

Microsemi's Outdoor Power over Ethernet Switches

Solving IP Surveillance Deployment Challenges to Enhance Public Safety

Client Background

Active Solutions LLC is a leading networking and communications systems integrator. The company specializes in large-scale deployments of video surveillance, access control, wireless, network, and building management technologies.

Business Challenge

A client approached Active Solutions to install an IP surveillance system comprised of cameras installed in multiple sites, including hard-to-reach locations. To enhance street surveillance, the client required maximum coverage with long-distance screening and optimum facial recognition using powerful panoramic pan-tilt-zoom (PTZ) cameras with significantly higher power consumption than typical surveillance cameras.

In addition to IP surveillance cameras, the overall network also required the installation of PTP/PTMP antennas for wireless connectivity in areas with no local power source, further increasing the complexity of network installation.

To guarantee a reliable and high-quality video surveillance network, the system solution needed to withstand harsh conditions, including temperatures over 100 °F (37.7 °C) with nearly 100% humidity.

Active Solutions worked with their client to study all available options before concluding that deploying Power over Ethernet (PoE) switches would provide the highest levels of performance and security while lowering the total cost of ownership.

Executive Summary

Challenge

Quickly install an outdoor IP surveillance system that included PTP/PTMP antennas and high-power panoramic PTZ cameras, often in locations without a local power source.

Solution

Microsemi's PDS-104GO outdoor PoE switches were installed in just 14 days for seamless deployment of PTP/PTMP antennas and 180 cameras.

Results

Microsemi's PDS-104GO outdoor PoE switches simplified installation of high-power outdoor IP cameras subject to harsh weather conditions and antennas for wireless connectivity in hard-to-reach places without power. Maintenance was simplified with remote management, while SFP input helped lower camera installation costs over longer distances.



“Microsemi’s PoE switches were essential to the success of this IP surveillance system. We chose Microsemi for the switch’s PoE capability, outdoor rating, port configurability, and ability to accept a fiber input. Their support was instrumental for a seamless installation and achieving our project deadline.”

— Brian Fitzpatrick, President, Active Solutions, LLC.

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Microsemi's Solution

After a detailed analysis of the client's business requirements, Active Solutions looked for the best PoE solution in the industry to address the outdoor and power-related deployment challenges they faced. Active Solutions considered several PoE solutions based on features, technical specifications, and lab tests.

As a leading PoE innovator, Microsemi Corporation was among the technology vendors they approached. Microsemi offered its industry-leading PDS-104GO outdoor PoE switch, ideally suited for wireless point-to-point, multipoint, and IP surveillance camera installations in extreme weather conditions.

Microsemi's outdoor PoE switch was their chosen solution because it addressed all of the client's requirements, including:

- Powering up to four devices with power consumption of up to 60 W per port
- SFP inputs to cover longer distances and extend the reach between the switch and the powered device (PD) by an additional 100 meters (to a maximum of 200 meters)
- Withstanding extreme weather conditions through an extended temperature range and with integrated surge protection
- Offering easy plug-and-play installation
- Enabling remote management, facilitating quick assessment of endpoint issues and allowing remote reboot/power diagnosis

Results

Microsemi helped Active Solutions with all the necessary equipment and technical support within their client's specified timeframe. The entire IP security system was installed in just 14 days.

With nearly 180 camera perspectives, the surveillance system proved to be extremely helpful during sports events and celebrations, enhancing security and safety for residents and visitors alike.

Related Information

- PoE Product Portfolio
<https://www.microsemi.com/products/poe-systems/poe-systems>
- PDS-104GO PoE Outdoor Switch
<https://www.microsemi.com/products/poe-systems/pds-104go-4-1-outdoor-switch>
- PoE Goes Outdoors video
<https://www.youtube.com/watch?v=zCjcgE9wfd8>



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