

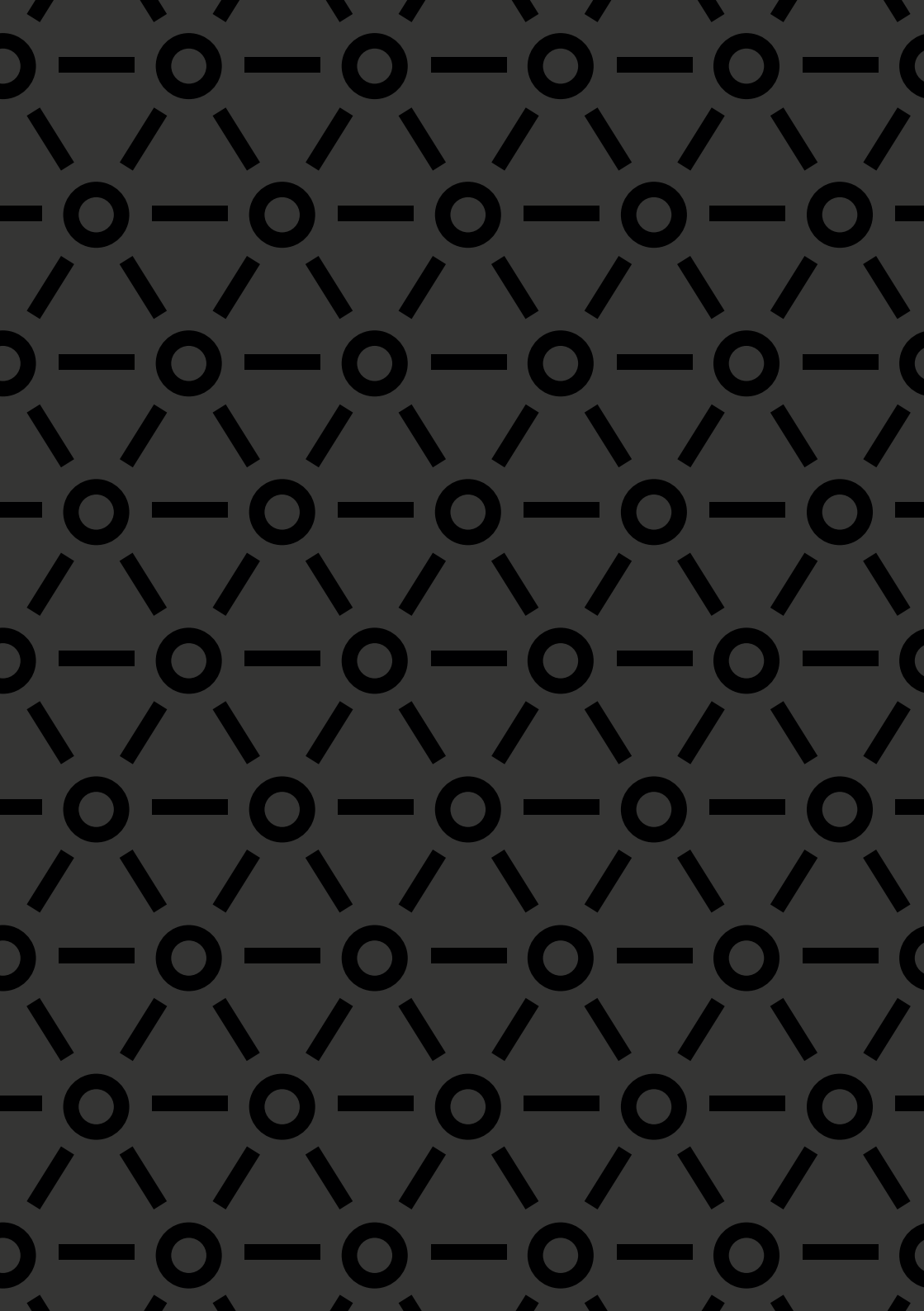
**e-shelter  
security**



# — Perimeter protection

Detection. Analysis. Incident management.

360° security solutions for outdoor areas,  
company premises, and critical infrastructure.



