Ekko Sense | AI

Disrupting data center management

Make the invisible visible

The Smartest Ally in your data center

When you're facing unprecedented scrutiny across the board you need the world's leading toolset for easily managing air and liquid cooling, capacity, power and risk across your data center estates.

What EkkoSense AI can do for you

Remove thermal and power risk, release critical power and hybrid cooling capacity, and cut cooling energy costs.

Quick to value

Deploy in days, benefit in weeks

1MW data hall takes just 1-week with non-disruptive retro-fit cyber secure RF sensors into live sites and cloud native SaaS.

Integrate and ingest

Makes your existing BMS better

Open API data ingest bridge to colo BMS / EPMS.

Easy to use

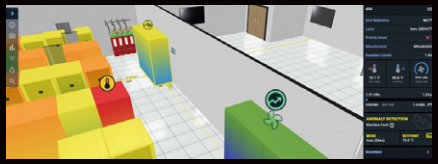
The world's most advanced GUI

Immersive digital twins and intuitive tools require minimal training.

Immediate insight

Continuous AI & ML analytics

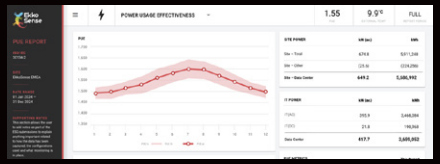
Patented AI and machine learning delivers power, cooling optimization and capacity planning insights.



Minimise risk

Automatic anomaly detection

Anomaly detection and item-based alerting provides early warnings before critical equipment failures occur.



Stay in the know

Automated reporting

One-click access and simple sharing of your KPIs, SLA and ESG reporting – from a single rack to an entire estate.

The power of EkkoSense AI 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

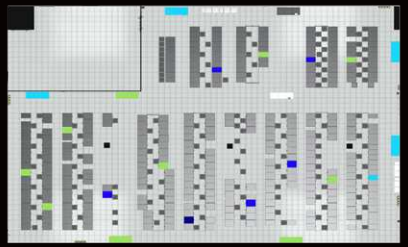
Supporting Edge sites and distributed IT

- 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

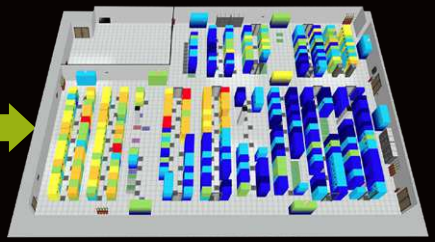
EkkoSense AI and Machine Learning are changing the game for data center operators.

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.

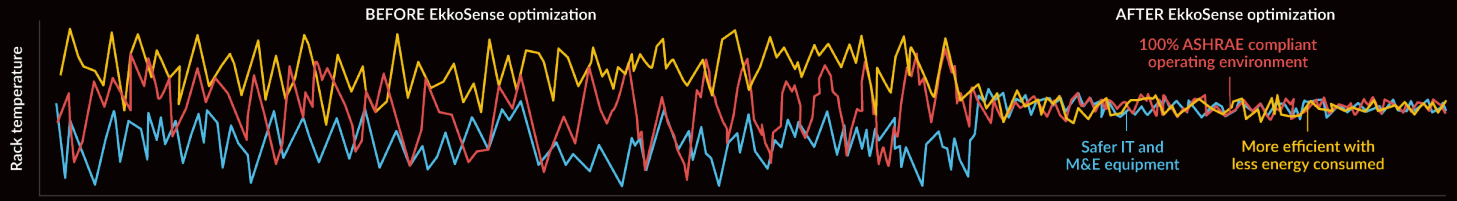
EkkoSense 3D Interactive Digital Twin



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 control across every cooling environment

The only ‘single pane of glass’ AI-driven SaaS solution to detect, monitor, analyze and optimize today’s hybridized data center air and liquid temperatures and flow rates.

