

EkkoLink R

Rack-mounted Data Aggregation



Part of the EkkoSense Critical Things® family of monitoring technology, EkkoLink R operates as a data aggregator – receiving data from EkkoHub wireless data receivers and securely forwarding it over a wired or cellular Internet connection to EkkoSoft® Critical software in the cloud

Designed for 1U rack-mount server deployment, EkkoLink R integrates with SNMP, Modbus and BACnet to retrieve data from other on-site third-party devices and networks before forwarding it to EkkoSoft Critical

Ensuring flexible, safe and secure data continuity with EkkoLink R

In the event of a temporary loss of external connectivity, EkkoLink R buffers site data and automatically transfers it to EkkoSoft Critical software when the connection is restored. EkkoLink R can also make EkkoSense measurement data available to other applications via an oBIX API.

Dual power input

The EkkoLink requires a 90-264V AC supply through an IEC C14 fused connector. Two power inputs are provided feeding two

internal independent power supplies with a load sharing / hot swap controller combining the outputs. Either input can be used, or where dual AC supplies are available both can be connected. Total power consumption is 70W maximum.

Connectivity

EkkoLink R connects to EkkoSoft through AWS IoT Core. This is a secure connection using TLS version 1.2 to encrypt all communication with an X.509 client certificate used for authentication.

EkkoLink R features three LAN ports. One is dedicated to the external internet connection, one to the on-site EkkoSense network (for EkkoHubs), and one that can be configured for local data integration. Network configuration and security rules are applied separately for each network to provide robust segregation. EkkoLink R also has two RS485 ports configured for Modbus communication to connect directly to local devices such as power meters to retrieve data for forwarding to EkkoSoft Critical.

Security

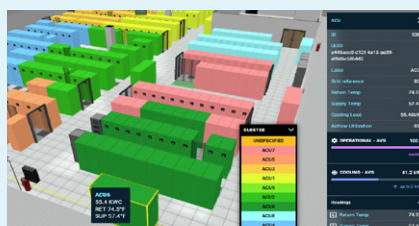
EkkoLink R's operating system has been hardened using Lynix, and is configured for unattended upgrades. In-house C++ applications are developed using CPPdepend, CPPcheck, and CPPlint to ensure best practices. The web interface is written in PHP, and code quality and licensing is continually assessed using SonarCloud and Snyk respectively. Penetration testing is also carried out bi-annually on EkkoLink and EkkoHub devices by a CREST-approved cyber security consultancy.

EkkoLink R features...



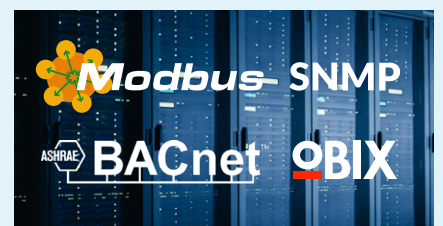
Secure connection using AWS

EkkoLink R provides a secure connection to EkkoSoft Critical in the EkkoSense Cloud through AWS IoT Core.



Real-time pre-processing

EkkoLink R gathers and processes real-time data collected from EkkoSensors via EkkoHubs and (optionally) other field devices. This pre-processed data is then available for viewing in the EkkoSense web application, accessible via the cloud only.



Comprehensive integration

Integration with a wide range of existing 3rd party systems for complete data center coverage.

Images show actual software footage



EkkoLink R



Inbound and Outbound Integration

EkkoLink R is the principal aggregation device that collates information from a variety of sources on site, and also provides a secure connection to EkkoSoft Critical in the cloud.

Inbound/Outbound integration options include:

Outbound Integration:

- **oBIX and BACnet** – To ensure interconnectivity on site, EkkoLink presents all raw data from the Critical Things wireless sensors using the oBIX or BACnet protocols (available during 2025) for existing 3rd party systems to integrate to, which is available with a minimum 1-year EkkoSoft license
- **SNMPtraps** – when alerts are configured centrally via the EkkoSoft platform, SNMPtraps can be alerted on EkkoLink R so that on-site SNMPtrap receivers immediately detect alarm conditions from EkkoSense sensors with zero latency

Inbound Integration:

- **Modbus/RTU** – Integration over RS485 on a dedicated serial port for connectivity to both existing and new Modbus equipment that has not previously been connected into client networks. Up to 30 devices on each serial network can be supported
- **Modbus/TCP** – EkkoLink R is able to collect Modbus data over TCP via both eth1 (the dedicated EkkoSense network) and eth2 (the client network). The protocol is commonly used for direct power monitoring and systems integration