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Our system – your benefits

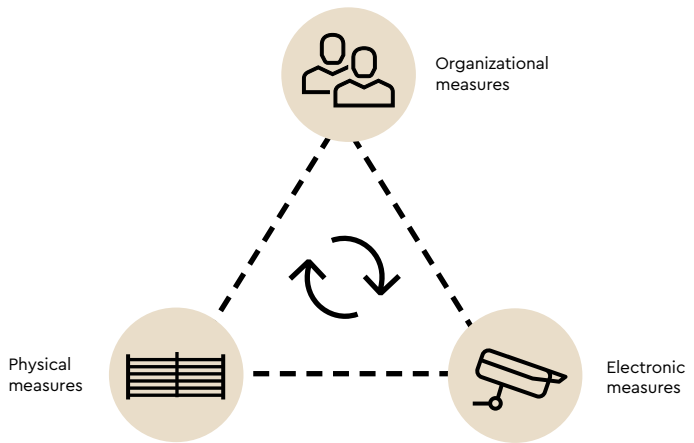


# — Security that's fit for the future

Artificial intelligence and networked electronic security, combined in a Physical Security Information Management System (PSIM), provide security at the highest level. Smart analytics detect threats at an early stage and automatically initiate actions to counter them. This helps your security team focus on relevant events and make informed decisions.

# The challenge of perimeter protection

From industrial and logistics companies to data centers and other critical infrastructure, intelligent perimeter protection is the most effective way to prevent physical security risks. The demands for security and operational efficiency are ever increasing – we've got them covered with integrated solutions and an innovative service model.



## — Detect risks with reliability

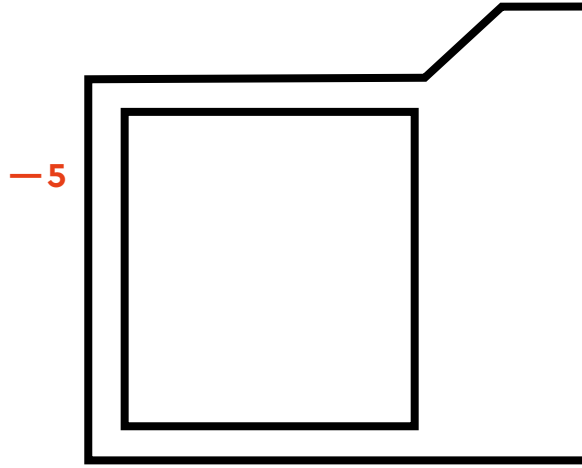
Optimal perimeter protection solutions reliably detect security-relevant events, even in tough environmental conditions such as overgrowth, gloomy weather, or darkness.

## — Boost operational efficiency

An intelligently networked security system minimizes false alarms and automates processes as much as possible. With analytics dashboards, you can manage operations across different sites.

