Ekko Sense | AI

Data Center Operations Intelligence (DCOI) Platform

Make the invisible visible



Get more compute from what you already have

Data center operators are all chasing the same goal: delivering as much compute as they can from the least possible resource. That means pushing every room and every site to its true limit – safely, and with the oversight and confidence to do it responsibly.

We are at a pivotal moment in our industry. The data center operational efficiency gains that used to come easily have plateaued – just as pressures to do more faster are building from every direction at once. Energy costs are rising; sustainability and planning regulations are tightening, and AI-driven compute requirements are accelerating quicker than most estates were ever designed for.

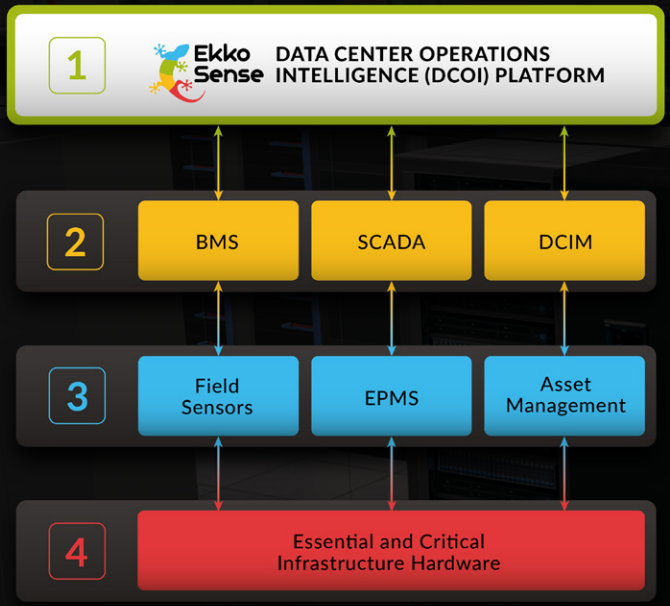
Heavy investment in monitoring, BMS, DCIM, EPMS, sensors and dashboards means that most operators are not short of data – however it's scattered across systems that were never designed to talk to each other.

This can lead to fragmentation, with critical data getting lost, trapped, or siloed among all the background noise. Swamped by data, it's easy to miss out on the big picture insights.

EkkoSense resolves this with our Data Center Operations Intelligence (DCOI) Platform. Allowing you to bring all your operations data together into a single, trusted Operational Truth. A unified real-time orchestration layer that helps turn data overload into decision advantage.



Daniel Kline
CEO, EkkoSense



Turn data overload into decision advantage

One platform, multiple perspectives. Your single source of Operational Truth.



Enabling Operational Truth across your business

At scale, across every room, every site, every portfolio.

Managing and optimizing performance is clearly challenging. Today's data center operations teams can't afford to wait. You need answers to your key questions if you are to make informed decisions at the pace and scale today's estates demand.

Unfortunately, many fully instrumented data centers are still flying blind. The answers to these questions are never going to come from just another dashboard. Legacy BMS, EPMS and DCIM systems may capture volumes of operational data, but they can't give you the answers you need.



The answers you need in a single orchestration layer

EkkoSense Data Center Operations Intelligence (DCOI) - the only true orchestration layer for critical infrastructure.



Understand exactly what's happening now

A single source of Operational Truth

Siloed BMS, EPMS, and DCIM data interpreted into a single real-time interface.



Maximize your compute

Increase capacity at minimal cost

Get more compute from what you already have. Works across your sites and rooms to identify and unlock previously stranded capacity.



Mitigate data center risk

Automatic Anomaly Detection

Anomaly detection and comprehensive alerting provides you with early warnings before critical equipment failures occur.



Prime colocation growth

Make better decisions at scale

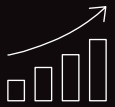
Accelerated time-to-market, faster customer onboarding, increased sellable capacity, improved asset utilization.



Real-time orchestration

Immediate estate wide insight

Sitting above your existing controls, freeing you to focus on optimizing for higher density & hybrid cooling.



Costs down, profits up

Discover your genuine estate costs

Capacity released, Opex spending delayed, operating costs reduced, and revenue protected. That keeps the CFO happy.

EkkoSense Data Center Operations Intelligence for any data center type

Comprehensive optimization insight and reporting outputs across your whole estate.

High density AI GPU

Hybrid / liquid cooling deployments

- Visualize liquid & air temperatures in a 'single pane of glass'.
- Deep integration with CDU (Cooling Distribution Unit) Model and manage air and liquid cooled racks + rear door heat exchangers (RDx).
- Monitor up to 10 PDUs per rack AC/DC power.
- CDU Anomaly detection provides early warning before critical issues occur.
- Cooling optimization balances capacity management and energy consumption.

Colocation

Air cooled modern optimized data center

- Model and manage fan wall/ cool wall solid floor data halls.
- Advanced capacity planning provides clear visibility of resources to sell.
- Permission model enables over the shoulder customer visibility / tenant portal.
- Rack level power visualization provides clear visibility of tenant power consumption – ramp to contract.
- Automated SLA reporting for tenants.
- Automated ESG reporting for internal stakeholders and industry regulators.
- Anomaly detection provides early warning before critical issues occur.

