

An aerial photograph of a university campus featuring several large, multi-story brick buildings, green lawns, and numerous trees. A prominent yellow diagonal band runs from the bottom left towards the top right, partially obscuring the buildings. The text 'Designing solutions for smarter and safer schools' is overlaid in yellow on the left side of the image.

# Designing solutions for smarter and safer schools

# Axis at a glance

#1 Industry leader in video surveillance\*



Network solutions in video surveillance, access control, intercom and audio systems



4,210 employees in 50+ countries\*\*



1.6 B USD\*\*\*



Committed to UN Global Compact

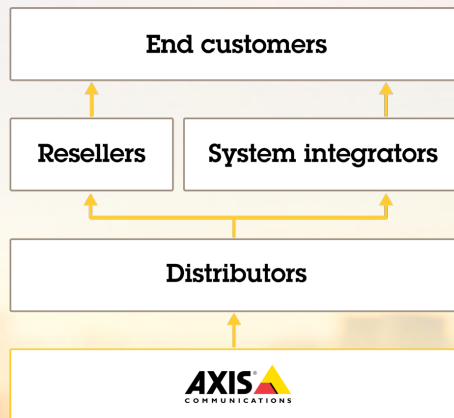


HQ and founded in Sweden – in 1984

Part of Canon group

Axis Group companies: 2N

## 2-tier business model



## Trusted eco-system



# Our offering



Network cameras



Analytics



Access control



Network intercoms



Network audio



Wearables



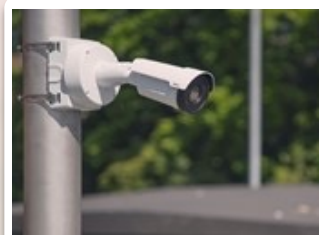
Video management software



Video recorders and desktop terminals



System devices



Accessories

# Axis analytics portfolio



AXIS Object Analytics