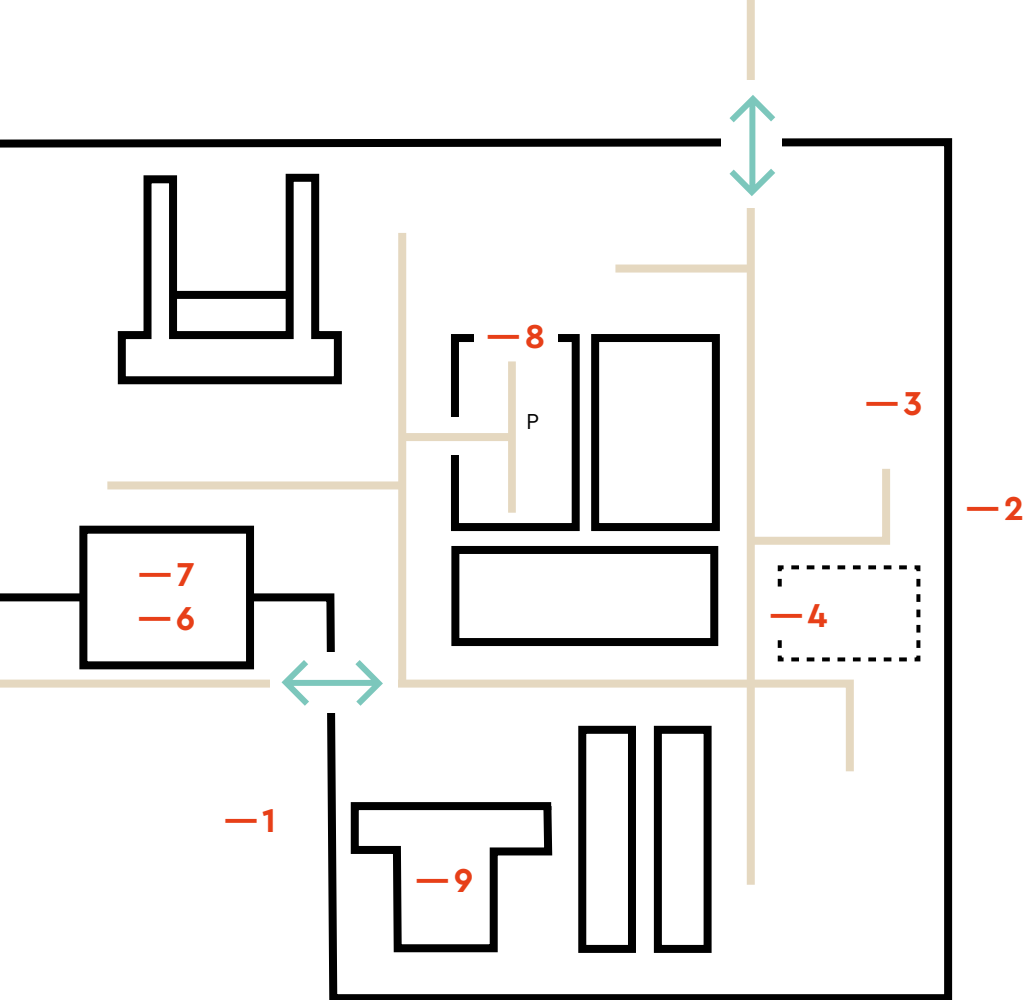
## — Future-proof your security

Our services keep the hardware and software up to date, guaranteeing your security in the best possible way both now and in the future.



# — Seamless interaction

Traditional physical security measures such as fences and walls aren't enough. Detecting security-relevant events in the surrounding area at an early stage averts risks and provides valuable time to take action. The control center responds to events within a multi-layered system. Notifications from different zones are logically linked and displayed in the PSIM.



—1  
Early warning for risks in the surrounding area

—2  
Incident detection on the perimeter fence

—3  
Audio warnings to deter intruders

—4  
Virtual boundary line

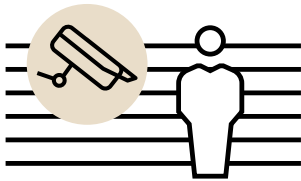
—5  
Reliable intruder detection

—6  
Alarms verified by video surveillance

—7  
Remote alarm management

—8  
Targeted tracing of suspects

—9  
Advanced video content analytics



—1

### **Early warning for risk in the surrounding area**

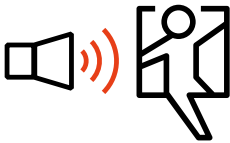
Intelligent video technology detects people and vehicles approaching the perimeter.



—2

### **Incident detection on the perimeter fence**

Smart fence sensors identify security events such as attempted climbing, cutting and knocking down, while preventing false alarms caused by the wind, for example.



—3

### **Audio warnings to deter intruders**

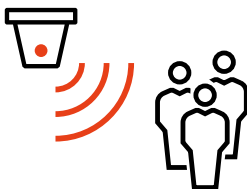
Event-driven audio clips are automatically played, discouraging potential perpetrators.



—4

### **Virtual boundary line**

Infrared technology and intelligent video analytics create virtual boundaries on sites without a physical barrier. Anyone who crosses a virtual line or zone is noticed without fail.

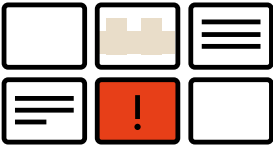


—5

### **Reliable intruder detection**

Thermal cameras along the perimeter monitor trespassers on the site, even in total darkness. Intelligent video analytics with object classification prevent false alarms.

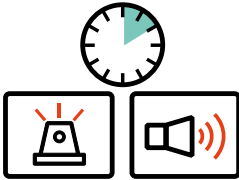




—6

### Alarms verified by video surveillance

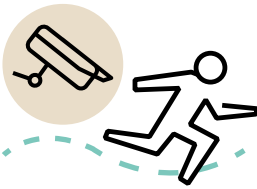
If the fence sensors or video analytics report an event to the PSIM, the Security Command and Control Center (SCC) verifies the alarm using live images from IP video cameras.



—7

### Remote alarm management

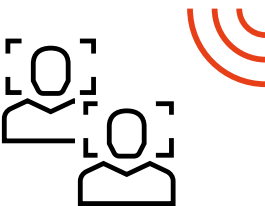
Once an alarm is verified, an audio is played to the intruders as an initial warning. If this does not deter them, the SCC initiates intervention measures. Downstream security systems then track the intruders.



—8

### Targeted tracing of suspects

High-performance PTZ cameras automatically track intruders. The SCC knows where intruders are at all times and can target any intervention.



—9

### Advanced video content analytics

Any suspicious persons and objects are quickly identified and located using multi-camera video search including facial recognition, as well as by analyzing object movements and behavior trends.

