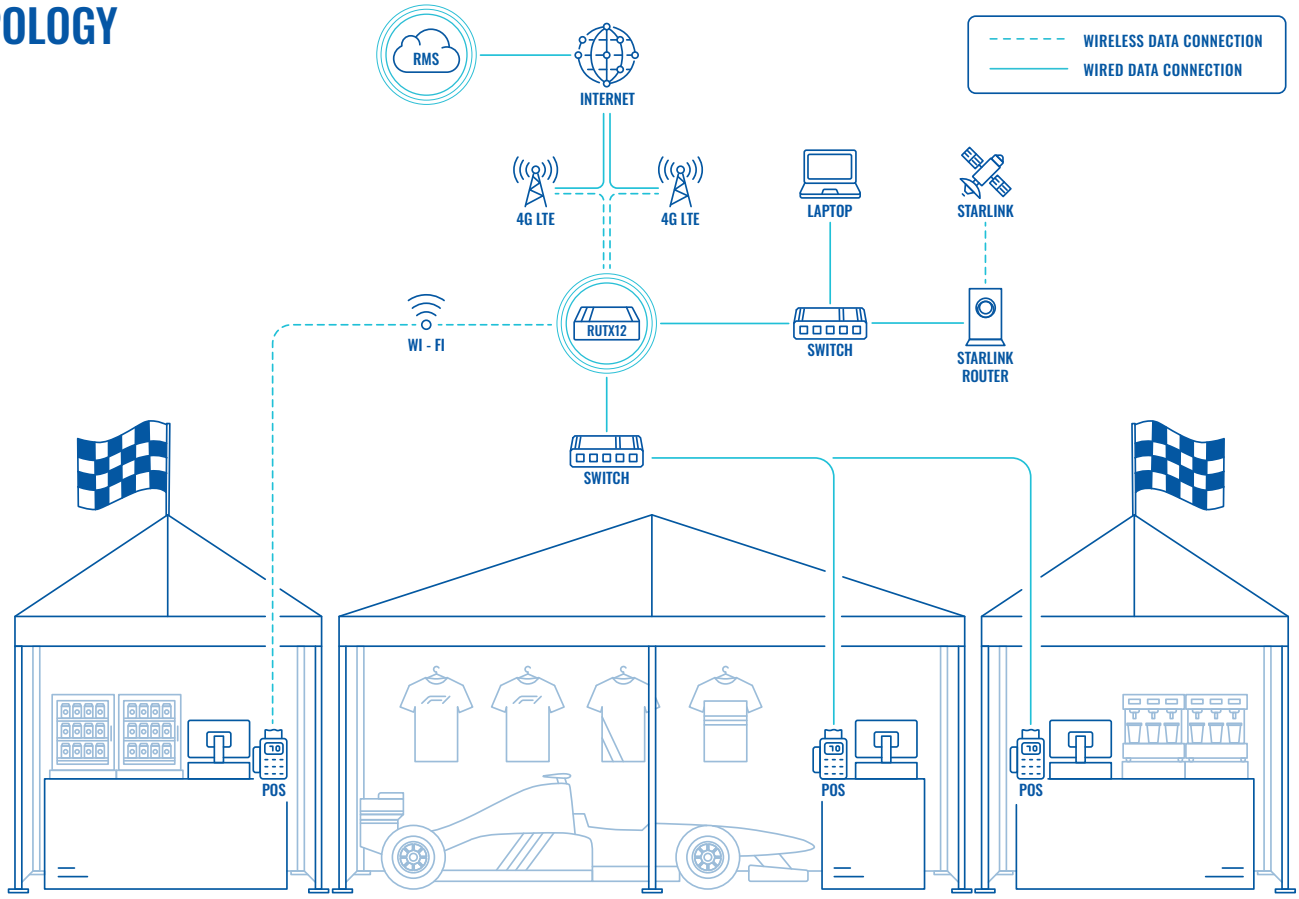
Another challenge lies in maintaining stable network connectivity in the POS terminals. Despite the Formula 1 Grand Prix premises being equipped with connectivity, the sheer number of attendees can be a huge obstacle to exceptional shop operations, as most of them are likely to use it for data-heavy activities, like social media or web browsing.

This high number of attendees using Formula's Internet can cause network congestion and slow down the network's speeds, negatively impacting the performance of POS terminals.

To solve this problem, moving the entire POS system serving all terminals to a separate network makes the most sense. However, the layout of the Grand Prix venue makes this difficult. With 25 shops spread out over a large area, using cable connections might not always work due to the physical distance between each shop.

Addressing these challenges, Fiberland Srls stepped in with a networking solution using our RUTX12 Wi-Fi router that upholds the high standards of operational efficiency synonymous with the Formula 1 Grand Prix.

TOPOLOGY



THE SOLUTION – UNCLOGGING CONGESTION WITH A WI-FI ROUTER

The Teltonika Networks RUTX12 Wi-Fi router, complemented by a Starlink router as a backup, was selected for multiple well-founded reasons. The RUTX12 router comes packed with many measures to ensure you get the best network connectivity possible – no matter the location or network traffic.

A key feature of the RUTX12 Wi-Fi router is its failover functionality. It allows the device to seamlessly switch between different WAN sources if the primary Internet connection fails, ensuring a continuous, uninterrupted signal. This is crucial for maintaining a reliable network for the entire POS system, which is united via Ethernet connection or Wi-Fi. Additionally, the Wi-Fi router includes two SIM modules, allowing the use of SIM cards from different ISPs simultaneously.

By utilising this dual connection capability, Fiberland Srls enabled yet another superb connectivity measure. You see, if one connection breaks or buffers, the other SIM card instantly covers the first one, maintaining stable cellular WAN connectivity for the POS terminals.

The ability to use two SIM cards also facilitates employing carrier aggregation to boost the router's overall bandwidth. This feature was particularly beneficial for POS terminal transactions, as the combination of all these connectivity measures ensured they could achieve utmost speed, robustness, and great operational efficiency.

The RUTX12 Wi-Fi router was connected to a Starlink router to provide connectivity over the solution as a backup when RUTX12 would stop receiving signals from ISPs. With superb Starlink speeds, this setup left no room for downtime or delays at the event's POS terminals.

To ensure the maintenance of each Wi-Fi router, Fiberlands Srls employed the Teltonika Networks Remote Management System (RMS). The RMS Management service enables remote management capabilities, allowing you to apply multi-configurations and check device status.

With the RMS Connect service, RMS became the intermediary between the Wi-Fi routers and POS terminals, as these services allowed reaching and, if needed, configuring or controlling third-party devices. RMS not only helped guarantee the necessary connection for POS terminals but empowered Fiberland Srls to overview the entire network infrastructure remotely, better known as simply.