

Welcome

Infraestructura en aplicaciones de videovigilancia

Antonio Gordillo IMA Septiembre - Diciembre 2020

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Webinar IMA Octubre 2020

Infraestructura en aplicaciones de videovigilancia





Fecha	**28 Octubre 2020**
Hora	9:00
Hora	16:00
Duración	1 hora
Costo	gratuito

Lograr mayor conocimiento en la oferta de infraestructura Ethernet disponible para aplicaciones de videovigilancia. Descubra como ahorrar tiempo en la producción, instalación, y operación en aplicaciones de videovigilancia con infraestructura PoE y otros tipos de tecnología opcionales.

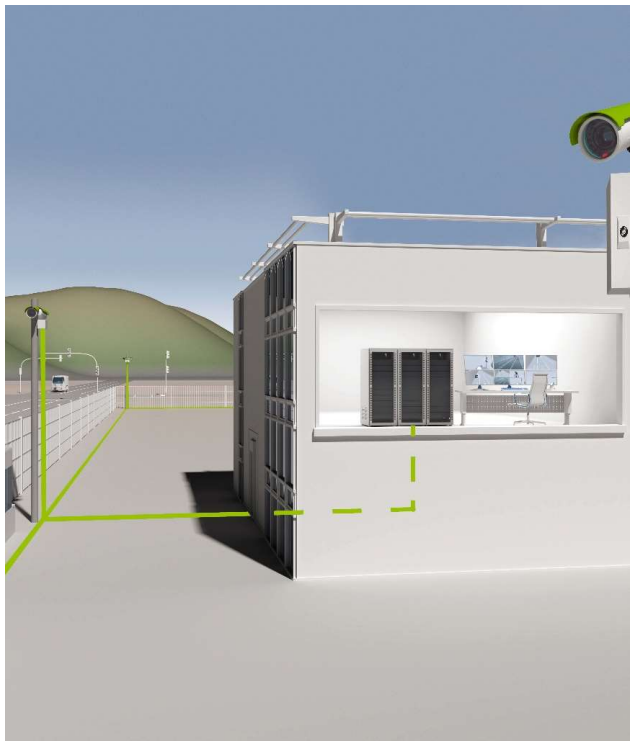
Durante la sesión serán explicados todos los productos PoE que están disponibles así como sus aplicaciones más representativas. Un nuevo producto denominado Smart Camera Box será presentado como una gran alternativa en las aplicaciones de videovigilancia moderna para utilización más práctica en la instalación y operación de cajas de infraestructura ya listas para cámaras normales y PoE en sistemas de videovigilancia.

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Webinars

Agenda

- Overview
- PoE
- Smart Camera Box
- Applications



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Surveillance Infraestructure

Phoenix Contact

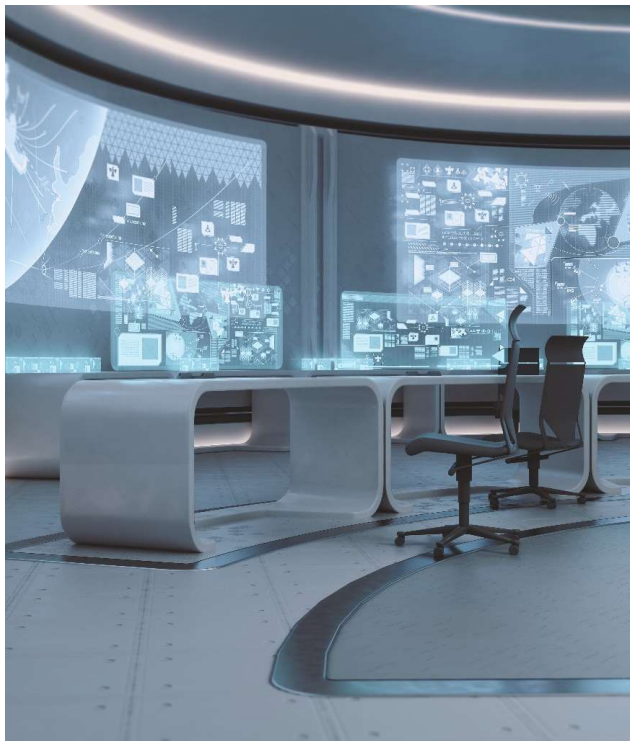
Video Surveillance

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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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PoE – Power over Ethernet

Agenda

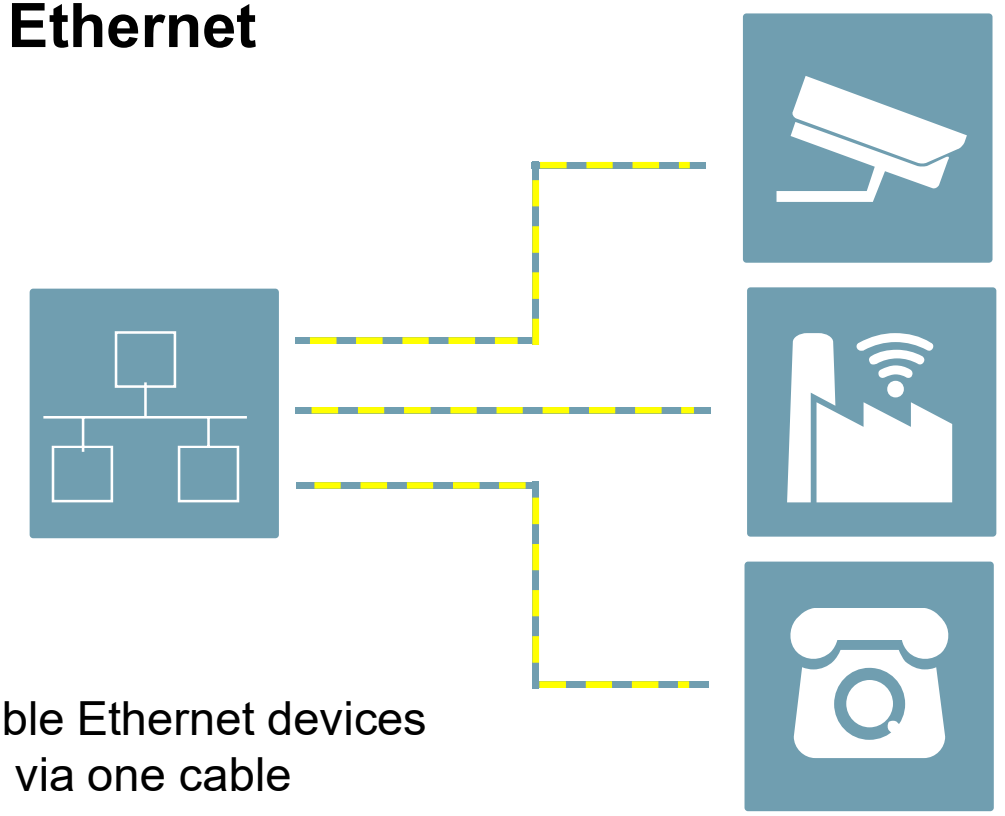
- What does **PoE** mean
- Basics
- Standards and performance classes
- Transmission modes
- Detection and classification
- Product portfolio
- IEEE 802.3 bt - the new standard
- PoE power
- Galvanic isolation
- Surge protection
- Shield current detection
- Connection of the PoE cable



