MULTI-USER MIMO 5G ROUTER FOR POP-UP AUTO SHOWS

HIGHLIGHTS

✓ The larger the event, the higher its network complexity. Such is the case of pop-up auto shows, where hundreds of end devices demand reliable connectivity with high throughput, low latency, and robust wireless capabilities supporting all devices at once.

✓ Delivering on all axes and more is the RUTC50 5G router, featuring a dual-band Wi-Fi 6 (802.11ax) with multi-user MIMO technology to support up to 512 users, and high processing power.

✓ This dual-SIM 5G cellular router is also equipped with cellular speeds of up to 3.4 Gbps, five Gigabit RJ45 ports, auto-failover and GNSS functionality, and a wide range of both VPN and industrial protocol support.

THE CHALLENGE – BIGGER, BETTER, MORE COMPLEX

A successful event is a cause for celebration, but also brings with it new challenges to the follow-up event. Success gives funds and incentives for the next event to be larger than before and make use of more advanced technology. Regional-level events can turn to national, and those can go international.

As everything scales up, so does the complexity of establishing the event's connectivity.

Take a pop-up auto show, for example. The staff needs wireless connectivity for the devices they work on, such as laptops and tablets used for attendee test drive registration. POS systems in merchandise stands also need connectivity, as do the informational tablets near the cars.

We're not quite done yet. Digital signage and a people-counting sensor are needed for marketing and analytics, while CCTV cameras are needed for the event's security – all of which require an Internet connection for real-time monitoring and remote management. If the event is international, robust guest Wi-Fi is essentially a requirement.

If you've been keeping a tally of all connected devices, you must have long run out of fingers by now.

The total number of connected devices demands the Internet source to not only be reliable and ensure fast data transfer, but also capable of wirelessly supporting this many devices at once. This isn't merely a question of 5G vs. LTE, but of wireless capabilities. Fortunately, Teltonika has just the ideal 5G router for the job.

TOPOLOGY
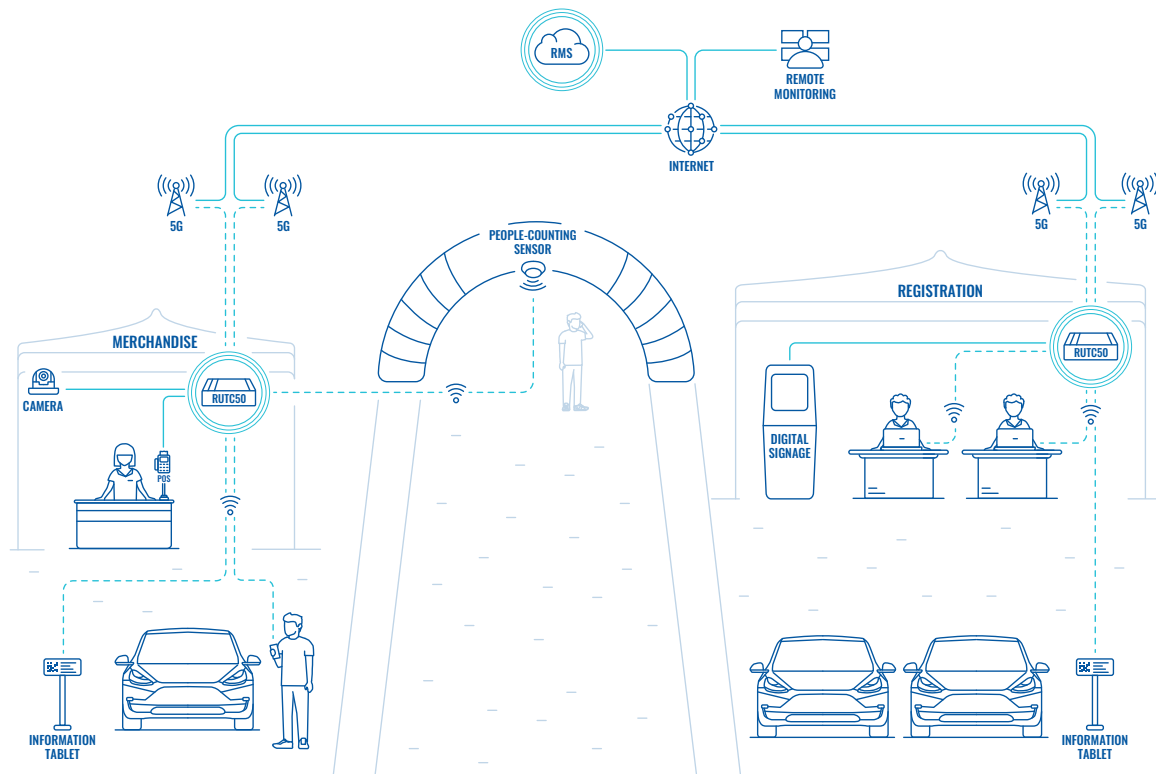
THE SOLUTION – THE RUTC50 5G CELLULAR ROUTER

Perfect for this industrial IoT solution is Teltonika's RUTC50 5G router – a true powerhouse of 5G Wi-Fi capabilities.

A pair of RUTC50 devices are installed: one in the registration booth, where it is connected to digital signs via one of its five Gigabit RJ45 ports, and another is in the merchandise booth, where it is connected to the CCTV cameras and POS systems, also via RJ45.

Both 5G routers are then wirelessly connected to all other end devices in the show, each to support up to 512 end users. These include staff laptops and tablets, informational tablets near each car showcased in the event, a people-counting sensor at the entrance, and all guest attendees. And, of course, a cloud data analytics server to boot – all without breaking a sweat!

Encompassing this multi-user network, the RUTC50 features cellular speeds of up to 3.4 Gbps and dual-band Wi-Fi 6 capabilities, meaning it operates in the 2.4 GHz and 5 GHz bands. On top of that, its 5G Wi-Fi is equipped with multi-user MIMO technology, allowing for multipath wireless communication by leveraging multiple users as transmission resources.

If this is somehow not quite enough for you, including a 5G antenna such as Teltonika's combo MIMO 5G antenna, will only improve this recipe for wireless greatness.

The RUTC50 is no one-trick pony, but a true powerhouse. Featuring a 1.3 GHz, dual-core ARM Cortex-A53 CPU, this device supports both SA and NSA 5G architectures and is backward compatible with 4G (Cat 20) and 3G, ensuring that throughput is high and latency low.

The stellar connectivity provided by this dual-SIM 5G router is safeguarded by its network redundancy features, including auto-failover, backup WAN, and other switching scenarios.

Beyond that, the RUTC50 5G router also safeguards the connection with a suite of cybersecurity features, including an integrated firewall, multiple authentication and encryption methods, and support of staple industrial VPNs such as ZeroTier, WireGuard, Stunnel, IPsec, and more.

The 5G router also brings GNSS for precise location tracking to the table, as well as support of a wide range of key industrial protocols, including Modbus TCP, MQTT, SMNP, and many others.

Of course, when your industrial IoT solution is comprised of so many devices, remote management and monitoring capabilities become paramount. The RUTC50 is fully compatible with Teltonika's Remote Management System (RMS), allowing for remote firmware updates and troubleshooting, configurable custom alerts and automation, and so, so much more!

No matter how complex your multi-user network gets, the RUTC50 5G router is ready to keep things running smooth for all devices. All you have to do is ask.