Welcome

Sistemas PoE y videovigilancia

Parte 3

Ing. Antonio Gordillo / 28 Mayo 2021 / Mercadotecnia Automatización

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Webinar IMA Mayo 2021

Sistemas PoE y Videovigilancia Parte 3

Fecha	**28 Mayo 2021**
Hora	16:00
Hora	17:00
Duración	1 hora
Costo	gratuito

Conozca las posibilidades del producto Smart Camera Box para aplicaciones de Videovigilancia

Aprenda la oferta a detalle desde el punto de vista técnico, y sus ventajas en diferentes tipos de aplicación en videovigilancia al utilizar el producto SCX Smart Camera Box como una aplicación fácil, sencilla y práctica al momento de ordenarla, instalarla, configurarla y administrarla por medio de Web en las aplicaciones de Videovigilancia. Con este producto tendrá avances significativos en la infraestructura ethernet moderna al instalar cámaras de videovigilancia y/o cualquier otro tipo de aplicación que pueda diseñar.

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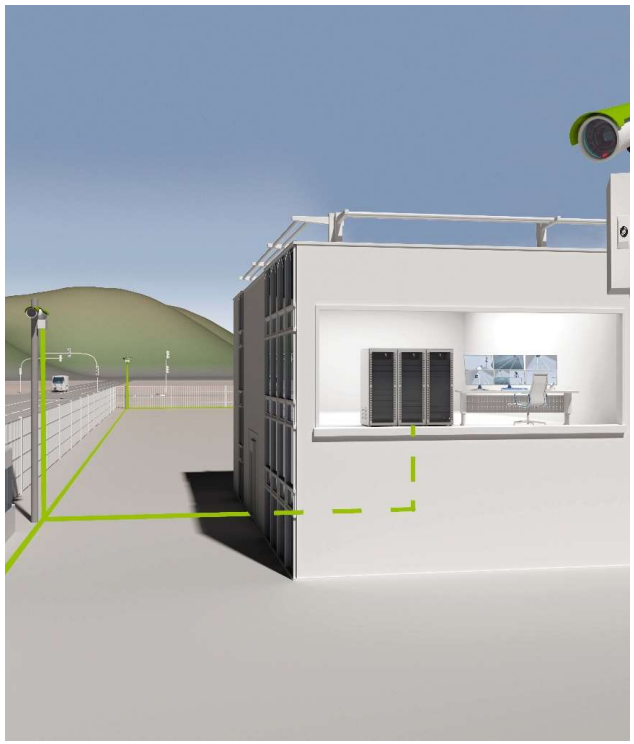
Webinars

Agenda

- Sistemas de Video vigilancia
- Smart Camera Box
- Aplicaciones



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Surveillance Infraestructure

Phoenix Contact

Video Surveillance

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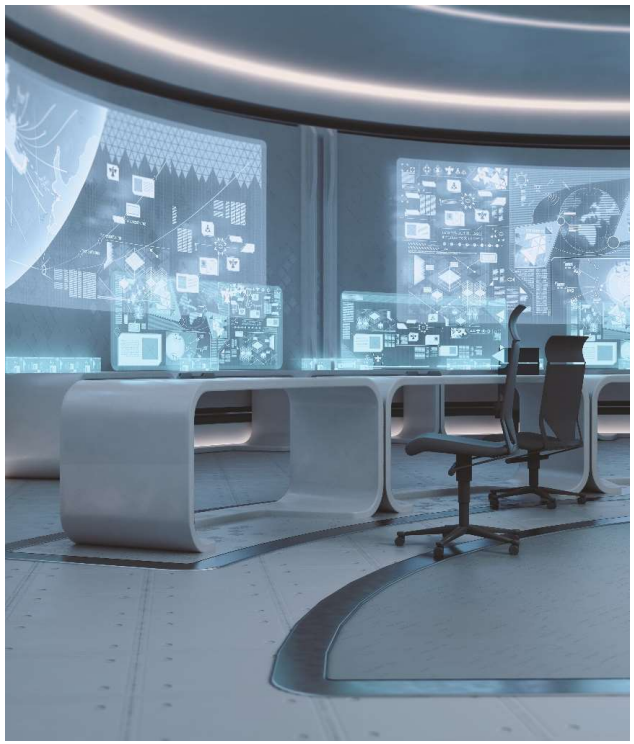
Surveillance Infraestructure

Overview

- Security
- Access
- Recording
- Process
- Paths
- Warning
- Alarm
- Control
- Actions
- Light
- Dark
- Temperature
- PoE
- Fiber optic
- Cameras
- Wireless
- Control Room
- Doors
- Bars
- Tunnels
- Traffic Light
- Urban Monitoring
- Police
- Fire Department



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IEEE 802.3 bt - the new standard

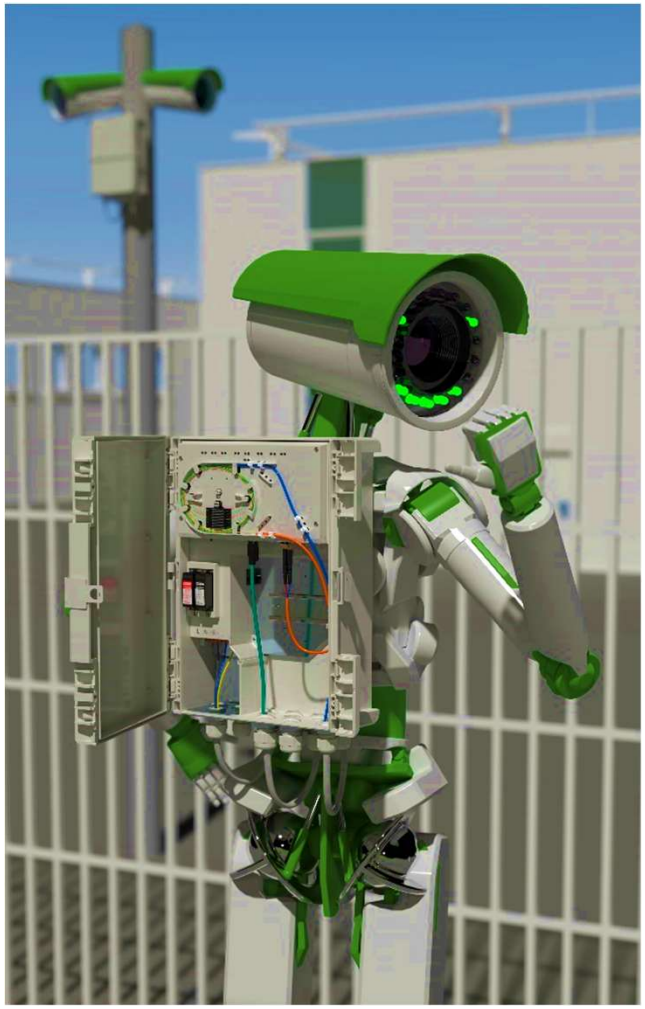
IEEE Standard → PoE bt

The Smart Camera Box

- More than just an outdoor PoE switch

It connects PoE devices to Ethernet networks,
such as IP cameras to a video server.

The compact all-in-one device replaces modular control cabinet solutions and
saves time during planning and installation.



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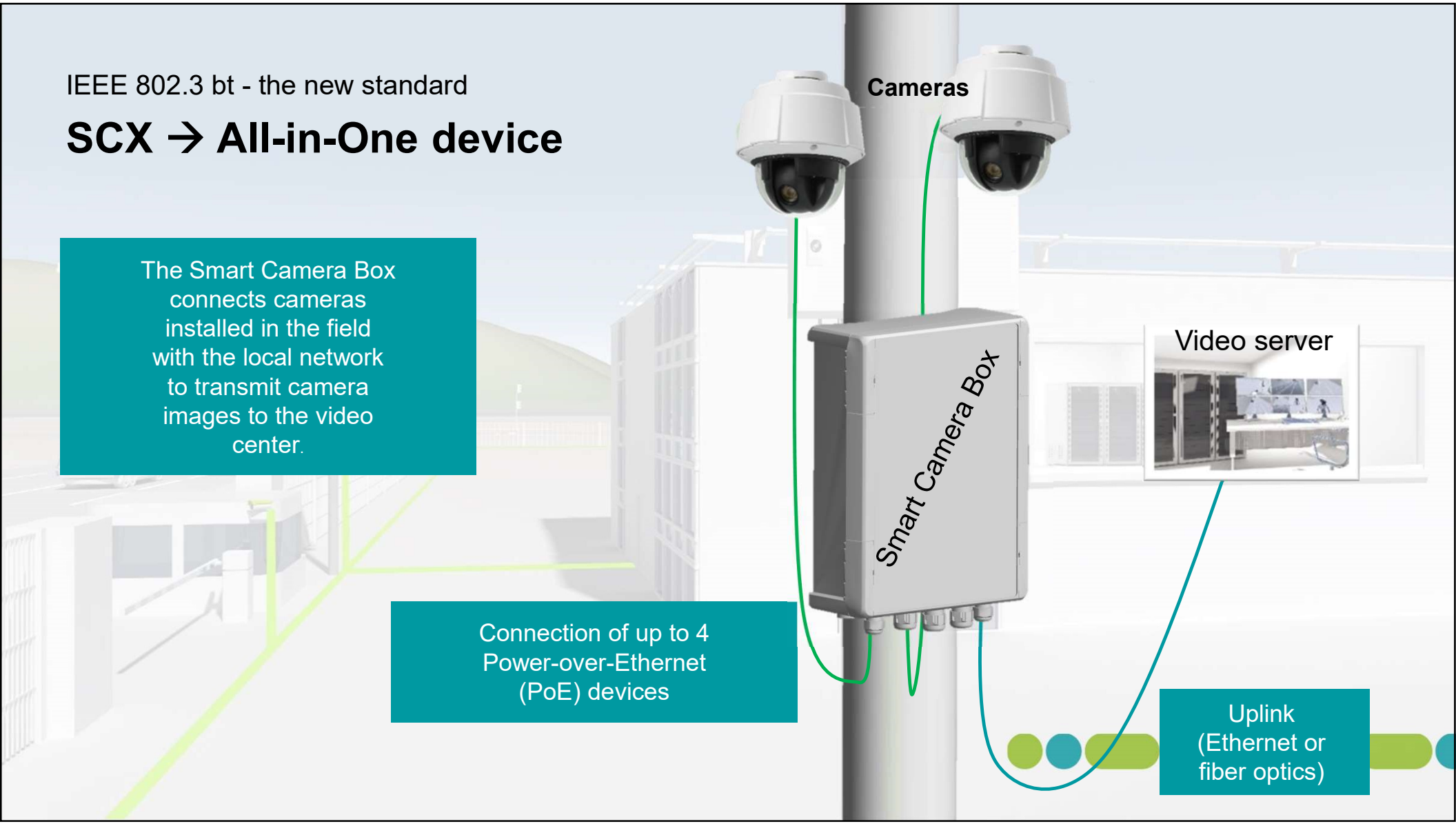
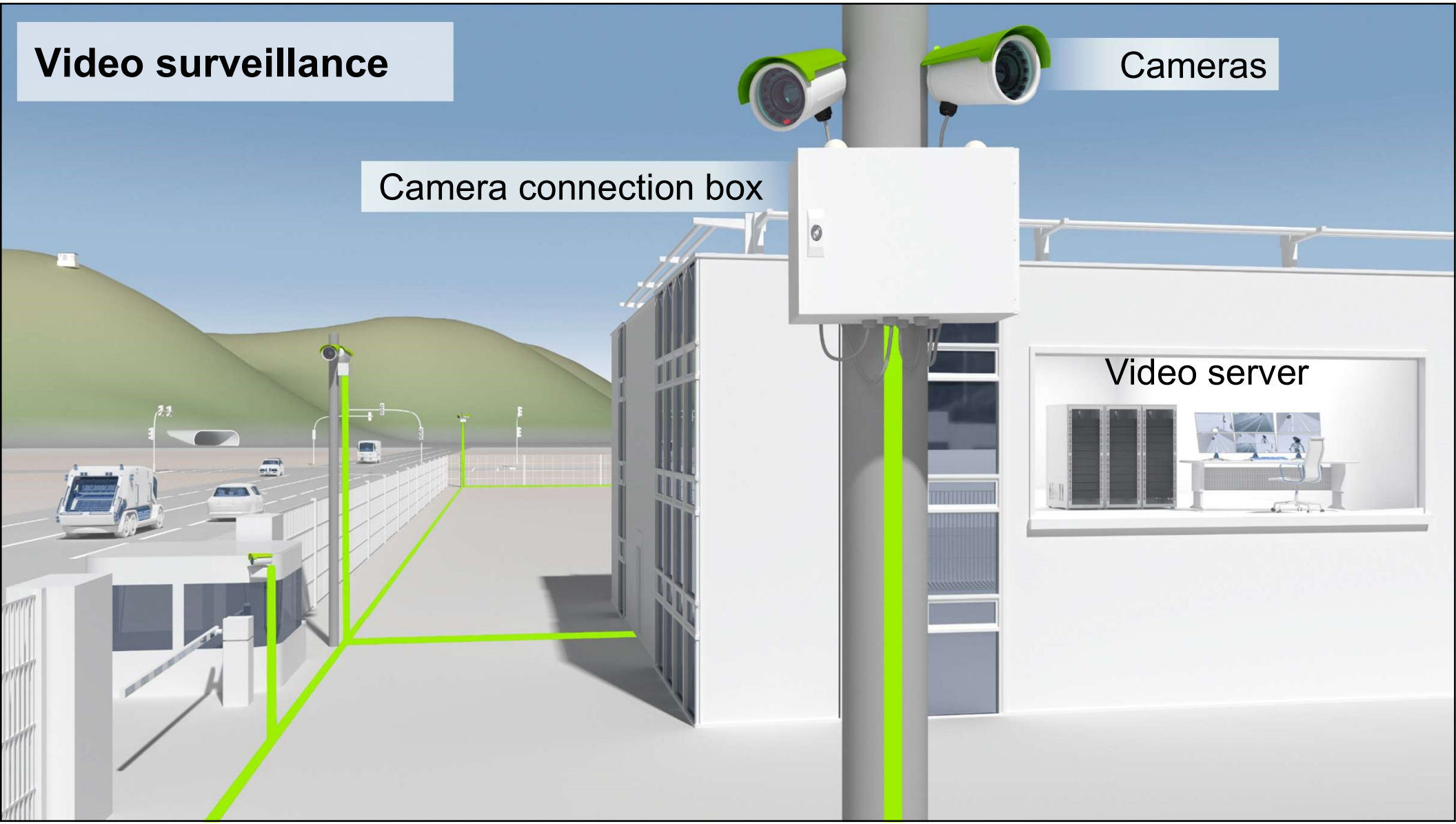
IEEE 802.3 bt - the new standard

