



# REDCAP 5G ROUTER FOR INNOVATIVE MANUFACTURING SOLUTION

## HIGHLIGHTS

- ✓ Among all [industrial sectors](#), manufacturing has the most to gain from 5G capabilities, ensuring peak efficiency in any automation primarily by leveraging 5G's low latency.
- ✓ The perfect connectivity device for affordable and innovative manufacturing solutions is Teltonika's RUT976 RedCap 5G router, effortlessly achieving that low latency while also wirelessly supporting up to 100 end devices.
- ✓ With speeds of up to 223 Mbps, backward compatibility with 4G, myriad interfaces and supported protocols, and more—this industrial-grade 5G router is the lifeblood of future manufacturing.

## THE CHALLENGE – LOW LATENCY, NO NONSENSE

Although all industries agree that 5G is the way of the future, the amount of value it promises varies from one sector to another. As such, not all businesses are confident that the value gained from 5G outweighs the cost of transitioning your infrastructure.

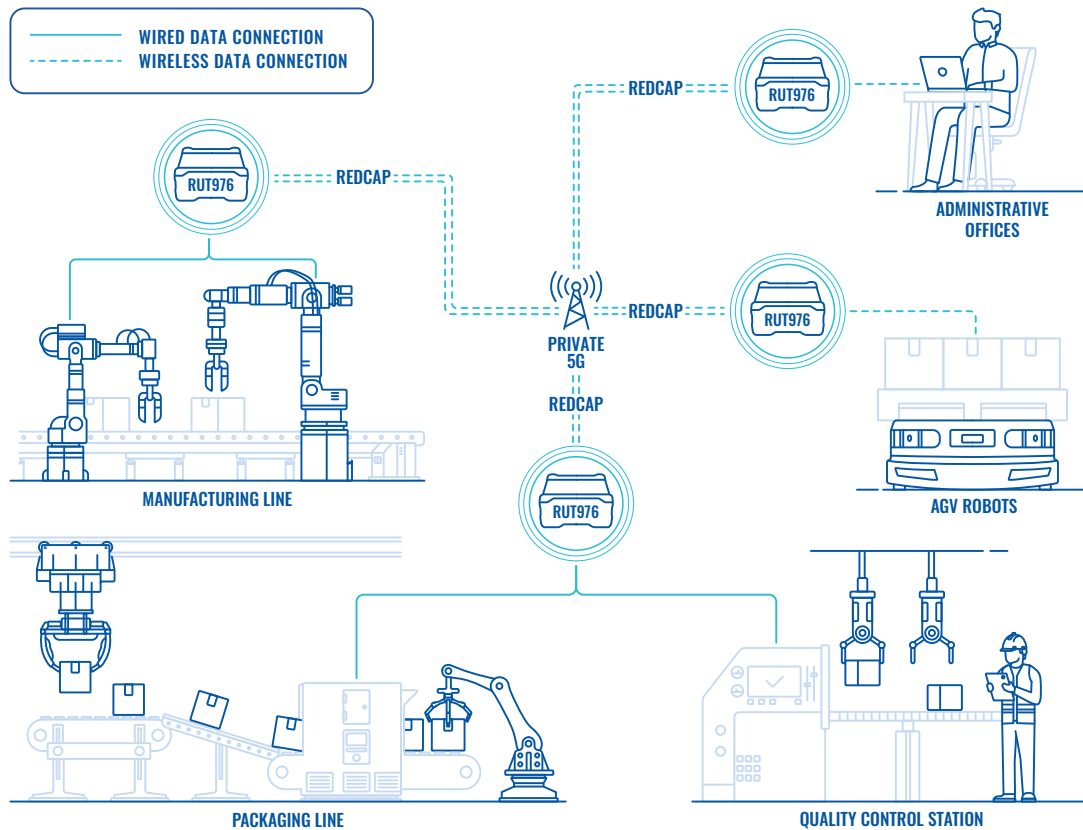
The manufacturing sector, however, knows only confidence. In fact, in [a study forecasting sales enabled by 5G](#), manufacturing was the leading industry—estimated to reach \$4,771 billion by 2035. For comparison, 2nd place goes to the information and telecommunications sector, estimated to reach \$1,493 billion—less than a third of manufacturing's sales.

The reason for this is quite simple: manufacturing has the most to gain from 5G capabilities, which can ensure peak efficiency in any automation, predictive maintenance, and Industry 4.0 operations.

Ultra-high cellular speeds are quite the buzzword, but in reality, manufacturing doesn't make much use of those speeds. Low latency is far more significant, as manufacturing relies on precision, capacity, and reliability above all else.

Is there a way to reap the benefits of 5G manufacturing without needing to pay for those fancy speeds? In fact, there is—5G RedCap.

## TOPOLOGY



## THE SOLUTION – CELLULAR REDCAP 5G ROUTER

The perfect connectivity device for affordable and innovative manufacturing solutions is Teltonika's RUT976 RedCap 5G router.

This device is equipped with four 10/100 RJ45 ports, RS232 port, RS485 port, and a USB 2.0 port, in addition to seven I/Os of varying types. This allows the RUT976 can connect to multiple end devices common in manufacturing lines, such as manufacturing and packaging robots and QA stations.

But this mobile router can support far more wirelessly—up to 100 end devices! This allows it to connect the many autonomous guided vehicles (AGVs) common in such industrial environments, as well as administrative equipment, via its stable Wi-Fi 4 connection. The result is a single private network encompassing all devices.

[MQTT](#), [OPC UA](#), and [Modbus](#) are all common communication protocols in the world of IoT, and the RUT976 supports them all, and many more still. And thanks to this 5G router's RedCap technology, the device supports speeds of up to 223 Mbps.

RedCap 5G stands for reduced capability, which bridges the gap between traditional 4G and full-capacity 5G. Supporting stand-alone (SA) architecture, cellular RedCap 5G operates in speeds closer to 4G while reaping another benefit of 5G: low latency.

What if one of your facilities has dodgy 5G coverage? No worries—this 5G router is also backward compatible with 4G LTE Cat 4, supporting speeds of up to 150 Mbps.

RedCap 5G makes the RUT976 perfect for 5G manufacturing solutions that inherently prioritise latency over speed,

while also keeping pricing low. But the fun doesn't stop here, as this mobile router packs a few more noteworthy features.

First are dual SIM slots with auto-failover, backup WAN, and other switching scenarios. These provide network redundancy by ensuring automatic switching to an available backup connection in case the primary one is interrupted for any reason. In addition, this 5G router's connection is safeguarded by a wide range of industrial VPN services, including [ZeroTier](#), WireGuard, IPsec, and OpenVPN, as well as a host of VLANs, authentication methods, and other network security fundamentals.

The RUT976 is a durable networking device, encased in [sturdy aluminium housing](#) with plastic panels that allow it to withstand extreme temperatures ranging from -40 °C to 75 °C. In other words, any and all temperatures typical in manufacturing facilities worldwide.

You don't have to overspend on 5G to get the features relevant to your innovative manufacturing solutions. Leverage the RUT976 RedCap 5G router and maintain robust, seamless connectivity with low latency—no nonsense.

