

# Binary Armor®

## Secure Wildfire Awareness



**Protects Against  
Cyberattacks**



**Bridges IT/OT  
Networks**



**Detects and Blocks  
Insider Threats**

### Introduction

Wildfires are growing in frequency and severity. Recent wildfires have grown so big, so fast they quickly developed into catastrophic events that endangered the public and led to significant financial losses. Electrical utilities have, in some cases, been both the cause and the victim of wildfires and their many consequences. As a result, utilities are seeking methods to quickly recognize and respond to wildfires in the hopes of containing them before they spread to emergency proportions.

### Problem

Electrical utilities face a two-fold wildfire problem. On the one hand, fallen electrical power lines can cause fires in remote locations that spread dramatically before they become apparent. On the other hand, wildfires – regardless of their origin – pose a significant danger to electrical utility infrastructure. In both cases, rapid recognition and response is key to containing the damage to people and property.

A major U.S. electrical utility has taken proactive steps to create a wildfire early warning system. They worked with the regional fire department and academia to identify areas that are vulnerable to becoming wildfire hotspots. They then contacted Sierra Nevada Corporation (SNC) to collaborate on a robust, secure solution leveraging SNC's proven secure remote monitoring platform.



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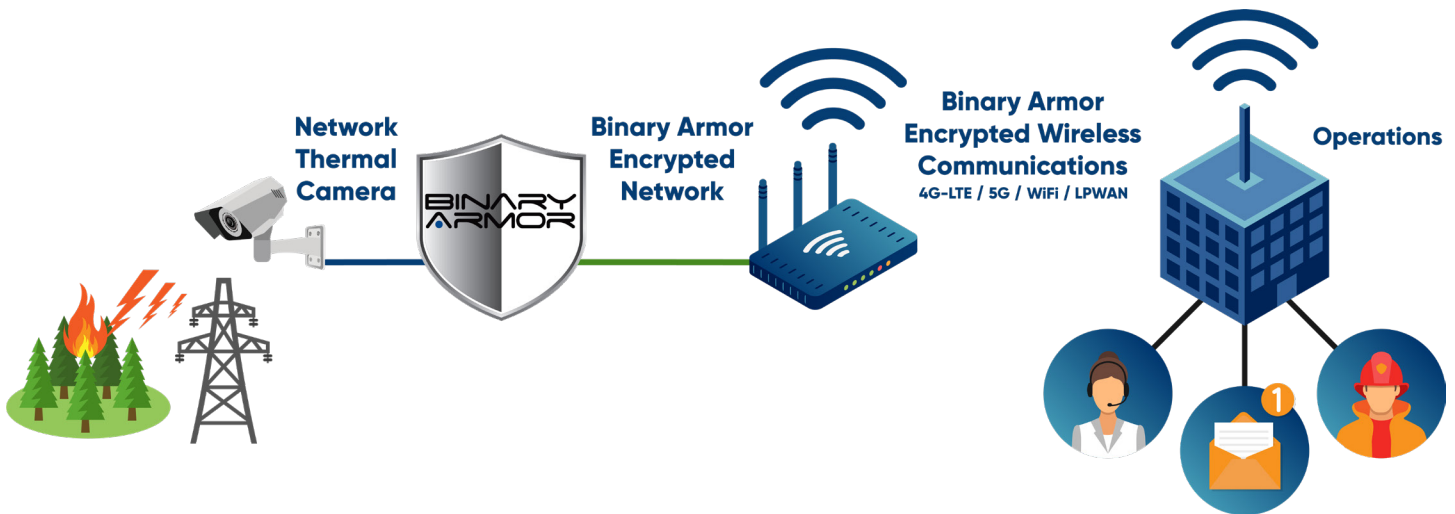
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### Solution

SNC, working in close coordination with the utility, defined system requirements, designed a solution, surveyed the likely installation points, produced, and installed a customized wildfire Binary Armor secure remote monitoring solution within three months from project start to finish. The solution has the following features:

- Integrated, enclosure-based system that contains a high fidelity weather station, a combined visible and Infrared camera, LTE modem for wireless communications, and a Binary Armor cybersecurity device to protect the equipment from cyber-attacks and provide data integrity using TLS 1.2 encryption.
- LTE Communications capability that leverages commercial wireless infrastructure for near real-time communication without the expense of a private network.
- Emergency text alerting system to notify key personnel around the clock.



### Benefits

The Binary Armor secure remote monitoring solution delivers greatly enhanced wildfire situational awareness. The near-real time notifications provided by the system enables first responders to be on the scene quicker with the right equipment and the needed support required to respond effectively.

In addition, the solution was developed for expansion in mind with an architecture that can easily integrate additional sensors or communicate over any wired or wireless network.

Finally, Binary Armor ensures the communications between remote stations and a central control station are secure, while also protecting against malicious actors who may try to access and turn off the sensors and cameras from the internet.

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