AXIS Perimeter Defender



AXIS License Plate Verifier



AXIS P8815-2 3D People Counter



AXIS People Counter



AXIS Queue Monitor



AXIS Fence Guard



AXIS Motion Guard



AXIS Loitering Guard



AXIS Video Motion Detection



AXIS Face Detector



AXIS Live Privacy Shield



# What are your security concerns?

*How do I ensure staff and student safety?*

*How do I minimize vandalism and costly repairs?*

*How can I easily investigate incidents and identify suspects?*

*How can I deter violence and theft?*

# What are your security challenges?

*How can I maximize my limited security budget?*

*How can I get an integrated security solution?*

*How do security and IT teams get on the same page?*

*Which products and solutions are best for my school?*

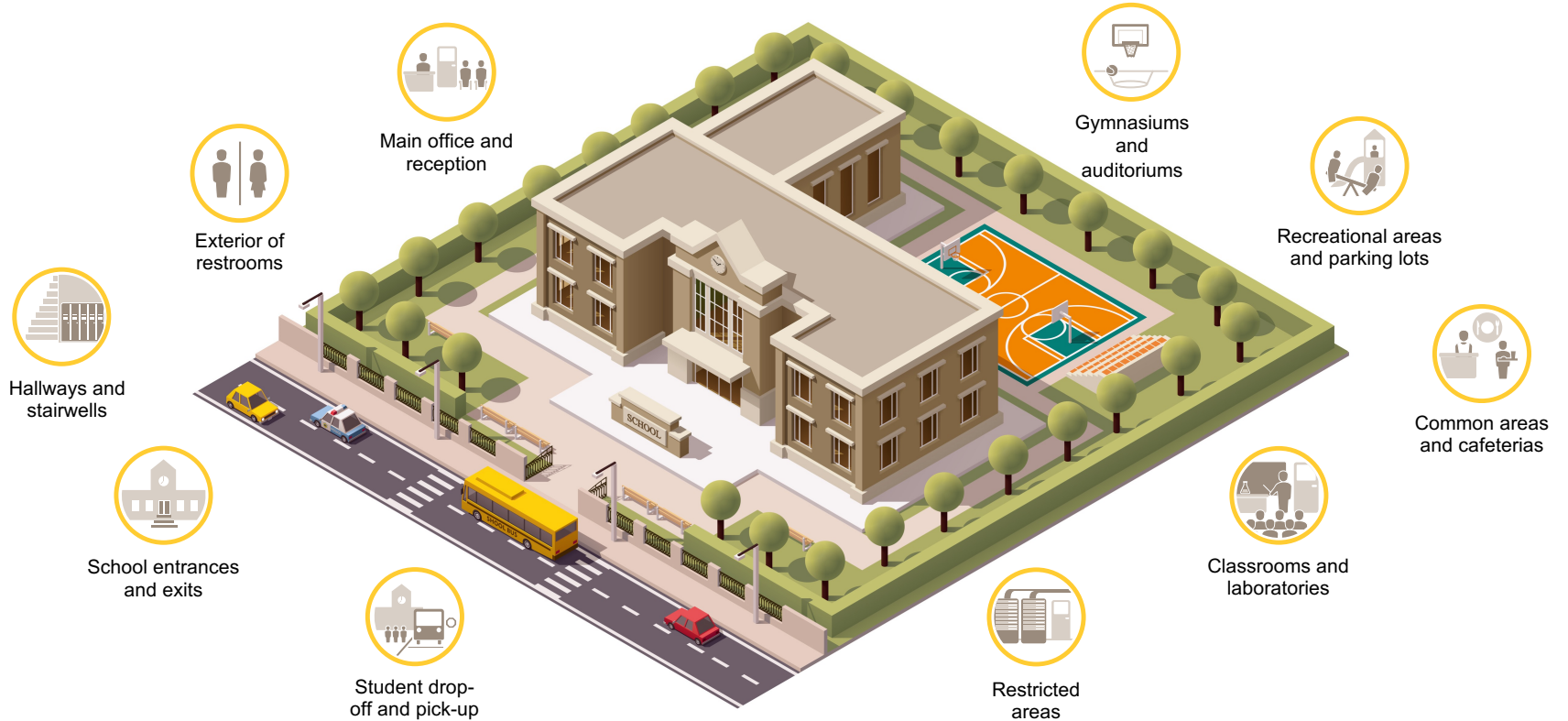


## How to help?

A photograph of a row of white school lockers. A yellow banner is overlaid across the middle of the image, containing text. The lockers have small windows and vents.

**With integrated school safety solutions -  
video - access control - audio**

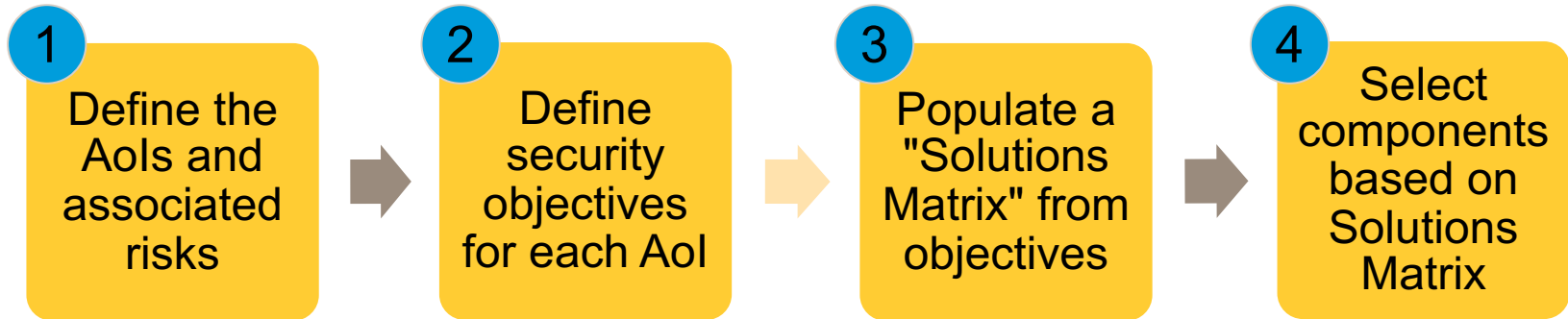
# Securing your school by areas of interest