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What does PoE mean

PoE - Power over Ethernet



LAN –
local Ethernet network

Video surveillance

WLAN access points

IP telephony

→ Supply of PoE capable Ethernet devices with power and data via one cable

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Infraestructure Surveillance

Phoenix Contact

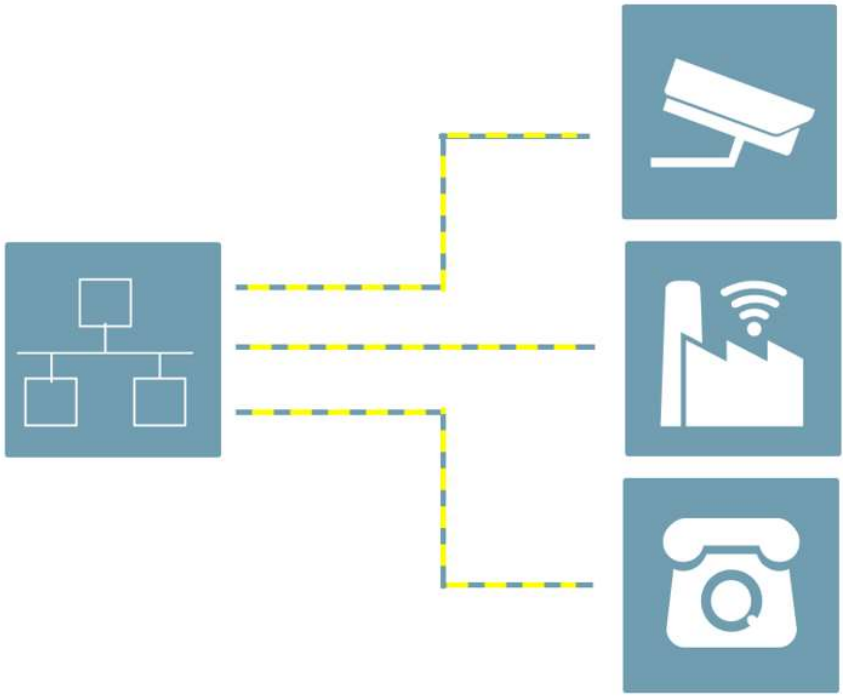


PoE Installation PoE Cameras

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What does PoE mean

Advantages



Significant cost savings

- Less cabling
- No separate power supply units for the devices to be supplied
- Easier and faster installation

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PoE – Power over Ethernet

Agenda

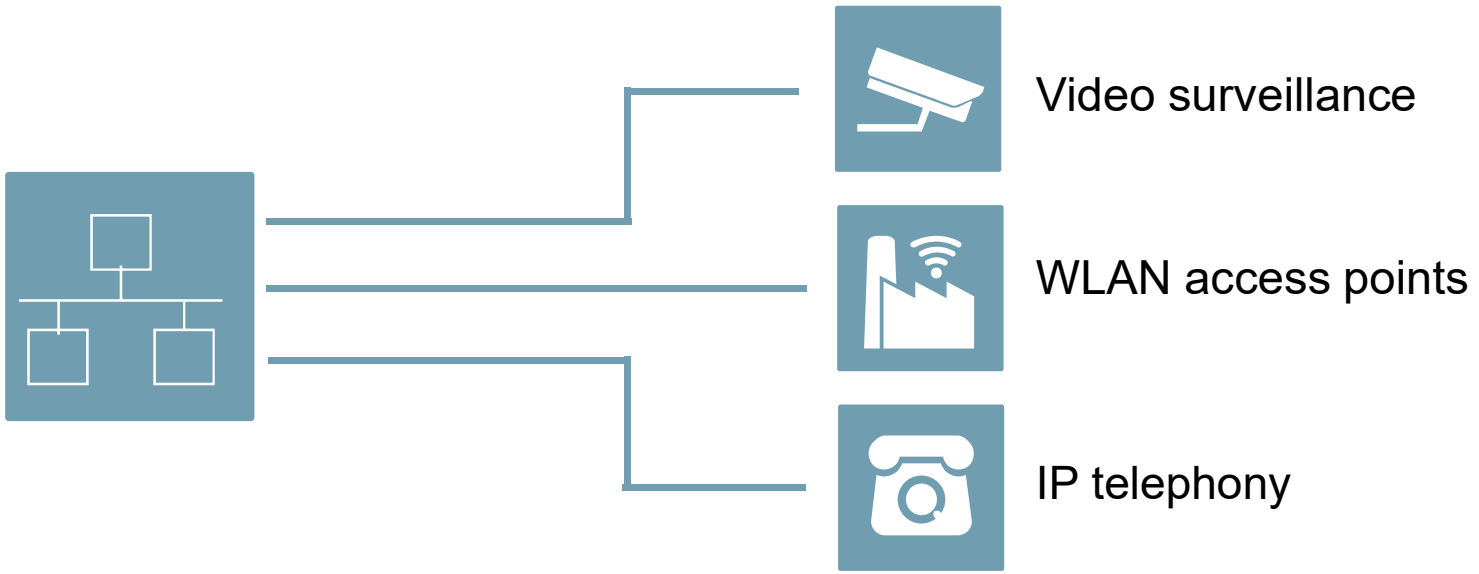
- What does **PoE** mean
- Basics
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- Product portfolio
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Basics