# Tailored systematic security

We draw on our many years of experience with system integration involving critical infrastructure to implement the right perimeter protection solutions with custom features – independent of specific manufacturers. Our solutions are created based on customer-specific security concepts, using well-designed components of our modular system. We see security as a process and work to make sure it operates efficiently, which includes taking account of risk management and suitability for the future.



## 1 — Security concept

This step involves analyzing the risk potential and the digital maturity level (for new and existing buildings).

**2 — Products (1-8)** Essential modules form the fundamental layer of protection. Advanced modules extend the solution to build a multi-layered security system with integrated alarm management whereas select modules offer tailored security with additional deep-learning analytics.

### Module functions



Detection



Analysis



Incident management

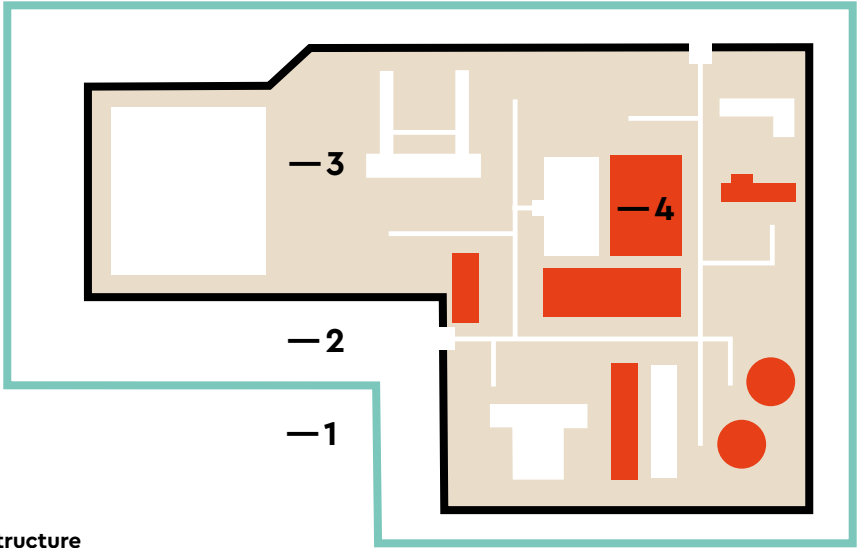
## 3 — Services

Our services ensure that the integrated system functions flawlessly while in operation. Depending on the service plan, we also offer 24/7 support and remotely manage your system from our control centers for your convenience and safety.

Modules	Functions	Essential	Advanced	Select
1. 3D combi-sensor		●	●	●
2. Network camera with video analytics		●	●	●
3. Audio system		●	●	●
4. Laser detector (LiDAR)*			●	●
5. Thermal camera with video analytics*			●	●
6. Physical Security Info Management (PSIM)			●	●
7. PTZ camera				●
8. Deep-learning video analytics platform				●

\*Or alternative modules depending on environmental conditions

Service & Support	Essential	Advanced	Select
Maintenance & technical support (page 26)	8-17 Uhr	24/7	Proactive monitoring & reporting
Control center services (page 27)	Redundancy connection	24/7 Dashboards	Individual add-on services



— **Zone structure**

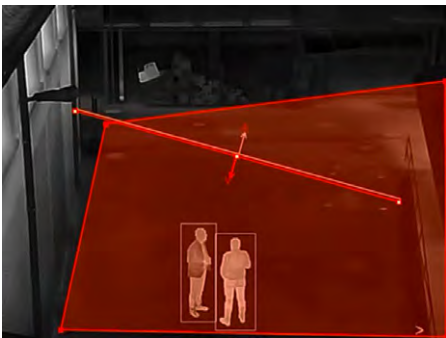
We divide the perimeter and the area to be protected into different zones. They are the basis of a multi-layered security system that logically combines and evaluates events depending on time and direction ensuring maximum security and reducing false alarms.

— **Zone 1** Area outside the perimeter of the protected area.

— **Zone 2** Open space between building and perimeter (anti-climb fence).

— **Zone 3** General areas in the building

— **Zone 4** High-security areas in the building



# Integrated AI-based solution with 24/7 remote management



Signals from multiple sensors in different zones of the perimeter or on the site are intelligently analyzed, reducing false alarms and allowing security staff to focus on justified alarms. Merging all the signals in the PSIM and visualizing them on a map helps staff to respond quickly and in a targeted manner.