SCX → All-in-One device

The Smart Camera Box connects cameras installed in the field with the local network to transmit camera images to the video center.



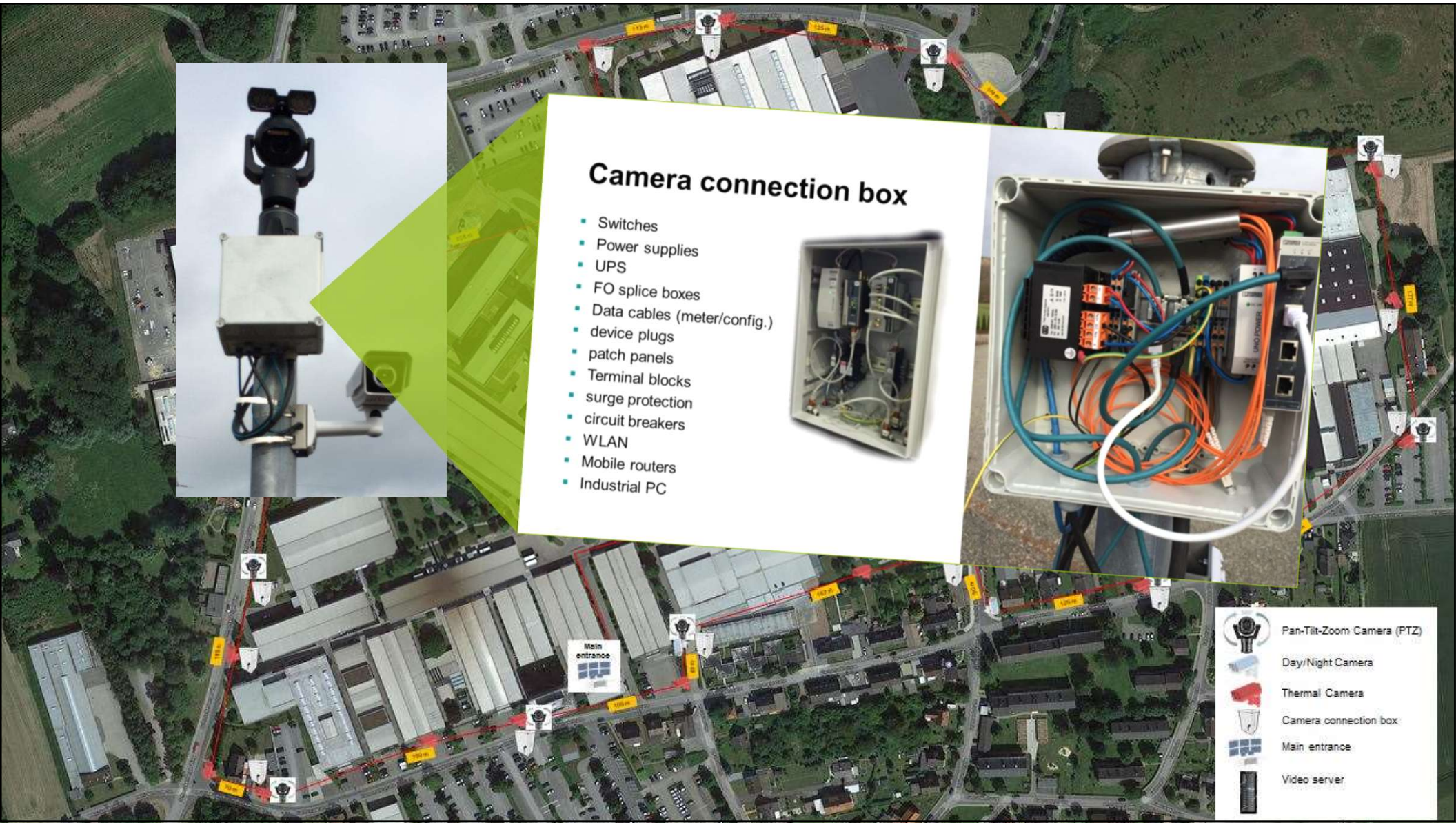
Connection of up to 4 Power-over-Ethernet (PoE) devices


Video surveillance
Cameras
Camera connection box
Video server

Control cabinet solution

... typical camera connection box

- Switches
- Power supplies
- FO splice boxes
- Surge protection
- Patch Panels
- Data cables
- Device plug
- …


Camera connection box
Switches
Power supplies
UPS
FO splice boxes
Data cables (meter/config.)
device plugs
patch panels
Terminal blocks
surge protection
circuit breakers
WLAN
Mobile routers
Industrial PC
Main entrance
Pan-Tilt-Zoom Camera (PTZ)
Day/Night Camera
Thermal Camera
Camera connection box
Main entrance
Video server

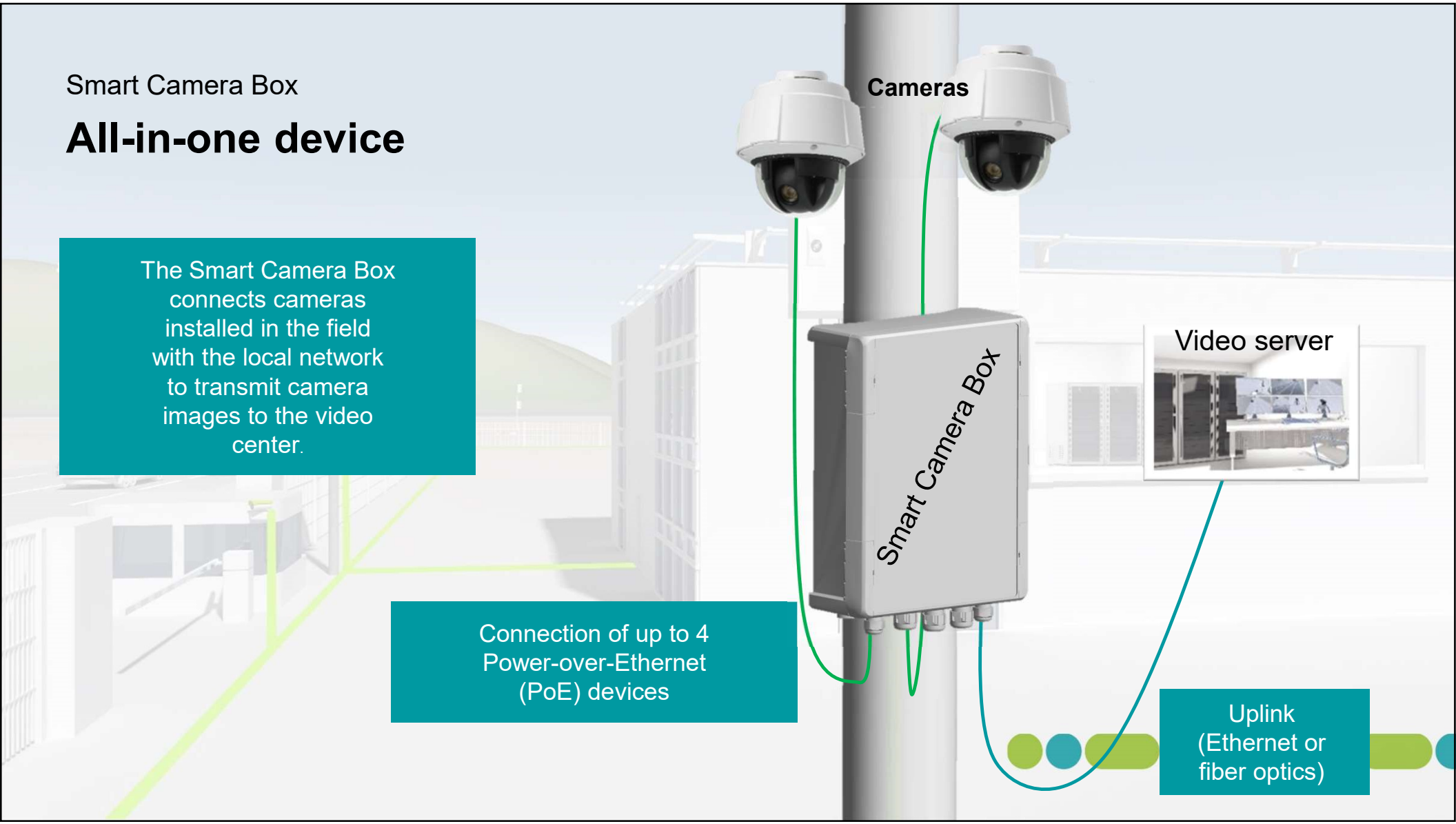
Video center
Video server
Switches
FO patch fields
Power supplies
UPS
patch fields (fiber optic / copper)
Data cables (meter/config.)
Terminal blocks
surge protection
circuit breakers
WLAN
Mobile routers
Industrial PC
MGuard
Video center Server
Main entrance
Pan-Tilt-Zoom Camera (PTZ)
Day/Night Camera
Thermal Camera
Camera connection box
Main entrance
Video server