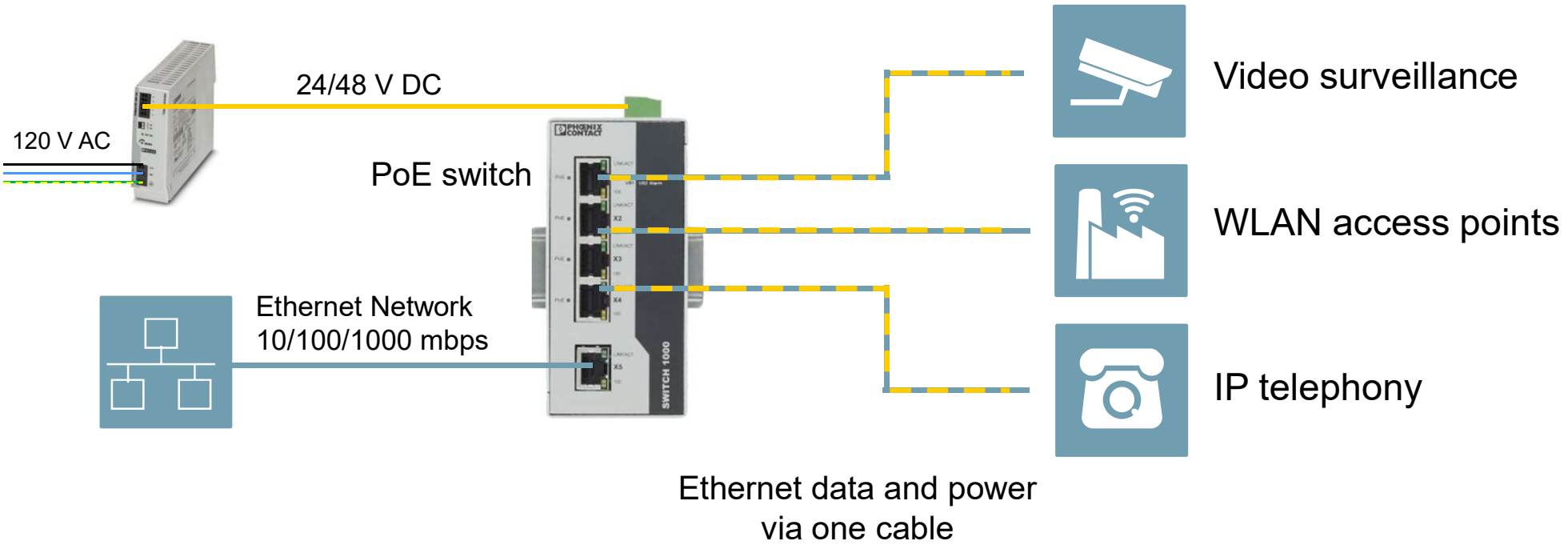
Terminology



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Basics

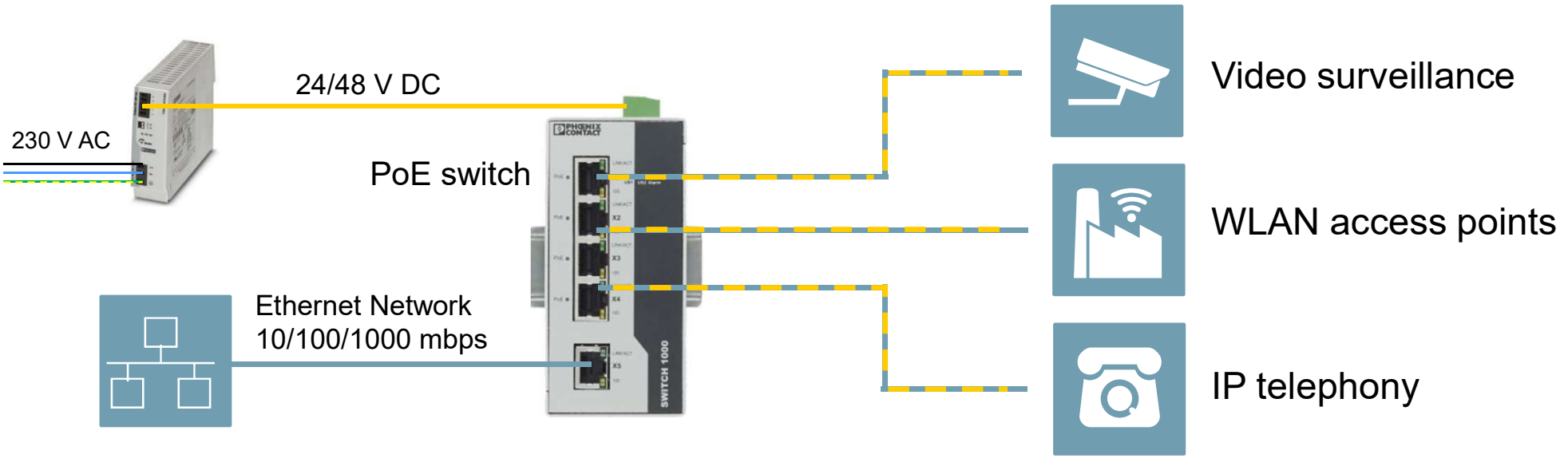
Terminology



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Basics

Terminology



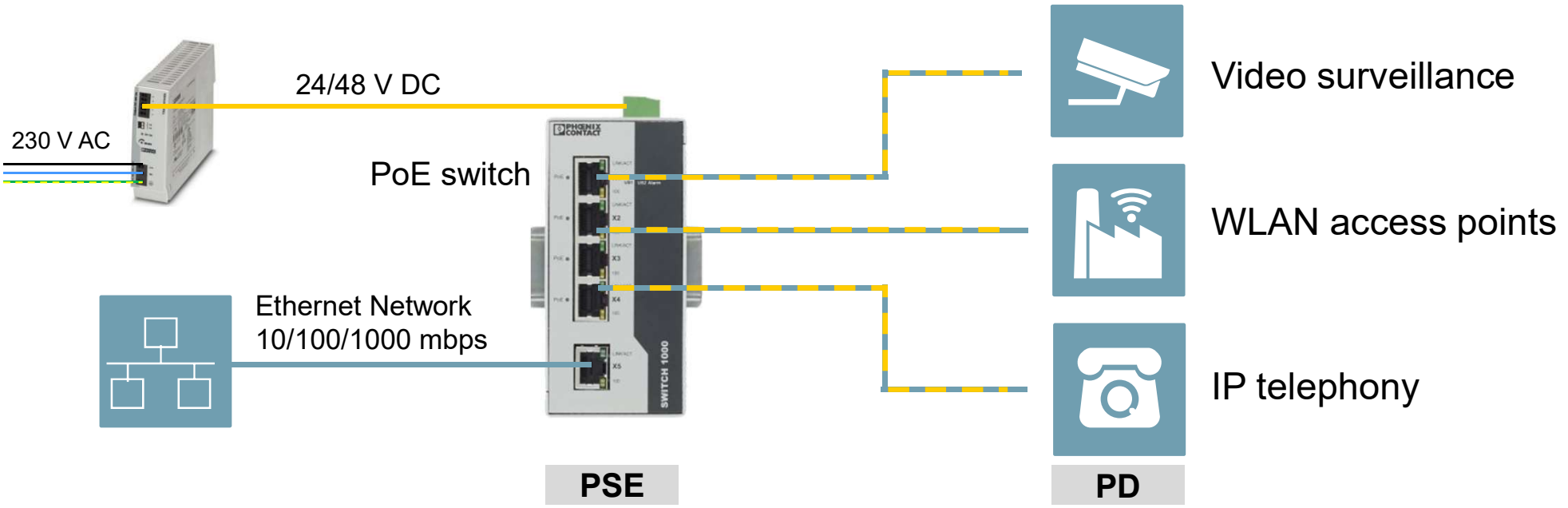
PSE
(Power Sourcing Equipment)
- Energy supplier -

