



CELLULAR ROUTER FOR CCTV CAMERA SYSTEMS

HIGHLIGHTS

- ✔ CCTV camera systems are crucial components of video surveillance, providing real-time footage around the clock to observe and record specific areas or locations for security, safety, or monitoring purposes.
- ✔ However, the operational efficiency of CCTV cameras depends heavily on the quality and capacity of the network connectivity they receive. This is why networking devices like the Teltonika RUTX11 cellular router and TSW202 managed switch are excellent choices for ensuring their reliable performance.
- ✔ The RUTX11 cellular router delivers exceptional connectivity speeds, supported by technologies such as carrier aggregation and auto-failover. Meanwhile, the TSW202 managed PoE+ switch reduces the overall cost of this IoT solution by requiring fewer deployed routers while providing superb connectivity and power to each connected camera.

THE CHALLENGE – CONNECTIVITY & POWER DUO

Video surveillance is the future of smart cities. This system, comprising cameras, recorders, and software, enables real-time monitoring and recording of activities at specific locations, serving security, safety, and general monitoring purposes.

From traffic and infrastructure management to smart parking, retail, and commerce, video surveillance plays a crucial role in enhancing urban efficiency. Not only that but it also helps the environment become safer and cleaner, creating a higher quality of life for residents and visitors alike.

Among the many video surveillance options available, one stands out: the tried-and-trusted closed-circuit television (CCTV) camera system. CCTV is notorious for providing situational awareness by continuously streaming footage to surveillance systems and allowing personnel to monitor areas and take action if anything seems to be out of order.

However, for CCTV camera systems to function efficiently, they heavily rely on robust network connectivity. This is where the real challenge begins.

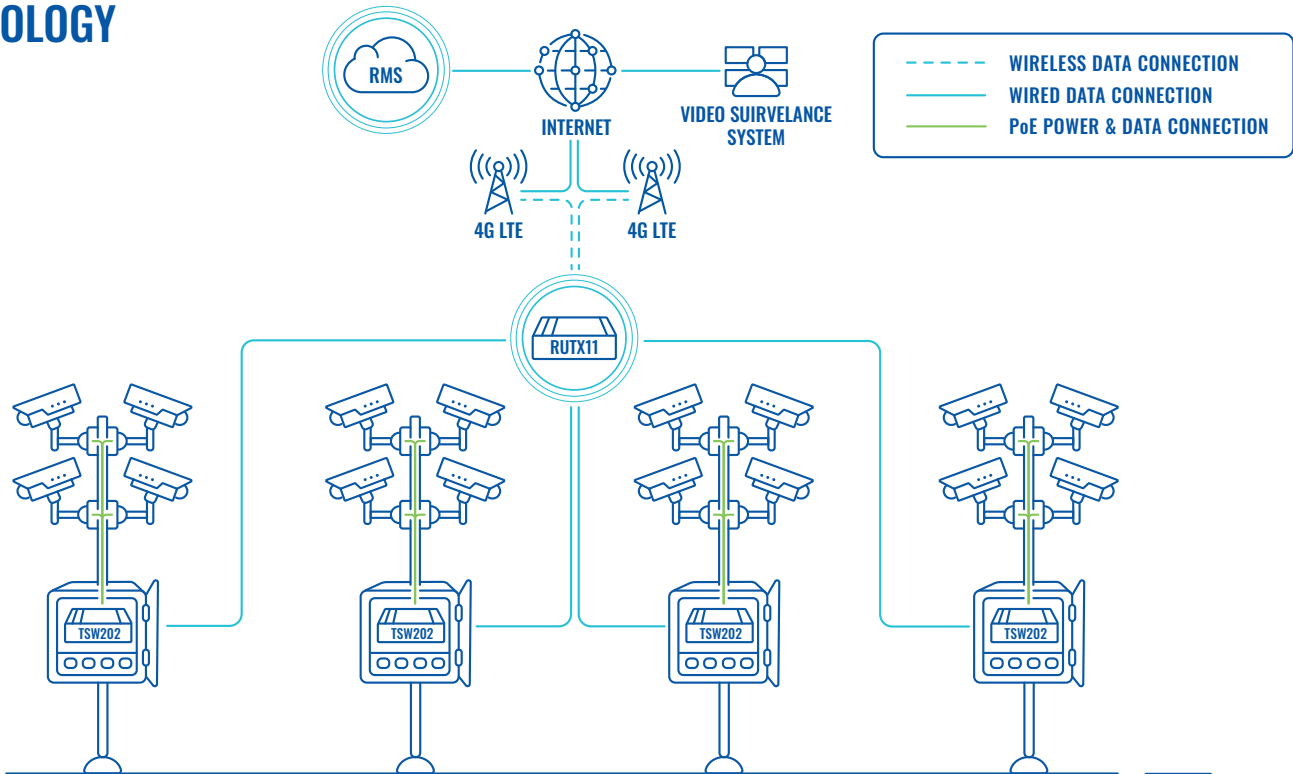
CCTV cameras transmit large amounts of continuous data, necessitating high bandwidth for effective data transmission. After all, the essence of CCTV camera systems is to provide real-time data, so if a network's bandwidth cannot support this, the system's effectiveness is compromised.

Another challenge concerns the location of CCTV camera installations. Often, these cameras are placed in remote areas, which are more prone to crime or [physical security](#) threats. Unfortunately, these locations can also present connectivity issues, so the selected networking devices must ensure consistent, high-quality connectivity at all times.

Now, consider the additional challenge of powering and controlling these CCTV cameras. Reliable network connectivity and a constant power supply are essential for continuous operation. So, who's going to cover that?

Fortunately, Teltonika has it all figured out. Phew!

TOPOLOGY



THE SOLUTION – THERE’S NOTHING TELTONIKA CAN’T DO

The perfect combination to tackle this challenge is Teltonika’s RUTX11 cellular router and TSW202 managed PoE+ switch, providing both connectivity and power to multiple CCTV cameras simultaneously.

The RUTX11 cellular router features dual SIM cards and supports cellular speeds of up to 300 Mbps with [carrier aggregation](#), expanding the bandwidth for data transmission capacity and ensuring reliable network connectivity for the entire CCTV camera system.

But how can this 4G router ensure data transmission is uninterrupted? Thanks to RUTX11’s [auto-failover](#) feature, which automatically switches to an alternative connectivity source if one fails.

The RUTX11 industrial cellular router features four Gigabit Ethernet RJ45 ports, with which you can connect the device to four CCTV cameras. Or you can make it even better and plug the TSW202 managed switch into one instead.

This switch has eight Gigabit Ethernet RJ45 ports with PoE+ technology, providing 30 W of power each. So, by plugging one switch into the RUTX11 cellular router, the TSW202 PoE+ switch can supply up to seven CCTV cameras with that same level of connectivity speeds, just with power running through Ethernet!

By using the powerful RUTX11 4G router for connectivity and combining it with the TSW202 managed PoE+ switch for

power supply, you can unlock one more fabulous feature: [PoE management](#).

With PoE management, functions like Ping Reboot allow you to reboot individual connected CCTV cameras if they become unresponsive.

The best part is that the RUTX11 and all connected TSW202 managed switches can be monitored and controlled through Teltonika's [Remote Management System](#) (RMS). Additionally, RMS Connect enables convenient and easy control over the entire networking solution, allowing you to also connect directly to each CCTV camera.

This solution demonstrates how Teltonika's networking devices can provide top-quality network connectivity, with granular control and a reliable power supply, so you don't have to worry about any other detail.