- **Modbus/TCP Gateway** – Installing a Modbus Gateway lets EkkoLink R connect to multiple devices that have already been connected via serial/485 cable. Deploying a dual port gateway lets EkkoLink R integrate with existing Modbus/RTU networks and enables shared access to devices
- **SNMP** – primarily used for UPS and In-Row PDU monitoring, EkkoLink R connects to any SNMP device using v1, v2c or v3 authentication to enable full EkkoSoft capacity management functionality
- **BACnet** – EkkoLink R enables communication with BACnet devices connected to eth 1 (EkkoSense network) and eth2 (Client Network) – enabling a key data communication protocol for Building Automation and Control Networks, BMS Integration and modern cooling systems
- **Tridium (Niagara)** – with integration via a dedicated controller such as the JACE-8000, EkkoLink R lets EkkoSoft collect data from the 1m+ Tridium systems utilizing the Niagara framework installed worldwide
- **Trend** – Modbus/TCP connectivity within EkkoLink R also enables EkkoSoft to integrate with Trend Controls – providing the main controller has been installed with the appropriate license for Modbus/TCP translation, and the relevant data mapping has been carried out

Technical specifications

EkkoLink R is implemented as an appliance running Debian 11. The core hardware is a shallow-depth (184mm) 1U 19" fanless rackmount platform.

The EkkoLink R appliance can be installed in client racks, or in a dedicated EkkoSense CM low profile wall-mount rack along with other infrastructure such as a PoE switch for the EkkoHubs.

Hardware specification

Processor: Intel® Elkhart Lake SoC Processor, Quad Core, 2M Cache, 1.6GHz (2.0GHz), 12W
Memory: 1x 50-DIMM 8GB DDR4-3200MHz

BIOS

Insyde SPI 64bit

Storage

128GB NVMe
Data storage backup configurable – default 24 hours

Data Transfer

Typical transfer rate: <25kB per datapoint per day at 10/100 Mbps
(~1GB per month for 1,500 datapoints)

Communication protocols

Inbound – Modbus/RTU, Modbus/TCP, SNMP, BACnet
Outbound – oBIX, BACnet

Operating System

Debian 11 (updated as required)

I/O

1 x Power button, 1 x Reset button, 1 x Power LED
4 x RJ45 ethernet ports (Intel® i225V 2.5GbE)
2 x RS485 serial port
USB ports are disabled

Mechanical

Design: 19" Rackmount
Construction: Heavy Duty Aluminium
Front panel / Mounting ears black powder coating
Body raw clean finish
Dimensions (WxHxD mm): 429 x 44 x 190

Environment

Operating Temperature: 0°C to 60°C
Operating Humidity: 20 to 90% RH
Storage Temperature: -20°C to 70°C
Storage Humidity: 20 to 90% RH

Power Input

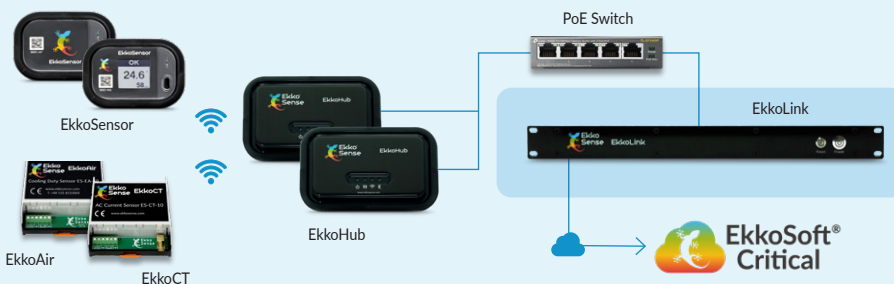
Dual IEC 60320 C14 connector. Power required is 90-264 VAC, 1A maximum, 50-60Hz

Regulatory approval

The EkkoLink appliance is CE marked and conforms to the following standards:
EMC Directive 2014/30/EU
EN 55032
EN 55035
EN IEC 61000-3-2, 3-3
EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11
Low Voltage Directive (LVD) 2014/35/EU
EN 62368-1
RoHS Directive 2011/65/EU
The restriction of the use of certain hazardous substances in electrical and electronic equipment

Standard deployment

Position in EkkoLink architecture



Secure 128-bit AES encryption



EkkoLink Mini mode for Edge support



Integration with existing 3rd party systems



Comprehensive integration capabilities for complete data center coverage

Bring the power of EkkoSense AI to your critical facilities

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EkkoHub V3

Wireless Data Receiver



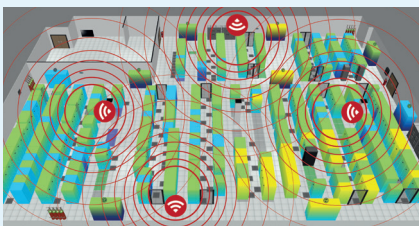
- EkkoHub collects and forwards wireless data from up to 500 EkkoSensors
- Transfers data to cloud-based EkkoSoft® Critical software
- Can operate as a combined wireless data receiver and data aggregator to support Edge sites

EkkoHub collects and forwards measurement data from up to 500 wireless EkkoSensors within a 20m radius. Multiple EkkoHubs can connect to an onsite EkkoLink which provides local data aggregation and storage, and implements secure connectivity with EkkoSoft Critical.

