

8-PORT POE+ SWITCH FOR SMART LIGHTING SYSTEMS

HIGHLIGHTS

- ✔ Smart lighting systems allow for automation and remote capabilities, but at the cost of requiring additional cabling for connectivity. This cost can be eliminated by deploying a PoE+ Ethernet switch.
- ✔ The best Ethernet switch for the job is the Teltonika TSW040 8-port PoE+ switch. Using its eight PoE-out RJ45 ports, this unmanaged switch centralises smart lighting systems by powering fixtures and providing them with connectivity using the same cables.
- ✔ The TSW040 features a total power budget of 240 W, 2-pin power input, integrated DIN rail bracket, and a compact, rugged design for plug-and-play deployment.

THE CHALLENGE – TWICE THE CABLES

The value of smart lighting is clear as day. Different light fixtures communicate with one another and with smart devices, allowing for automation and remote control, management, and troubleshooting. Being bright and being smart have never been as synonymous.

But being smart brings with it complexity, and with complexity come diminishing returns.

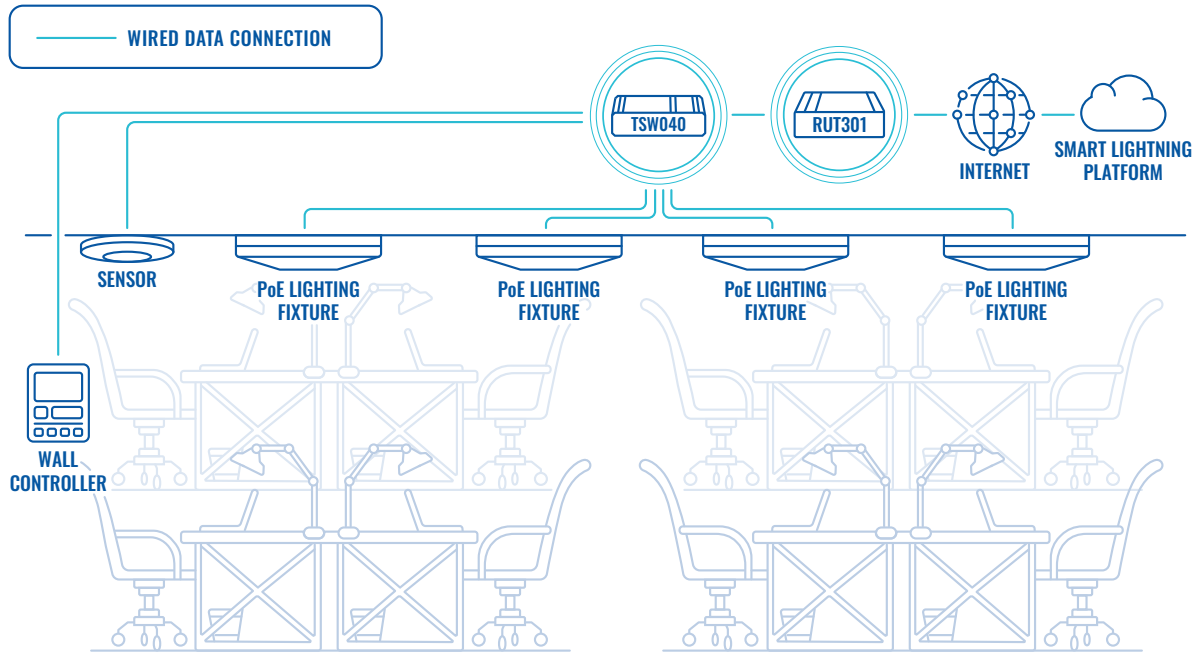
The key issue with smart lighting is that all the cabling needed to power the light fixtures is only half the picture. The other half is cabling for wired connectivity to facilitate reliable access to a centralised fixture network. In other words, you need twice as many cables.

This may not sound like an issue when imagining smart lighting in a single small apartment, but as projects scale up to entire [enterprise](#) buildings and industrial complexes and facilities, twice the cables means twice the risk of things going awry.

To solve this issue, we must think smart in the cabling itself. Imagine, for example, if the same cable could both power the light fixtures and connect them to a connectivity source – at the same time.

Why, that's exactly what [Power over Ethernet](#) (PoE) is all about! To reap the benefits of PoE and the reduced cabling it promises, a PoE Ethernet switch be must deployed.

TOPOLOGY



THE SOLUTION – HALF THE CABLES

The perfect device for this use case is the TSW040 8-port PoE+ switch. Connected to the [RUT301 Ethernet router](#), this unmanaged switch takes full advantage of its eight PoE-out RJ45 ports to power an array of light fixtures while providing them with the router's wired connectivity at the same time.

This setup cuts the number of needed cables in half, enabling a simpler and more effective smart lighting system setup. In turn, this centralises the light fixtures into a single network for easier remote management capabilities.

Each of the TSW040's RJ45 ports has a power budget of 30 W, meaning that this 8-port PoE+ switch can provide a total of 240 W via PoE-out. The 8-port switch itself has a wide voltage range of 7-57 VDC, though its PoE-out voltage range is 44-57 VDC.

Of course, electricity isn't the only factor to consider when choosing the right device. The TSW040 has a 2-pin power input and an integrated DIN rail bracket for easy mounting, making it ideal for industrial applications wishing to capitalise on efficiency.

In addition, this PoE Ethernet switch is a compact, industrial-grade device. It measures only 113.1 x 41.2 x 74.6 mm and is housed in anodised aluminium, allowing it to withstand extreme temperatures of -40 °C to 75 °C and take a few good hits. After all, what is efficiency without reliability?

Don't let cables get out of hand in your smart lighting system – deploy the TSW040 8-port PoE+ switch and make your system truly smart.