# Transitioning from risks to solutions

## Using an Area of Interest (Aol) design



## Areas of interest

# Entrances and exits

Incident detection

Access management

## Challenges

- > Protect property from vandalism, theft, and burglary
- > Stay alert to trespassing and loitering
- > Ensure safe workplaces
- > Prevent unauthorized or unwelcome visitors

## Solution overview

AXIS Object Analytics helps detect trespassers and intruders, and event-triggered strobe sirens and voice messages act to deter them. Cameras or speakers paired with audio detection analytics improve response times by triggering alerts in the event of aggression, gunshots, or breaking glass. An IP-based public address system with audio zoning meets all your needs for safety, operational, and informational voice messages. Access control and connected systems automate building access for credentialed individuals and enable remote visitor approval.



# Hallways and stairwells



Incident detection

Safety and security

## Challenges

- > Deter unwanted behaviors
- > Prevent vandalism and protect property
- > Respond promptly to accidents
- > Track unauthorized individuals' movement
- > Minimize loitering and unwanted behaviors

## Solution overview

Multidirectional and dual-sensor cameras provide forensic-quality coverage in corridors and stairwells, respectively. Paired with sound detection analytics, they can alert you to potential incidents outside the camera's field of view. Network audio lets you respond to incidents even before staff arrives on scene, using live or prerecorded and event-triggered messages from the nearest speaker.

# Classrooms and laboratories

Public address

Access management



## Challenges

- > Deter aggression
- > Maintain a safe working environment
- > Respond promptly to accidents and incidents
- > Limit access to authorized individuals
- > Prevent vandalism, theft, and burglary
- > Support remote learning

## Solution overview

Speakers or cameras with audio capabilities and sound detection analytics can notify security personnel to the sounds of glass breaking, gunshots, or aggression. Strobe sirens alert affected areas to an urgent situation. A variety of network devices with two-way audio capability facilitate both clear instructions from administrators and real-time updates from staff members at the scene. Access control limits unwanted traffic and enables classroom lockdowns with the push of a button. Live streaming cameras support distance learning and flipped classroom models.

# Common areas and cafeterias



Incident detection

Access management

## Challenges

- > Provide a safe and secure environment
- > Protect property from theft, burglary, and vandalism
- > React quickly to accidents
- > Manage after-hours visitors
- > Prevent trespassing and loitering

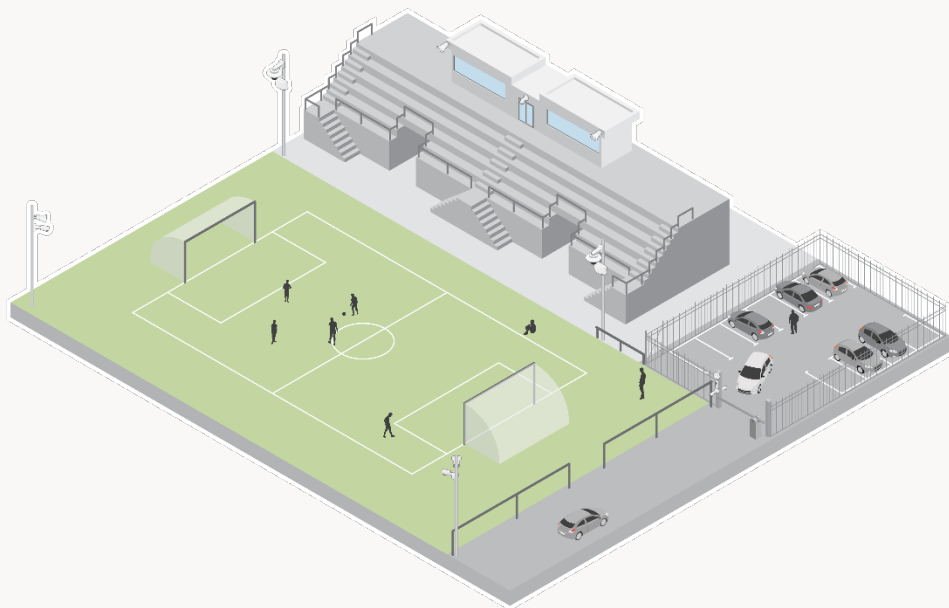
## Solution overview

A single panoramic camera provides a 180° to 360° field of view of your common areas. Video and audio analytics help keep security staff or local law enforcement alert to potential incidents and unauthorized presence, day or night. Access control enables and maintains a record of authorized visitors to a room or a partitioned area within that room. Network speakers broadcast live, scheduled, or event-triggered messages, as well as background music.