EkkoHub can also be quickly configured to operate in 'EkkoSoft Direct' mode as an EkkoLink Mini. The EkkoHub then connects directly to EkkoSoft Critical without the need for a separate EkkoLink Data Aggregator.

In this mode EkkoHub can use its second Ethernet port to accept data from another EkkoHub and acquire data from Modbus/TCP, BACnet and SNMP devices for energy monitoring and alarming functionality. This makes it an ideal solution for smaller Edge sites.

EkkoHub V3 features...



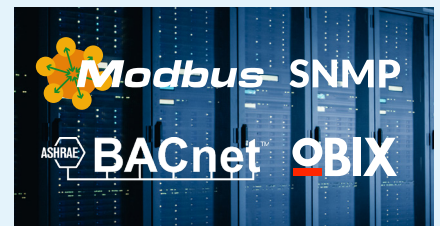
Simple to deploy

EkkoHub couldn't be any easier to deploy - simply distribute EkkoHub devices evenly across your monitored areas, plug them in and switch on.



Support for Edge sites

EkkoLink Mini configuration makes EkkoHub an ideal monitoring and alarming solution for remote Edge facilities - from small server rooms to sites with up to 200 sensors.



Comprehensive integration

To enable integration with existing 3rd party systems, EkkoHub also features Modbus/TCP, SNMP and BACnet integration for complete coverage.

Images show actual software footage



Critical Things®



EkkoHub V3



The EkkoHub is compatible with all members of the Critical Things® sensor family, temperature and humidity sensors (THX, TDX), wireless EkkoAirs and EkkoCTs.

The EkkoHub can be powered by Power over Ethernet or from a local 5V DC supply. Four LEDs on the front panel provide real-time status information.

EkkoHub's radio interface is encrypted with 128 bit AES to match the Critical Things® sensors. TLS is used to protect data on the wired interface.

The EkkoHub will mount on any flat surface using the separate mounting plate, ensuring installation is fast and tidy. Alternatively, with an adapter accessory, it can be DIN rail mounted.

The EkkoHub has an internal antenna which provides excellent performance in most situations. A conversion kit is also available to enable an external antenna to be used where necessary.

In its EkkoLink Mini mode, the EkkoHub is well suited to Edge installations with up to 200 Critical Things sensors and up to 20 Modbus/BACnet/SNMP devices.

In addition to European and North American regulatory approval, EkkoHub is approved for use in a growing list of other countries. Contact EkkoSense for the latest information.

Technical specifications

Operating temperature range
0°C to 40°C (32°F to 104°F) ambient

Operating humidity range
5% to 90% relative humidity

RF data link
GFSK 250kbit/s at 868.3MHz (ES version) or 923MHz (FS version). GFSK at 100kbit/s at 919.8MHz (AS version)

Operating range (from EkkoSensors)
>20m (22yds) (>15m in Japan)

Power supply
IEEE802.3af Power over Ethernet or 5V DC 2.5A

Enclosure material
Black ABS

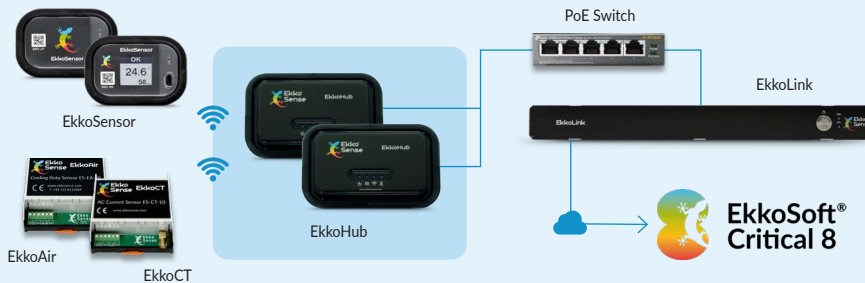
Mounting method
Separate bracket with two fixing holes. EkkoHub twists and locks onto bracket
Option for DIN rail mount

Core regulatory approvals
CE marked:
Radio - EN 300 220-2 V3.1.1
EMC - EN 61326-1 and EN 301 489-3
Safety - IEC 62368
Radio - FCC CFR 47 Part 15C, ISSED RSS-247
EMC - FCC CFR 47 Parts 15.107 and 15.109, ICES-003

Approved countries
Australia, Brazil, Canada, Chile, China, Columbia, European Union, Hong Kong, India, Japan, New Zealand, Saudi Arabia, Singapore, South Africa, South Korea, UAE, UK, USA, Vietnam.