Legacy data centers

Air cooled and requiring optimization

- Embedded Cooling Advisors help optimize cooling energy consumption.
- Quick to value – quick to deploy and immediate energy saving ROI.
- Advanced capacity planning provides clear visibility of resources to deploy, identify stranded capacity.

Edge sites

Supporting Edge sites and distributed IT

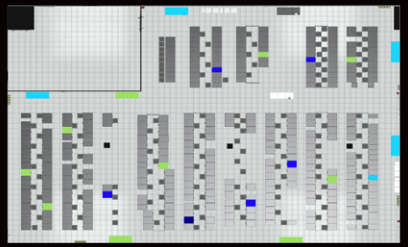
- Remote monitor for unstaffed sites.
- Lightweight deployment using EkkoLink mini and wireless sensors.
- Item based alerting – create alerts for any monitored device.
- Estate level analytics show underperforming sites.



Make the invisible visible

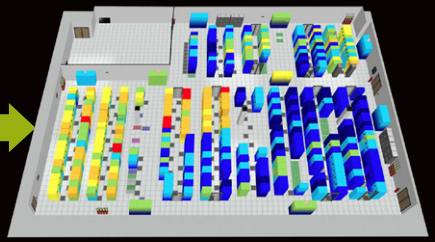
EkkoSense AI and Machine Learning are changing the game for data center operators.

Typical BMS View



Most data center teams see only the cooling unit temperatures. Rack inlet temperatures are not properly monitored and their true status is invisible.

EkkoSense 3D Interactive Digital Twin

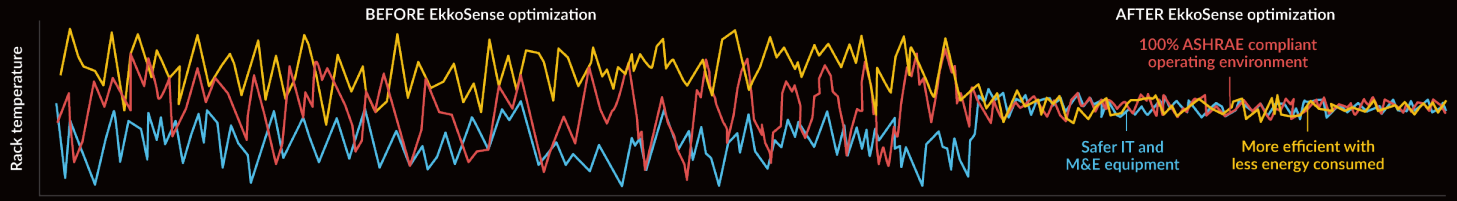


Comprehensive thermal data capture and monitoring gives full visibility and uncovers risk, predicts failures and provides opportunities for improvement.

EkkoSense AI and Machine Learning



AI powered software with Machine Learning allows operators to quickly and easily fine tune the data center to ensure maximum efficiency.



EkkoSoft® Critical

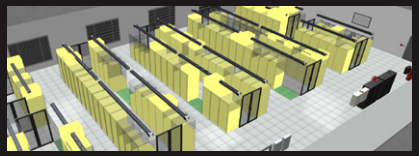
Real-time insight across every cooling environment

Gain complete operational visibility

Manage transition to AI workloads

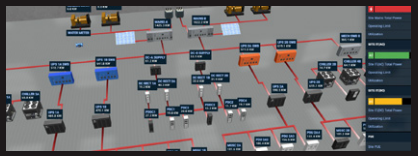
Optimize air, liquid and hybrid cooling

The only platform that enables operations teams to manage the real-time performance of air-cooled, liquid-cooled and hybrid cooling deployments from a single orchestration layer.



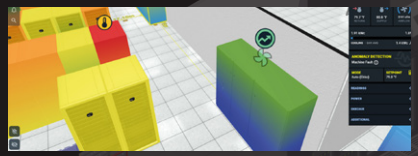
Capacity Planning

Ongoing capacity management of site cooling, space and power for allocation and reservation across the full power chain.



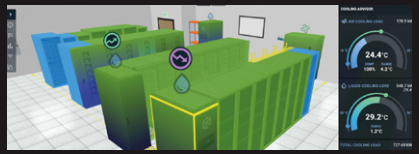
Power Monitoring

Real-time visibility into power consumption, capacity, and risk across the data center estate.



Auto Cooling Anomalies Detection

Identify M&E equipment performance anomalies before potential equipment failure, enabling proactive maintenance.



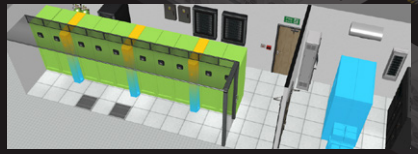
Hybrid Cooling Advisor

The world's first in-room optimization engine for hybrid air and liquid cooling.