Some examples of surveillance applications

Smart Camera Box

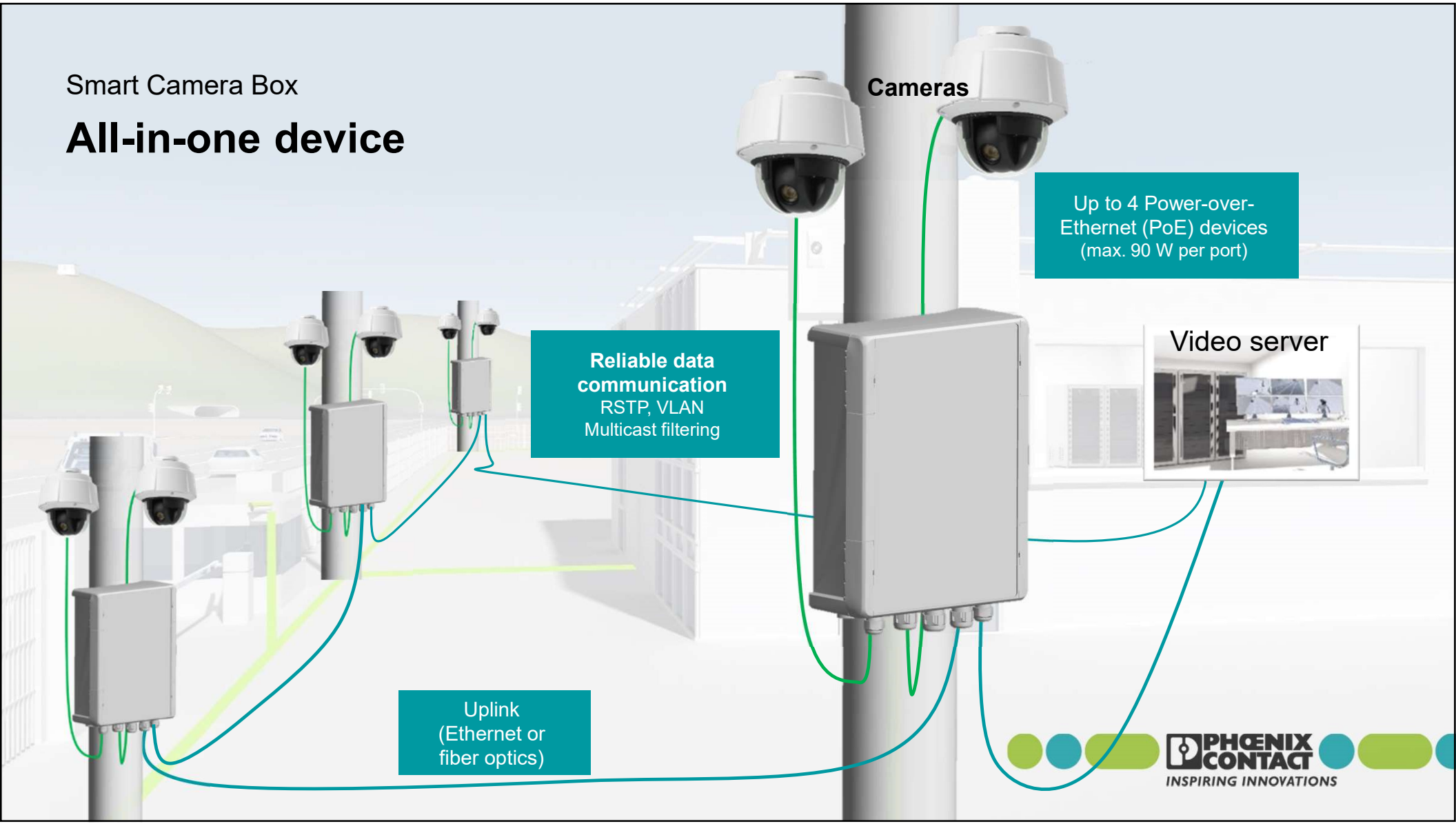
All-in-one device

The Smart Camera Box connects cameras installed in the field with the local network to transmit camera images to the video center.



Smart Camera Box

All-in-one device



Smart Camera Box

Features

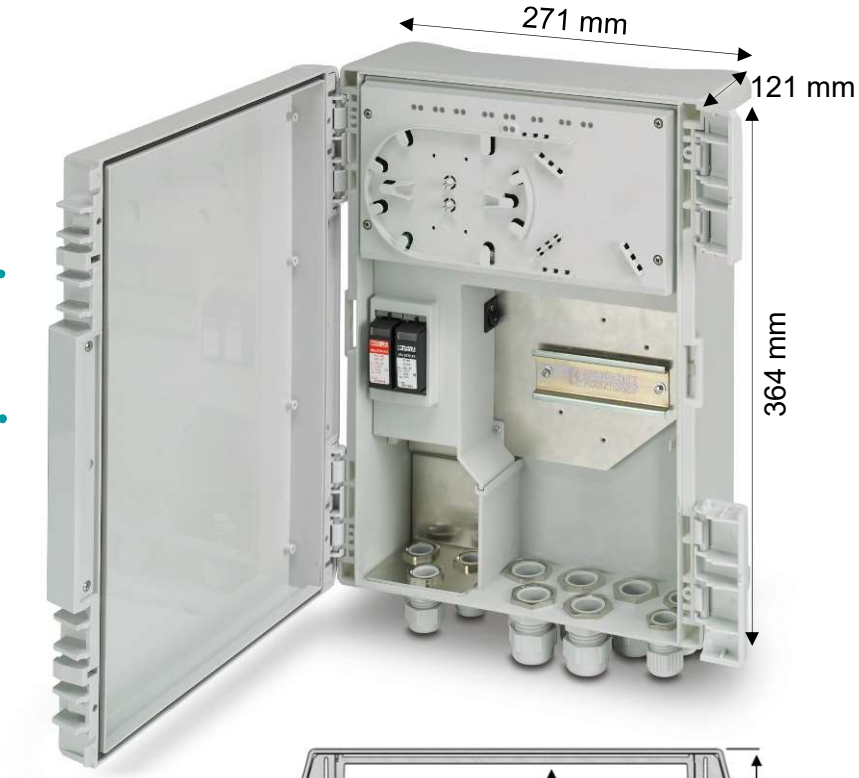
The Smart Camera Box is a **All-in-one device** which contains all the functionalities of a standard camera box

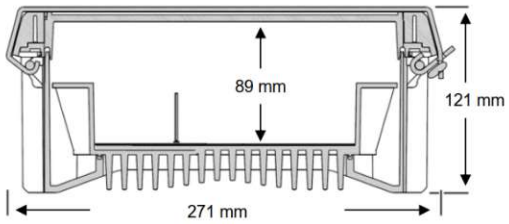
Smart Camera Box

Overview

Housing for outdoor use
IP65/IP67
IK10

Mounting adapter
for pole and wall





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Smart Camera Box

Housing

Front view

Back view

Lightweight, robust casing
IP65 / IP67 - Outdoor housing
IK10 - Vandalism proof

Mounting adapter
Provides secure fit
Hidden release mechanism, can only be released with a tool

Wall mounting
Holes for direct mounting on a wall

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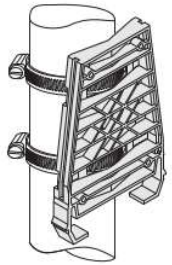
Smart Camera Box

Mounting adapter



Mounting adapter for pole and wall

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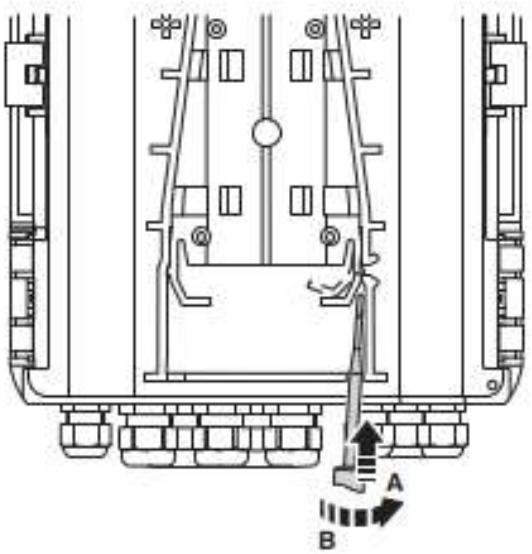
Smart Camera Box

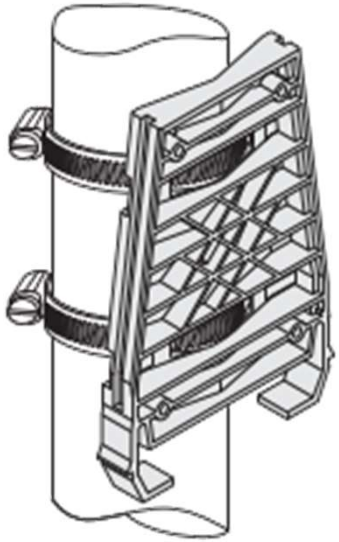
Installation - mounting - mounting adapter



Disassembly
Pry open the latch with a screwdriver

Installation with mounting adapter

1. Attach the mounting adapter
2. Click the box on the adapter
3. Connect the cables
4. Done!



Mounting adapter for pole and wall

Smart Camera Box

Mechanical safety

Door bolt with locking tab
Accessories SCX-DOOR-LOCK Part No.: 1184401

Metal door interlock
Enables safe locking of the door

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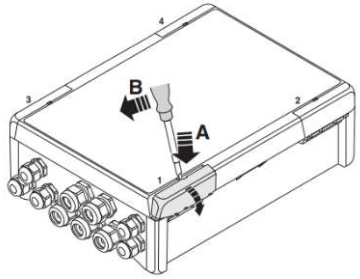
Smart Camera Box

Flexible door mounting



Door hinge right

Door hinge left

Door removable

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Smart Camera Box

Overview

Housing for outdoor use
IP65/IP67
IK10

Mounting adapter
for pole and wall

Power supply
100 VAC... 240 VAC

Temperature range
-40°C ... +70°C

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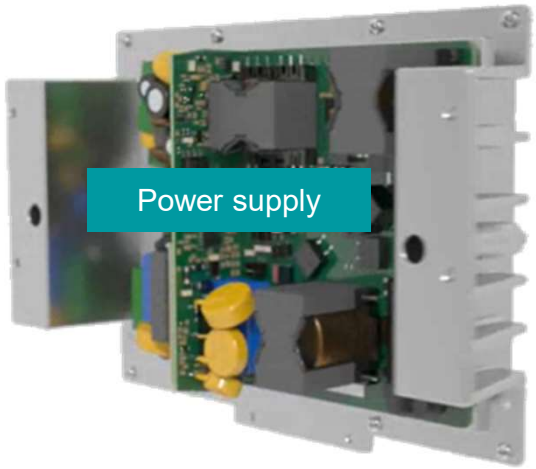
Smart Camera Box Features

Reliability - Heat sink

Integrated heat sink

- Enables reliable use in harsh environments
- Temperature range **-40° C ... +70° C**



Heat sink

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INSPIRING INNOVATIONS

Smart Camera Box

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Housing for outdoor use
IP65/IP67
IK10

Mounting adapter
for pole and wall

Power supply
100 VAC... 240 VAC

Temperature range
-40°C ... +70°C

Cable entry

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Smart Camera Box

Installation - Cable entry

Direct connection of pre-assembled patch cables

- Due to the slotted seal, the connectors fit directly through the cable glands
- Error-free and fast !

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Smart Camera Box

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100 VAC... 240 VAC

Temperature range
-40°C ... +70°C

Device switch on/off

Cable entry

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

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100 VAC... 240 VAC

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Device switch on/off

Cable entry

Overvoltage protection
for 230 V AC supply
Exchangeable and status via SNMP

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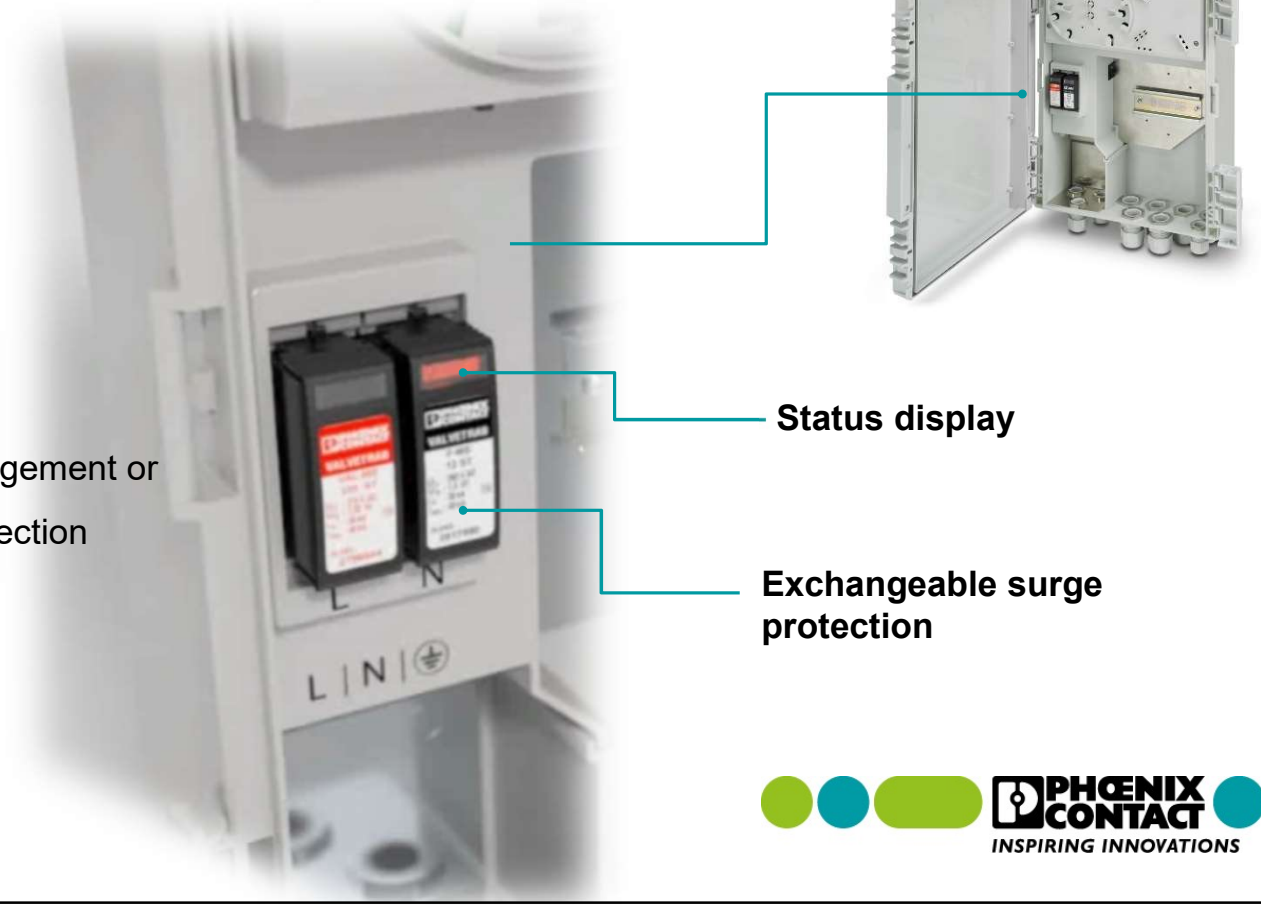
Smart Camera Box