# Recreational areas and parking lots

Access and vehicle  
management

Safety and security



## Challenges

- > Protect property from theft, burglary, vandalism, and arson
- > Prevent illicit, illegal, and unwanted behaviors
- > Efficiently manage vehicular traffic
- > Ensure only authorized access
- > Provide a safe and positive environment for students, staff, and visitors

## Solution overview

Thermal technology, radar, visual cameras, and intelligent analytics work together to detect, classify, verify, and track intruders, day and night. Sound detection analytics provide alerts of incidents outside the camera's field of view. Vehicle access control and license plate recognition analytics ensure vehicles gain access only to the appropriate parking lots, while network video intercoms let you remotely manage and maintain a record of visitor parking requests. Network audio supports public address, serves as your sound system for events, and supports deterrent messages. Live streaming cameras enable high-quality event broadcasting.

## **Recommended technologies and features**



# Integrated solutions

## Video surveillance

Whatever you're looking for, you'll find an Axis network camera to suit your needs. From robust outdoor cameras to discreet products for sensitive environments, we offer it all.

## Access control

Efficient access management, centralized management of all entry points, smart video verification of all accesses.

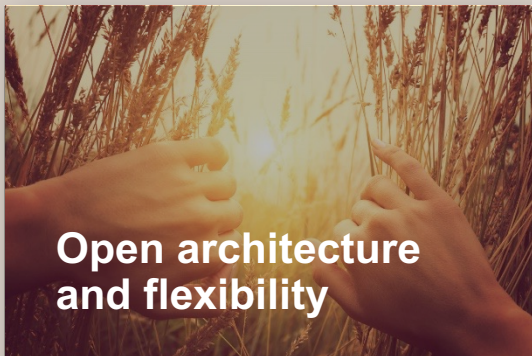
## Network audio

Easy to integrate and use in your daily business, Play voice messages or alarm in selected zones. Scalable, flexible, reliable system.

## Body worn

Deter offenders, protect people and assets, and document forensic evidence. Built on open technology, scalable, easy-to-use and cost-effective.

# The Axis advantage



## Open architecture and flexibility

### Openness

Axis products are built on open standards, meaning that you can integrate our products with your existing systems, protecting your legacy investment and migrating at the pace that's right for you.



## Lifecycle costs of a security system

### Total cost of ownership

Axis designs high-quality products that last, and we offer free tools to simplify product selection and site design. AXIS Device Manager tool makes managing all major installation, security, and maintenance tasks straightforward and cost-efficient.



## Drive innovation with in-house SoCs

### Innovation

The heart and the brain of every Axis product is its system-on-chip (SoC). We design our ARTPEC chips in-house, sealing back door entry points, and developed to perfectly match the requirements of professional video surveillance..

# You and Axis – partners in a smarter, safer world

A digital graphic with a blue background, featuring various icons representing technology and security, such as a laptop, a shield, a key, and a person. The text is overlaid on this graphic.

## Cybersecurity addressing a major global concern

### Cybersecurity

Cybersecurity is about products, people, technology, and ongoing processes. At Axis, we tackle cybersecurity by continuously monitoring threats and consequences, and taking quick, decisive action. Find out how training and AXIS Device Manager can support cybersecurity management.

A photograph of a vertical garden wall with various green plants growing in a grid pattern on a dark background.

## Towards a sustainable future

### Sustainability

All our products, practices and processes contribute to a smarter, safer world, and our goal is to promote sustainable ways of working in the entire value chain. Read more about our work with recycled material, circularity, healthy working conditions, our code of conduct and other initiatives.

A blue background with a yellow speech bubble containing five blue stars.

## Quality in everything we do

### Quality

Quality is at the heart of the culture of Axis. We work to provide the best quality in our products and solutions, our business relationships, training, technical support and customer services. Learn about our outstanding portfolio, Axis Communications Academy and more.