Standard deployment

Position in EkkoLink architecture



Secure 128-bit AES encryption



EkkoLink Mini mode for Edge support



Integration with existing 3rd party systems



Comprehensive integration capabilities for complete data center coverage

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EkkoSensor

Wireless Temperature and Humidity Sensors with optional display



- 🔌 **Ultra-low-cost IoT wireless sensors**
- 🔌 **Unrivalled levels of sensing accuracy and granularity**
- 🔌 **Secure solution with 128-bit AES encryption and physical airgaps**
- 🔌 **Rapid installation and low-cost deployment**

Whether it's...

- handling increased IT workloads,
- remodeling for AI compute
- or delivering against corporate ESG and net zero demands,

today's data center operations teams require absolute real-time white space visibility.

The only reliable way for teams to achieve this is to gather massive amounts of data from across their enterprise. For years ASHRAE advocated measuring just one out of every three racks. However, new research from EkkoSense has shown that all IT racks should

have at least one thermal sensor on their inlet air surface in order to provide adequate thermal monitoring coverage.

More sensors ensure much higher and granular spatial resolution – right down to rack level. With sensors on every rack, you can not only better optimize your environment, but also ensure that key team members are alerted when a threshold is breached - enabling rapid response.

The good news is that all the data is out there, ready to be collected. Operations teams just need to capture it. That's why EkkoSense has disrupted traditional data collection. By using the ultra-low-cost Internet of Things wireless EkkoSensor, much higher numbers of sensors can be deployed across the data center.

Our unrivalled levels of IoT sensing bring new levels of accuracy and granularity to data center operations. This provides the core machine learning data that enables true real-time visibility of critical cooling, power and capacity performance.

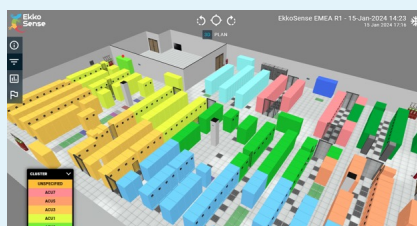
The machine learning data collected by EkkoSensors feeds into our EkkoSoft Critical AI-powered data center optimization software. This approach unlocks the intelligence needed to help teams stay on top of their escalating workloads and sustainability tasks. EkkoSensor data directly supports key EkkoSoft Critical functionality.

🔌 EkkoSensor enables...



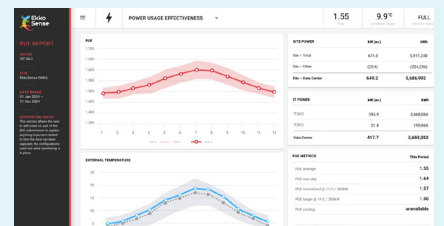
ASHRAE Compliance

EkkoSensors are low-cost and easy-to-install, encouraging data center teams to comply with ASHRAE guidelines for inlet temperatures and protect against cooling issues that account for a third of unplanned outages.



3D Data Center Visualization

Thanks to EkkoSensor data, operations teams get to see all their cooling, power and thermal conditions presented via intuitive 3D visualizations



ESG Reporting

EkkoSoft Critical's granular accuracy allows access to key ESG Reporting metrics including PUE, CUE, WUE and CER for CSRD and EED.

Images show actual software footage



EkkoSensor



EkkoSensors disrupt the traditional sensor cost model and made the real-time thermal management of critical facilities such as data centers a possibility.

Our ultra-low cost 'Critical Things®' sensors are compact and unobtrusive, and can be deployed in large numbers – ensuring that high spatial resolution is available, down to rack-level where required. This allows the air temperature and humidity at each asset of interest to be accurately monitored, and wirelessly transmitted to enable the measurement of values at predefined intervals.

EkkoSensors are entirely self-contained and battery-powered for simpler installation, and provide a direct sensor-to-hub linkage to keep the radio network simple and deliver predictable battery life and performance. Each sensor is uniquely identified at manufacture, and associated with a specific asset at installation.

The TDX EkkoSensor includes a local display of the measured temperature and relative humidity values and supports configurable temperature alert thresholds. The screens can be cycled through to show alert status, temperature profiles over the last hour, 24 hours and 7 days for quick thermal assessment on site.

All measurement data is encrypted with 128-bit AES encryption before transmission to an EkkoHub wireless data receiver for forwarding to our cloud-based EkkoSoft® Critical visualization and analysis software.