Reliability - Overvoltage protection



Integrated overvoltage protection

- Exchangeable, pluggable
- Alarm message via Web-based management or SNMP in case of defective surge protection

Surge protection modules:
VAL-MS 230 ST, item no. 2798844
VAL-MS 350 VF ST, item no. 2856595

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Smart Camera Box
Overview

managed Ethernet switch
10/100/1000 Mbps
Up to 4 PoE camera connections
and 2 uplink ports
Up to 90 W per port (IEEE802.3bt)
Flexible power management

Housing for outdoor use
IP65/IP67
IK10

Mounting adapter
for pole and wall

Power supply
100 VAC... 240 VAC

Temperature range
-40°C ... +70°C

Uplink to the Video Center (variants)
2 x FO with SFP adapter or
2 x standard Ethernet

Device switch on/off

Overvoltage protection
for 230 V AC supply
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Cable entry

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Smart Camera Box

Ethernet Management

Reliable networks

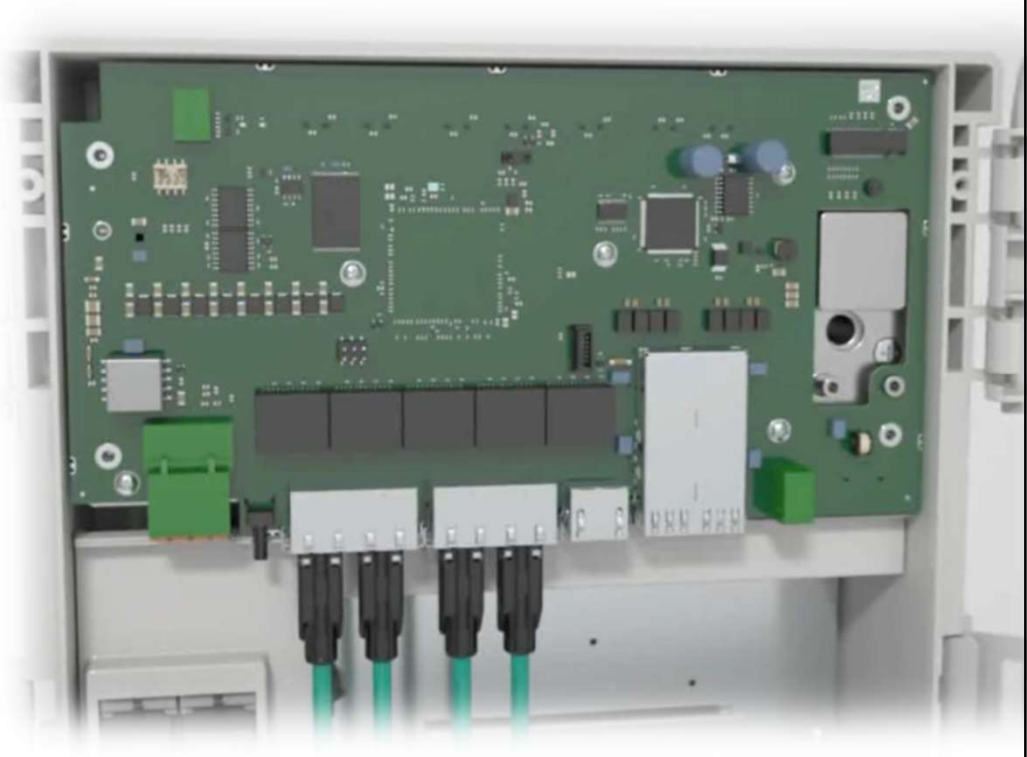
- Redundancy for fail-safe networks
- VLANs
- Multicast filtering

Power-over-Ethernet

- Power supply of cameras with up to **90 W** per connection (new standard IEEE802.3bt)
- **Alarm message** when the temperature or power budget is exceeded

Flexible configuration options

- web-based management
- FL NETWORK Manager software support
- SNMP, CLI



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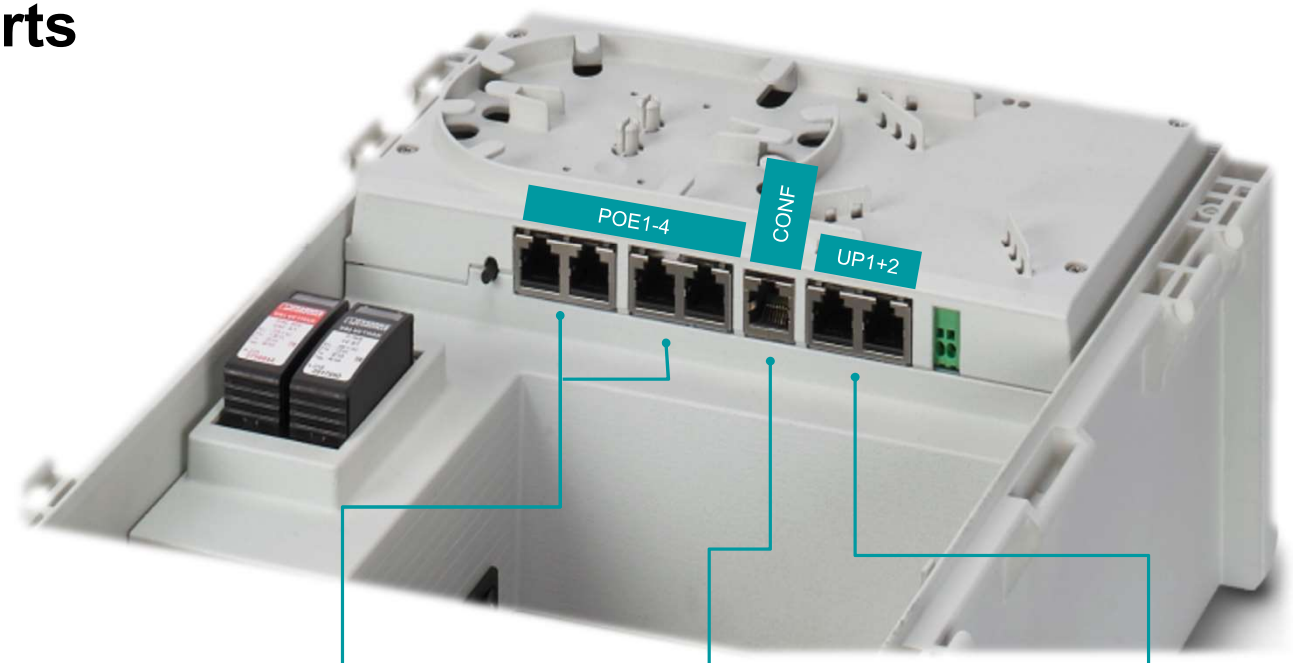
Smart Camera Box

Switch Ports



(PoE) Power-over-Ethernet Ports 1 - 4

Local configuration port

Uplink Ports 1+2
(Ethernet or SFP (fiber optic) slots)

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Smart Camera Box
Overview

Integrated splice cassette
for FO cable

managed Ethernet switch
10/100/1000 Mbps
Up to 4 PoE camera connections
and 2 uplink ports
Up to 90 W per port (IEEE802.3bt)
Flexible power management

Housing for outdoor use
IP65/IP67
IK10

Uplink to the Video Center (variants)
2 x FO with SFP adapter or
2 x standard Ethernet

Mounting adapter
for pole and wall

Device switch on/off

Power supply
100 VAC... 240 VAC

Temperature range
-40°C ... +70°C

Overvoltage protection
for 230 V AC supply
Exchangeable and status via SNMP

Cable entry

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Smart Camera Box

Installation - Splice Box

Integrated FO splice cassette

- No additional splice box required
- Secure connection of all fibre optic cables
- Improved cable routing within the box

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box
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for FO cable

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Uplink to the Video Center (variants)
2 x FO with SFP adapter or
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Device switch on/off

Reliable data communication
RSTP, VLAN
Multicast filtering

Overvoltage protection
for 230 V AC supply
Exchangeable and status via
SNMP

Cable entry

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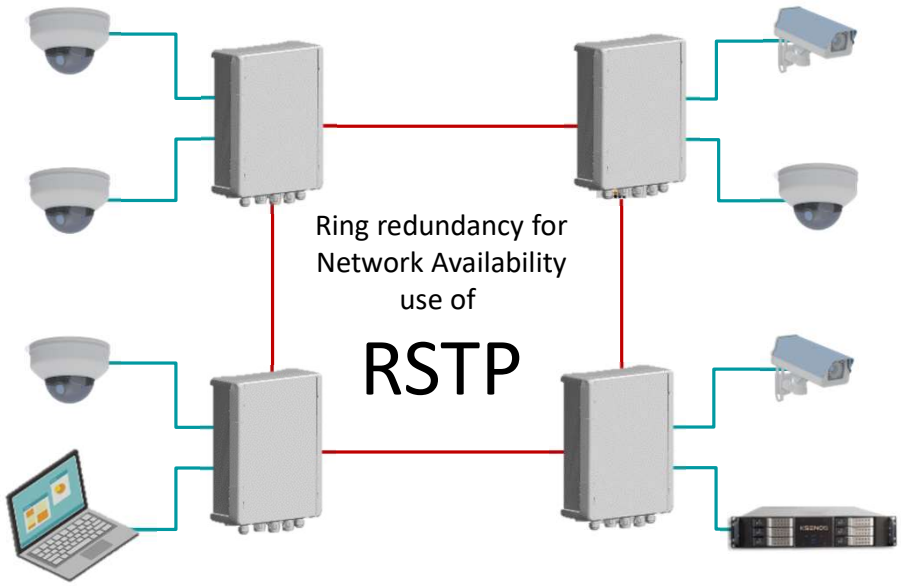
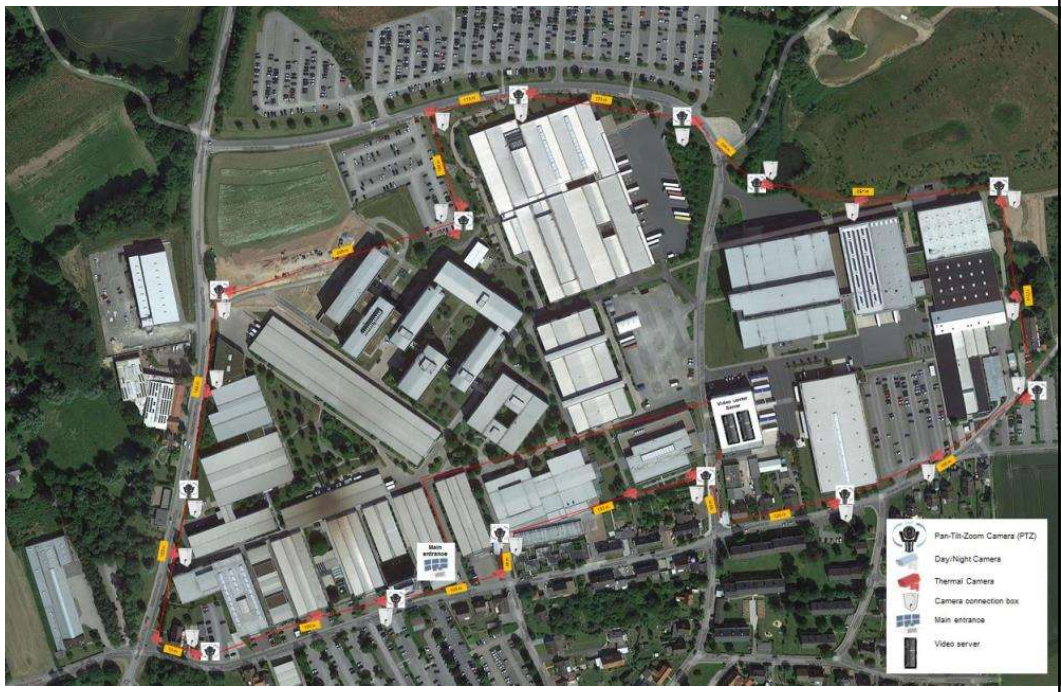
Smart Camera Box