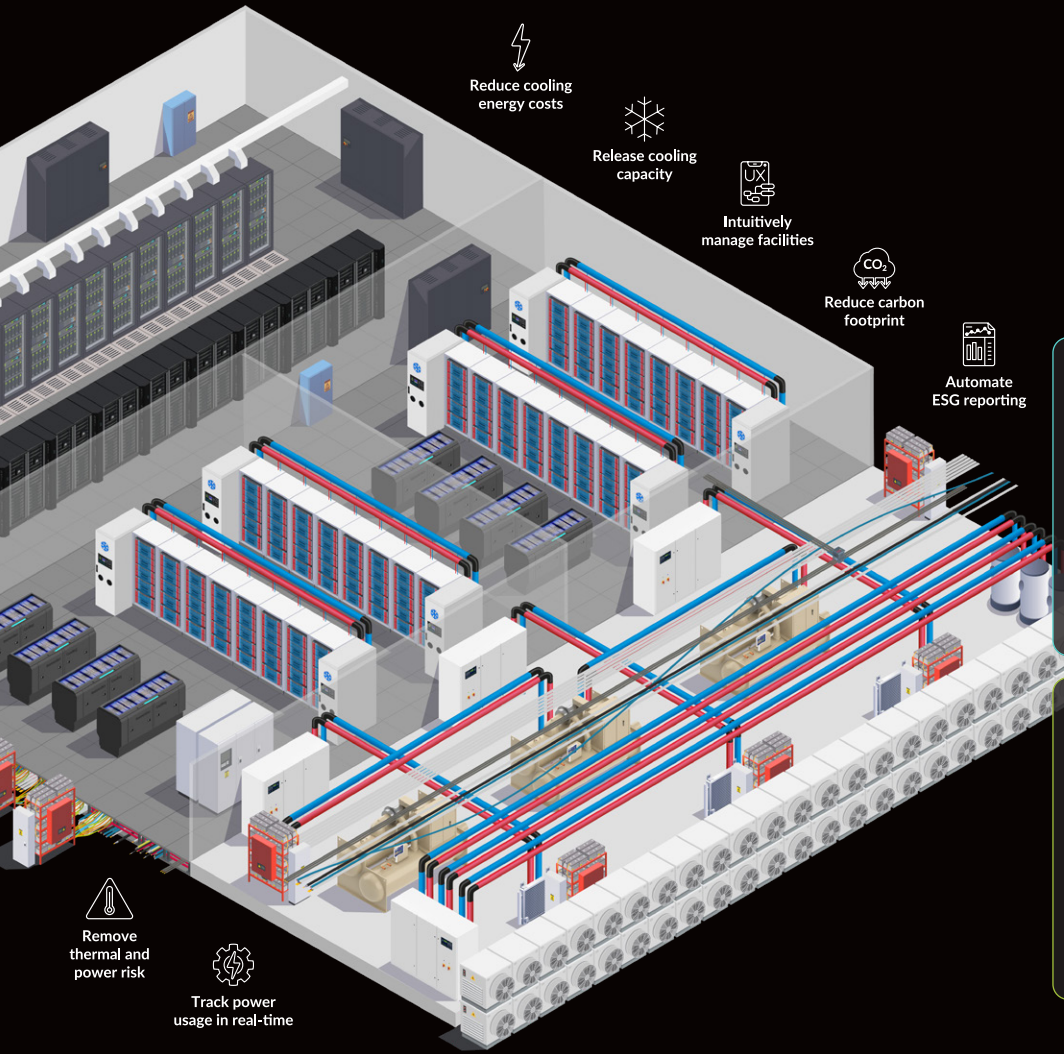
Liquid Cooling

Drive your transition to hybrid air and liquid cooling technologies, while managing the complexities with EkkoSense.



Digital Twins

Immersive real-time visualization of all your data center rooms.





Estate Dashboard Views

Optimization performance and alerting across extended data center estates, with essential KPI data accessible in just seconds.



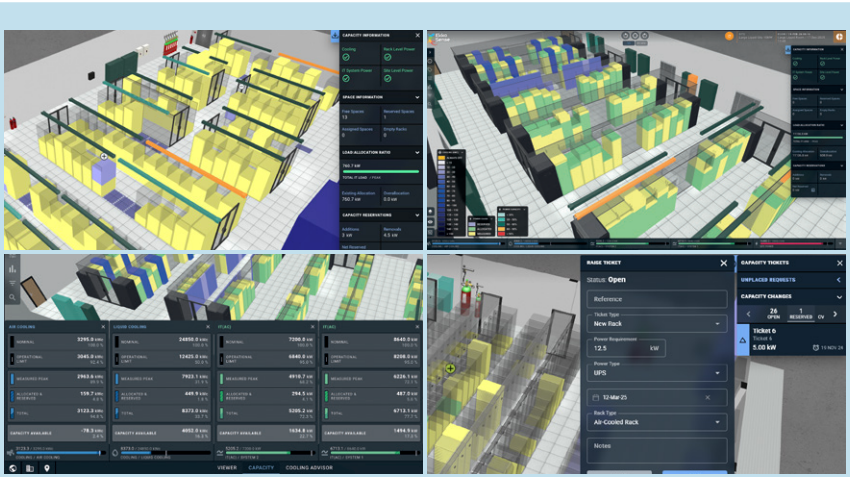
Automated ESG Reporting

Collect, trend, analyze and report on ISO 30134 ESG Reporting requirements such as PUE, CER, CUE and WUE.