PD
(Powered Device)
- Energy consumer -

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Basics

Terminology



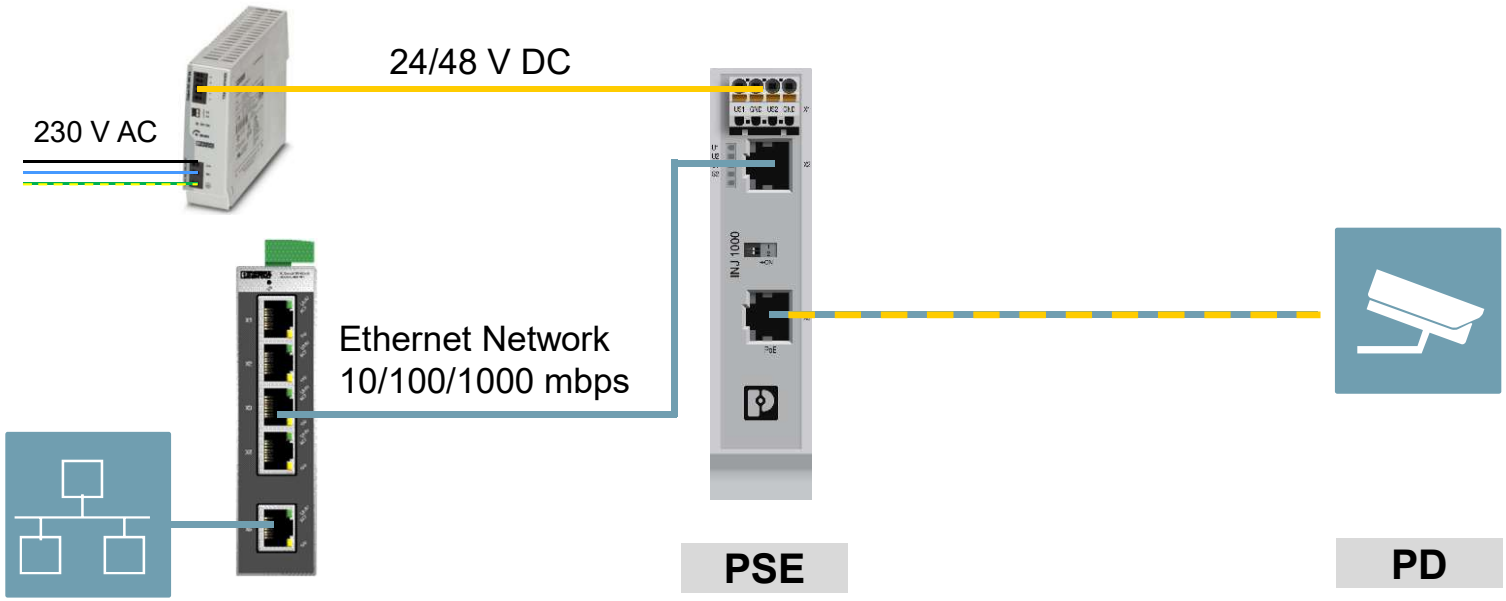
PoE Switch:
"Endspan" device

→ Active power supply

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Basics

Terminology



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Standards and performance classes

IEEE Standard for PoE → 3 Standards - Overview

PoE	Standard	max. power from PSE	max. power at PD
PoE	IEEE 802.3 **af** - 2003	15,4 W	12,95 W
PoE+	IEEE 802.3 **at** - 2009	30 W	25,5 W
PoE++ (4PPoE) [four pair PoE]	IEEE 802.3 **bt** - 2018	90 W	71 W

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Standards and performance classes

IEEE standard for PoE → Types

	Type	Standard	Maximum current	Powered data pairs	max. power from PSE	max. power at PD
PoE	**Type 1**	IEEE 802.3 **af** - 2003	**350 mA**	**2**	15,4 W	12,95 W
PoE+	**Type 2**	IEEE 802.3 **at** - 2009	**600 mA**	**2**	30 W	25,5 W
PoE++ (4PPoE) [four pair PoE]	**Type 3**	IEEE 802.3 **bt** - 2018	**600 mA**	**4**	60 W	51 W
PoE++ (4PPoE) [four pair PoE]	**Type 4**	IEEE 802.3 **bt** - 2018	**960 mA**	**4**	90 W	71 W

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Standards and performance classes

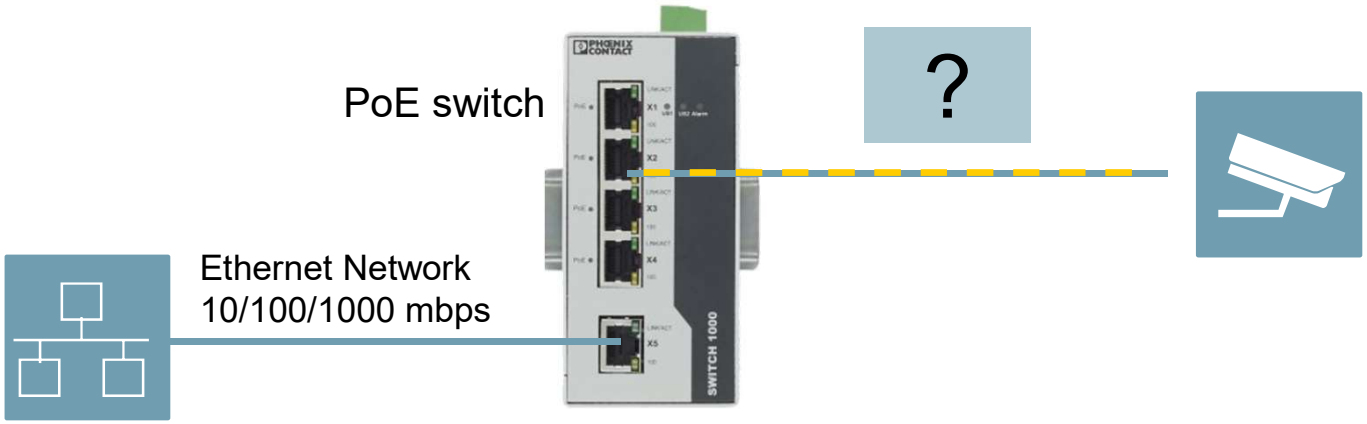
IEEE standard for PoE → Classes

	Type	Standard	Class	Maximum current	Powered data pairs	max. power from PSE	max. power at PD
PoE	Type 1	IEEE 802.3 **af** - 2003	**0** **1** **2** **3**	350 mA 350 mA	2 2 2 2	15,4 W 4,0 W 7,0 W 15,4 W	12,95 W 3,84 W 6,49 W 12,95 W
PoE+	Type 2	IEEE 802.3 **at** - 2009	**4**	600 mA	2	30 W	25,5 W
PoE++ (4PPoE) [four pair PoE]	Type 3	IEEE 802.3 **bt** - 2018	**5** **6**	 600 mA	4 4	45 W 60 W	40 W 51 W
PoE++ (4PPoE) [four pair PoE]	Type 4	IEEE 802.3 **bt** - 2018	**7** **8**	 960 mA	4 4	75 W 90 W	62 W 71 W