EkkoSensors also support two optional additional external thermistors, enabling compliance monitoring to add more coverage for liquid cooling or hybrid cooling environments. The sensor automatically detects the presence of additional thermistors and starts transmitting measurement values. 1.2m flylead thermistors are available as a standard accessory.

Technical specifications

Operating temperature range
-10°C to 55°C (14°F to 131°F)

Operating humidity range
0% to 100% non-condensing

Temperature accuracy (internal sensor)
±0.3°C typical (±0.5°F)

External inputs measurement accuracy (excluding accuracy of thermistor)
±0.6°C typical (±1°F)

External thermistor characteristic
10k at 25°C, B=3435K. Standard length 1.2m, other lengths available subject to minimum order quantity

Humidity accuracy
±2% typical from 20% to 80% RH

Temperature alerts (TDX model only)
Low and high thresholds configurable between -30°C and 69°C (-22°F and 156°F)
Alerts can be generated by some or all temperature inputs

Weight
51g (1.8oz), 62g (2.2oz) in clip

Dimensions
75mm x 55mm x 22mm (3" x 2.2" x 0.9") 80mm x 58mm x 28mm (3.1" x 2.3" x 1.1") in clip

Operating range (from EkkoHub)
> 20m (21yds)

Battery life
> 5 years at 2 minute transmit interval (THX)
> 3 years at 2 minute transmit interval (TDX)

RF data link
GFSK 250kbit/s at 868.3MHz (ES versions) or 923MHz (FS versions)

Enclosure material
Black ABS with polycarbonate front window

Mounting method
Cable tie through clip or self-adhesive pad

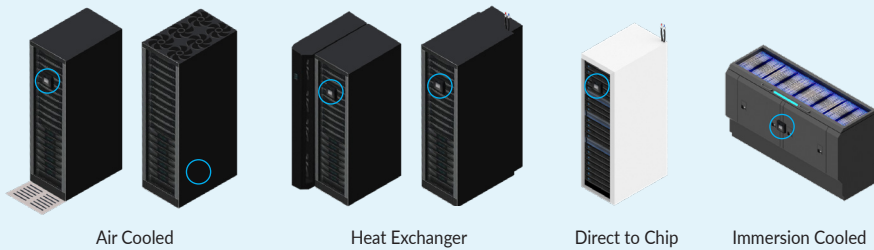
Power supply
Internal field replaceable ½ AA lithium thionyl chloride battery

Core regulatory approvals
CE marked:
Radio Equipment Directive (RED) 2014/53/EU
Low Voltage Directive (LVD) 2014/35/EU
Radio EN 300 220
EMC EN 61326-1 with reference to EN 301 489
Safety - EN 60950
FCC rules CFR 47 Part 15.107 and 15.109
Class A
FCC rules CFR 47 Part 15.247 ISSED RSS-247

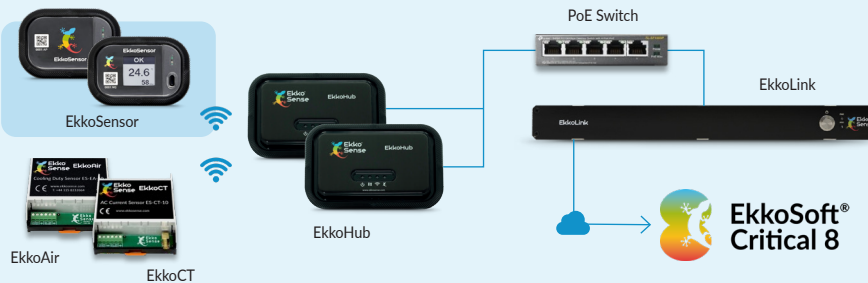
Approved countries
Australia, Brazil, Canada, Chile, China, Columbia, European Union, Hong Kong, India, Japan, New Zealand, Saudi Arabia, Singapore, South Africa, South Korea, UAE, UK, USA, Vietnam.

Standard deployment

Example EkkoSensor rack placements



Position in EkkoLink architecture



Secure 128-bit AES encryption



EkkoSoft direct mode for Edge support



Integration with existing 3rd party systems



Comprehensive integration capabilities for complete data center coverage

Bring the power of EkkoSense AI to your critical facilities

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EkkoAir

Wireless Cooling Duty Sensor



- ⚙️ Real-time cooling performance insights
- 🔒 Secure wireless connectivity with 128-bit AES encryption and physical airgaps
- 🏭 Manufacturer-agnostic wireless sensor
- 🔧 Rapid installation to a wide range of cooling systems

At a time when data centers face the challenge of supporting increased high-density workloads and adjusting to AI compute requirements, it's essential that operations teams are able to track their cooling performance in real-time.

