

## **IMPLEMENTATION EXAMPLE WITH TOPOLOGY**

Secure distributed IT racks and floor distributors -  
secure, efficient and scalable

Kentix ist Mitglied im

**BSKI** 

Bundesverband für den Schutz  
Kritischer Infrastrukturen e. V.

# Secure distributed IT racks and floor distributors - secure, efficient and scalable

## The requirement

*Distributed IT racks and floor distributors are often infrastructures in companies which, on the one hand, are important/critical for the operation of the organisation, but at the same time represent uncontrollable access for IT by third parties, which they often cannot control. The aim is to close these security gaps with efficient means and to obtain transparency for the processes at these decentralised structures.*

*First of all, controlled access, its documentation and 24/7 monitoring of the closing and locking status of the rack doors must be established. Environmental parameters should provide remote indications of possible sources of error, sabotage or imminent system failures (e.g. due to fire,*

*leakage, etc.). Alternatively, a calibrated measurement of the power consumption including DGUV V3-compliant leakage current measurement should provide additional transparency and safety. This measurement also helps to optimise operation and to be able to react quickly in case of abnormalities and deviations.*

*All values are to be clearly monitored in a dashboard from any location, alarms can be sent and server switching can be carried out. Installation and operation should be cost-efficient and simple. Open interfaces should enable easy integration into third-party systems. Free scalability, modularity and cost-effective, simple maintenance must be part of the solution concept.*

## The Kentix system solution

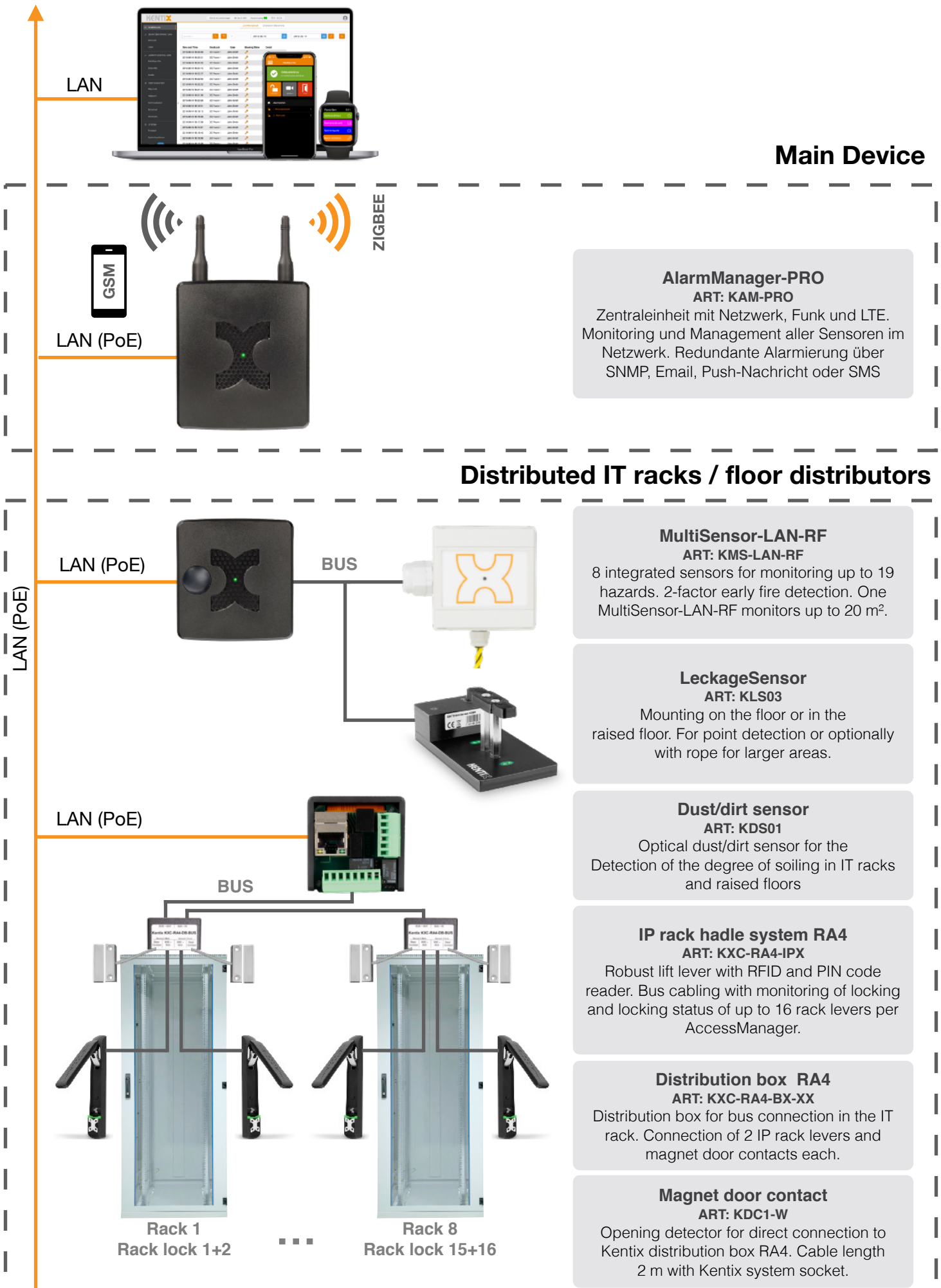
The MultiSensor-LAN takes over the monitoring of undesirable environmental conditions in the respective IT rack. This reliably monitors for temperature, humidity, early fire detection, movement, sabotage, etc. For the detection of leaks and contamination, a leakage sensor and a contamination sensor are connected to each of the MultiSensors. The Kentix AlarmManager takes over the management of all connected sensors of multiple racks and the monitoring of all detected values. If threshold values are exceeded, it sends alarms to users via SNMP, email, push message and redundantly via SMS. Alternatively, all values and alarms are transferred to a higher-level monitoring system.