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Transmission modes

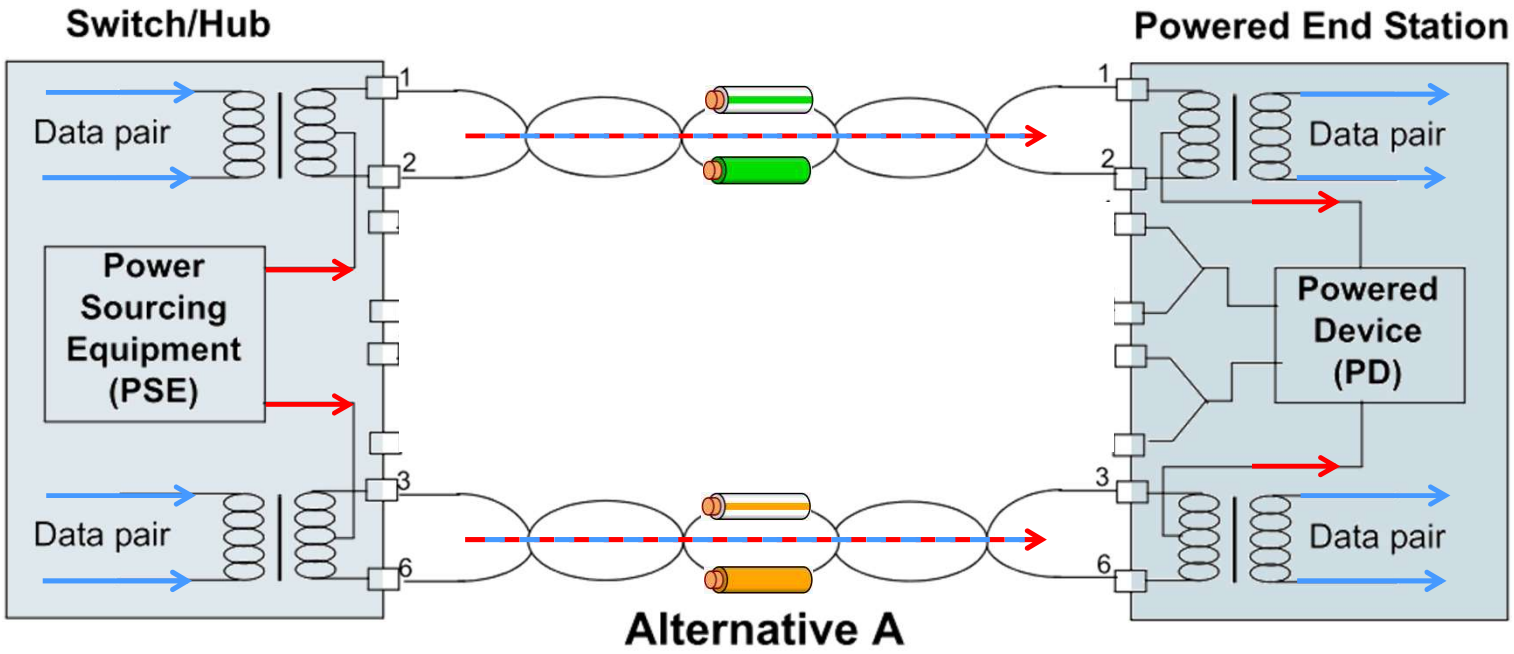
PoE af / at



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Transmission modes

PoE af / at → Mode A - "Phantom Power“



10BASE-T/100BASE-TX Endpoint PSE location overview

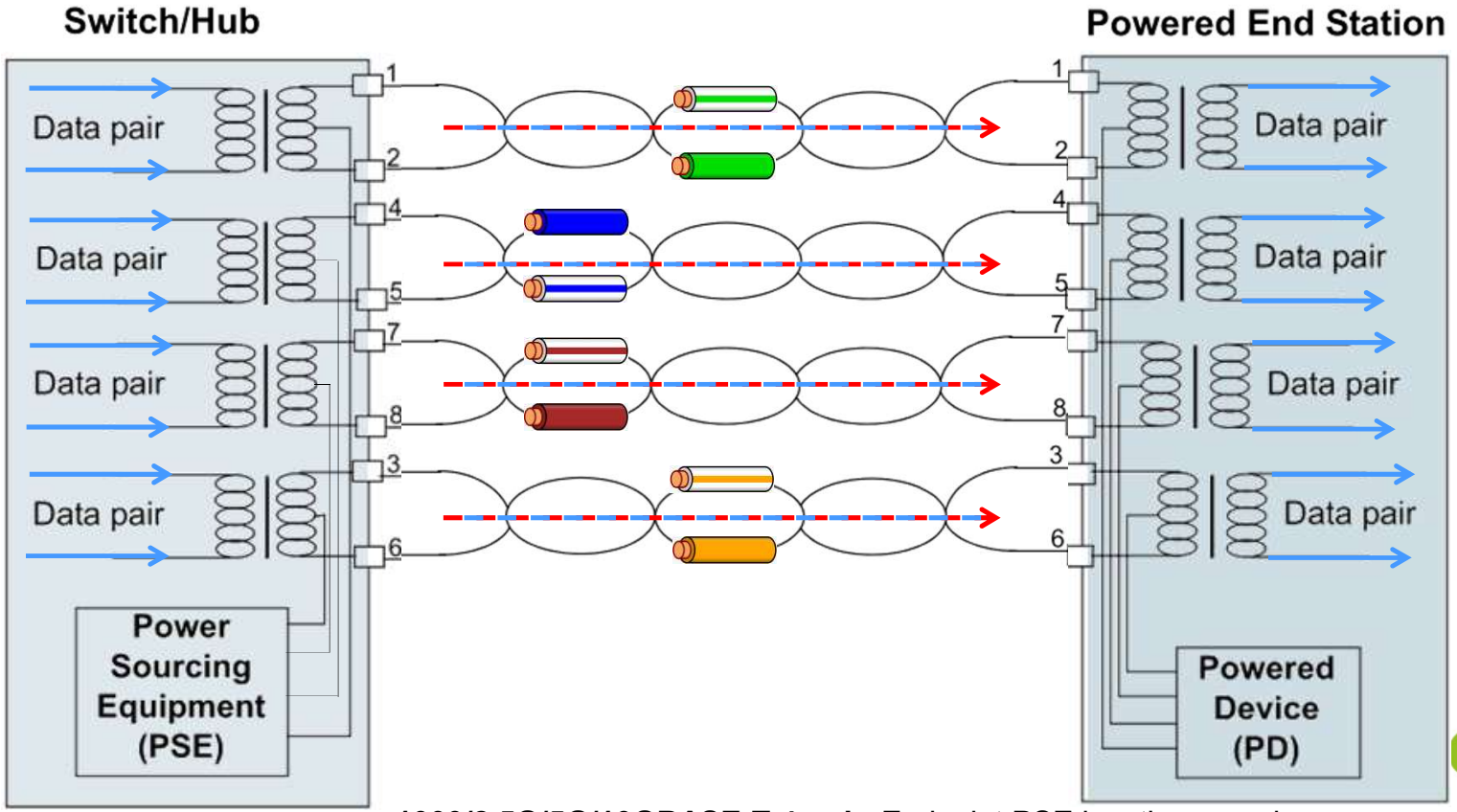
Mode A
Voltage is modulated via the data lines