Capacity Planning

With EkkoSoft® Critical, EkkoSense offers support for the largest and most complex data center rooms.

- **Track Capacity in real-time** – live 3D visualizations enable immediate capacity decisions across connected rooms.
- **Unlock stranded capacity** – highlight and release previously unidentified stranded M&E capacity, with accept/reject workflow to give users control over capacity restrictions.
- **Intelligent Capacity Planning** – EkkoSense uses innovative 'zones of influence' data analytics to identify true space, power and cooling capacity performance.
- **Capacity planning for colocation customers** – with detailed rack capacity planning across custom rack groups, as well as support for internal data center cross-charging.
- **Simple interface and comprehensive reporting** – ditch your unwieldy capacity spreadsheets thanks to EkkoSense's accessible, intuitive reporting, powerful regression analysis and easy-to-use sidebar visualizations.



Taking data center capacity planning to the next level.

EkkoSoft® Critical lets you unlock stranded capacity and run your data centers leaner with intuitive, real-time M&E Capacity Planning for entire enterprise estates. Our distinctive software lets your operations team gather and visualize critical data center capacity, power and cooling performance at a much more granular level.

Unlike over-complex traditional DCIM tools and CFD solutions, EkkoSoft® Critical helps teams manage all their current and future capacity planning demands within a single, intuitive 3D visualization and analytics tool.

We provide your operations team with a precise understanding of exactly what's going on from an infrastructure and engineering perspective when they deploy AI services and start to run them at scale.

EkkoSoft® Critical gives data center teams the capacity, power and cooling insights they need to run their increasingly complex data center enterprise estates much more efficiently.



Intuitive real-time Power Management for entire data center estates.

EkkoSoft® Critical provides the AI-driven power monitoring that gives operations teams real-time visibility into consumption, capacity, and risk across their enterprise estate. We then transform this real-time analytics power data into actionable operational insights.

Key capabilities include:

Tracking and Managing Data Center Power Usage in real-time – giving you estate-wide access to critical power management data, key power metrics, and standard KPIs such as PUE performance for automated ESG reporting.

Power Usage Analytics across IT and facility infrastructure – correlating power data from UPS systems, PDUs, branch circuits and IT load to provide full power chain visibility, and a unified view of consumption and capacity utilization.

Support for larger and more complex rooms – architected to support multiple AC and DC power systems, multiple UPS systems, and up to 10 PDUs for each rack – addressing the needs of the largest data center operators.

Power Monitoring

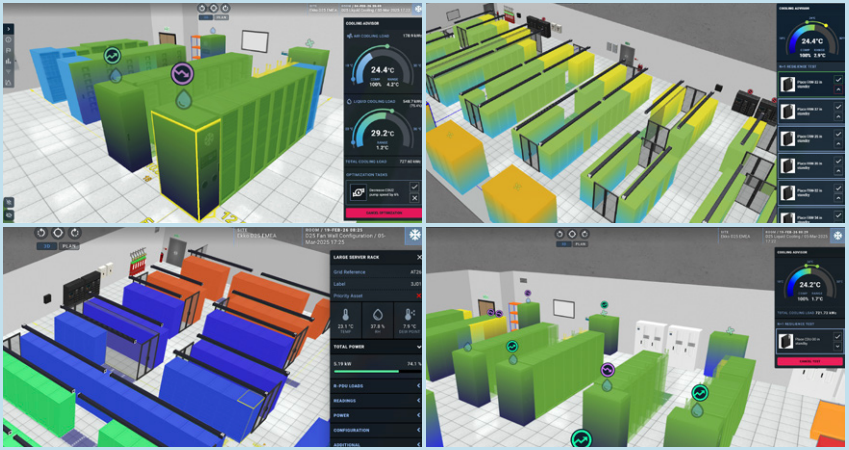
How EkkoSoft® Critical unlocks data center power monitoring value.

- Monitoring live power usage across racks, rows, rooms and facilities to help understand energy consumption and identify abnormal usage patterns.
- Keeps your 3 phase power balancing on track by monitoring and resolving any power imbalances.
- Features 3D Mechanical & Electrical One-Line Visualizations that help operations teams to make more informed upstream and downstream power distribution decisions.
- Removes the requirement for complex manual testing by offering Residual Current Monitoring Safety Support for PDUs.
- Enables Estate Data Power Aggregation by capturing Average/ Peak Site Power, Room Power and PUE data for up to a 35-day period.

Hybrid Cooling Advisor

The world's first embedded advisory engine to support hybrid cooling technologies within technical rooms with high rack loads.