Gain complete operational visibility

Manage transition to AI workloads

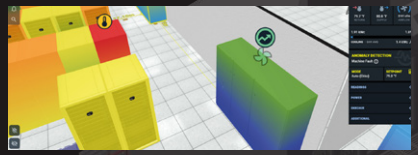
Optimize air, liquid and hybrid cooling

Liquid Cooling

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

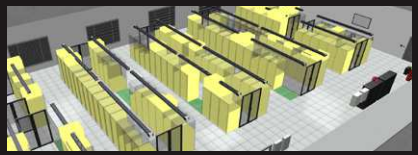
Hybrid Cooling Advisor

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



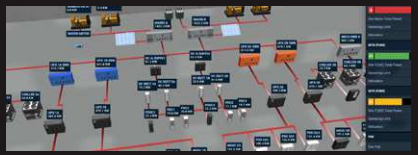
Auto Cooling Anomalies Detection

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



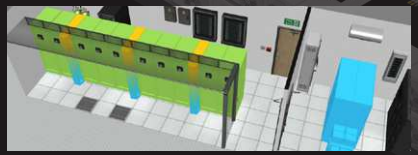
Capacity Planning

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



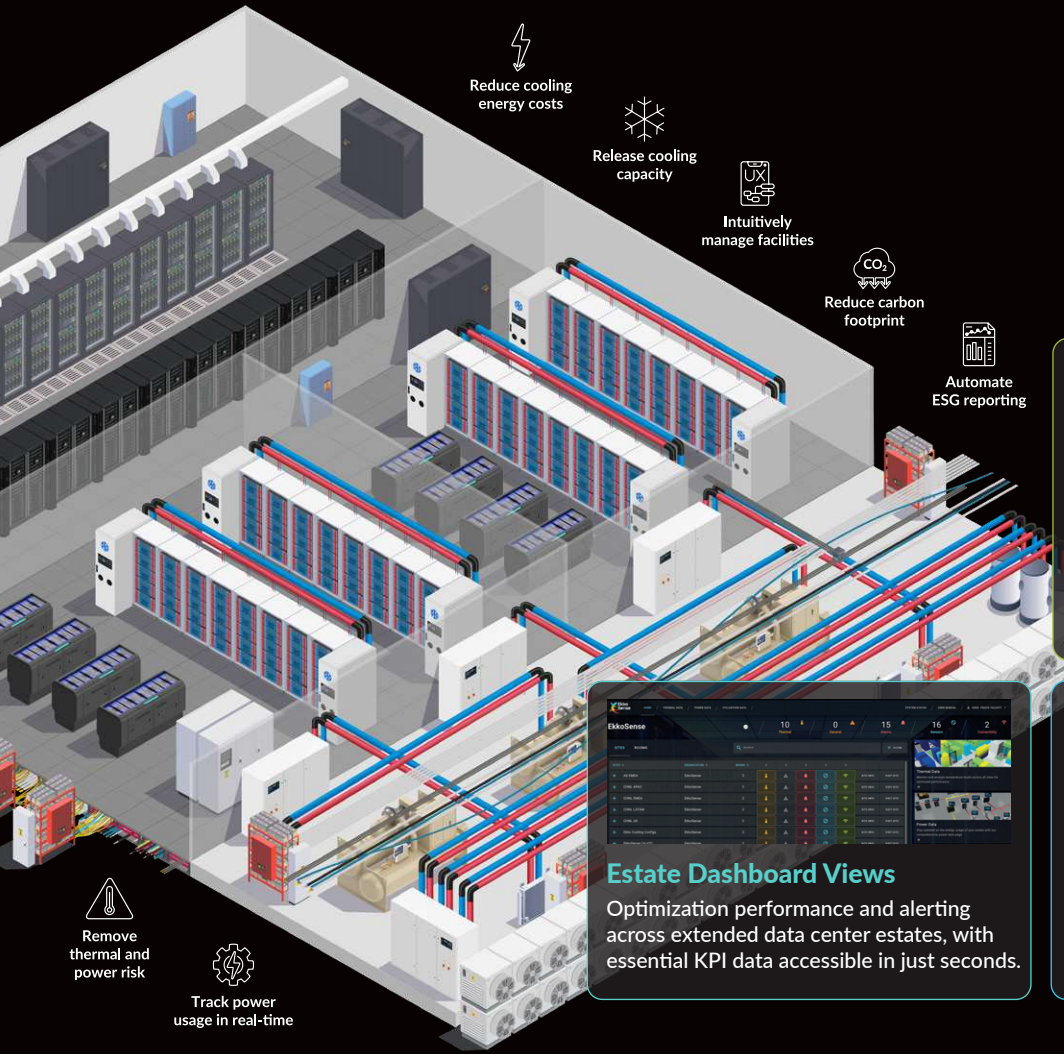
Power Monitoring

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



Digital Twins

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



Automated ESG Reporting

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

Estate Dashboard Views

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

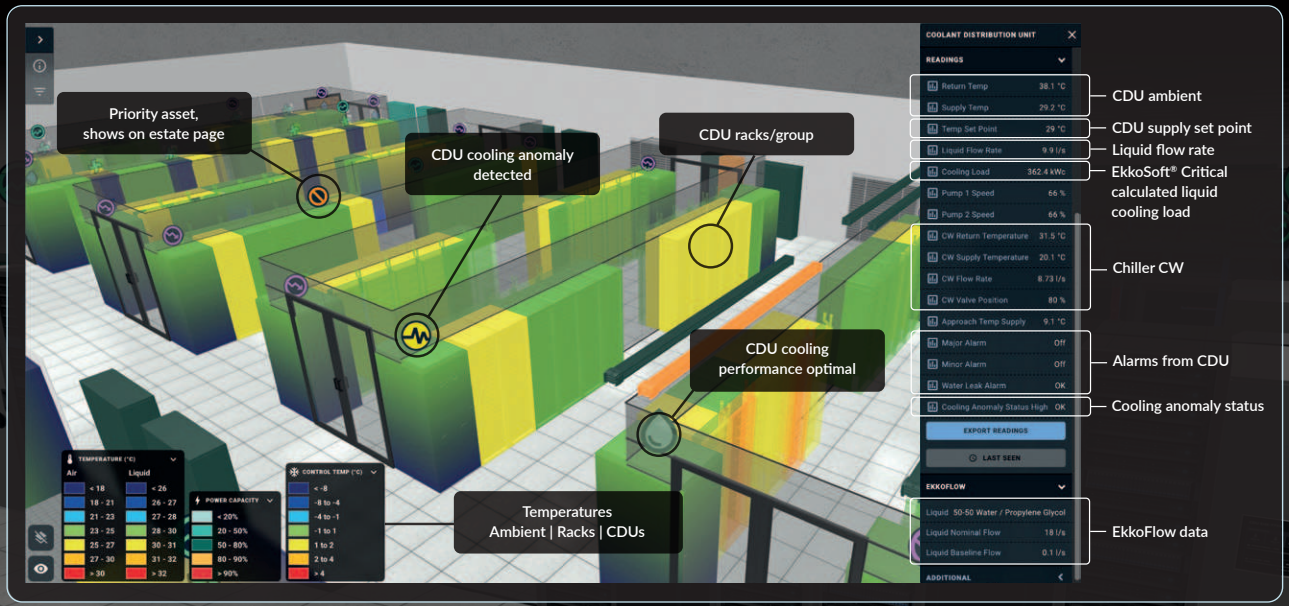
EkkoSim

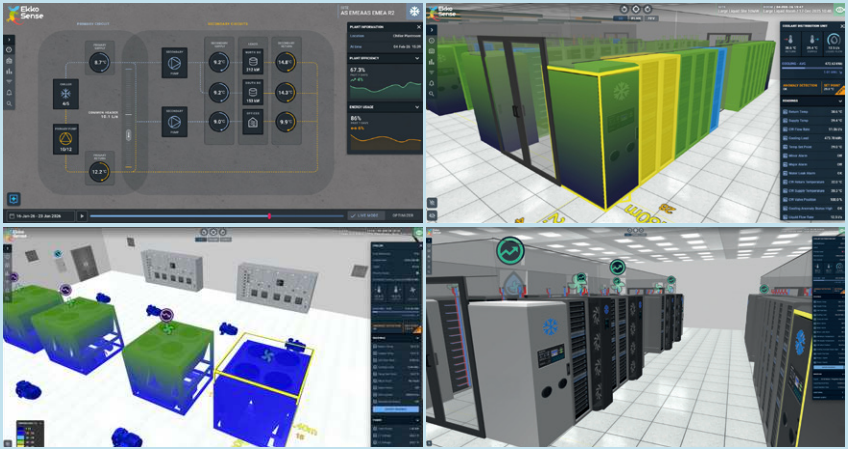
Test 'what-if?' scenarios with precise infrastructure simulation models, and take the guesswork out of data center planning.