Our certified Alarm Receiving Center (DIN EN 50518) and our Service Control Center Network (VdS 3138-2) handle operations 24/7 and provide alarm management (DIN EN 9001-2015) for all integrated security systems. Alternatively, we offer redundancy within a defined period if you have your own personnel. First responders and resources are dispatched and directed based on the PSIM using defined workflows.



In addition to perimeter protection, we can also enable fire and burglary alarm systems as well as other video and access control systems, so you always get a complete picture of the situation. Dashboards help you make informed decisions and continuously optimize systems and processes.

# Planning, installation, and operation from a single source

As a technology and service provider with many years of experience in critical infrastructure, we have a 360° view of your site's security.

## Full service

With our big picture of your campus, we manage the entire life cycle of your integrated security system, including maintenance and support. We also take care of alarm management 24/7 and equip you with a security dashboard.

## Analysis & design

Our consultants develop a tailor-made security concept that takes into account local conditions and your individual protection objectives. We also analyze existing systems and processes to check their digital maturity and their ability to meet future security demands.



## Systematic implementation

For us, systematic implementation means delivering individual solutions leveraging proven components of a modular system. We install pre-configured modules, integrate them into your IT landscape, configure the entire system, and connect it to our Security Command and Control Center.

## Individual planning

We take our assessment as a basis to design your perimeter protection solution. We use BIM as an efficient planning method in order to cooperate with all the various trades and parties involved in the project.

# Security concept

Our experts work together with you to define and seamlessly coordinate protection measures after analyzing the risk potential.



## — Analysis

Describe the requirements of the various stakeholders; identify the risk potential based on possible threat scenarios, intruder profiles, and vulnerabilities.



## — Objectives

Define and prioritize relevant protection goals.



## — Actions

Derive physical, electronic, and organizational security measures, such that the resistance time of the end-to-end solution is higher than the time it takes the security team to respond.



## — Concept

Use summary of risk assessment and coordinated measures for a precise tailor-made concept.



# — Products

With our integrated solutions, we provide a security solution that corresponds to your needs and identifies threats before they occur.



Detection



Analysis



Incident  
management



# 1. 3D combi-sensor

Functions      Essential    Advanced    Select



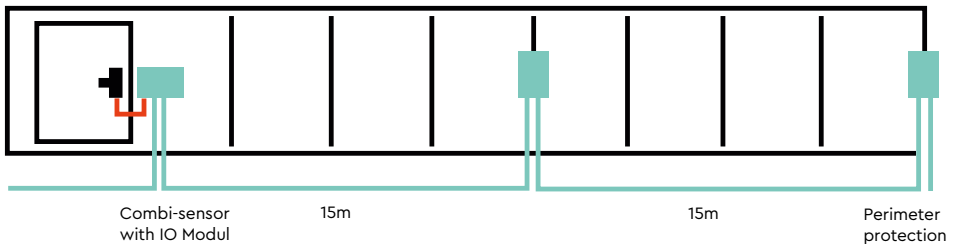
A 3D combi-sensor reliably detects intrusions such as cutting or climbing a fence within a specific perimeter section. It also serves as a pre-alarm when linked to other sensors in a multi-layered security system.

## Features

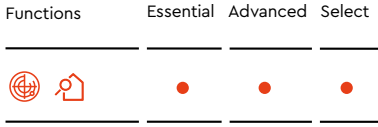
- Detects changes in body sound and dynamic inclination of the fence as well as the sensor position
- Works even in complete darkness
- Resistant to weather conditions
- Monitoring range approx. 10-15 m per sensor (regardless of fence)
- Can be visibly mounted or concealed

## Integration

- Integration with door contacts, serial interfaces, OPC, IP, and Modbus
- Video management system
- PSIM



# 2. Network camera with video analytics



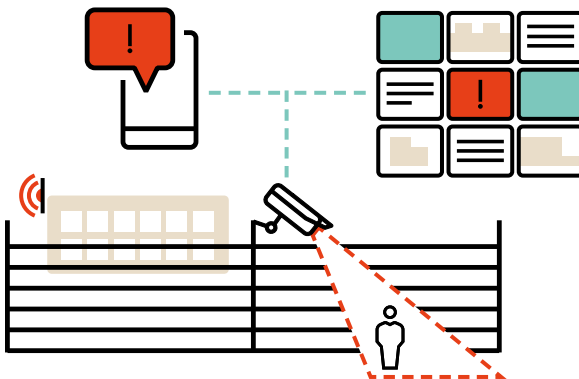
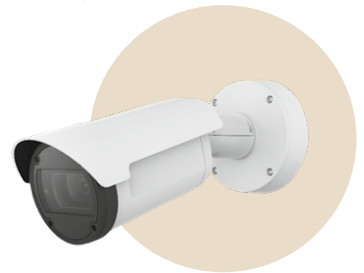
High-resolution, high-sensitivity video cameras shed light on security events. With the aid of video analytics, movements such as crossing a virtual zone in a certain direction or loitering, are detected and raised as security events.