The EkkoAir Wireless Cooling Duty Sensor delivers this with real-time tracking of cooling duty performance in kWc for any CRAC/AHU unit. EkkoAir is a manufacturer-agnostic sensor that is able to collect data from DX, chilled water and free air units, providing

operations teams with a much greater understanding of cooling performance and potential cooling anomalies.

EkkoAir's ability to collect cooling load data in real-time helps teams to gain additional insights into thermal performance across individual rooms as well as broader enterprise estates using EkkoSense's EkkoSoft Critical visualization and analytics software.

EkkoAir machine learning data combines with readings from EkkoSensor IoT rack-mounted sensors to deliver a much greater understanding of cooling performance and potential anomalies and help teams stay on top of their escalating workloads and sustainability tasks.

The EkkoAir Wireless Cooling Duty Sensor is also essential for benchmarking cooling power savings as part of the EkkoSense DCOP Data Center Optimization Process.

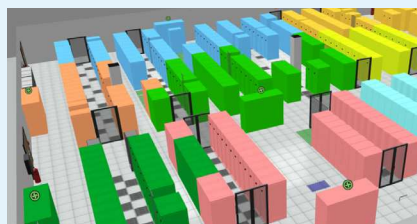
EkkoAir wireless cooling duty sensors can be deployed in just moments, and transmit data at configurable intervals of between 30 seconds and 10 minutes. Like our EkkoSensors, EkkoAir wireless units use 128-bit AES encryption before transmitting cooling duty data to EkkoHub wireless data receivers.

EkkoAir enables...



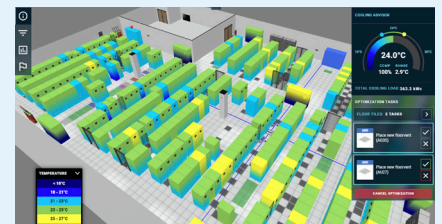
Cooling Anomaly Detection

EkkoAir provides the return and supply temperature and RH readings that help EkkoSense's Cooling Anomaly Detection feature to determine whether M&E equipment such as CRACs are drifting from control setpoints and demonstrating any abnormal changes in performance.



Zone of Influence

EkkoAir's cooling data enables Zone of Influence, a core EkkoSense feature that provides data center operations teams with unique, real-time insight into the relationship between groups of IT racks and specific cooling units.



Cooling Performance

Combining EkkoAir's real-time cooling duty data with rack-level thermal measurements provides data center teams with dynamic insights into their true thermal performance and capacity utilization for increased resiliency.

Images show actual software footage



Critical Things®



EkkoAir



Unique, manufacturer-agnostic wireless sensor for real-time cooling duty performance.

EkkoAir Wireless is housed in a standard DIN rail mount enclosure with two compact temperature and humidity sensors that connect via small cables. Sensors can be fixed in position using screws or cable ties. The humidity-sensing element is protected with a PTFE membrane to avoid measurement errors caused by dust build-up. Single or three phase fan current measurements are made using standard millivolt output current transformers. An opto-isolated 12V-24V AC input is provided. This can be used to monitor the operating status of the CRAC/AHU.

The EkkoAir Wireless cooling duty sensor transmits data at configurable intervals of between 30 seconds and 10 minutes. Data can either be transmitted as an instantaneous value, or as the average from multiple measurements spaced evenly throughout the transmit interval. This ensures that changes to AHU/CRAC operating conditions between transmissions are captured.

Technical specifications

Operating temperature range
0°C to 40°C (32°F to 104°F)

Operating humidity range
5% to 95% RH

Measuring temperature range
0°C to 60°C (32°F to 140°F)

Measuring humidity range
0% to 100% RH

Temperature accuracy
±0.2°C typical (±0.4°F)

Relative humidity accuracy
±2% typical

RF data link
GFSK 250bit/s 868.3MHz (ES-EA-10) or 923MHz (FS-EA-10)

Operating range (from EkkoHub)
> 20m (21yds)

Power supply
12V to 24V AC or DC or internal battery

Internal battery (if not powered externally)
Replaceable LS14500 AA size Lithium Thionyl Chloride

Battery life
> 3 years (transmitting once every two minutes an average of measurements at 30s intervals)

Current transformer inputs
Compatible with 333mV output current transformers rated between 1A and 1000A

Housing
ABS 70mm wide (4 DIN), 74mm high, 46mm deep (2.8"x2.9"x1.8") (53.5mm/2.1" including DIN rail)

Sensors
30mm (1.2") diameter, 10mm (0.4") deep, supplied with 3m (118") cable

Antenna connection
SMA female connector

Sensor, power and CT connections
Screw terminals

Core regulatory approvals
CE marked:
Radio - EN 300 220-2 V3.1.1, FCC CFR 47 Part 15C, ISSED RSS-247
EMC - EN 61326-2-1, EN 55032, EN 301489-3, FCC CFR 47 Parts 15.107 and 15.109
Safety - Safety - IEC 62368

Approved countries
Australia, Brazil, Canada, Chile, China, Columbia, European Union, Hong Kong, India, Japan, New Zealand, Saudi Arabia, Singapore, South Africa, South Korea, UAE, UK, USA, Vietnam.