- **"Phantom power"**
- **2-pair mode**

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Transmission modes

PoE bt → 4 data pair mode



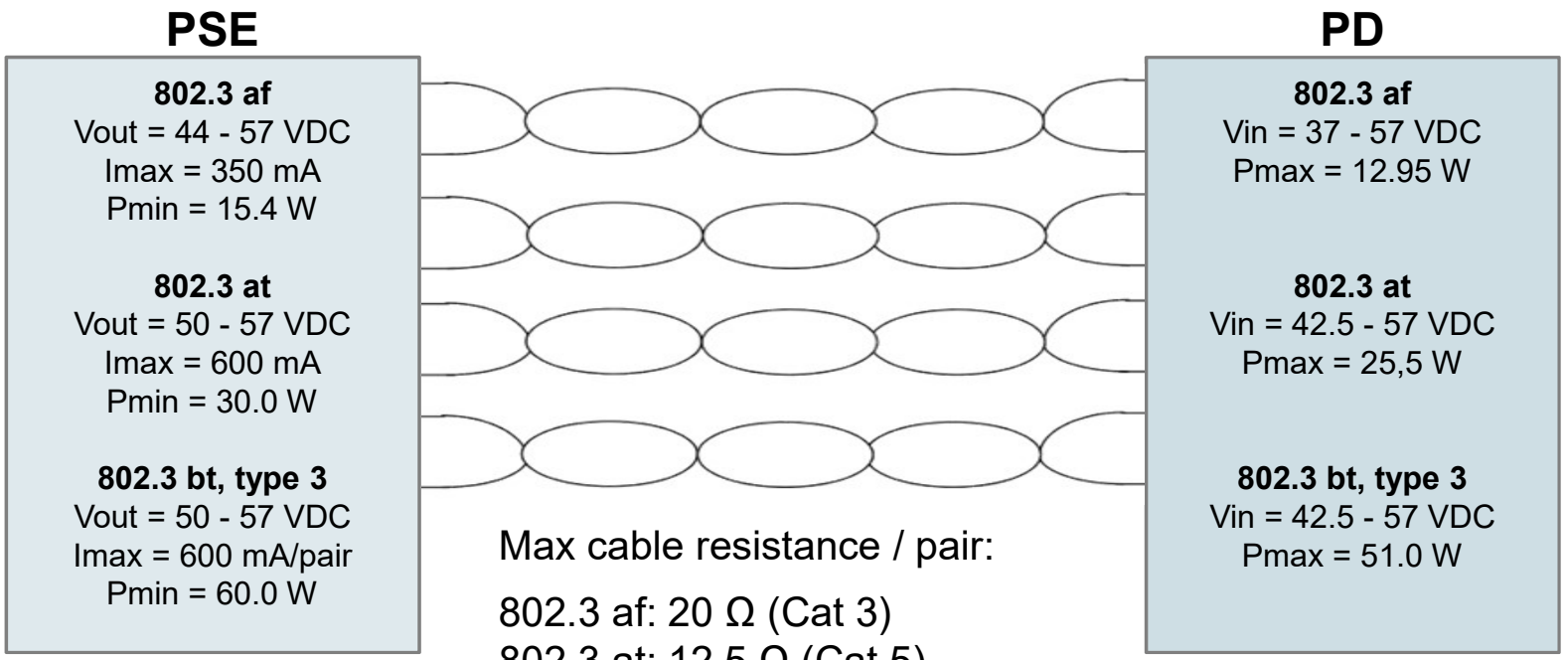
4-pair mode
Power is modulated on all data pairs

1000/2,5G/5G/10GBASE-T 4-pair Endpoint PSE location overview

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Transmission modes

Parameters



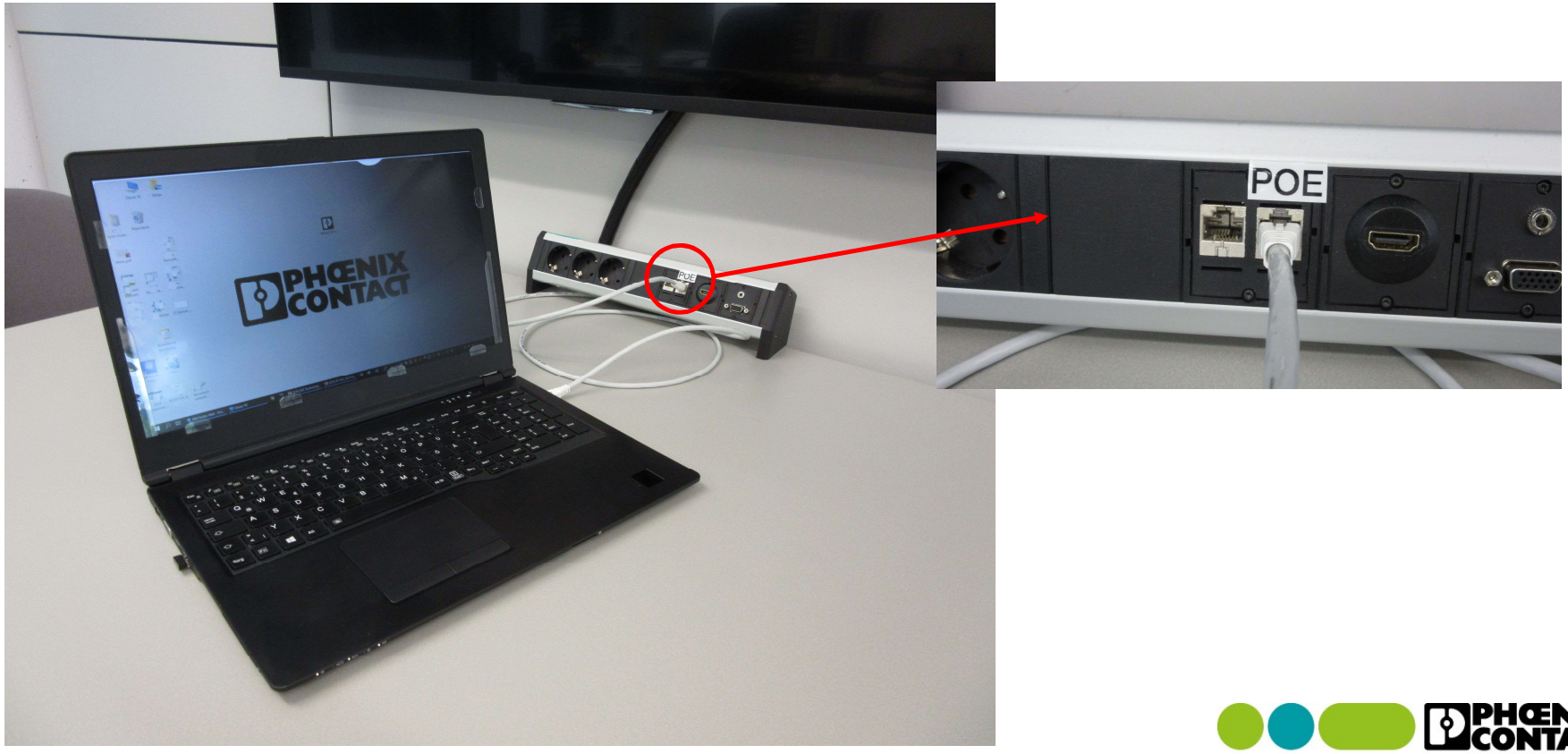
Max cable resistance / pair:

802.3 af: 20 Ω (Cat 3)
802.3 at: 12.5 Ω (Cat 5)
802.3 bt: 12.5 Ω

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Detection and classification

Non-PoE-capable devices at the PoE connection



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Detection and classification

Non-PoE-capable devices at the PoE connection



- No danger of overvoltage damage
- Protective mechanism existing
- Regular intervals for identification the valid signature of a PD
- No identification → No voltage

→ „Resistive Power Directory (Discovery)“

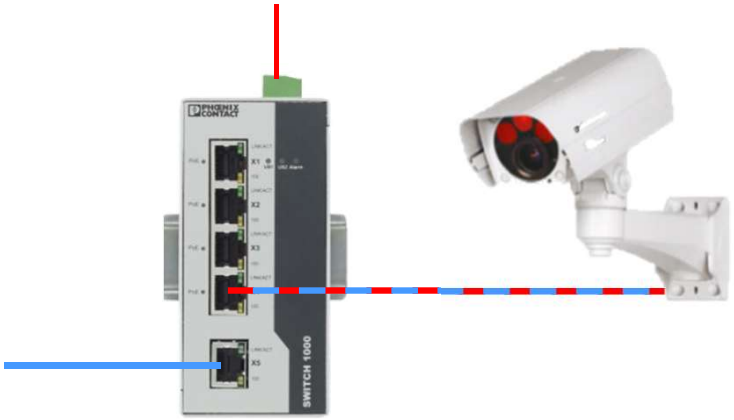
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Detection and classification

PoE detection

→ Resistive power directory

- 1. Detection
  PSE – measurement circuit for the internal resistant and capacity of the connected PD
- If the values are in the range,
  power will be activated
- 2. Classification
  PSE – measurement circuit for the power class



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Detection and classification

PoE Detection and Classification

Stage	Action	Volts specified [V]	
		802.3af	802.3at
Detection	PSE detects if the PD has the correct signature resistance of 19–26.5 kΩ	2.7–10.1	
Classification	PSE detects resistor indicating power range	14.5–20.5	
Mark 1	Signals PSE is 802.3at capable. PD presents a 0.25–4 mA load.	-	7-10
Class 2	PSE outputs classification voltage again to indicate 802.3at capability	-	14,5-20,5
Mark 2	Signals PSE is 802.3at capable. PD presents a 0.25–4 mA load.	-	7-10
Startup	start-up voltage	> 42	> 42
Normal operation	Supply power to device	37-57	42,5-57

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Detection and classification

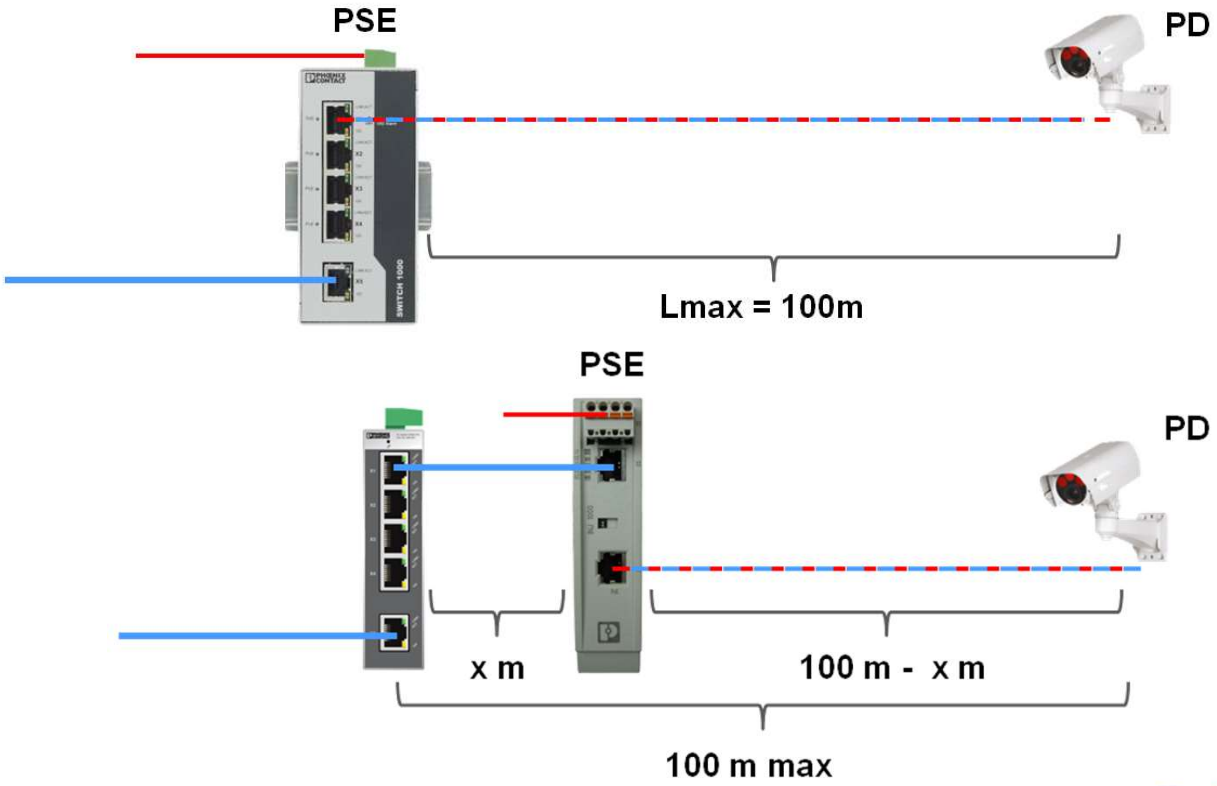
Physical layer classification

Standard	Class	Type	Classification Current	Max. Power by PSE	Max. Power at PD
IEEE 802.3 af	0	default	0 - 4 mA	15,4 W	0,44 - 12,95 W
IEEE 802.3 af	1	optional	9 - 12 mA	4,0 W	0,44 – 3,84 W
IEEE 802.3 af	2	optional	17 - 20 mA	7,0 W	3,84 – 6,49 W
IEEE 802.3 af	3	optional	26 - 30 mA	15,4 W	6,49 – 12,95 W
IEEE 802.3 at	4	optional	36 - 44 mA	30,0 W	12,95 – 25,50 W