Network structure





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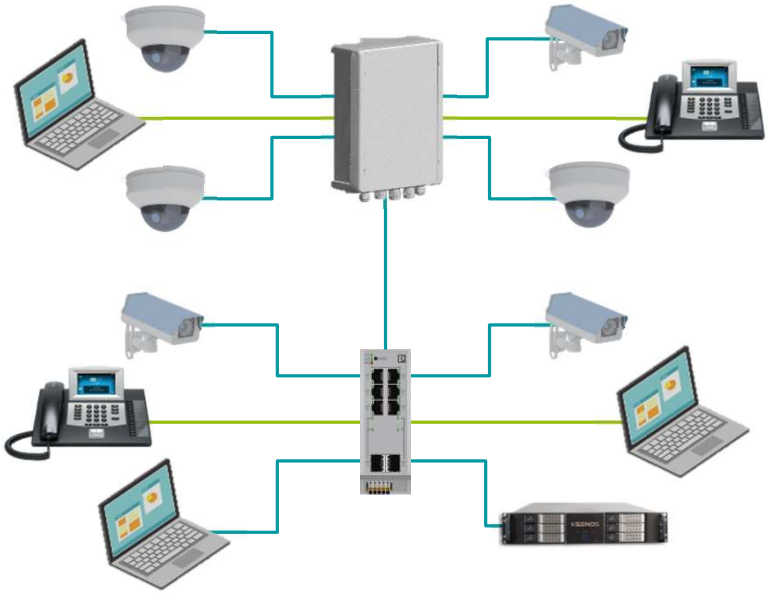
Smart Camera Box

Network structure



Video Security

Office

Combination of both networks

Use of VLAN for

Safety and

Priority setting

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Smart Camera Box
Overview

Integrated splice cassette
for FO cable

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Mounting adapter
for pole and wall

Device switch on/off

Power supply
100 VAC... 240 VAC

Reliable data communication
RSTP, VLAN
Multicast filtering

Temperature range
-40°C ... +70°C

Flexible configuration
web-based management
Configuration software (FL NETWORK MANAGER)
SNMP, CLI
Smart mode button

Overvoltage protection
for 230 V AC supply
Exchangeable and status via
SNMP

Cable entry

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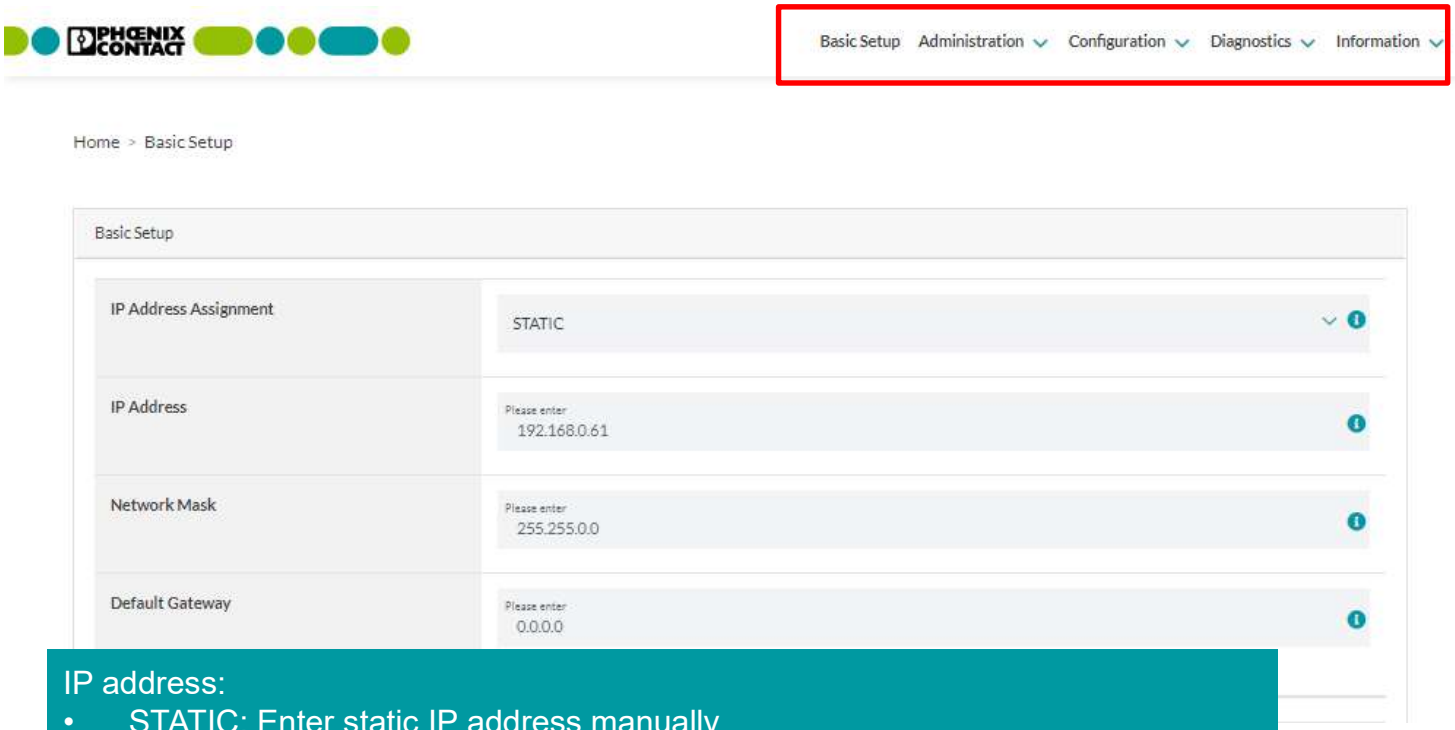
Smart Camera Box

web-based management



IP address:
- STATIC: Enter static IP address manually
- BOOTP: IP address assignment via BootIP
- DHCP: IP address assignment via DHCP, delivery status

Homepage

- basic setup
- Administration
- Configuration
- Diagnosis
- Information

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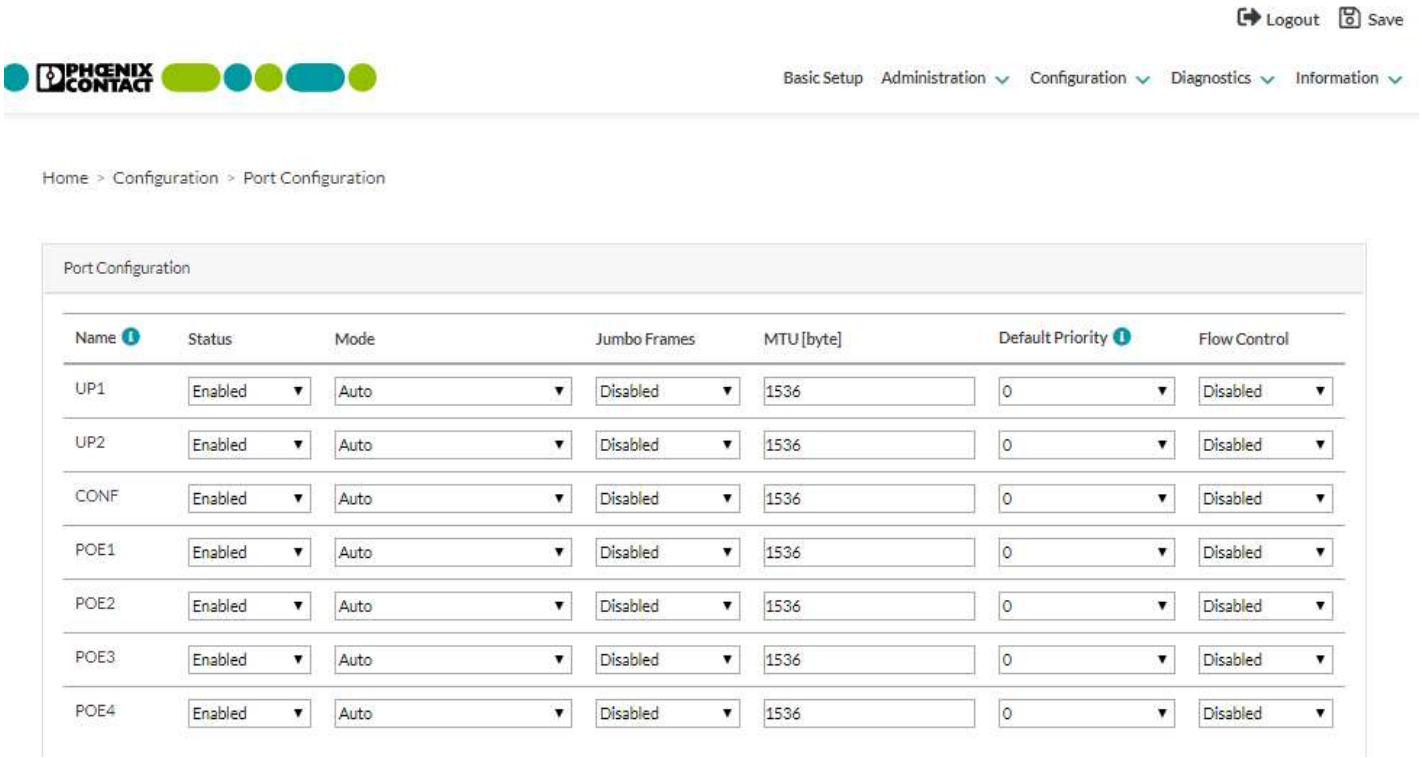
Smart Camera Box

web-based management



Port Configuration

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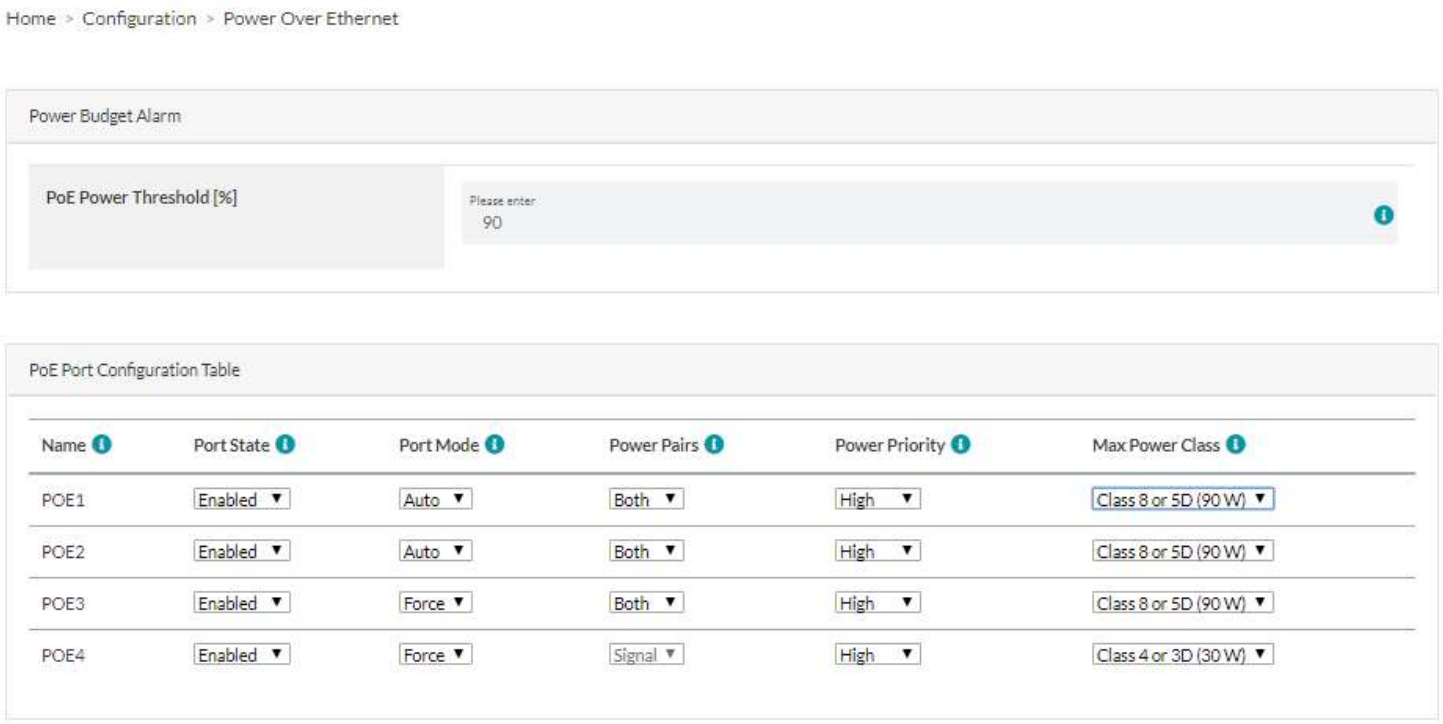
Smart Camera Box