- Expands Cooling Advisor to support hybrid air and liquid cooling deployments.
- Developed to support the most technical data center rooms with high-density rack loads.
- Intuitive process that provides operations teams with clear recommendations of next best actions needed to optimize air and liquid cooling performance.
- Advisory actions support 100% ASHRAE rack thermal compliance.
- Active risk mitigation built-in, with clearly defined step, back out mechanisms, and logging of all user inputs and activities.
- Powered by machine learning insights from billions of EkkoSoft® Critical data points.



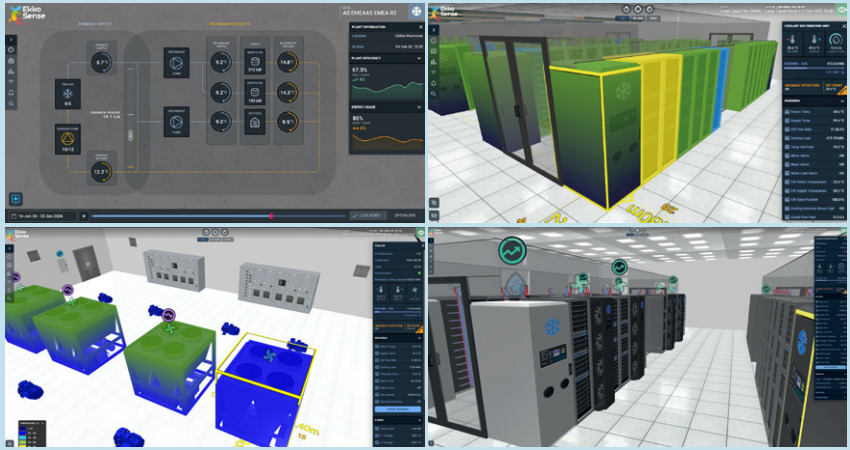
Your own embedded smart Hybrid Cooling Advisor.

Hybrid Cooling Advisor applies powerful machine learning and AI technology to provide valuable, proactive thermal advice. This helps facilities managers, energy managers and data center operations teams ensure their data center's hybrid air and liquid cooling performance stays optimized.

Built right into the heart of EkkoSoft® Critical, Hybrid Cooling Advisor is the industry's first process-driven embedded advisory capability available as part of a data center thermal optimization solution.

By following the clear recommendations offered by Hybrid Cooling Advisor's algorithms, data center teams can independently keep on track in their journey to minimize risk, unlock capacity, and optimize cooling performance.

Hybrid Cooling Advisor draws on the deep cooling optimization best practice expertise of EkkoSense's team of PhD-level thermal software and electronics engineers.



Liquid Cooling. Optimized for AI.

The move to hybrid air and liquid cooling demands smarter design, tighter control, and continuous optimization. Because even in liquid-cooled environments, air still plays a role — often accounting for 15–30% of total cooling capacity depending on CDU configuration.

Without precise balance, you could end up using more air cooling after introducing liquid cooling. And with AI heat loads at unprecedented densities, real-time visibility across both white space and grey space is mission-critical.

If you're not fully instrumenting every element of your cooling ecosystem, you won't know there's a problem — until there is one.

EkkoSoft® Critical's 3D visualization and analytics software can accommodate multiple cooling architectures, allowing operations teams to monitor, visualize and optimize all cooling types. Because EkkoSoft® Critical lets teams visualize cooling performance at a much more granular level, teams can ensure their environment remains fully optimized – particularly as workloads continue to scale upwards.

Liquid Cooling

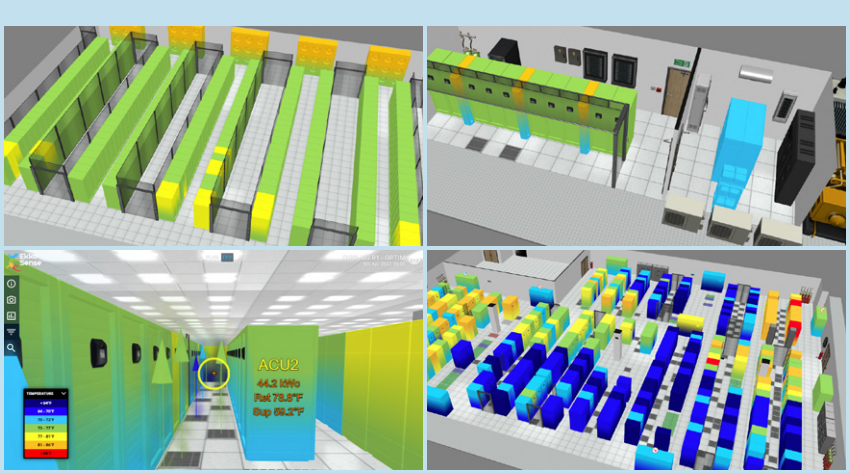
A comprehensive portfolio of liquid cooling optimization solutions proven in dedicated liquid cooling labs worldwide.

