The following table contains the specifications for the ThermalSafe systems to be installed. Variations in thermal optics are used to optimize for specific sites.

ThermalSafe Configuration	Pan/Tilt gimbal with Thermographic Thermal Infrared and Color Data and Video; cabinet assembly for power, communications, battery, remoting.
Thermal Camera Specifications	
Array Format (8 or 14 bit video)	640 x 480, 320x240
Pixel Pitch	12-17 microns
Focal Length	19-35 mm
Field of View	18 x 14 degrees
Zoom	2x, 4x E zoom, V zoom
Spectral Range	7.5 - 13.5 microns
Outputs	Imagery-over-network: 8 bit H.264 streaming and 14 bit raw
Color CMOS Specifications	
Array Format	2592 x 1944 (5MP)
Pixel Pitch	1.4 microns
Field of View	67.5 degrees (H)
Outputs	Imagery over network: 8 bit H.264 video, 8 bit MJPEG, 8 bit raw
System Parameters	
Control	Network, server and mobile device app
Weight	24 lbs
Dimensions	10 x 10 x 15 inches
Power Requirements	24VDC, 0.5A (w/o heater), 2A (w/ heater)

Cabinet Configuration	
Battery	2 x 12VDC, wide temp range
Radio w/ external antenna, GPS antenna	Rugged wide temp LTE
Power Supply w/ battery UPS	120VAC--24VDC regulated [non solar opt]
Network Switch	4 port wide temp LAN switch
Power Control	Network accessible power switch
Enclosure	NEMA3, lockable
[Optional] Solar Power	
Solar Panel	Qty 2 30x60 photovoltaic panels
Battery	Qty 2 12VDC, AGM, wide temp range
Controller	Qty 1 24VDC regulator, tender
Battery Enclosure	30 x 24 x 24 vented, lockable, cabinet
Video Management System	
On Site	Local 24 hr continuous storage with cloud access for playback and real-time; cloud based event logging and snapshots on demand.
Cloud Access	User login with customer owned data, video viewing, historical review of motion events (snapshots).
ThermalSafe Automation Suite	
On Site	Real time tours with asset-specific monitoring and logging; short term local data storage with routine cloud storage; built in remote system management for software and hardware.
Cloud Access	User login with customer owned data and on demand data sheets, graphs; auto alerts

ThermalSAFE
Substation Safety and Security Automation

COMPONENTS

ThermalSafe rugged color/thermal camera unit with embedded computing

Pan / Tilt gimbal assembly with harnesses

Cabinet for power / UPS (battery), radio, remote service access
(example pole-mount system in photo at right)

ThermalSafe Automation Suite
(thermal monitoring/reporting)

DTI-Videonet embedded/Cloud combonation Video Management System
(security camera)

OUR PROCESS
- Customer consultation
- Delta Thermal Proposal
- Customer Proposal Acceptance
- Receipt of Order
- Proposal acceptance for building and deploying ThermalSafe units with cabinet enclosure hardware.
- System Production and Assembly, Test
- On Site Installation and Testing, Training
- Site Operational

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Delta Thermal, Inc. Proprietary Information

DELTA THERMAL

Thermal**SAFE**
Substation Safety and Security Automation

OVERVIEW

Delta Thermal Inc (DTI) is offering **ThermalSafe** to automate the detection and reporting of hot spots in electrical substations and support color/thermal video perimeter security. One or more ThermalSafe units can be installed at a substation and enabled by DTI for monitoring, reporting and recording of both asset thermography and site security data. Our solar power option enables a fully operational system with less than 1 hour install.

FEATURES

- Automatic, continuous measurement of equipment temperature throughout the day or night

- Up to the minute data report access using a networked desktop or mobile device

- Local recording of thermal and color video to solid state drive with motion snapshots

