KENTIX
Innovative Security

IMPLEMENTATION EXAMPLE WITH TOPOLOGY

The modern IT cage -
Secure, efficient and scalable

Kentix ist Mitglied im
BSKI
Bundesverband für den Schutz
Kritischer Infrastrukturen e. V.

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The modern IT cage - Secure, efficient and scalable

The requirement

As a result of internal, industry-specific and legal requirements for IT security, there is often a need for further control and transparency of the standardised security measures of cages in the data center.

For this purpose, real-time remote access to access authorisations, access documentation and the permanent monitoring of the locking and locking status of all doors must be established at cage and rack level. In addition, granular remote monitoring of potential hazards (climate, fire, unauthorised access, sabotage, leakage, etc.) in the cages and racks must be ensured in order to identify irregularities at a very early stage and prevent failures. A calibrated measurement of power consumption, including DGUV V3-compliant leakage current measurement, is to provide additional transparency and security as an option and if required, in order to further optimise operation in the cage.

All data should be clearly monitored in a central dashboard from any location and alarms can be sent. 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.

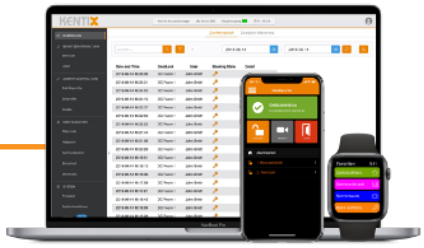
The Kentix system solution

Access control is handled by the Kentix online IP access control system at the cage entrances with WA6 IP wall readers and directly at the IT rack with RA4 IP cabinet locks. Locking and interlocking contacts monitor the status of all doors. Via an integrated web server application or open interfaces (LDAP, ReST-API, etc.), the system can be managed remotely from a central location in real time and authorisations can be granted or revoked. Furthermore, it is documented who, when and where access was granted.

The MultiSensor-LAN is used to monitor undesirable environmental conditions in the cage. It reliably monitors up to 20 square metres for temperature, humidity, early fire detection, movement, sabotage, etc. The MultiSensor-LAN can also be used to monitor leaks and seals. Up to 2 leakage and/or dirt sensors are connected to each of the MultiSensors to monitor leakage and dirt. The Kentix Alarm Manager manages the connected sensors and monitors all detected values. If threshold values are exceeded, it sends alarms to users via SNMP, email, push message and redundantly via SMS.

In order to further increase the level of protection of operating data in case of need, the intelligent and highly available Kentix SmartPDUs are used as a Kentix complete system solution. In addition to the calibrated current measurement, a DGUV V3-compliant leakage current measurement is carried out and all important consumption parameters are fed into the monitoring system. Optionally, all IEC C13/C19 ports are switched and measured individually. The MultiSensor installed in the PDU provides measured values for temperature, humidity, fire gas and manipulation directly in the rack, thus creating additional granular transparency and security. The Kentix IP rack locking system RA4 is directly connected to the SmartPDU, simplifying installation, operation and maintenance.

Simple, up-to-date and resource-saving operation is realised by the Kentix OS. The Kentix OS is the integrated, freely scalable and modular IoT software platform that, 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, the Kentix OS is the basis for further AI analyses and visualisations.



LAN

IP access control to the cage

LAN (PoE)

24V/0,5A

BUS

Cage 1

Cage 2

Closing with door status contact

LAN (PoE)

AccessManager SmartRelay
ART: KXC-RA4-IPX
Connection of up to 2 IP wall readers. Powered outputs for opening electromechanical locks. Central management through integrated web server.

IP wall reader WA6
ART: KXC-RA4-IPX
RFID and PIN code wall reader (also 2-way authentication) with IP66 suitable for indoor and outdoor areas. Encrypted communication and power supply via bus connection

IP access control IT cabinets

LAN (PoE)

BUS

Rack 1
Rack lock 1+2

...

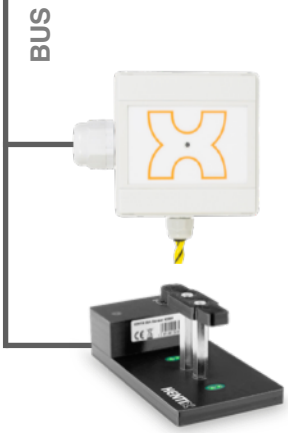
Rack 8
Rack lock 15+16

IP Rack Lever System RA4
ART: KXC-RA4
Robust lift lever with RFID and PIN code reader. Bus cabling with monitoring of the locking status of up to 16 rack levers per AccessManager.

Distribution box RA4
ART: KXC-RA4-B
Distribution box for bus connection in the IT rack. Connection of 2 IP rack levers and magnet door contacts each.

Magnet door contact
ART: KDC1-W
Opening detector for direct connection to Kentix distribution box RA4.

Environmental monitoring in the cage



LAN PoE

AlarmManager-PRO
ART: KAM-PRO
Central unit with network, radio and 4G. Monitoring and management of all sensors in the network. Redundant alerting via SNMP, email, push message or SMS.

MultiSensor-LAN
ART: KMS-LAN
8 integrated sensors for monitoring up to 19 hazards. 2-factor early fire detection. One MultiSensor LAN monitors up to 20 sqm.

LeckageSensor
ART: KLS-03
Mounting on the floor or in the raised floor. For point detection or optionally with rope

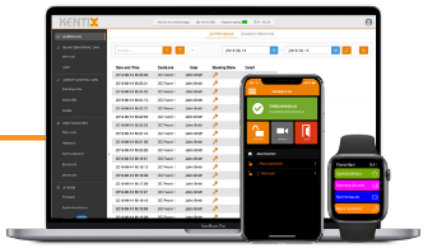
Dust/dirt sensor
ART: KDS01
Optical dust/dirt sensor for the Detection of the degree of soiling in IT racks and raised floors

System supplement for monitoring and alerting

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) bright flashing light siren. Simple connection via RJ45 connection to the Kentix system port

LAN



Optional: Secure IT racks

LAN (PoE)

BUS

LAN (PoE)

SmartPDU
ART: KPMDU-XX
Kentix all-in-one system solution. SmartPDU in 40 or 2 U 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.

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 the Kentix system socket.

LeckageSensor
ART: KLS03
Mounting on the floor or in the raised floor. For point detection or optionally with rope

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