- Early identification and alerting of service-impacting issues.
- The world's first in-room optimization engine for hybrid air and liquid cooling.
- Support for immersion systems and CDUs with advanced flow rate analytics, visualization, and optimization.
- Vendor-agnostic optimization of chillers, pumps, and control systems for repeatable liquid cooling performance.
- Low-cost air-side and liquid-side (direct-to-chip and immersion) monitoring sensors.
- End-to-end grey and white space performance management for complete liquid system efficiency.
- Universal retrofit monitoring for CDUs, immersion cooling pods, and chillers.
- Simulation software supporting water-cooled chillers, liquid-cooled racks, split DX units, and immersion cooling.

Digital Twins

Immersive real-time optimization of all your data center rooms from the smallest Edge site through to your largest facility.

- Comprehensive real-time visibility across your entire data center enterprise estate.
- Clear visualizations that help to communicate complex data - making it easier to compare changes and highlight potential anomalies.
- Removes the requirement for over-complex DCIM suites or expensive, non real-time external CFD consultancy.
- Intuitive interaction, with accessible 3D visualizations and a simple drag and-drop interface providing access to a broad range of M&E functionality.
- Support for ongoing data center optimization through the active display of suggested airflow and cooling improvements.
- Real-time visualizations based on latest monitoring results, with Digital Twins refreshed to reflect updates.

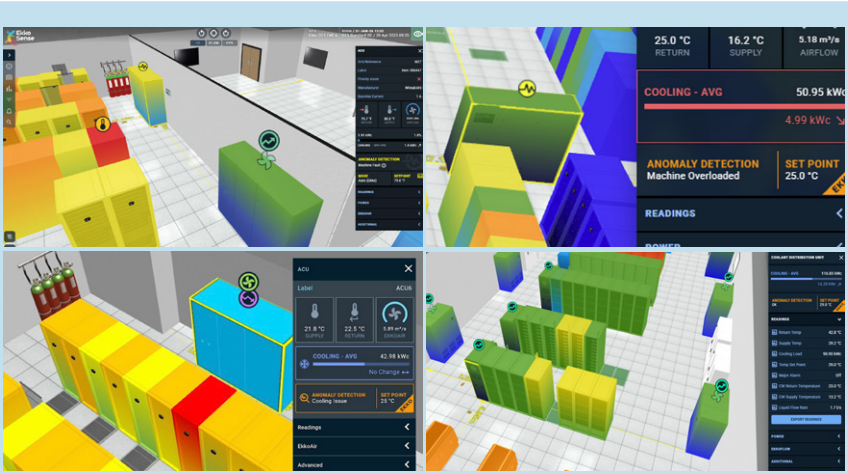


Intuitive Digital Twin approach for increased visibility.

One of the main barriers to data center optimization has always been the complexity of traditional DCIM tools and CFD solutions.

EkkoSense solves this challenge by creating a concise Digital Twin of your data center environment. We draw on new levels of sensing granularity, real-time analytics and innovative gaming software techniques. This makes immersive real-time optimization of all your data center rooms a reality – from the smallest Edge site through to your largest facility.

Our powerful 3D visualization and analytics platform makes data center optimization far more accessible. The intuitive Digital Twin models take things to the next level. Digital Twins not only keep things simple by visually representing all your current cooling, power and thermal conditions, but also offer immediate tangible recommendations for continuous optimization.



Identify cooling performance anomalies ahead of time.

Today's high-density AI infrastructure is far more volatile. with thermal conditions changing in real-time. Data center teams simply can't afford to rely on traditional lengthy BMS or EPMS alert mechanisms. If something's not performing optimally, you need to know now.

That's where EkkoSoft® Critical's Auto Cooling Anomalies Detection delivers - removing thermal and power risk by providing an early warning of any air or liquid cooling infrastructure anomalies way ahead of a critical infrastructure asset reaching the threshold for generating a BMS alarm or a room temperature alert.

Auto Cooling Anomalies Detection alarms also provide data center operations teams with the ability to triage air and liquid cooling issues and move beyond traditional reactive data center monitoring to a much more proactive maintenance approach.

Auto Cooling Anomalies Detection

Data center operations teams can use our distinctive Auto Cooling Anomalies Detection to identify any abnormal air and liquid cooling performance – and signal users proactively before failure occurs.

- Reduces risks associated with today's increasingly complex liquid and air cooling deployments.
- Supports a full range of air and liquid cooling assets, chilled water supply infrastructure including CDUs and Chillers, as well as hybrid cooling deployments within the same room.
- Default auto-setpoint detection, while manual and actual setpoints can also be supported, along with the ability to disable individual units.
- Integration via webhooks with Teams for alert notifications, as well as JSON webhooks for BMS integration.

Enterprise Dashboard

Consolidated interface for capacity, power, thermal performance management and reporting.

- Quickly navigate from estate to site to floor to room, with the ability to clearly differentiate between all data halls, plant rooms, and edge sites.
- Thermal, faults, alarms, sensor, and connectivity alerts help to keep teams aware of any potential operational issues that need addressing.
- Performance trending and comparison tools support the analysis of any changes in thermal performance, site and room power usage and full capacity utilization updates.
- Embedded reporting capabilities enable data center operations teams to automate production of real-time ESG and sustainability reports.



Real-time dashboard overviews of your key data center metrics.

