

REMOTE TOWER SITE MANAGEMENT

SUMMARY

According to GSMA, there are more than 5.2 billion unique mobile subscribers and more than 9 billion mobile connections worldwide. This number includes cellular IoT subscribers and is continuously growing as the world is moving forward towards digitalization. As the number of subscribers and providers is growing, the need for more cellular base stations is also increasing rapidly.

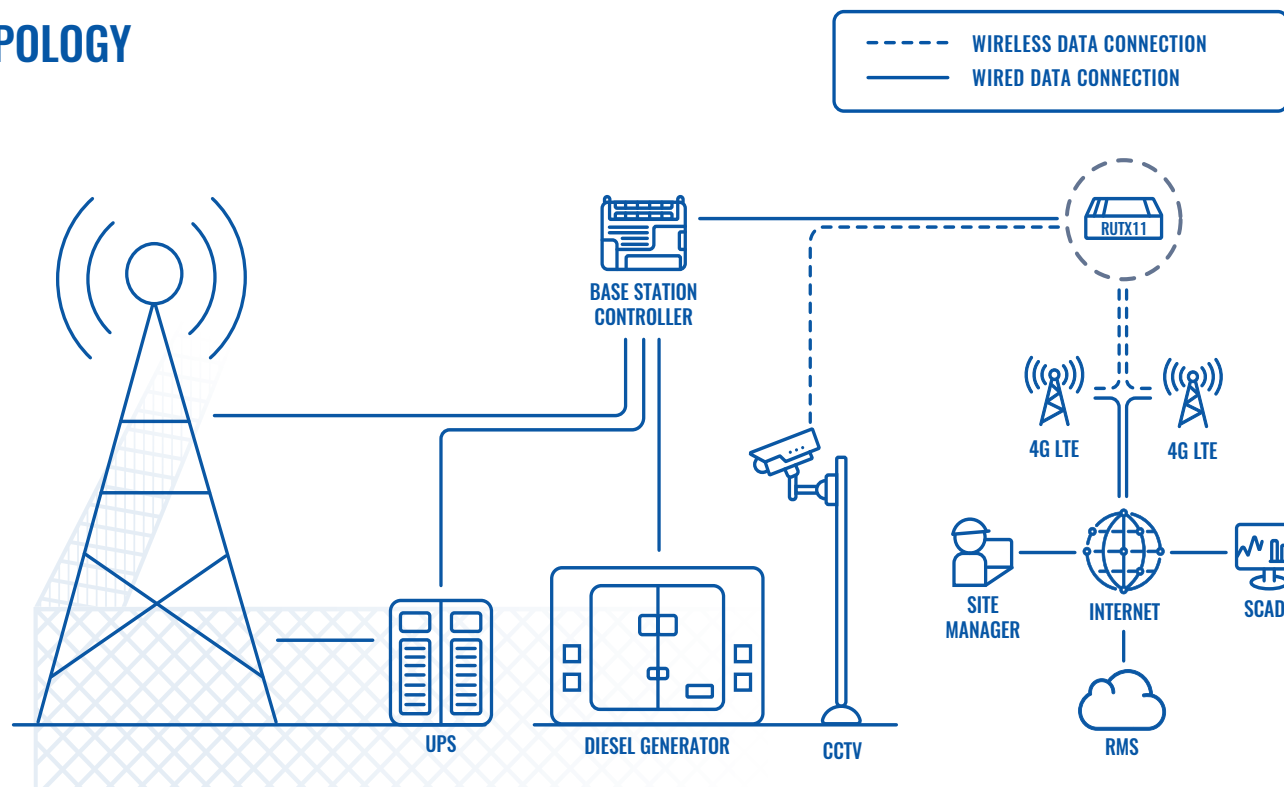
CHALLENGE

Since the market is expanding, more and more base stations are installed in remote areas. It is extremely expensive to run electricity cables for hundreds of miles to power up the tower infrastructure. Due to this fact, the base stations and other site components are usually powered by the combination of diesel generators and UPS – uninterruptable power supply systems. Furthermore, these tower systems are self-sufficient, expensive, and controlled remotely; they include CCTV cameras for security, access control barriers, and separate site manager controller systems. All of these solution components must be controlled and monitored. Due to the remote nature of such sites, in very rare cases, they have cable Internet connectivity available. Since it is estimated that there are more than 6.5 million base stations worldwide, the only sensible way to monitor and control all of their infrastructure sites is to do so - remotely. The challenge here is clear – to provide secure and reliable access to the internet without any cable infrastructure available.

SOLUTION

The cellular base station tower site is a complex infrastructure solution since it includes various elements, as mentioned above. However, most of those parts are connected directly to the tower site controller (also called site manager), which jointly monitors and allows to control everything using a single platform. These tower site controllers need to be connected to the Internet. Our partners are using the RUTX11 to ensure a secure and reliable connection, which grants the tower site controller connected to the Internet using 4G LTE.

TOPOLOGY



Besides, RUTX11 has Dual-SIM functionality with auto-failover, which increases solution reliability. Using RUTX11 gives grants the possibility to access the controller remotely and manage a large number of sites from a central management center. Also, this professional cellular router is equipped with Gigabit Ethernet and Wi-Fi, which allows connecting additional components like CCTV cameras or access control barriers.

Furthermore, every maintenance company must have alerts and notifications if something happens to the system. In this case, the whole system is controlled remotely via site management software, and our router – RUTX11 – is managed and controlled via RMS – Remote Management System. The RMS ensures that RUTX11 gets all the latest firmware updates and can provide valuable alerts and usage reports.

BENEFITS

- Reliability – our RUTX11 has two SIM card slots, meaning that you can use two different operators for the best internet connection reliability.
- Wireless interfaces – RUTX11 has 2.4 & 5 GHz Wi-Fi included, which enables integrators to provide internet to various devices without additional cabling.
- Remote control – our product can act as a gateway between the controller and software system for control and management.
- Remote configuration – having thousands of sites can be a nightmare; however, with RMS, it is possible to configure all Teltonika routers remotely at once!

WHY TELTONIKA?

RUTX11 is the most advanced industrial cellular router by Teltonika Networks, and it follows our product design philosophy to be secure, reliable, and easy to use. It is powerful but simple to deploy and is capable of providing high cellular data speeds for multiple tower site infrastructure components. Even better, it is compatible with Teltonika RMS, which allows to manage and monitor all Teltonika Networks devices conveniently and remotely.

