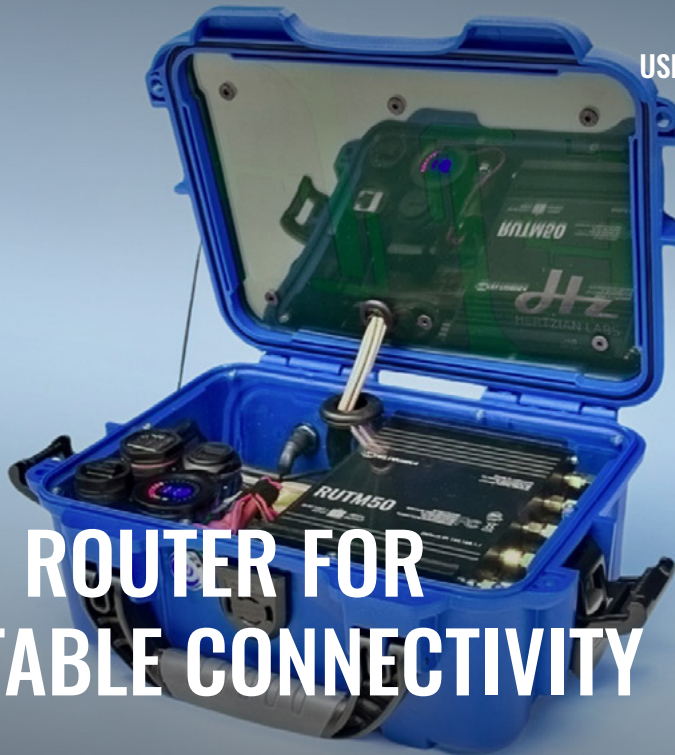




THE RUTM50 5G ROUTER FOR SEAMLESS PORTABLE CONNECTIVITY

HIGHLIGHTS

- ✓ [Hertzian Labs](#) is a US-based innovator in antenna and wireless technologies, providing specialised and emerging markets with high-performance connectivity solutions.
- ✓ To support their network in a box portable and instantly deployable system, Hertzian Labs required a robust network device capable of delivering uninterrupted connectivity.
- ✓ The [RUTM50 5G router](#) was selected for its dual SIM feature, automatic failover, compact form factor, and proven resilience to environmental conditions. It was paired with Teltonika's [BAT120 – uninterruptible power supply](#), able to power the router for up to 6 hours.

THE CHALLENGE – UNPLANNED POWER OUTAGES

In today's digital landscape, unplanned power outages threaten business continuity and operational stability. In fact, by 2022 over two-thirds of such incidents have costed companies more than [\\$100,000 each](#). For critical sectors such as finance, healthcare, and energy, even brief disruptions can halt operations and significantly affect supply chains.