EkkoSoft® Critical

Optimize your complex air, liquid and hybrid cooling

EkkoSoft® Critical is the only AI-powered data center optimization platform that enables operations teams to manage the real-time performance of air-cooled, liquid-cooled and hybrid cooling deployments all from a single intelligent platform.





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

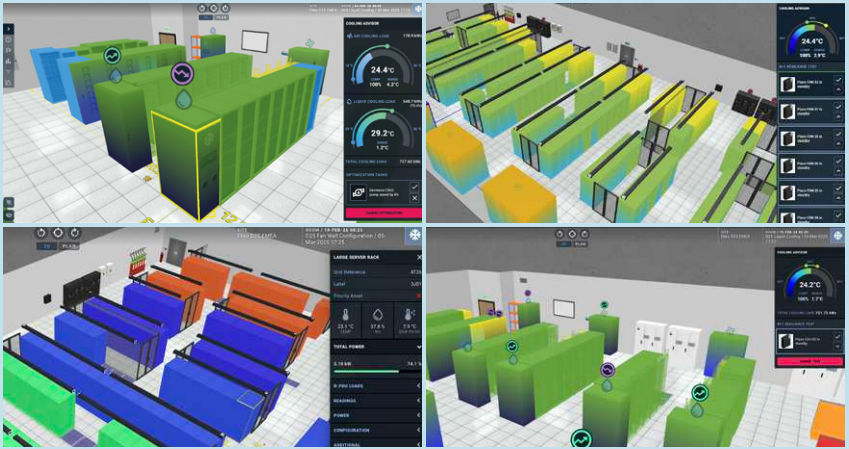
A comprehensive portfolio of liquid cooling optimization solutions proven in dedicated liquid cooling labs worldwide.

- 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.

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.



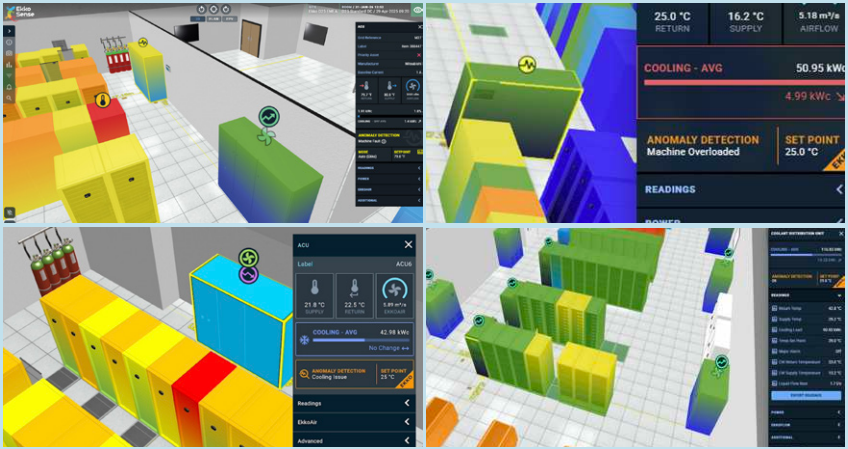
Your own embedded smart Hybrid Cooling Advisor.

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.



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

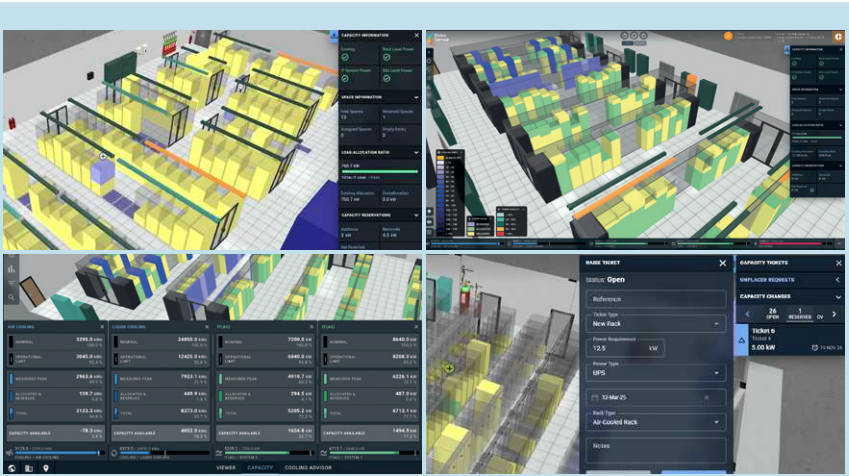
Data center operations teams can use our distinctive Auto Cooling Anomalies Detection to identify any abnormal air and liquid cooling performance – and signal users proactively before failure occurs.