EkkoSense provides instant single pane of glass dashboard views for all of your critical data center metrics including capacity, power, thermal performance management and reporting.

Embedded real-time compliance reporting also delivers exactly the kind of evidence-based real-world sustainability and ESG metrics that the ISO has defined in its ISO/IEC 30134 series of standardized data center resource efficiency KPIs.

EkkoSense supports reporting regimes such as the EU's Corporate Sustainability Reporting Directive (CSRD) and the EC Energy Efficiency Directive (EED) and will enable the production of key ISO/IEC 30134 metrics.



Data Center ESG Reporting made easy.

With increased pressure in many regions for data centers to track and report on their energy efficiency, there's no doubt that operations teams will need to take steps to improve their reporting processes if they are to keep pace with the growing range of energy efficiency and sustainability reporting initiatives.

These regulatory regimes, including the EU's CSRD Corporate Sustainability Reporting Directive (CSRD), the EC Energy Efficiency Directive (EED), and California's Senate Bill SB 253 and SB 219, are transforming ESG from being primarily a social and corporate responsibility into a crucial aspect of compliance.

EkkoSense solves this problem by embedding ESG Reporting within EkkoSoft Critical – and it really couldn't be any easier to use. ESG Reporting is embedded within EkkoSoft® Critical as an automated process, and is a great way for operations teams to present their sustainability and ESG metrics. The whole process takes just a few minutes, rather that the multiple hours, if not days, needed to generate this information manually. And if you're a colocation service provider, the benefits are even more compelling.

Automated ESG Reporting

Sustainability reporting requirements for data centers are changing. Ensure CSRD and EED compliance with The 'AAA' Standard in reporting.

Automated
EkkoSense's optimization solution is fully automated, integrates easily with your existing system, with no need for specialist analyst teams.

Accurate
EkkoSense AI and machine learning crunches information from billions of data points to generate full PUE, CUE. WUE and CER reporting.

Auditable
EkkoSoft® Critical gives you the reporting framework you need to stay compliant, and you can be up and running with ESG Reporting in just weeks!

Critical Things®

Disrupt traditional data gathering cost models with our IoT suite of sensors and flexible integration solutions

Support your transition towards a 'fully-sensed' data center environment. Designed for simple, rapid installation.

Accelerating data center optimization through integration

EkkoSense is committed to supporting its data center customers with extensive integration opportunities. Our EkkoSoft® Critical SaaS platform solution is vendor-agnostic, encouraging integration with multiple sensor offerings, asset management systems and existing BMS, EPMS and other logging systems.

EkkoSoft® Critical's Public API server ensures our software can publish and ingest data to and from third parties. This encourages the collection of daily aggregate data at room and individual item levels, as well as gathering metadata to manage layouts in third party applications such as AssetSpire's DCIM asset management platform. EkkoSense also works with sensor vendors such as Packet Power to broaden monitoring options for customers. Modbus, BACnet, oBIX and SNMP devices can be configured, enabling the sharing of critical power and environmental data.

Secure 128-bit AES encryption

Communication between all hardware and EkkoSoft® Critical secured with 128-bit AES encryption. Wired interfaces protected with TLS.