Application examples

Example EkkoAir placements for air side monitoring



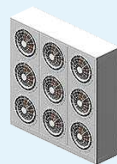
Room CRAC units (DX)



Room CRAH units (CW)



In-row cooling systems (DX/CW)

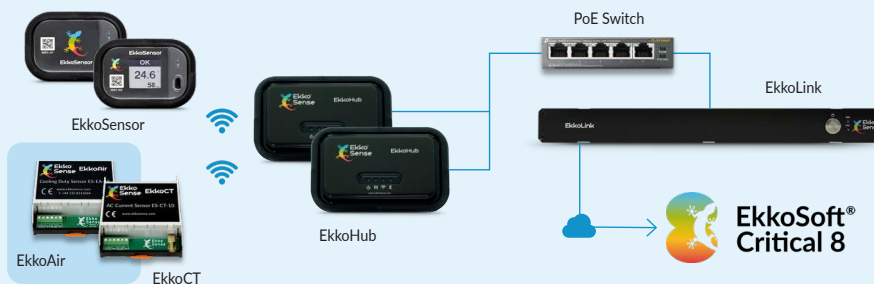


Adiabatic cooling / fan-wall systems



Active rear-door cooling systems (DX/CW)

Position in EkkoLink architecture



Secure 128-bit AES encryption



EkkoSoft direct mode for Edge support



Integration with existing 3rd party systems



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EkkoCT

Wireless AC Current Sensor



- ⚙️ **Manufacturer-agnostic wireless sensor**
- ⚙️ **Non-invasive installation**
- ⚙️ **Low cost**
- ⚙️ **Secure wireless connectivity with 128-bit AES encryption and physical airgaps**

EkkoCT uses retrofit current transformers clipped round the relevant conductors and combines this data with a representative voltage and power factor to measure power. This simplified approach is ideal for applications where power consumption trends are more important than absolute power measurement.

EkkoCT can be powered by its internal battery, avoiding the need for any electrical connection to your infrastructure. Combined with the independence from existing monitoring this provides a fully airgapped separation between your infrastructure and EkkoSoft.

EkkoCT can be combined with an adapter module to allow the use of Rogowski coils in place of current transformers. These are ideal for higher current circuits or where the space around the conductors is too limited for current transformers to fit.

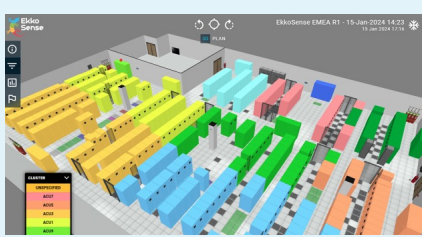
EkkoCT transmits measured data at intervals between 30 seconds and 10 minutes. Data can either be transmitted as instantaneous values, or as the average from multiple measurements spaced evenly throughout the transmit interval. Averaging data over multiple measurements ensures that any changes to measured values between transmissions are captured. EkkoCT is housed in a standard DIN rail mount enclosure and can be powered by an internal battery or from an external 12-24V AC or DC supply.

⚙️ EkkoCT enables...



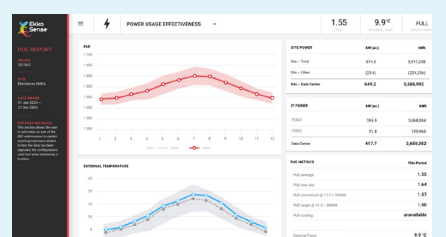
Fine grain temporary power monitoring for DCOP

As part of a pre-packaged kit EkkoCT provides a convenient way to monitor power changes without integration to existing on site meters.



3D Data Center Visualization

Thanks to EkkoCT data, operations teams get to see all their cooling, power and thermal conditions presented via intuitive 3D visualizations



ESG Reporting

EkkoSoft Critical's granular accuracy allows access to key ESG Reporting metrics including PUE, CUE, WUE and CER for CSRD and EED.

Images show actual software footage



EkkoCT



Simplify power usage comparisons with DCOP EkkoCT.