- 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.

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

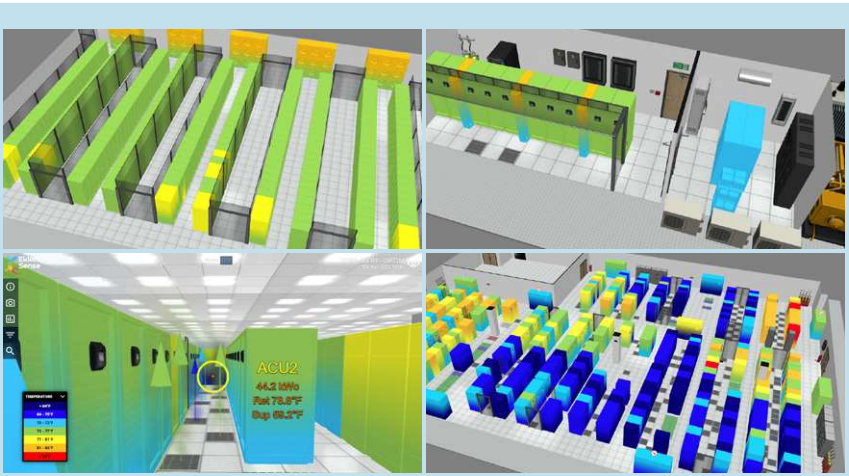
How EkkoSoft® Critical unlocks data center power monitoring value.

- 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.

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.

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!

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.

Unlimited simulation scenario creation with EkkoSim.

EkkoSim is the first Digital Twin software solution to provide comprehensive, end-to-end grey and white space data center modeling and simulation. This gives you the ability to run through limitless scenarios to simulate growth, technology changes, or even TCO.

EkkoSim allows for multiple scenarios to be created, tested and analysed in the platform, such as the addition of new plant, an increase of IT load, failover scenarios, reconfiguration of cooling systems, viability of new power distribution systems and many more.

The interface clearly displays capacity for each unique asset class based on the provisioned (maximum) and utilized (existing) site loads.

Furthermore, integration with EkkoSoft® Critical provides 'live' Actual v Expected performance data within the platform in order to review operating performance against OEM specifications to identify inefficiencies.

Model, Predict, Deploy

Data center simulation, infrastructure and capacity planning modeling.

- Calculate expected power use throughout the data center from IT load provisioning up to the incoming transformers.
- Select from a large range of asset models and quickly create scenarios, with the ability to combine assets to model a large variety of systems.
- Calculate the PUE of the data center and the pPUE of each component.
- Perform 'what if' analysis to simulate data center performance in a variety of ambient conditions for both power and cooling distribution networks.
- Plan and simulate performance for data center extension projects or for entire new build.