# Overview A&E program 2023

## Design support

AXIS Plugin for  
Autodesk®  
Revit®

AXIS  
Specifications  
Compiler

AXIS Site  
Designer

Axis product  
selector

A&E Media

Camera details  
drawings

AXIS Perimeter  
Defender

Dimensional  
drawings

Speaker  
coverage  
calculation

Accessory  
selector

Technology  
partner finder

## Documentation support

A&E  
specifications

Data sheet

User guides

Installation  
guides

Product  
roadmap

Declaration of  
conformity

MTBF  
documentation

Product video

Video tutorials

MSRP

## Insight support

Cybersecurity

Sustainability

Customer  
services

TCO

Customer  
stories

Industry  
knowledge

Analytics

White papers

Eco-system  
partners

Audio

Standard &  
norms

Beyond security

**Communication channels:** Local A&E Managers   AEC   A&E partner web   Events/webinars   Newsletters   Social media



# Axis tools – Plan and design

Tools to help you plan your sites and optimize your systems, as for example:

- > AXIS Site Designer
- > AXIS Plugin for Autodesk® Revit®
- > AXIS Perimeter Defender
- > AXIS Specification Compiler

[Explore the tools on Axis partner web](#)



—  
> DESIGN SUPPORT

—  
DOCUMENTATION  
SUPPORT

—  
INSIGHT SUPPORT



# AXIS Plugin for Autodesk® Revit®

> DESIGN SUPPORT

DOCUMENTATION  
SUPPORT

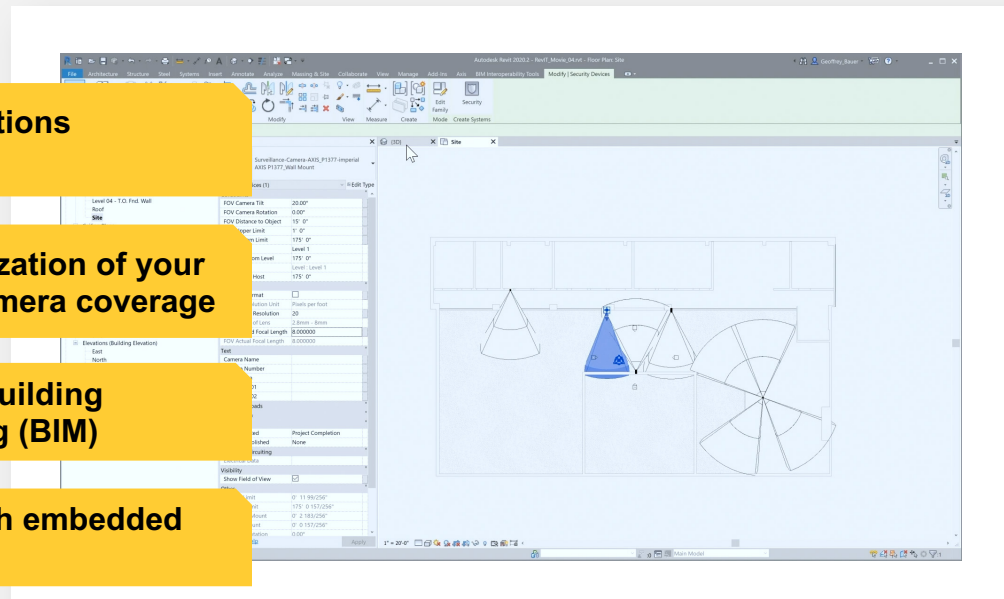
INSIGHT SUPPORT

**3D product visualizations  
for professionals**

**Get complete visualization of your  
design and verify camera coverage**

**Access all data for Building  
Information Modeling (BIM)**

**Access products with embedded  
product selector tool**



# AXIS Site Designer – Design your ideal solution

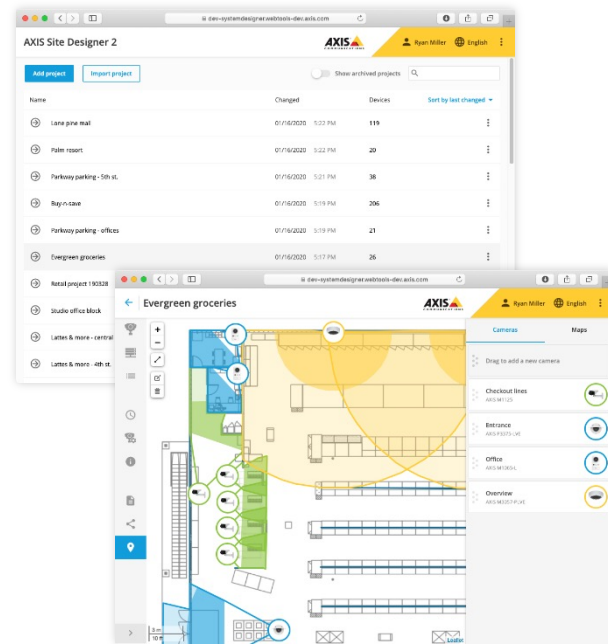


Find products based on requirements, and use maps feature to plan camera placement and coverage

Calculate required bandwidth or storage

Create complete bill of materials and quotations

Work with multiple projects and re-use existing projects or templates