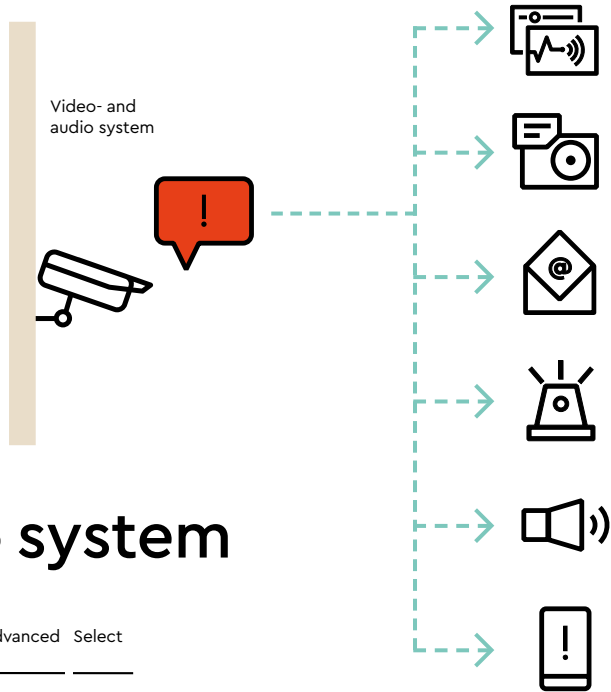
### Features

- Network video camera with zoom lens; resolution depends on the surveillance target (detection according to DIN62676-4 or identification according to DIN62676-4 with 4K at 25/30 frames per second)
- Integrated IR illumination and wide dynamic range functionality
- Video analytics to detect loitering and movement with object classification (distinction between people, animals, and vehicles)
- Powered by PoE

### Integration

- Video management system
- PSIM





### 3. Audio system

Functions	Essential	Advanced	Select
!	•	•	•

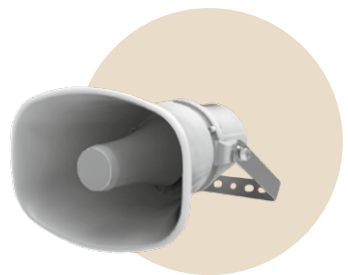
The networked speaker allows you to make wide-range announcements. In addition to live announcements, recorded audio sequences can be played back to deter intruders.

#### Features

- Speaker with integrated amplifier and signal processing
- Live announcements and event-driven audio clips played after motion is detected
- Suitable for outdoor use
- 121 dB, 70° opening angle
- Powered by PoE

#### Integration

- Video management system
- PSIM
- SIP





## 4. Laser detectors (LiDAR)

Functions      Essential    Advanced    Select



Laser detectors act like an invisible horizontal or vertical barrier. They can determine the size, speed, and distance of moving objects with precision. This allows perimeter sections of up to 100 m, open areas, and roofs to be secured.

### Features

- Networked laser detectors (LiDAR technology)
- Unaffected by light and heat sources
- Detection configurable by object size
- Divided into up to 8 detection areas for accurate threat pinpointing
- Monitoring range up to 100 m depending on laser detector type
- Powered by PoE / PoE+

### Integration

- Video management system
- PSIM

# 5. Thermal camera with video analytics

Functions

Essential Advanced Select



Thermal cameras with video analytics keep watch over a long perimeter section, depending on the surveillance target and the focal length used. They even capture people, objects, and events in complete darkness.

## Features

- Networked thermal camera with variable focal length (according to individual requirements)
- Thermal sensitivity <math><70\text{ mK}</math>
- Max. video resolution 768 x 576
- Detection even in complete darkness and resistance to weather influences, light cones, and shadows
- Video analytics to identify loitering and movement with object classification (distinction between people, animals, and vehicles)
- Powered by PoE

## Integration

- Video management system
- PSIM





# 6. Physical Security Information Management System (PSIM)

Functions      Essential    Advanced    Select



The central PSIM platform integrates the various security systems so they can all be controlled through a single user interface. Events and dynamic instructions are displayed to help the security operator at the control center take the right action without delay.