The DCOP EkkoCT kit supports the EkkoSense Data Center Optimization Process (DCOP) by making it easier to demonstrate before and after energy savings. DCOP EkkoCT is deployed temporarily before the DCOP process begins, and provides a clear benchmark against which EkkoSense DCOP energy savings can be demonstrated.

DCOP EkkoCT takes advantage of our existing EkkoCT Wireless Current Measurement Sensor, and – once permission has been obtained - provides a temporary solution in order to measure the current flowing in a monitored circuit. The kit combines EkkoCT with a manually inputted voltage and a power factor reading to enable circuit power to be monitored without the complexity of integrating with existing customer metering. It is also ideal for those optimization projects where existing metering cannot provide historical power data.

Our DCOP EkkoCT kit is designed to be minimally invasive, using Rogowski Coil transducers that are lightweight, flexible and easy to clip around the circuit conductors of interest. Data is transmitted wirelessly to standard EkkoSense monitoring infrastructure and visualized using standard power objects in the EkkoSoft Critical software.

The EkkoCT unit and Rogowski interface are housed in a robust plastic enclosure. Cables run out to the Rogowski Coils and antenna. All cables can be extended if necessary to simplify location and installation of the main unit. The kit is powered by the standard internal battery in the EkkoCT unit inside the enclosure.

Technical specifications (DCOP EkkoCT)

- Enclosure dimensions**
140mm x 140mm x 79mm
- Antenna cable length**
5m (can be extended up to 25m total)
- Rogowski coil cable length**
2.5m (can be extended up to 5m total)
- Rogowski coil diameter**
15cm
- Current measuring range**
10-400A. Can be reconfigured for 20-800A

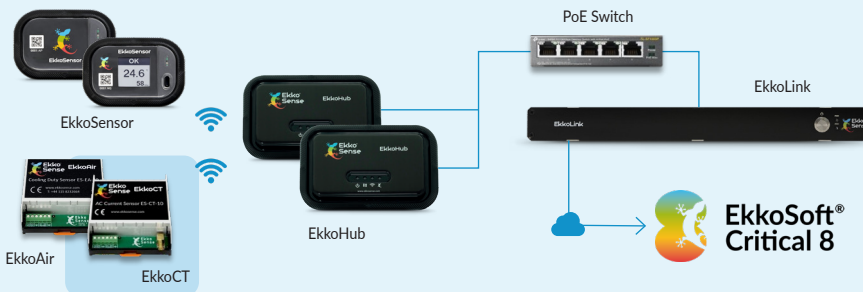
Specifications are subject to change without notice.

Technical specifications (EkkoCT)

- Operating temperature range**
0°C to 40°C (32°F to 104°F)
- Operating humidity range**
5% to 95% RH
- Measuring temperature range (with optional external sensors)**
0°C to 60°C (32°F to 140°F)
- Measuring humidity range (with optional external sensors)**
0% to 100% RH
- Temperature accuracy**
±0.2°C typical (±0.4°F)
- Relative humidity accuracy**
±2% typical
- RF data link**
GFSK 250bit/s 868.3MHz (ES-CT-10) or 923MHz (FS-CT-10)
- Operating range (from EkkoHub)**
> 20m (21yds)
- Power supply**
12V to 24V AC or DC or internal battery
- Internal battery (if not powered externally)**
Replaceable LS14500 AA size Lithium Thionyl Chloride
- Battery life**
> 3 years (transmitting once every two minutes an average of measurements at 30s intervals)
- Current transformer inputs**
Compatible with 333mV output current transformers rated between 1A and 1000A
- Housing**
ABS 70mm wide (4 DIN), 74mm high, 46mm deep (2.8"x2.9"x1.8") (53.5mm/2.1" including DIN rail)

Standard deployment

Position in EkkoLink architecture



- Sensors**
30mm (1.2") diameter, 10mm (0.4") deep, supplied with 3m (118") cable
- Antenna connection**
SMA female connector
- Sensor, power and CT connections**
Screw terminals
- Core regulatory approvals**
CE marked:
Radio - EN 300 220-2 V3.1.1, FCC CFR 47 Part 15C, ISSED RSS-247
EMC - EN 61326-2-1, EN 55032, EN 301489-3, FCC CFR 47 Parts 15.107 and 15.109
Safety - Safety - IEC 62368



Secure 128-bit AES encryption



EkkoSoft direct mode for Edge support



Integration with existing 3rd party systems



Comprehensive integration capabilities for complete data center coverage

Approved countries

Canada, European Union, UK, USA.

Bring the power of EkkoSense AI to your critical facilities

www.ekkosense.com | info@ekkosense.com | UK Headquarters: +44 (0) 115 678 1234
North America: 1-833-921-3335 | Germany: +49 89262025276 | Australia: +61 2 8358 0031



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