CASE STUDY

Hidalgo County WiFi Mesh Network

PIS2030

In the ever-evolving landscape of digital connectivity, ensuring equitable access to the internet has become a paramount concern for fostering inclusive communities and driving economic development. However, there are still many cases of unserved and underserved areas in the country, where the current infrastructure falls significantly short of meeting the burgeoning demands for connectivity.

PIS2030, 30W PoE Output

The Need

In September 2020, Hidalgo County received CARES funding from the government to deliver WiFi broadband access to areas in the county that lacked service. However, the stipulation was that the funding had to be utilized by December 2020. Given the limited existing infrastructure, the tight 4-month timeframe posed considerable challenges.

The WiFi initiative evolved into a utility project, which addressed both the improvement of existing streetlights and the installation of new ones. Following the establishment of the infrastructure, the plan called for the deploying of Ruckus outdoor access points on streetlights through a smart mesh wireless network.

The Solution

At the core of the Hidalgo County WiFi mesh network are Inscape Data's PIS2030 2-Port Outdoor 802.3at Gigabit PoE (Power over Ethernet) Injectors. These outdoor PoE injectors play a central role in supplying power and connectivity to 3400 Ruckus outdoor access points that were strategically placed on streetlights, utility poles, traffic signals, and towers.

The PIS2030 offers a maximum output power of 30W, and a total system power of 45W. The unit has two RJ45 network ports, one of which is used as an uplink port to a switch or to another network device. Another network port is the PoE port that integrates PoE power output and network data. The 30W power DC output simplifies the overall installation by omitting the need for a power cord.

HIGHLIGHTS

- 35,000+ residents served
- 3,400 access points
- 5,000+ wireless radios of mesh, PTP and PTMP equipment
- 20 sq miles of WiFi coverage
- 16 constructed towers

The unit's PoE power supply type is four line pairs of twisted pair, the positive power supply side is 1/2 or 4/5 line pair, and the negative power supply side is 3/6 or 7/8 line pair. The injector supports IEEE802.3af/IEEE802.3at standards, it does not include a fanning system due to its natural cooling, and is IP67 compliant due to its water tight connectors.

Download Product Datasheet:

Product Information Online: http://www.inscapedata.com

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