## Features

- Events from various security and building systems are intelligently visualized on the site and building plans
- Up to 25,000 data points and 15 operator stations (Professional) or unlimited data point units and operator stations (Enterprise)
- Dynamic procedure instructions and actions that run automatically in the background
- Systems activated/deactivated as required
- Multiple levels of redundancy for highest availability (hot standby)

## Integration

- Security, building and communications technology
- Other systems such as mission control or ticketing systems

# 7. PTZ camera

Functions

Essential

Advanced

Select



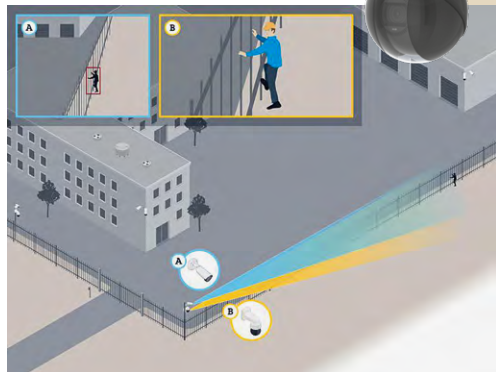
PTZ cameras can be panned, tilted, and zoomed to capture not only large areas but also fine details. Once the sensors of the multi-layered system detect an event, the cameras are used as part of the PSIM, allowing intruders to be identified even from afar.

## Features

- Network camera with HDTV resolution, 2.36°-66.7°, 30x optical zoom
- Can also be used in the dark thanks to integrated high-power LEDs
- Laser focus for faster focusing in low-light and low-contrast conditions
- Monitoring range up to 372 m (detection according to DIN 62676-4, image width 15 m, 125 px/m) or 186 m (identification according to DIN 62676-4, image width 7.7 m, 250 px/m)
- Pan/tilt: 360° unlimited, 0.05°-700°/s; +20°-90°
- Speed dry function: Water droplets are actively removed by shaking the PTZ head
- Powered by PoE / PoE+

## Integration

- Video management system
- PSIM



# 8. Deep-learning-video analytics platform

Functions    Essential    Advanced    Select



Video analytics using deep learning provide the highest accuracy in detecting and classifying objects and behaviors. Live images and recordings from a variety of cameras are analyzed to quickly locate relevant objects and events, even over vast areas. Risks are identified through behavioral patterns at an early stage.

## Features

- Multi-camera video search and filtering based on object categories (e.g. people or vehicles) and attributes (e.g. colors, clothing, and face masks)
- Object movements, behavior trends, and hotspots analyzed and displayed
- Real-time alerts based on object classifications and detection filters
- Face and vehicle license-plate recognition, GDPR-compliant
- Suitable for single- and multi-site applications
- Dashboards for data analysis

## Integration

- Video management system including real-time video (RTSP)
- PSIM





# — Services





# Maintenance & technical support

We ensure that your technical solution operates optimally and safely – including system updates for long-term security. Simply choose the service plan that best meets your needs.

## Essential

- System components inspected, maintained, and repaired
- Application software managed and maintained, in particular by installing security patches, hotfixes, and updates that extend its functionality
- Technical support helpdesk available from Monday to Friday, from 08:00 to 17:00 CET

## Advanced

Essential services plus:

- Technical support 24/7
- Reduced response times

## Select

Essential and Advanced services plus:

- System availability and performance proactively monitored
- Reports and dashboards per site and across sites



# Control center services

We understand security as a process. Our Alarm Receiving Center (DIN EN 50518) and our Service Control Center Network (VdS 3138-2) handle remote monitoring and incident management for your convenience and security. Simply choose the service plan that best meets your needs.

## Essential

- AES/NSL/provider connection to the perimeter protection solution with alarms displayed and logged in a PSIM
- Intervention in case of an incident as agreed
- Monitoring and alarm management provided as redundancy for the local security team (e.g. during night shifts, weekends, and holidays)

## Advanced

Essential services plus:

- 24/7 monitoring and alarm management
- Reports and dashboards per site and across sites

## Select

Essential and Advanced services plus additional individual services:

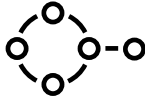
- Virtual guard patrols using live camera images
- AES/NSL/provider connection to additional security systems
- Elevator emergency call activation
- Remote-control access and door/gate openings





# Our system – your benefits

Thanks to our modular system and holistic services, our customized perimeter protection solutions are exceptionally reliable and economical.



### — Simply integrated.

All services are provided from a single source – from planning and implementation to operation. We combine the best products into a tailor-made solution, without being tied to any specific manufacturers.



### — Simply reliable.

By networking security technology in a multi-layered system as well as alarm management with 24/7 service availability, any threats are reliably detected and averted.



