Quick Deploy Substation Monitoring Kit

FLIR PREMIUM PARTNER

Just Add Power - Portable, Multi-Use System

Electric power companies need systems that reduce the risk of breakdown in power delivery, such as blackouts and brownouts, often caused by aging infrastructure. A breakdown can have extensive negative affects to the customers and communities they serve. The costs associated with unplanned maintenance and restoring systems operation again can be massive.

Monitoring needs change, so Viper designed a system that can easily adapt to those changes with a remote monitoring system that can be transported from one site to another. This innovative solution equips engineering teams with the data they need to respond in real time to sudden changes.

VIPER IMAGING

System Solution

Thermal imaging camera systems are the ideal solution for identifying problems before failure occurs. Traditional monitoring of substation equipment utilizes handheld thermal imaging cameras. These methods are ineffective due to limitations of both time and the work force to conduct such inspections - not to mention the safety risk to personnel. This type of inspection has the potential to miss warning signs of impending failure.

Viper's Quick Deploy Substation Monitoring Kit is a portable, multi-use setup including two (more upon request) FLIR thermal imaging cameras integrated with our powerful ViperVision software. Temperature variations in substation components are monitored by the system which can alarm, providing early warnings. Viper's Quick Deploy system provides flexibility in that it can easily be moved to another location. This improves maintenance planning for your company's entire fleet and reduces the risk of catastrophic failure.

FLIR cameras are integrated with ViperVision software to directly communicate with most industrial platform controllers. Temperature data is provided in real time, and hot spots are evident before excessive heat or insulation loss results in failure. ViperVision provides the ability to draw specific regions of interest, which is a significant time-saver by providing the operators with only the data they need.

The software analyzes and compares the data against the customer's parameters and will trigger an alarm if warranted. Data is transmitted wirelessly to the customer's control room, and alerts can be sent via email. All data can be saved for process analysis and quality control.

Key Benefits

- Portability and quick setup - requires only power
- Instant notification alarm for temperature beyond preset parameters
- Improved safety for plant personnel and reduced risk of breakdown
- Provides remote thermal monitoring for plant management
- Easy integration into existing plant control system
- Ability to plan for maintenance
- Reliable and rugged system

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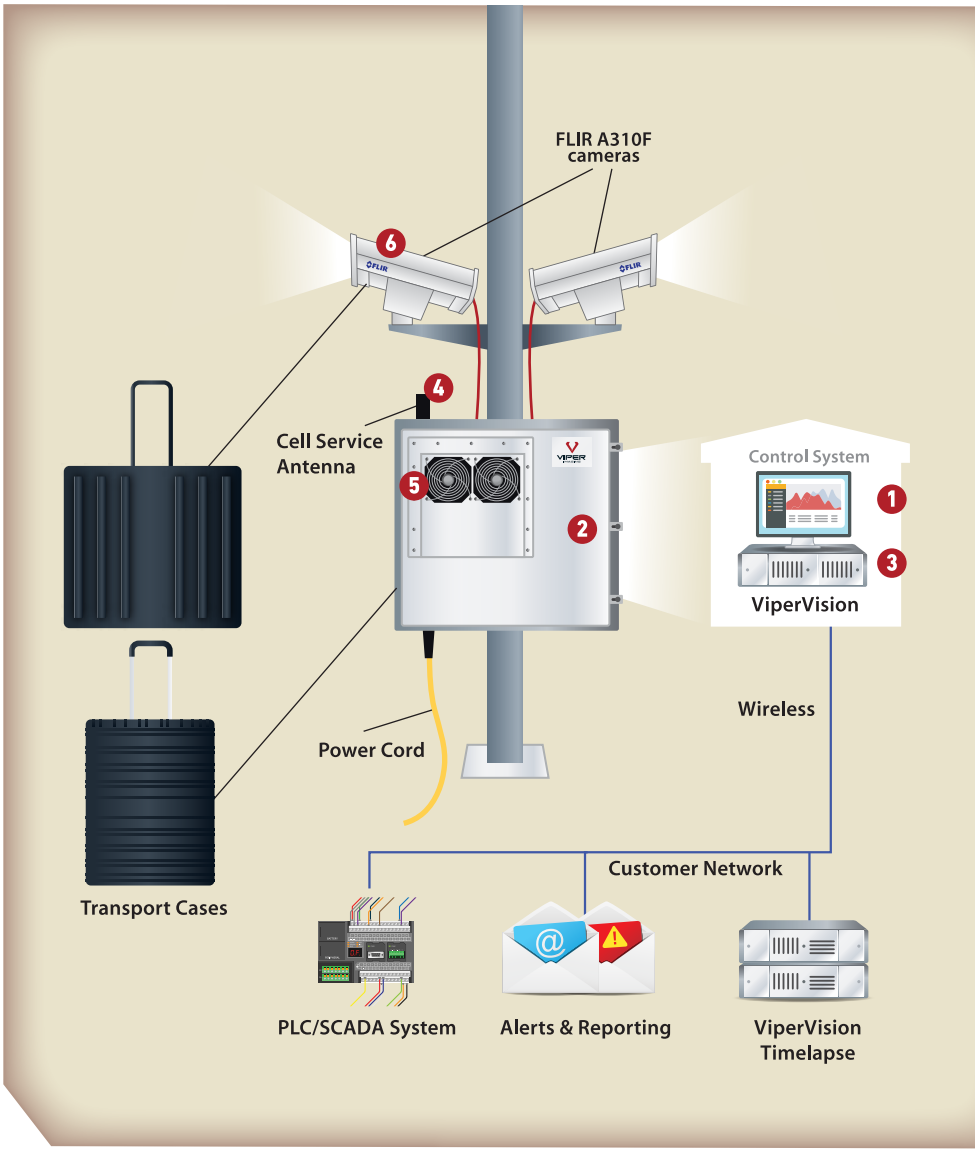
Setup and Installation

Complete in 90 minutes or less

Viper's Quick Deploy Substation Monitoring System is self-contained in two customized transport cases. One case houses two FLIR A310F thermal imaging cameras with the stands for installation. The other contains the control panel which houses a computer, power cords, the telemetry for data transfer and an optional air conditioner. The control panel enclosure can be wall-mounted or pole-mounted via uni-strut. Setup is complete in about 90 minutes, with the FLIR A310F thermal imaging cameras in position ready to monitor several critical assets simultaneously. The system can easily be dismantled and packed in the wheeled cases to be transported to another location.



Hot spots - evident with thermal imaging - are an indication of impending failure.

System Specs

1. A ruggedized computer capable of withstanding high temperatures is included. Two RAM capacity options are available - based on the number of cameras in the system (1-2 cameras: 4 GB; 1-4 cameras: 8 GB).
2. To keep the system lightweight, Viper uses an aluminum (5052) electrical enclosure. It can be locked with a padlock.
3. Web relay is installed allowing for remote reboot of the computer and cameras.
4. High speed 4G cellular communication is standard.
5. For environments subject to extreme heat, Viper will install an air conditioner on the control panel enclosure which provides up to 800 BTU/hour of cooling. Heaters are installed for cold environments.
6. The FLIR A310F is an extremely rugged system that meets IP66 requirements, protecting the camera from the environment. The camera's digital data stream is connected wirelessly to the control system. ViperVision software controls all camera functions, collects temperature data, displays thermal images and analyzes data.