SCHOOL DEPLOYS CAMERAS ON INTERMITTENTLY POWERED LIGHT POLES WITH VENTEV POWER EXTENDER

EXECUTIVE SUMMARY

CLIENT

Texas School System

CLIENT CHALLENGE

Install surveillance cameras on intermittently powered light poles.

PRODUCT SOLUTION

Multi-Port Power Extender for Intermittently Powered Light Poles

Ventev's Multi-Port Power Extender enables continuous operation of Wi-Fi access points (APs), wireless surveillance cameras, or other PoE+ devices that are installed on light poles with intermittent AC power.

- Designed for light poles that are controlled by timers or photocells that interrupt the availability of AC power to conserve energy.
- Powers devices up to 18 hours during daylight hours and recharges batteries within six hours at night when AC power is available.
- Provides PoE+ for Wi-Fi APs and additional 35W of PoE power for one to two other devices.

A SCHOOL SYSTEM IN TEXAS NEEDED TO DEPLOY SURVEILLANCE SYSTEMS AT ALL FIVE OF ITS CAMPUSES.

The schools planned to deploy outdoor wireless mesh networks rather than installing data cables because it was less expensive, quicker to deploy, and less disruptive to school operations. The school system's goal was to install the camera network on existing campus light poles, where possible. Campus light poles are ideal for deploying security cameras because they are close to the students, faculty, cars, and other areas of the school that require monitoring. The network designer planned to install four cameras on each light pole to sectorize the environment and obtain optimal picture quality.

CHALLENGE

There was one major obstacle with the deployment; the campus light poles were intermittently powered. The light poles were tied to a master photocell, so during daylight hours, when the lights were not needed, there was no power to the light poles. This allowed the schools to conserve energy but made deploying a surveillance network on the light poles very difficult.

The network designer considered rewiring the intermittently powered light poles to solve for this problem, but it would increase the budget and the amount of time to get the system up and running. Another alternative was to avoid the issue altogether and deploy the cameras on the closest buildings instead of the light poles. This solution would require the use of more expensive cameras that might compensate for greater distances but would still provide less detailed images of the monitored areas.

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SOLUTION

The school's network engineer had recently learned about a new product from Ventev that would provide a much better solution. Ventev's Power Extender for Intermittently Powered Light Poles is an outdoor pole-mounted enclosure containing a battery bank and a proprietary charging system that extends PoE power to all active equipment during the daytime, then quickly recharges at night when the AC power is available.

The school's network engineer tried a sample of Ventev's Power Extender and determined that it would allow the surveillance cameras to be deployed on the intermittently powered light poles and would cost less than the other alternatives. The Power Extender charging system generated reliable power for active devices from the battery bank (200AHrs) during the daytime and then recharged the battery for the next day's operation in less than six hours at night when AC power was available.

Ventev's engineer performed some enhancements to the Power Extender to accommodate the specific requirements for the school system:

- Modified the standard 120VAC input to accommodate for 480VAC input.
- To keep weight, size, and cost to a minimum, Ventev used a transformer-less power system design.
- Increased the number of PoE outputs from one to five to accommodate four PoE cameras and one PoE+ wireless AP.
- Increased the size of the battery reserve to accommodate the total load of active equipment.

The schools were very satisfied with the effectiveness of the surveillance systems and the timeliness of the installation. They were especially impressed that the network engineer had found a state-of-the art solution for deploying the cameras on the existing, intermittently powered light poles.

Multiport Power Extender
Tessco SKU 586690