web-based management



Power-over-Ethernet Configuration

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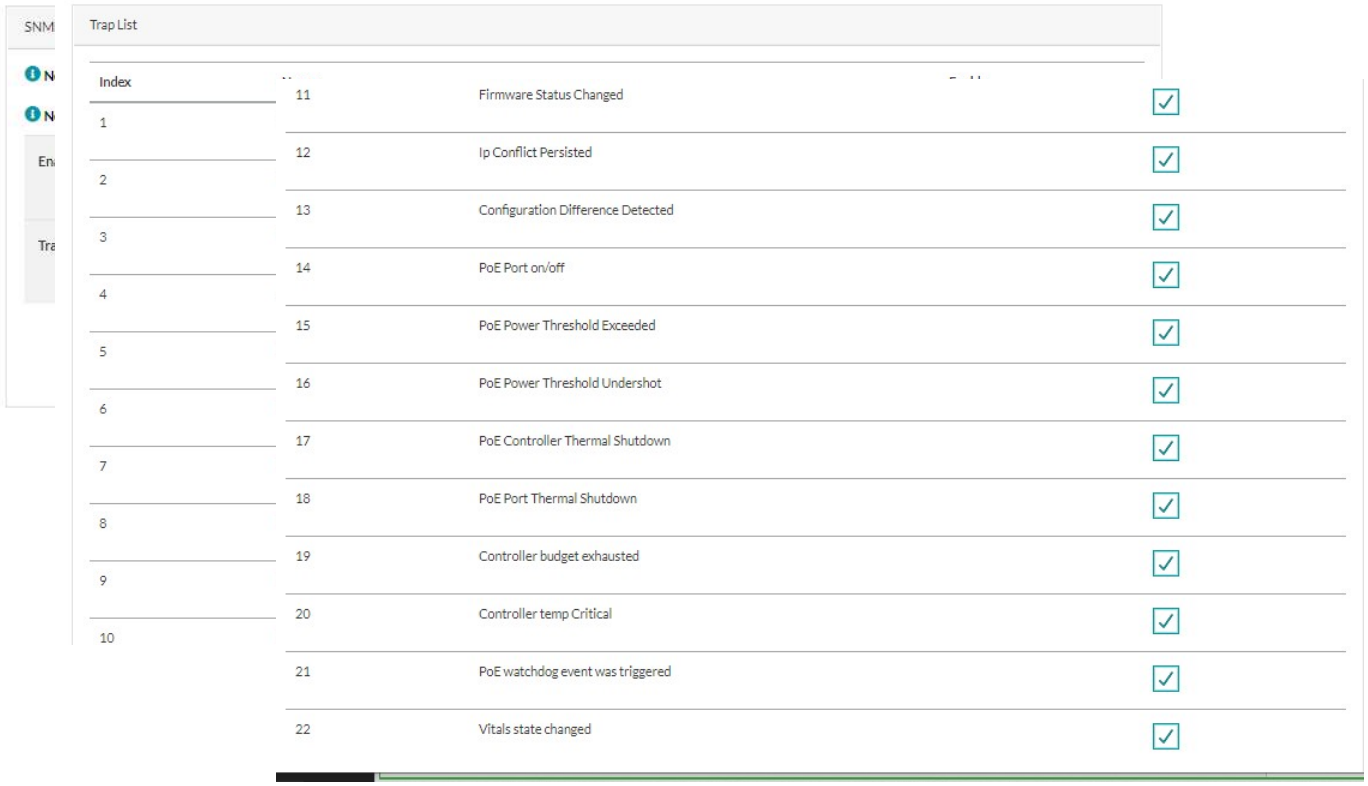
Smart Camera Box

web-based management

Home > Configuration > SNMP



Simple Network Management Protocol

SNMP Traps

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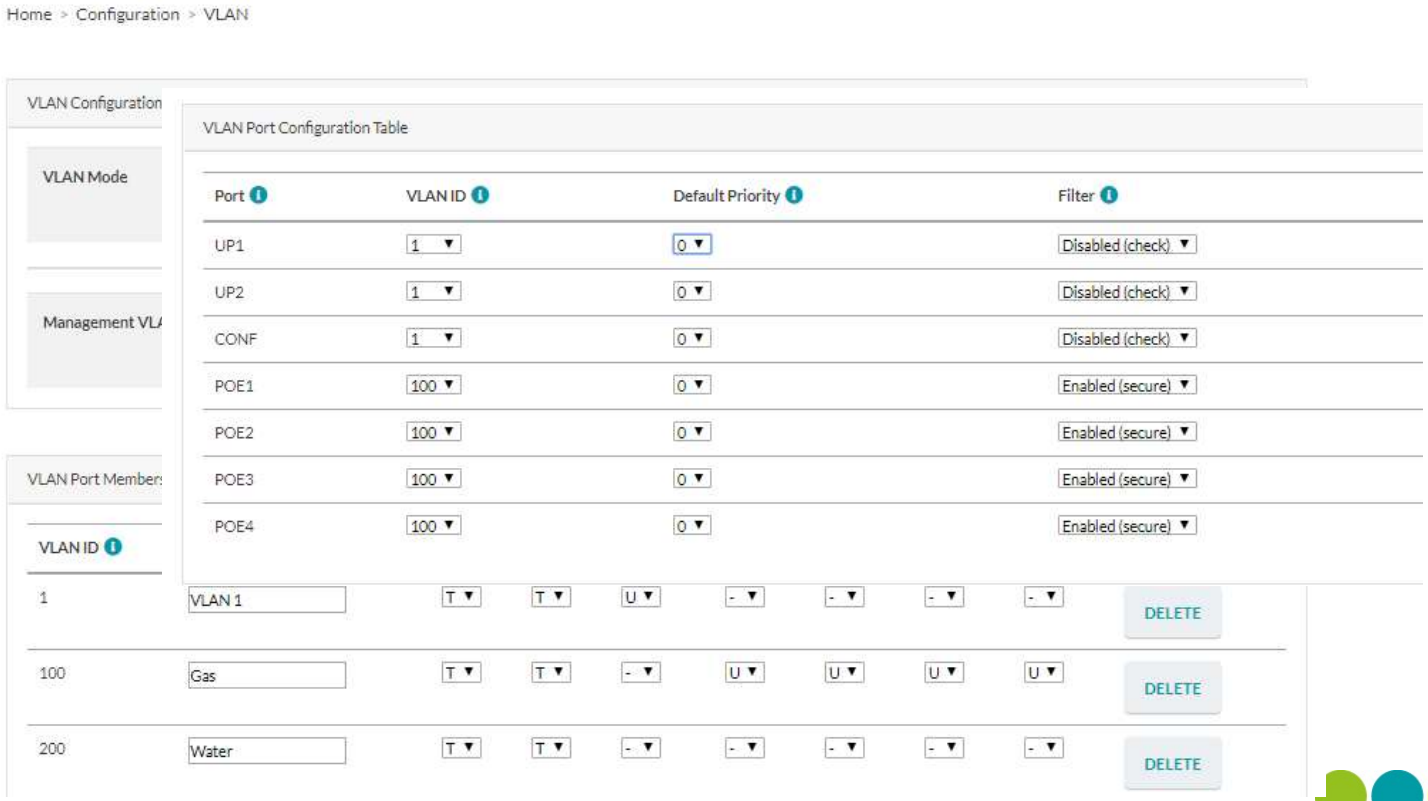
Smart Camera Box

web-based management



VLAN

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Smart Camera Box

web-based management

Home > Configuration > Network Redundancy

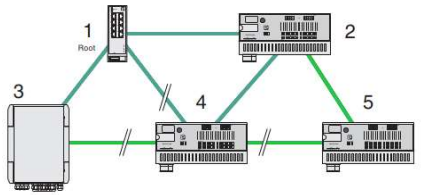
Spanning-Tree Configuration

RSTP Port Configuration Table

Name	RSTP Enable	Admin Path Cost	Auto Edge	Admin Edge	Priority
UP1	Enabled	0	Enabled	Non-Edge	128
UP2	Enabled	0	Enabled	Non-Edge	128
CONF	Enabled	0	Enabled	Non-Edge	128
POE1	Enabled	0	Enabled	Non-Edge	128
POE2	Enabled	0	Enabled	Non-Edge	128
POE3	Enabled	0	Enabled	Non-Edge	128
POE4	Enabled	0	Enabled	Non-Edge	128

15

RSTP
Rapid Spanning
Tree Protocol



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Smart Camera Box

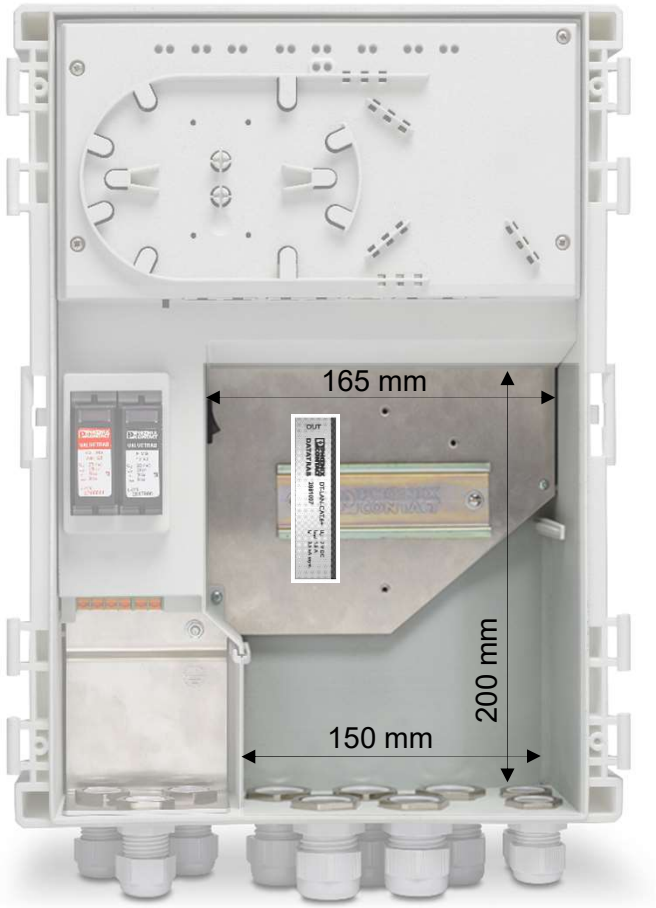
Security - Sabotage Alarm

Integrated sensor

- Detects open and closed doors
- Alarm message via Ethernet (SNMP) as soon as the door is opened

Smart Camera Box

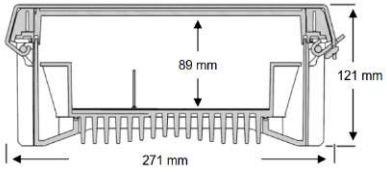
Individual extension

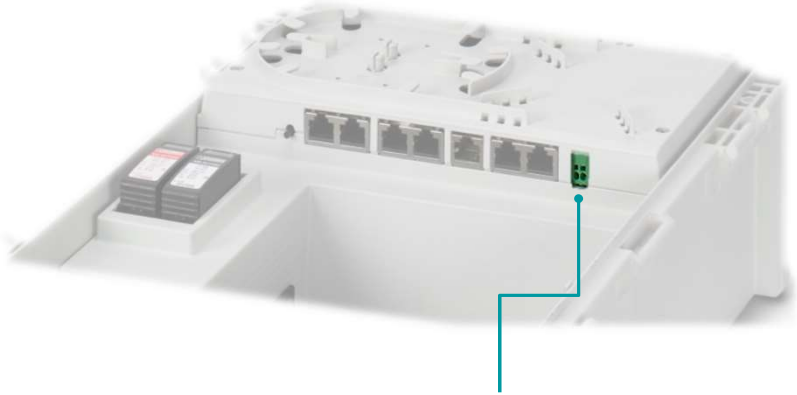


Integrated DIN rail

Allows the use of additional equipment, e.g.