### — Simply intelligent.

Intelligent analytics help your security team focus on relevant events and make informed decisions.



### — Simply economical.

Our modular solution, automated actions, and integrated service concept enable us to deliver the greatest value possible.

# — Our solutions

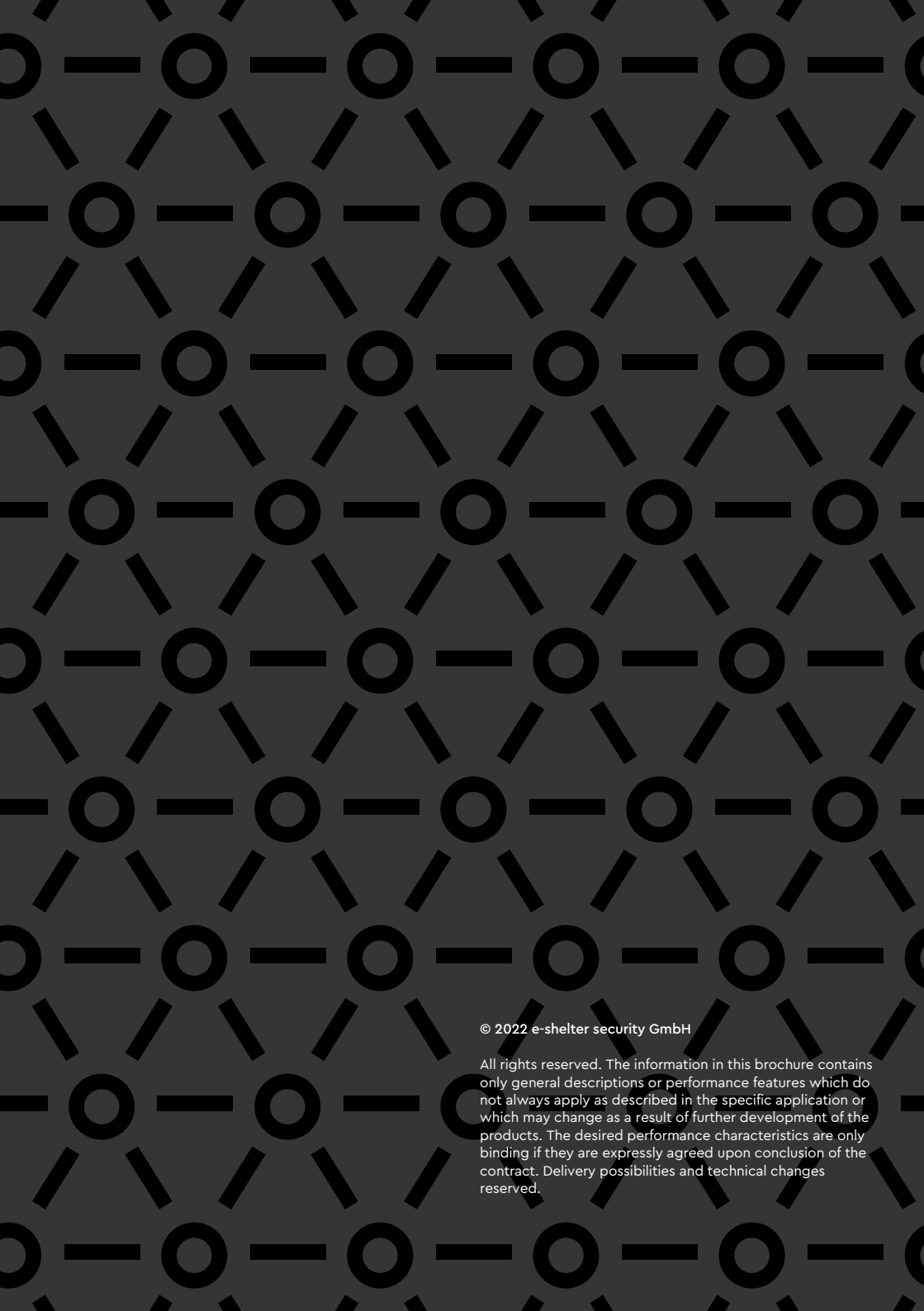
We also combine perimeter protection solutions with other systems to create a complete security solution for your site.

- Fire protection
- Anti-burglary protection
- Access control
- New workplace model

Innovative security technology and digitalization.  
**Made in Germany.**

20+ years of experience with systems integration in critical infrastructure. We manage thousands of sensors and complex systems for data centers throughout Europe.

Certified quality in accordance with ISO 9001:2015, VdS-Installer, VdS 3138, DIN EN 50518.



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