# AXIS Specification Compiler

> DESIGN SUPPORT

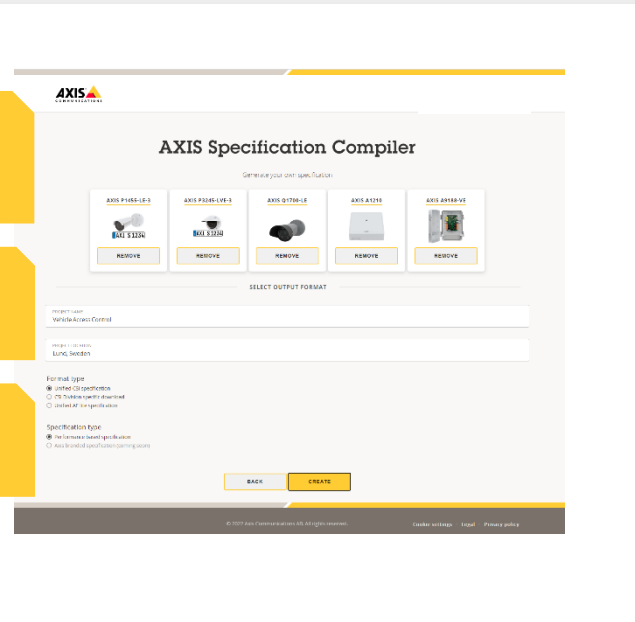
DOCUMENTATION  
SUPPORT

INSIGHT SUPPORT

Select and generate specification texts based on individual product specifications

Opportunity to improve your workflow

Integrated functions with AXIS Site Designer





# A&E Media – Performance based specifications all in one place



DESIGN SUPPORT

> DOCUMENTATION  
SUPPORT

INSIGHT SUPPORT

Product specifications

General specification

Compilation of specifications

## PART 1 GENERAL

### 1.01 SYSTEM DESCRIPTION

#### A. General Requirements

- The specified unit shall be of manufacturer's official product line, designed for commercial and/or industrial 24x7/365 use
- The specified unit shall be based upon standard components and proven technology using open and published protocols
- Installed Requirements
  - 28.06.07 21 PoE
  - 28.05.11 Cyber S
  - 28.05.18 Storage
  - 28.05.21 Network
  - 28.05.23 Storage
  - 28.10.11 Video M
  - 28.20.13 Video M

#### B. Sustainability

- The specified unit sh
- The specified unit sh (IEEE)
- The specified unit sh
- The specified unit sh
- The manufacturer sh United Nations

### 1.02 CERTIFICATIONS AND

#### 1.03 QUALITY ASSURANCE

#### 1.04 WARRANTY

## PART 2 PRODUCTS

### 2.01 GENERAL

- The product shall be IP
- The product shall be IP
- The product shall be IP interface) which shall p applications.

### AXIS M3000-G

#### AXIS M3000-G PTZ Camera

The camera features three 1/3" CMOS sensors and one PTZ camera with 10x optical zoom for total situational awareness of indoor areas up to 400-m<sup>2</sup> (4300 ft<sup>2</sup>). With everything displayed on one monitor, you can move from overview to detailed view in a single click. 8 video streams (10x zoom) with 2x slower frame rates to communicate with up to six devices in a system (e.g., for instance monitor temperatures in freezers or turn lights on/off) from the camera via the benefits of four cameras while enabling unit use camera.