- Overvoltage protection for data cables
- Relay for switching external lights etc.
- 4G router
- WLAN access point





24 V DC output

- Power supply of additional devices
- Switchable via WBM and SNMP

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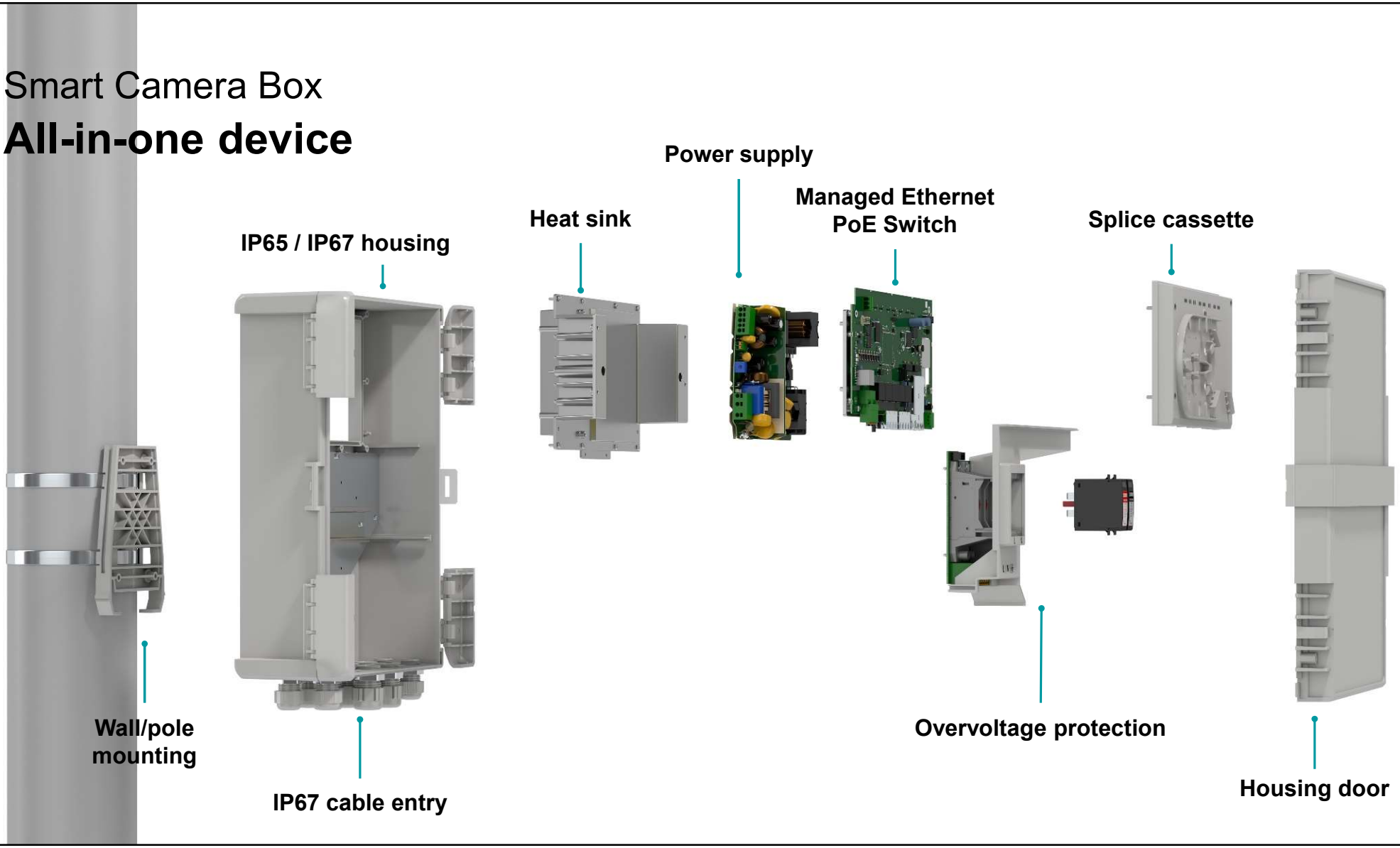
All-in-one device



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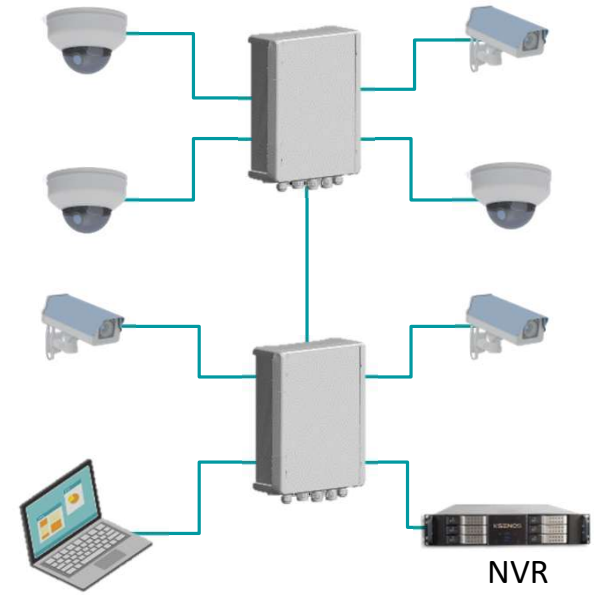
Network structure

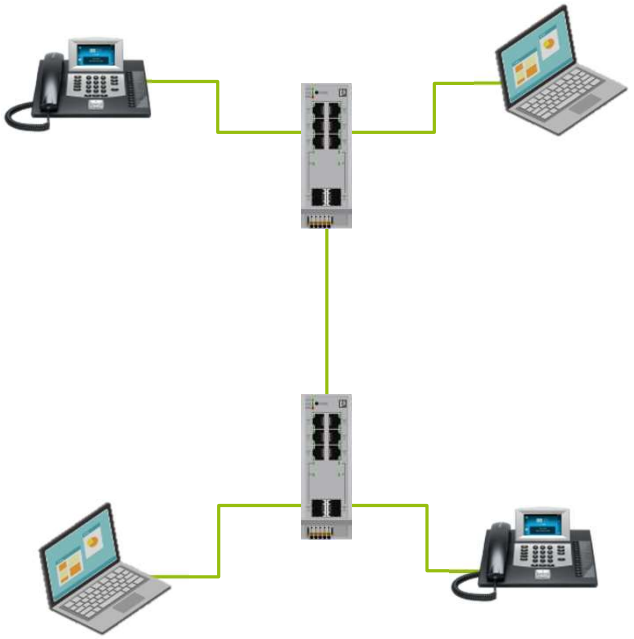
Video Security Network



NVR

Video Operator

Office Network



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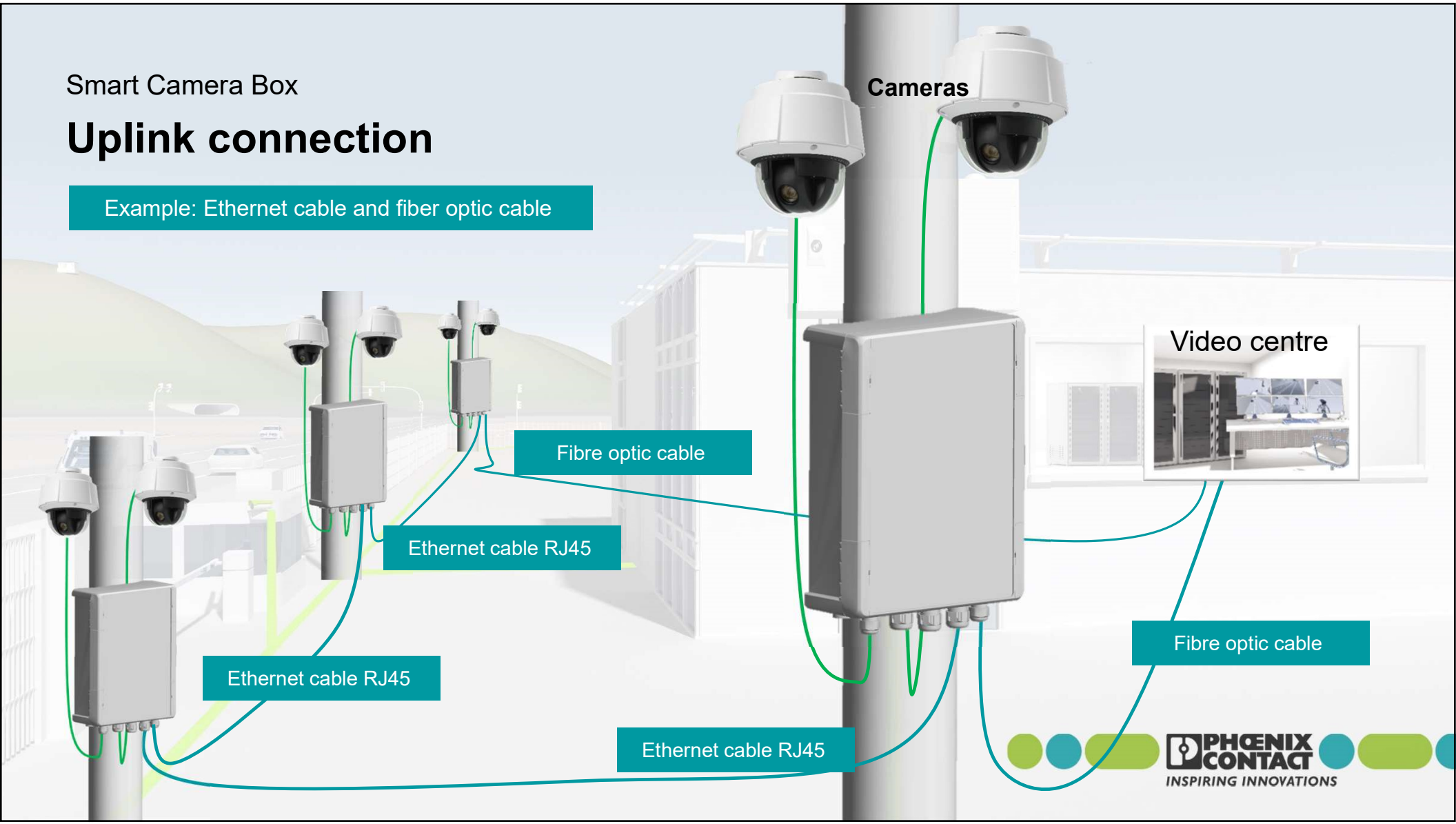
Uplink connection

Example: Ethernet cable and fiber optic cable



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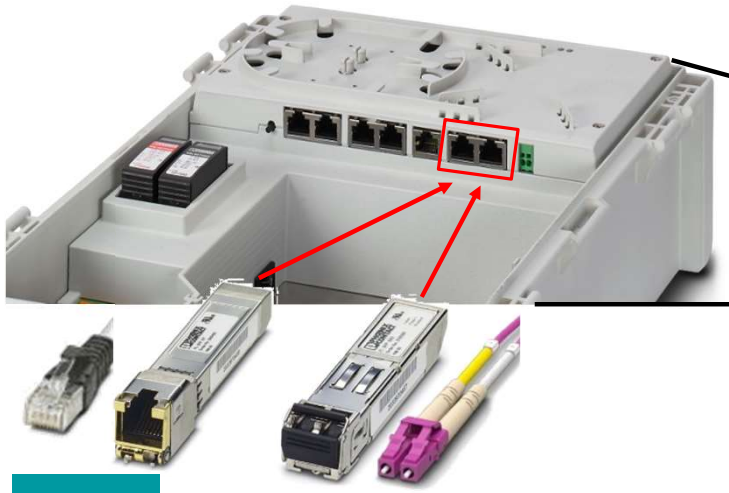
Uplink connection

Example: Ethernet cables and optical fibres



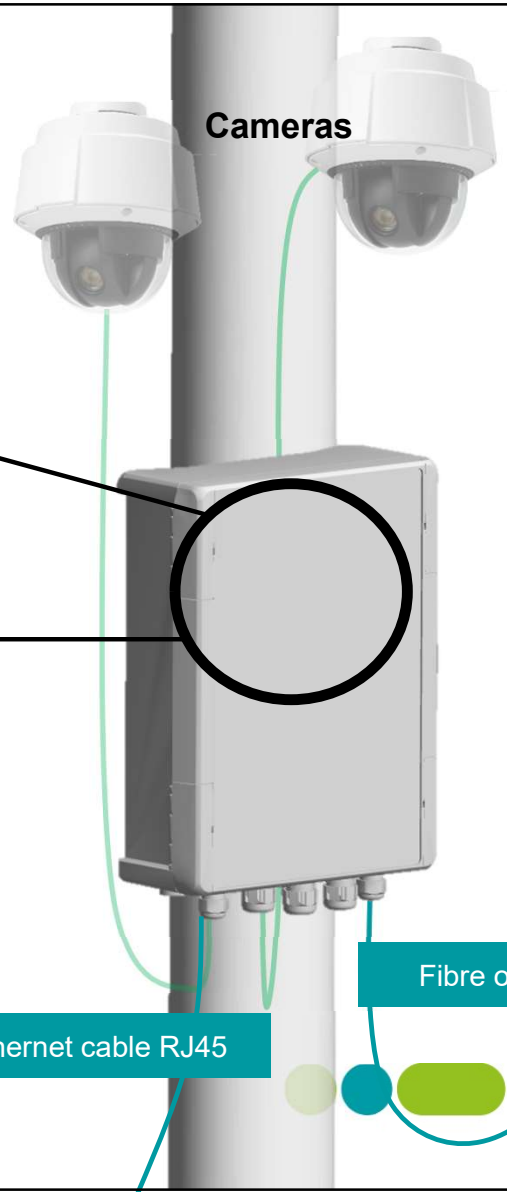
UP1

UP2

SFP Module
FL SFP GT - 2989420
With a data transmission rate of 1000 MBit/s at a maximum transmission length of 100 m.

