

IP Connectivity used in Security Solution for large Public Utility



Remote panel approx. 700 ft away from main facility

Securing facility access is a constant concern for public utilities. Utility organizations face the challenge of an expansive territory with numerous remote sites and authorized personnel needing to gain access to locations or equipment. Traditionally, access is gained through physical locks and keys, which create a confusing, inconvenient and insecure method of access. How can we provide a more secure, cost-effective, efficient solution? This was the challenge brought to Elevate Wireless and the contractor, a provider of worldwide security services, while working with a large public utility provider in Northern California. The customer desired a modern, networked, unified security solution across all of their facilities.

Requests & Challenges

Their consultant designed a security solution using RFID-based key cards and corresponding networked access panels, which validate access by referencing a secure database of authorized users. However, not all of the customer's facilities had network access.

Our team was enlisted to enable IP-based communication to a remote access panel. The panel is located at a secure site approximately 700 feet away from the controlled facility where there is internet connectivity. In addition to the remote panel, the Public Utility also wanted to access a video camera used to monitor facility access at the secure site.

The main obstacle for wireless communication is dense tree growth blocking line of sight communications, making many radio options unrealistic. Wi-Fi could not reliably connect the two facilities and a wired connection would require construction at the facilities and under the road, which would have required a significant budget and many months of planning and construction.

Services Provided

Elevate Wireless provided the initial consulting for feasibility of radio communication using 900 MHz ISM-band license-free radio technology. This included software evaluation of potential radio paths, identification of antenna sites and diagrams of the radio installation to assist with control panel planning. Our team visited the customer location to assess the conditions on the ground and confirm that robust, reliable communication was in-fact possible.

We provided a complete package of radio hardware, ancillary equipment (antennas, cables, power supplies, etc) and on-site commissioning during installation, ensuring optimized radio settings to guarantee speed and reliability. XetaWave's Software Defined Radio technology allows for a wide variety of radio parameter tuning, allowing a single platform to be used in a wide variety of link conditions. The Xeta IP/Ethernet radios provide industry-leading speed all while providing reliable security with AES 256 bit encryption.



Video camera at remote site, used to monitor access



Installation at main building

Results

The result of the work provided by Elevate Wireless was a robust, secure and reliable link providing IP connectivity from the remote panel to the equipment at the main building. The Public Utility was able to access the video camera live feed, by taking advantage of the high performance capabilities. By using our Xeta9-EL platform coupled with the expertise of the Elevate Wireless team, the Public Utility was able to finish the project ahead of schedule and significantly under budget.

If you would like to see how we can help you with your communications challenges, call us at 408-642-5458 or email info@elevatewireless.com.