#### • 3x 1/3" CMOS sensors for situ

- Total overview, zoomed
- Covers minor areas up to
- 10x optical zoom with 100
- 2x Wave for smart home s

#### The product, including all its o

The contractor or designated certification, verified by a third The main unit shall be readily replace as defined by clause

#### Image sensor

- 1/2.8" progressive scan CMOS
- 1/2.8" progressive scan CMOS

#### Lens

- PTZ camera
- Varifocal: 4.7-47mm, F1.6, 3.6x optical zoom
- Motorized: 4.7mm, 0.1-0.15, AutoFocus, auto-iris, P-iris, 500
- Optical zoom: 10x
- Focal length: 2.8mm, F2.0
- Horizontal field of view: 90°
- Vertical field of view: 55°

#### Day and night

- PTZ camera
- Automatic: removable white

#### Minimum illumination

- PTZ camera
- Color: 0.05 lux at 30 IRE F1.6
- Day: 0.01 lux at 30 IRE F1.6
- Color: 0.1 lux at 30 IRE F1.6
- Day: 0.01 lux at 30 IRE F1.6
- Color: 0.05 lux at 30 IRE F2.0
- Day: 0.01 lux at 30 IRE F2.0
- Color: 0.1 lux at 30 IRE F2.0
- Day: 0.01 lux at 30 IRE F2.0

#### Shutter speed

- PTZ camera

The manufacturer shall provide an open application platform that supports the installation of video analytics directly on the device, both from the manufacturer and from external suppliers. In addition to the possibility of installing and using video analytics directly on the device, the manufacturer shall provide a function that allows server-based analytics.

All products shall support the management of a minimum of two (2) simultaneous applications, distributed on one (1) for called edge-based and one (1) for server-based.

#### Product requirements

##### General product requirements and functionality

All solutions or products shall be IP-based and comply with established network or video standards, or both.

All solutions or products shall be fully supported by an open and published Application Programming Interface (API), which shall provide necessary information for the integration of functionality into third-party applications.

The device is based on a Linux open-source project and includes a built-in web server.

Device management shall be possible via Windows-based software that can be used to assign IP addresses, firmware upgrades and back-up the configuration. The management software is provided by the manufacturer.

##### Manufacturer cybersecurity

To prevent the circumvention of authentication methods (see the "back door" or the screen control of a product there shall be no hidden operating accounts, passwords, tokens, or URLs) available on the device known only to the manufacturer.

The manufacturer cannot be called upon to help reset a lost or forgotten account password. In this case, only the factory default settings should be possible to get restored.

Any process required to do a factory reset a product or recover for a lost password must include a physical presence field, such as pressing a reset button.

By default, the product must not communicate with any third-party server outside the network, except for explicitly approved connections. Core network services (DHCP, DNS, NTP, etc.) are expected to be provided within the network.

Upon resetting to factory default, the device should revert to the default protection, including:

- The disabling of FTP server functionality
- The disabling of SSH and/or telnet
- The provision of a self-signed device certificate for immediate HTTPS connection during deployment (not to be used for daily operation) (if a factory pre-installed vendor signed device certificate)
- The removal of all stored sensitive data, such as passwords and user-defined private keys.
- The removal of add-ons installed by the user

##### Vulnerability management

a. The manufacturer should provide a Software Bill of Material (SBOM) that contains information about the software composition of the operating system of the device.

b. The manufacturer should facilitate a Bug Bounty program (vulnerability reward program) to protect that it can work professionally together with external security researchers in identifying and patching vulnerabilities.

c. The manufacturer should provide upon request a client statement of a penetration test conducted by a reliable 3<sup>rd</sup> party company specialized in security testing.

General, Architect and Engineering specifications for AXIS products



**Kristina Madolova**  
Architect & Engineering Manager  
[Kristina.madolova@axis.com](mailto:Kristina.madolova@axis.com)  
+46 72 020 03 68

Thank  
you

**Let's connect!**