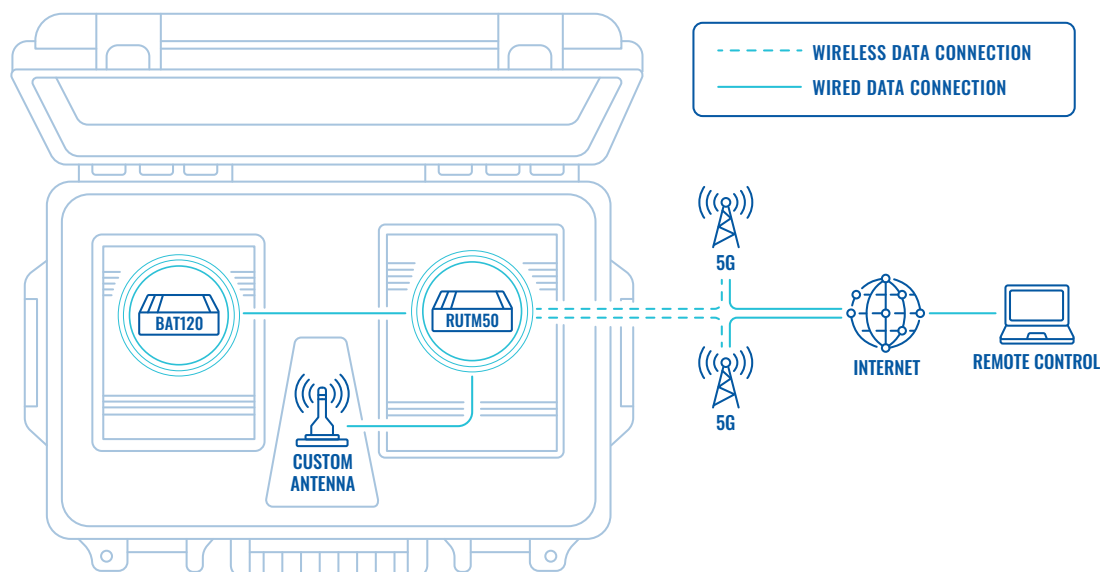
As organisations grow increasingly dependent on continuous connectivity, the need for rapid-deployment network solutions has become paramount. In response, Hertzian Labs, an American innovator in antennas and wireless technologies for emerging and specialized markets, introduced a breakthrough concept: network in a box system.

Designed for instant deployment, this portable system can be stored in executive offices and activated on demand, delivering immediate wireless internet access without the need for network engineers' intervention. It's both reliable and intuitive – simple enough for non-technical staff to operate confidently in urgent situations.

Beyond corporate environments, the same network system extends to military use, where it enables rapid network setup in remote or hostile field conditions.

To bring this IoT solution to life, Hertzian Labs required a rugged, compact 5G router with dual-SIM feature, automatic failover, and capability to perform across extreme temperature ranges. It had to be connected to a backup device, able to power the router in case internet loss.

TOPOLOGY



THE SOLUTION – CONTINUOUS 5G CONNECTIVITY ANYWHERE, ANYTIME

At the heart of the system lies the [RUTM50 5G router](#), a rugged, [FCC-certified](#) dual SIM connectivity device designed for the North American market. It delivers ultra-fast cellular speeds of up to 3.4 Gbps, making it ideal for data-intensive applications in demanding environments.

Equipped with automatic [failover](#), backup WAN, and support for both SA and NSA 5G architectures, this cellular router ensures uninterrupted connectivity even under challenging conditions. Its backward compatibility with 4G LTE networks adds an extra layer of resilience in areas with limited 5G coverage.

Despite its powerful capabilities, the RUTM50 5G router maintains a compact form factor. Measuring at just 132 x 44.2 x 95.1 mm, it fits seamlessly into the portable architecture of this IoT solution – delivering industrial-grade performance without compromising on space or mobility.

Moreover, this 5G router's ability to operate in extreme temperature ranges, varying from -40 °C to 75 °C offers additional assurance of reliability in demanding conditions.

Inside the network in the box system, the router is paired with Teltonika's [BAT120 – uninterruptible power supply](#). Equipped with 18650 Li-Ion cells, the BAT120 can power the router for up to 6 hours. It also features overvoltage protection, safeguarding the device from power surges that can occur in unstable or fluctuating power conditions.

Additionally, the RUTM50 5G router connects directly to a custom-designed antenna by Hertzian Labs, maximizing signal strength for both indoor deployments and remote outdoor locations. All components are securely enclosed in a durable, compact case that's small enough to fit in an office cabinet yet tough enough for field use.

According to Dave Urbasic, Chief Engineer of Antenna Product Development at Hertzian Labs, Teltonika's routers are impressively feature-rich on both the hardware and firmware side – especially considering their competitive price point. He notes that Teltonika's strong supply chain, expanding North American presence, and responsive support give their team confidence when integrating these devices into new products.

Curious how our connectivity devices can enhance your IoT solution? Get in touch with us – we're ready to answer your questions and help you find the ideal choice to meet your needs!

