



MOBILE ROUTERS ENABLE 4G CONNECTIVITY FOR RECYCLING MACHINES

HIGHLIGHTS

- ✓ **B:bot** is a manufacturer, developer, and producer of recycling machines installed in supermarkets across France, Germany, and other countries.
- ✓ These machines require a networking device capable of providing reliable 4G LTE connectivity, ensuring that each of their component is connected to the company's remote monitoring station for maintenance and real-time data streaming.
- ✓ It selected Teltonika's [RUTX12](#) and RUT200 mobile routers for their ability to provide high Internet speeds, support multiple VPNs, and facilitate secure, fast data transfers using industrial communication protocols like SSH.

THE CHALLENGE – BEEP BOOP, B:BOT NEEDS CONNECTIVITY

Plastic pollution is a devastating global crisis predominantly fuelled by single-use plastics, such as bottles. Shockingly, there are [66 times more plastic bottles](#) than humans on Earth. Do we really need this many polluting our surroundings?

We all know the answer to this question is no. So, we must remove the environmental damage of plastic bottles by recycling them.

Fortunately, many bright minds walk on this Earth – creating effective solutions to address this widespread issue. Our partner, B:bot, has developed a recycling machine named after the company, that sorts and shreds plastic bottles into fine flakes and rewards people with money!

Now, what initially appears simple is frequently laden with intricate details.

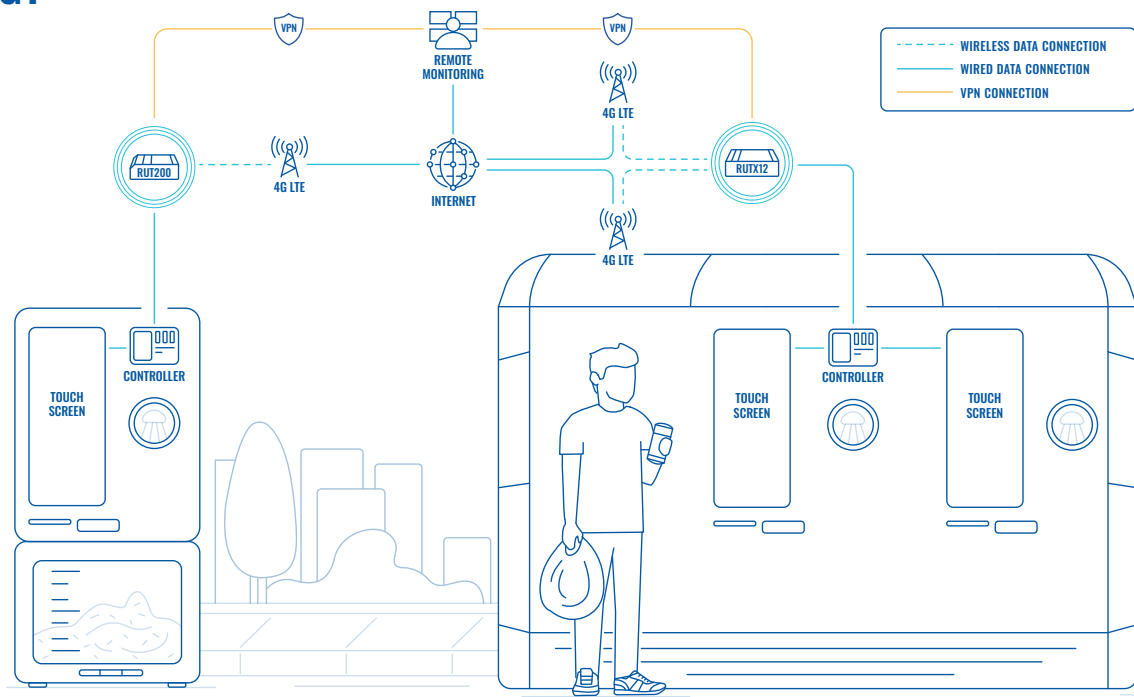
The B:bot machine comes in several size options and is equipped with barcode reading scanners, optical and plastic detection sensors, and metal and weight control detectors to accurately detect and sort plastic bottles for further distribution. Additionally, it features a touchscreen that allows people to interact with the machine.

Already, this sounds like a lot.

Well, we can't forget that B:bot's performance highly depends on its ability to measure the volume of plastic bottle shreds and when it needs emptying. Also, consider the scale of its deployment: B:bot has installed numerous of its machines across France and other countries, making secure connections for remote monitoring and maintenance essential to its success.

Without robust network connectivity, no B:bot machine could achieve its intended purpose. And with many tasks and responsibilities on the line, this is the perfect challenge for Teltonika's RUTX12 and RUT200 mobile routers.

TOPOLOGY



THE SOLUTION – BOOP BEEP, MOBILE ROUTERS GOT ME COVERED

To enable remote monitoring and management capabilities of recycling machines, B:bot chose Teltonika's RUTX12 and RUT200 mobile routers to handle all connectivity requirements with ease.

Connected to the larger recycling machines' controllers via an RJ45 port, the RUTX12 stands as a powerhouse of robust network connectivity support. Featuring two SIM card slots, this mobile router accesses connectivity from two different sources simultaneously.

The router also has two Cat 6 modems, which provides exceptional 4G LTE connectivity with speeds of up to 600 Mbps for the entire machine and its components.

This level of Internet speeds is particularly relevant for larger recycling machines, which have double the amount of devices requiring connectivity. With higher data throughput, delivering delayed data becomes impossible.

The RUT200 mobile router represents an affordable option in our portfolio. Connected to smaller B:bots via RJ45 ports, the RUT200 provides excellent 4G LTE Cat 6 connectivity support while easily fitting into space-limited applications.

Both mobile routers feature auto-failover, load balancing and multiple WAN switching options to maintain superb connectivity. But connectivity is only half a virtue if it's not secure and reliable.

And this brings us to the greatest benefit of the RUTX12 and RUT200 mobile routers: their support of multiple VPNs, like ZeroTier and IPsec VPN, and a myriad of industrial communication protocols, like MQTT and SSH, for secure connections and seamless real-time data streaming.

The IPsec VPN establishes a VPN tunnel between each recycling machine and B:bot's remote monitoring station to guarantee data security. Additionally, the VPN tunnel enables assigned personnel to perform remote monitoring and maintenance check-ups, establish real-time alerts, and securely extract data.

The SSH protocol is used for quick data transmission regarding each machine's health and storage capacity. This data, when analysed in conjunction with our partner's AI and machine learning techniques, shows which machines are working efficiently and which might require troubleshooting or bin emptying.

This is a perfect example of what IoT can accomplish – addressing prevalent global issues with smart solutions. And with the right connectivity equipment, ensuring optimal outcomes is effortless.