For access control, the IT enclosures are each fitted with an IP rack lever RA4 with RFID and PIN code reader at the front and rear, of which up to 16 are connected to a SmartRelay module. The connection between the SmartRelay module and the IP rack levers is established by one distributor box per IT enclosure, which also allows the connection of 2 door contacts. Thanks to the integrated locking contact in the IP rack lever, the status of each IT cabinet door is known in real time at all times. Via an integrated web server application and/or open interfaces, the

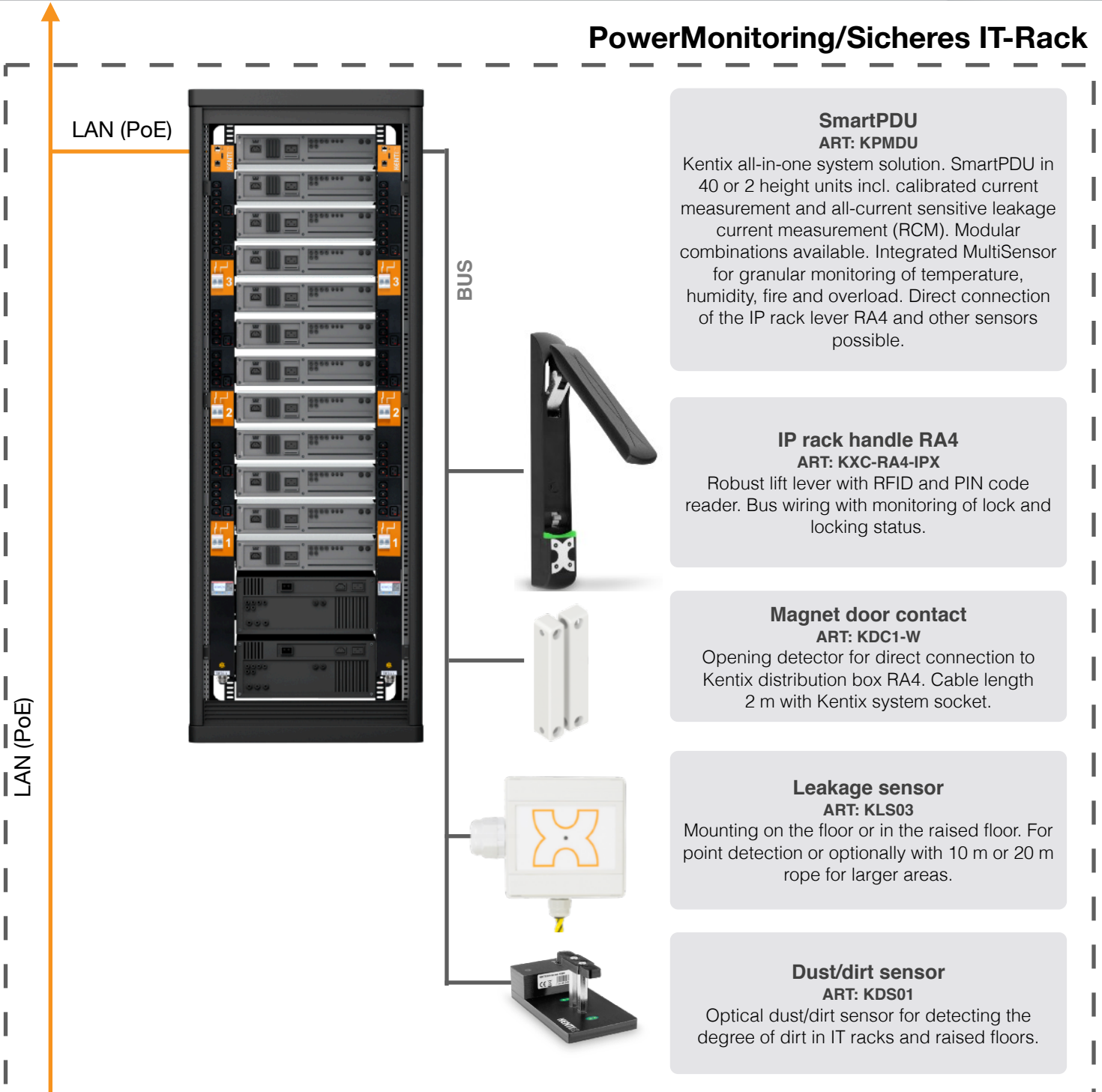
system can be managed automatically from a central location in real time and authorisations can be granted or revoked. Remote opening of doors is also possible through the integrated software.