- On demand cloud access to live video, motion event history and clips

- Secure wireless network, tunnel for data to/from cloud

- Remote servicing when needed, to minimize site visits
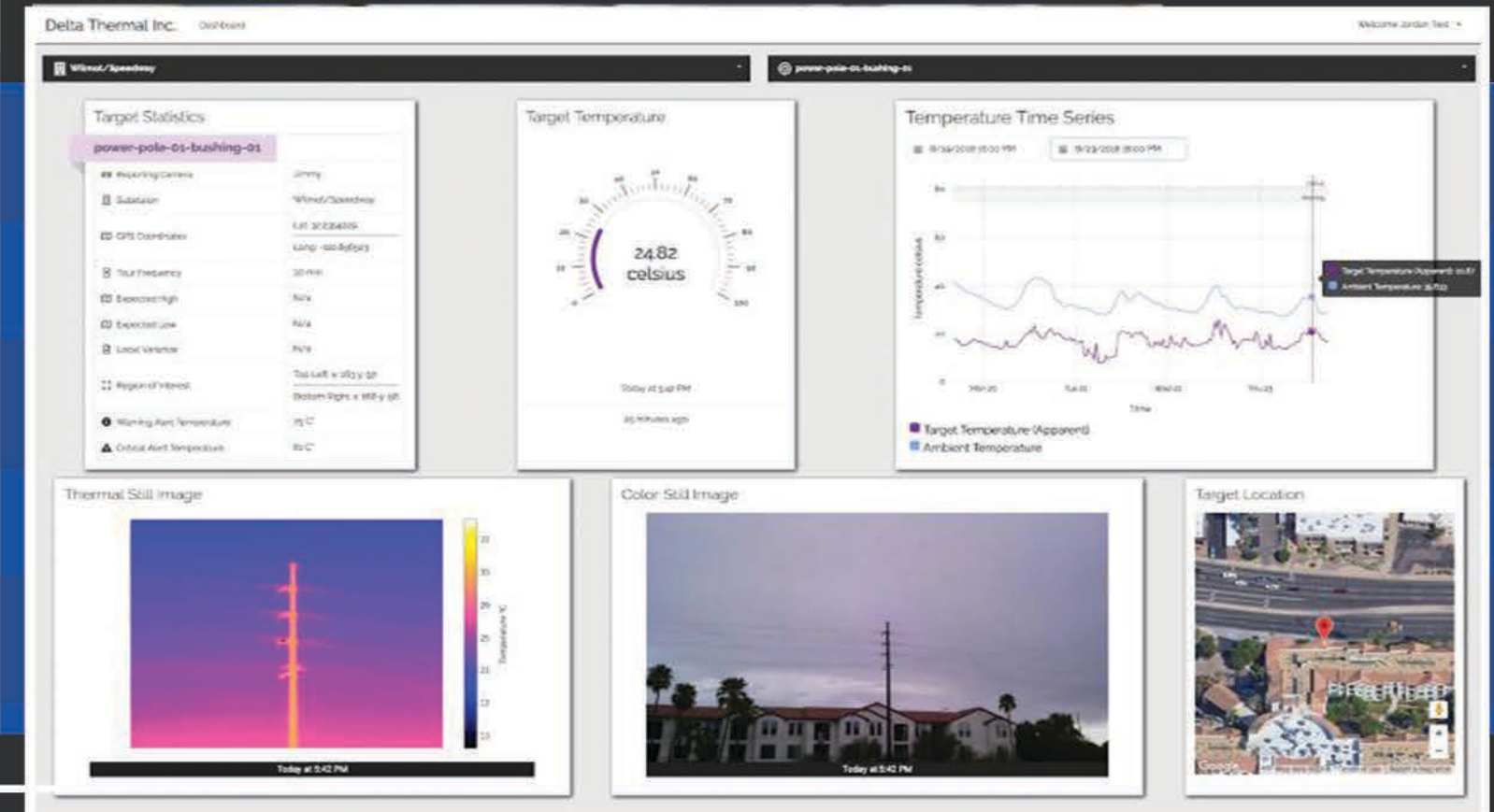
- Sample ThermalSafe dashboard

"The industry needs to stop playing Russian roulette with its employees and assets."

THE PAST
Intermittent on site, hand held thermography

Hand held thermal imaging systems are outdated techniques that require manpower, can malfunction due to human error, and only take a snapshot of that exact moment the equipment is being monitored. **ThermalSafe** offers automatic, 24 hour continuous thermal monitoring that enables for secure up-to-the the minute data reporting on your mobile devices for remote monitoring and alerts. If your equipment leaves the desired temperature range your staff will be immediately sent an alert so you can promptly address the concern BEFORE system failure.

THE FUTURE
24 Hour Automated Monitoring w/ live notifications on your device

Thermal**SAFE**
Substation Safety and Security Automation