EkkoSim
MODEL | PREDICT | DEPLOY

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

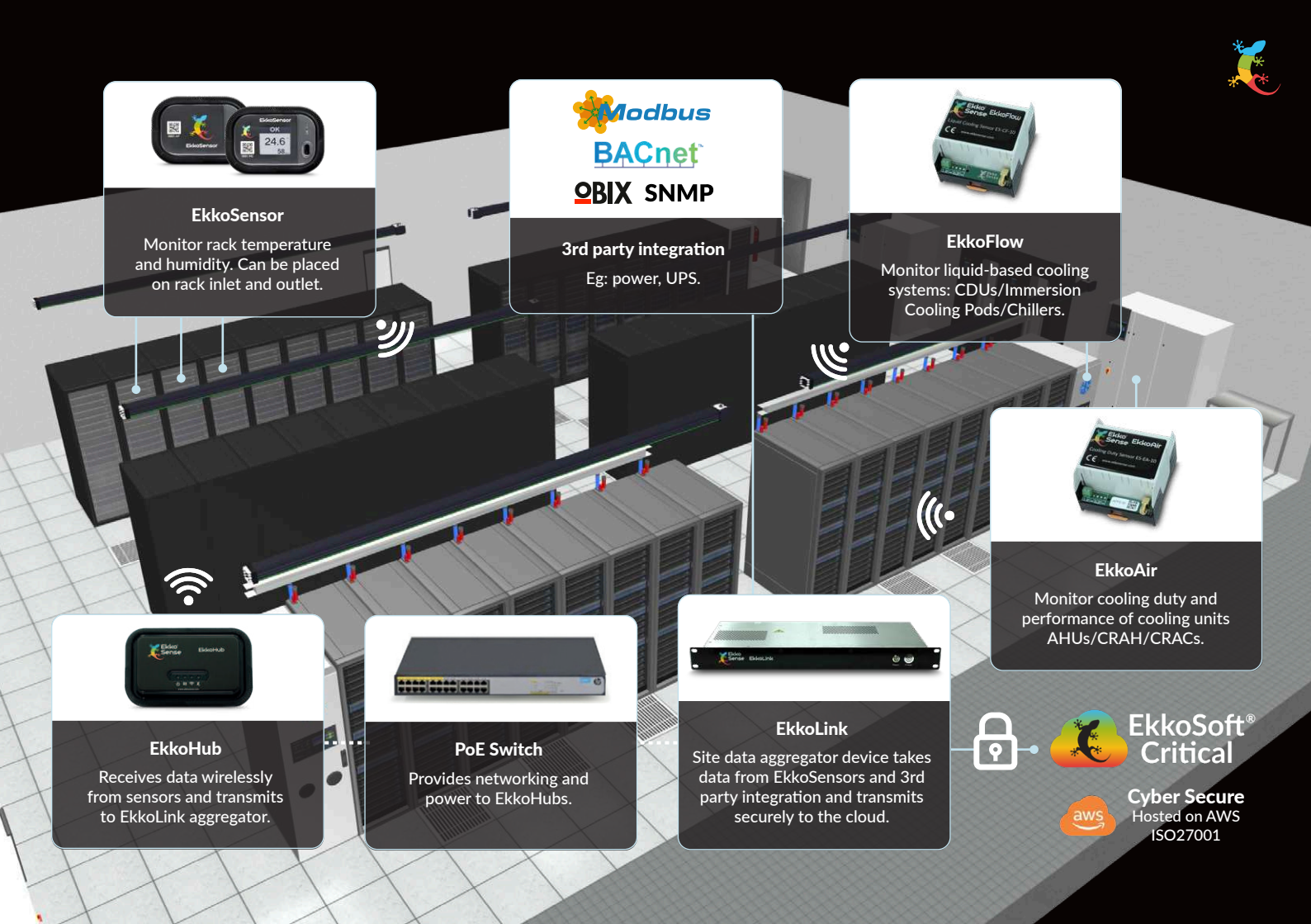
Enables the EkkoHub to connect directly with EkkoSoft® Critical, making it an ideal monitoring and alarming solution for an organization's many smaller Edge sites.

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 · BT · TELEHOUSE · servicenow · British Airways · sky · 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

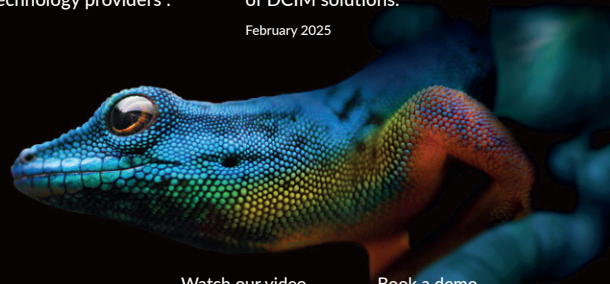
We're recognized as one "of the world's most advanced liquid cooling technology providers".

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

Ekko Sense | AI

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