Alternatively, the Kentix SmartPDU in 40 or 2 U can be used as an all-in-one complete system solution that not only monitors the environment but also the power. At the same time, the SmartPDU provides the hardware interface for connecting further components such as the RA4 IP rack locking system and other sensors. In addition to a DGUV V3-compliant leakage current measurement, all important consumption parameters are calibrated and measured in a billable manner and fed into the monitoring system.

The simple, modern and resource-saving operation is realised by KentixOS. KentixOS is the integrated, freely scalable and modular IoT software platform which, in addition to the web front ends, provides open interfaces for easy integration into third-party systems (ReST-API, WebHooks, SNMP, LDAP, etc.). At the same time, KentixOS is the basis for further AI analyses and visualisations.



**PowerMonitoring/Sicheres IT-Rack**



**SmartPDU**  
ART: KPMDU

Kentix all-in-one system solution. SmartPDU in 40 or 2 height units incl. calibrated current measurement and all-current sensitive leakage current measurement (RCM). Modular combinations available. Integrated MultiSensor for granular monitoring of temperature, humidity, fire and overload. Direct connection of the IP rack lever RA4 and other sensors possible.

**IP rack handle RA4**  
ART: KXC-RA4-IPX

Robust lift lever with RFID and PIN code reader. Bus wiring with monitoring of lock and locking status.

**Magnet door contact**  
ART: KDC1-W

Opening detector for direct connection to Kentix distribution box RA4. Cable length 2 m with Kentix system socket.

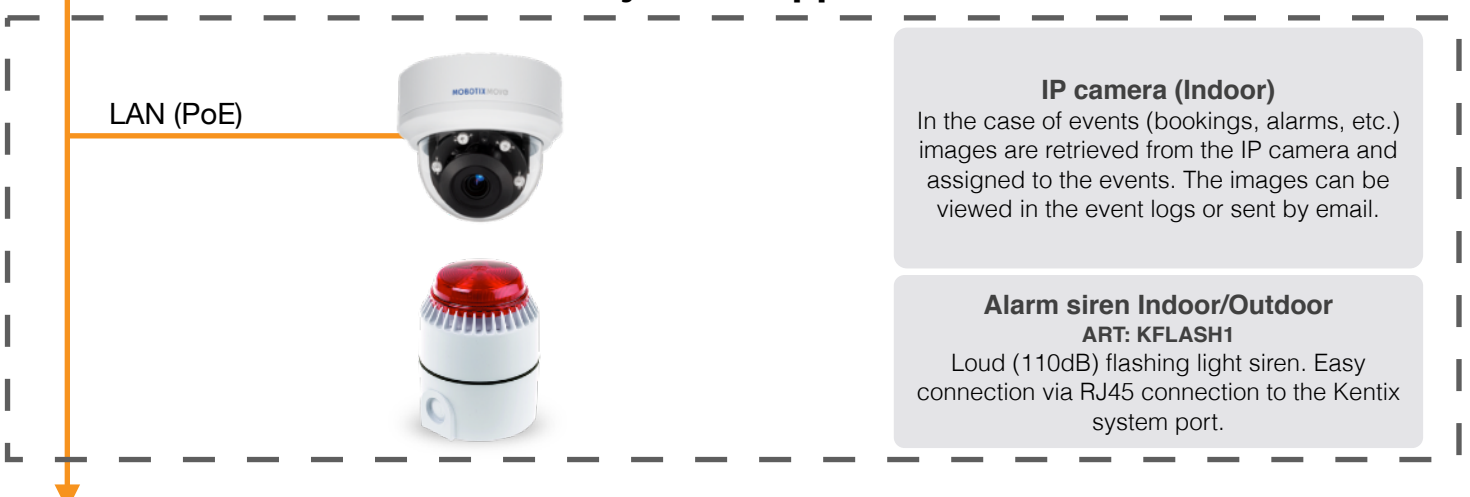
**Leakage sensor**  
ART: KLS03

Mounting on the floor or in the raised floor. For point detection or optionally with 10 m or 20 m rope for larger areas.

**Dust/dirt sensor**  
ART: KDS01

Optical dust/dirt sensor for detecting the degree of dirt in IT racks and raised floors.

**Useful system supplement for event documentation**



**IP camera (Indoor)**

In the case of events (bookings, alarms, etc.) images are retrieved from the IP camera and assigned to the events. The images can be viewed in the event logs or sent by email.

**Alarm siren Indoor/Outdoor**  
ART: KFLASH1

Loud (110dB) flashing light siren. Easy connection via RJ45 connection to the Kentix system port.