

Case Study

MSAI Solutions Help Data Centers Monitor/Optimize Load and Protect Critical Assets

Summary

A major data center deployed MultiSensor AI's infrared imaging and AI-powered software to monitor critical assets 24/7, from server loads and thermal conditions to power infrastructure. The system detects anomalies in real time, identifies thermal imbalances across racks, and improves hot/cold aisle regulation. By enabling predictive maintenance and early fault detection, MultiSensor AI helps prevent downtime, improves efficiency, and ensures power reliability.

Solution

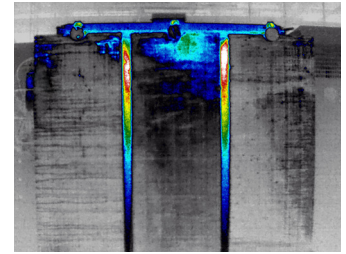
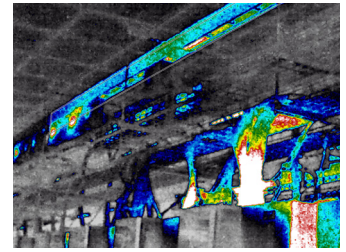
In order to guard against future incidents the facility partnered with MultiSensor AI to enhance fire safety and asset reliability. MSAI installed 14 FMX 400 thermal cameras paired with AI-powered software, maximizing coverage by monitoring up to eight high-risk zones per camera. The system delivers 24/7 thermal monitoring, integrates with existing fire suppression infrastructure, and sends automated alerts for rapid response. Reliability teams also use solution to monitor mechanical assets and reduce maintenance-related downtime. The client now benefits from global access to live video feeds, real-time notifications, and historical data for safety audits and operational improvements.

15%

Reduction in insurance premiums and prevented fires

11.4x

Estimated return on investment by operational gains in the first year



Challenge

The data center experienced a fire without early detection, resulting in \$3.42 million in damage, inventory loss, and production downtime. In addition, reliance on calendar-based inspections led to recurring equipment failures, averaging \$1.1 million annually in avoidable costs from unplanned downtime and lost output.

Results

Real-Time Safety Alerts

Multisensor AI's System delivers instant alerts when potential thermal incidents are detected, dramatically improving response times and situational awareness.

Zero Incidents Since Implementation

Since the system went live, there have been no recorded thermal runaway events, highlighting the effectiveness of proactive monitoring.

Automated Incident Workflow

The security team now receives automated alerts, shifting from passive monitoring to active intervention. Future plans include direct integration in their southern US sites after sharing these results internally.

62%

Reduction in asset failures leading to nearly \$550,000 in downtime costs

4.64x

Return on investment on fire prevention