Direct mode for Edge support

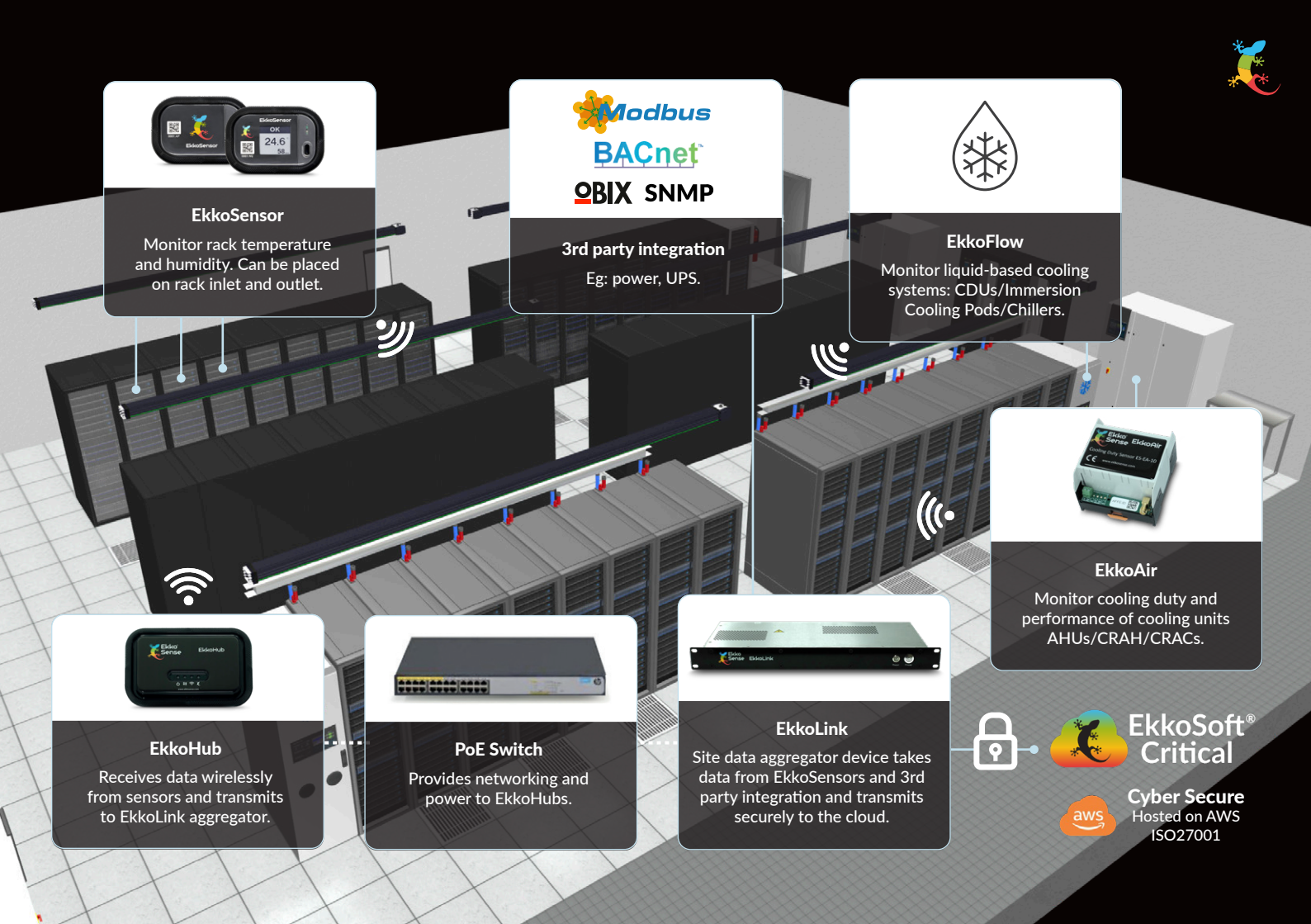
Enables the EkkoHub to connect directly with EkkoSoft® Critical, making it an ideal monitoring and alarming solution for an organization's many smaller Edge sites.

Comprehensive data center coverage

EkkoLink data aggregator can retrieve data from other on-site third party devices and networks using Modbus, OBIX or SNMP connectivity.

Integration with existing 3rd Party systems

The Critical Things® family is also able to access data from existing 3rd party systems such as BMS, EPMS and other logging platforms.


EkkoSensor
Monitor rack temperature and humidity. Can be placed on rack inlet and outlet.
Modbus
BACnet
oBIX SNMP
3rd party integration
Eg: power, UPS.
EkkoFlow
Monitor liquid-based cooling systems: CDUs/Immersion Cooling Pods/Chillers.
EkkoAir
Monitor cooling duty and performance of cooling units AHUs/CRAH/CRACs.
EkkoHub
Receives data wirelessly from sensors and transmits to EkkoLink aggregator.
PoE Switch
Provides networking and power to EkkoHubs.
EkkoLink
Site data aggregator device takes data from EkkoSensors and 3rd party integration and transmits securely to the cloud.
EkkoSoft® Critical
Cyber Secure
Hosted on AWS
ISO27001

Trusted by global giants of data center infrastructure...

CBRE · Cigna · gsk · Africa DataCentres · daisy. · Digital Realty · interxion A DIGITAL REALTY COMPANY · DELL · BT · TELEHOUSE · servicenow · British Airways · bulk · Virgin media O2 · 3 · VISA · Fidelity INTERNATIONAL · Santander · Telefónica

Recognized by worldwide data center industry awards...

Cloud & Datacenter AWARDS ★★★★★ WINNER 2025 · DCR DATA CENTRE REVIEW EXCELLENCE AWARDS 2025 · DCS AWARDS 2024 & 2025 WINNERS · WINNER · BusinessGreen UK Green Business Awards 2024 WINNER · DATACLOUD GLOBAL AWARDS 2024 WINNER · The CLOUD Awards WINNER 2023-24

Part of the

TELEHOUSE LIQUID COOLING LAB

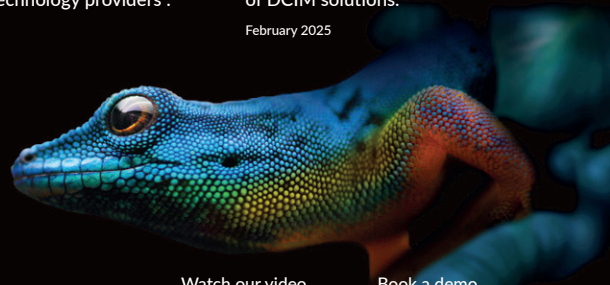
We're recognized as one "of the world's most advanced liquid cooling technology providers".

Ranked in the top 3 for DCIM

DataCentre MAGAZINE

Ranked 3rd by Data Centre Magazine for leading providers of DCIM solutions.

February 2025



Request your free demonstration and experience the future of data center optimization, today.

Watch our video

Book a demo

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