SFP Module
FL SFP SX2 - 2702397
With a data transmission rate of 1000 MBit/s at a wavelength of 1310 nm and a maximum transmission length of 2 km.

Other SFP modules are available!



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Customer benefits

Quick and easy installation

- ☑ You **only** need to manage **one part number** instead of many devices
- ☑ Saves up to 70% installation time through innovative wall and pole mounting adapter
- ☑ Small and lightweight housing to allow installation by only one person instead of two

Time saving

- ☑ No need to **plan** a complete cabinet with different devices
- ☑ No need to **install** and **wire** different devices in one cabinet

Cost saving

- ☑ The Smart Camera Box is cheaper than standard camera boxes - All-In-One solution

End customer

Video Installer

Wholesaler

System Integrator

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Product portfolio

	SCX 4POE 2LX	SCX 2POE 2LX	SCX 4POE 2T	SCX 2POE 2T
Uplink ports	2 x fibre optic cable	2 x fibre optic cable	2 x Ethernet copper	2 x Ethernet copper
PoE ports	4	2	4	2
Item no.	1102626	1108543	1108542	1108544

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Accessories

Accessories	Type	Order No.	Pcs./Pkt.
Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 230 V AC	VAL-MS 230 ST	2798844	10
Surge protection connector type 2 with series connection consisting of varistor and gas-filled spark gap for VAL-MS base element, thermal monitoring, visual fault warning. Design: 350 V AC	VAL-MS 350 VF ST	2856595	10
Mast clamp with quick mounting connection for installation on masts with a diameter of 51 ... 127 mm	SCX-CLAMP 14X51-127	1175556	2
Mast clamp with quick mounting connection for installation on masts with a diameter of 102 ... 254 mm	SCX-CLAMP 14X102-254	1188634	2
Multi-mode OM4 duplex jumper, LC-LC, UPC polishing, length 5 m	FOC-LC:PA-LC:PA-OM4:D01/5	1115621	1
Single-mode OS2 duplex jumper, LC-LC, UPC polishing, length 5 m	FOC-LC:PA-LC:PA-OS2:D01/5	1115626	1
Locking	SCX-DOOR-LOCK	1184401	1
Gigabit SFP WDM module for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1550/1310 nm.	FL SFP WDM10-B	2702441	1
Gigabit SFP module for transmission up to 2 km with a wavelength of 1310 nm.	FL SFP SX2	2702397	1
Gigabit SFP WDM module for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm.	FL SFP WDM10-A	2702440	1
Gigabit SFP module for transmission up to 10 km with a wavelength of 1310 nm.	FL SFP LX10-B	1025401	1
FL Network Manager, SNMP-based configuration and firmware update software, for easy startup of Managed Switches	FL NETWORK MANAGER BASIC	2702889	1

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Smart Camera Box

Fast Installation
Ready to use

Video SMART CAMERA BOX

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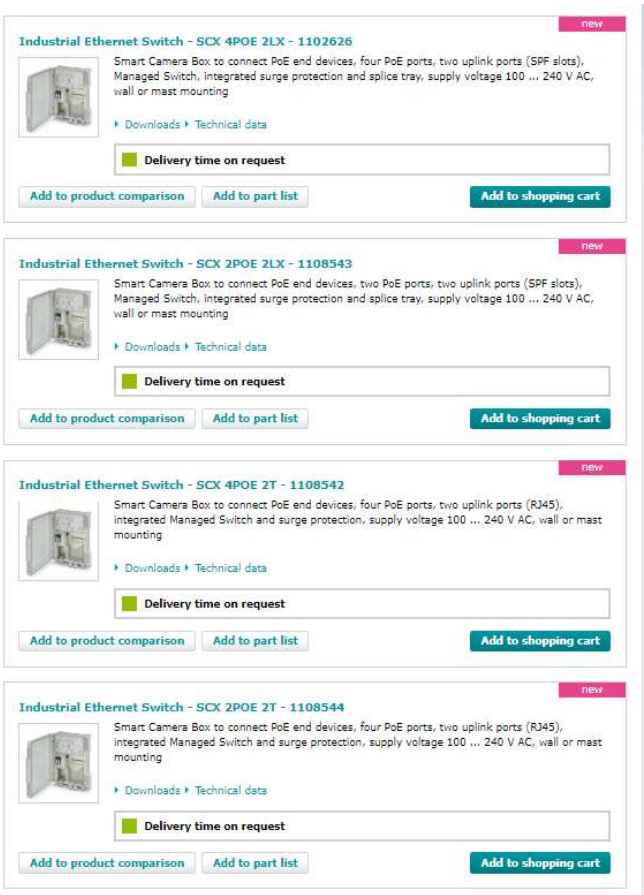
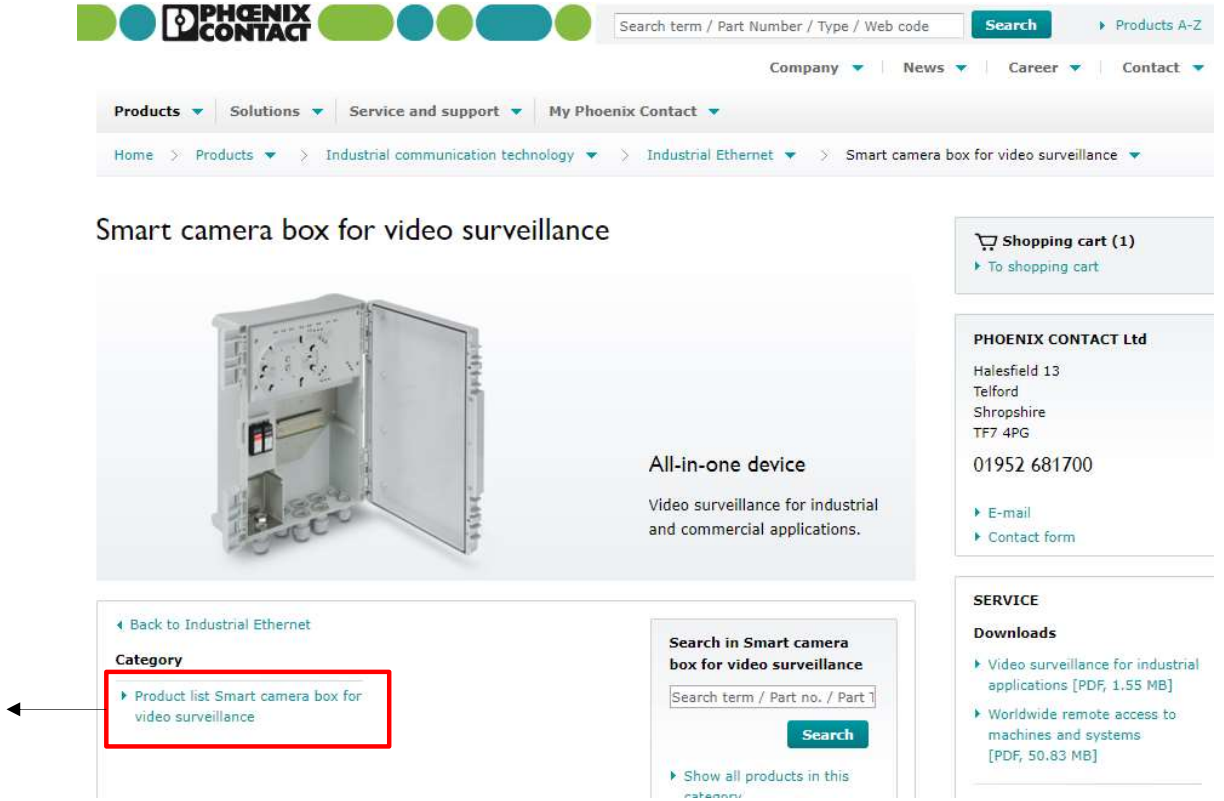
Product page





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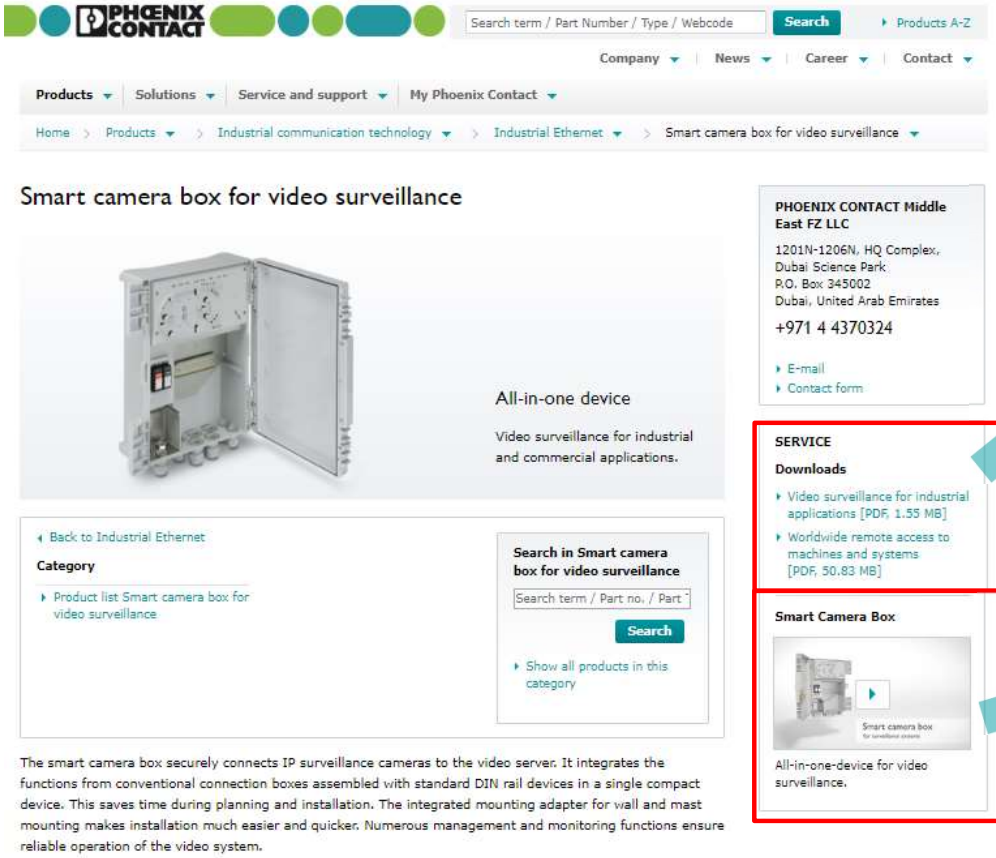
Video surveillance

landing page



New brochure incl. Smart Camera Box

MNR 1128136/2020-01-30/01

Video

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Surveillance Infraestructure

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Video Infraestructure Summary Cabinets

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