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Detection and classification

maximum distance



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Product Portfolio

Phoenix Contact PoE Portfolio











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Product Portfolio

From the Injector to the Splitter



Injectors



Unmanaged Switches



Managed Switches



Splitter



Smart Camera Box

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Product Portfolio

PoE- Injector or switch



Injector

- Plug and play one port
- Hi Power (60W)
- Price advantage by one port
- Patch Panel technology
- Surge protection
- Shield current diagnostics
- galvanic isolation

Unmanaged Switch

- Plug and play several ports
- SFP fiber ports
- Remote monitoring of connected PDs

Managed Switch

- Managed features like redundancy, monitoring, configuration, security
- SFP fiber ports
- Hi Power (60W)
- Prioritize PDs
- Remote control of PDs
- PoE Watchdog
- Force power to non-compliant PDs

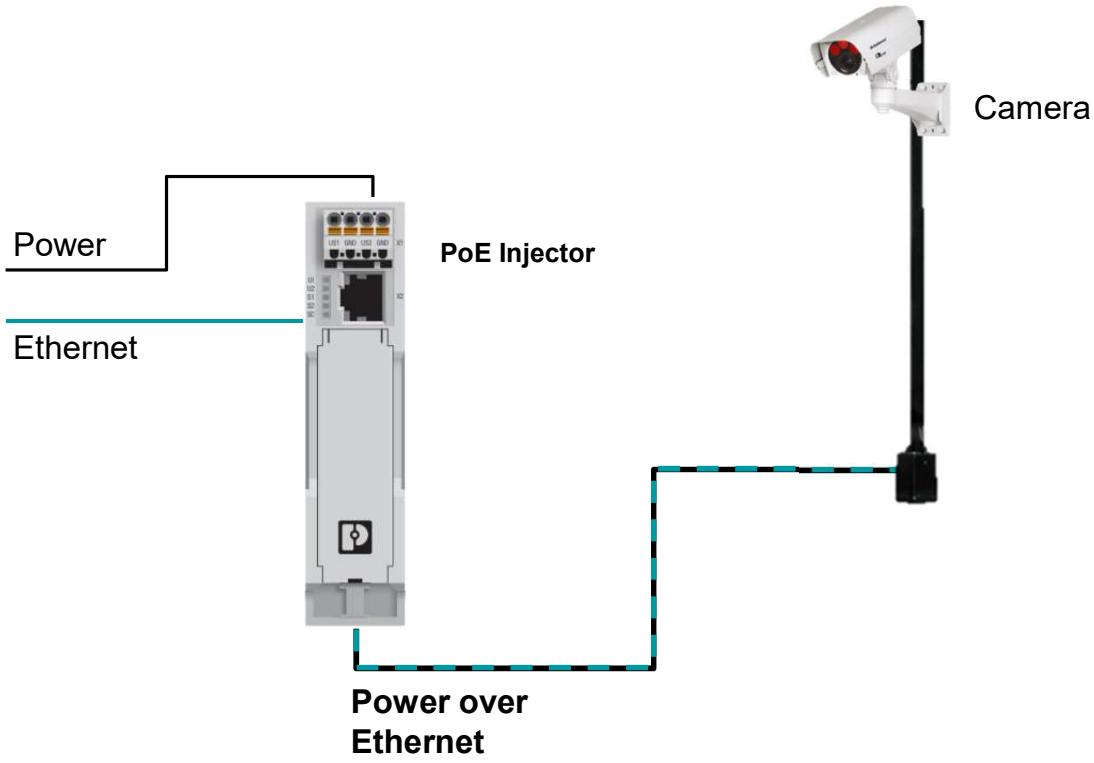
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Product Portfolio

PoE Injectors

Injector

- Plug and play one port
- Hi Power (60W)
- Price advantage by one port
- Patch Panel technology
- Surge protection
- Shield current diagnostics
- galvanic isolation



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Product Portfolio

PoE Injectors

Surge protection

shield current monitoring on the PoE cable side.
An LED indicates differences in potential or other shield currents caused by the effects of EMC



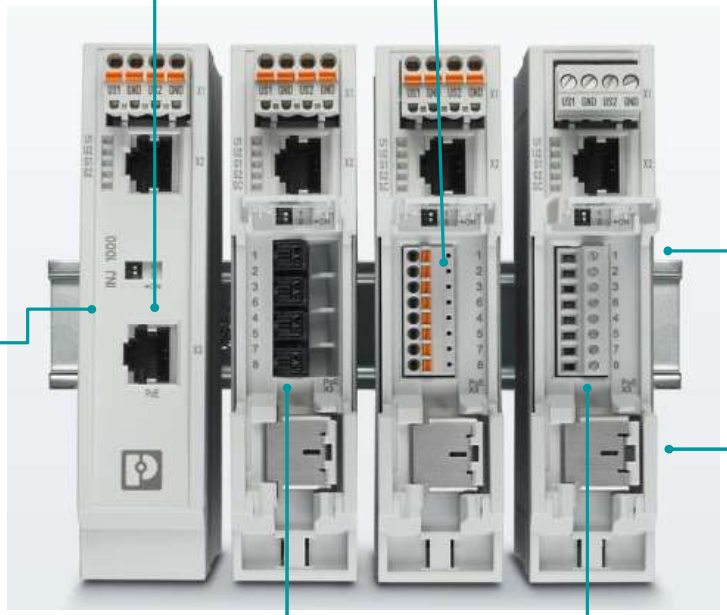
Different performance standards, temperature range and power classes

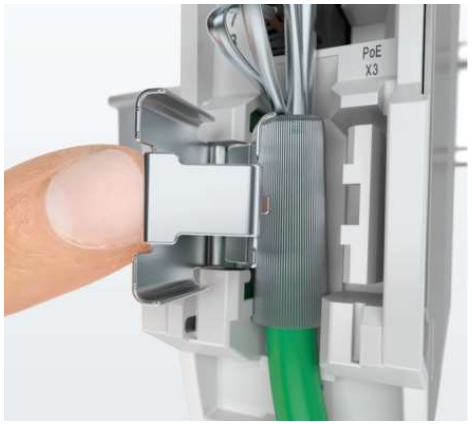
Electrical isolation,
→ Power supply and PoE port are electrically isolated

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Product Portfolio

PoE Injectors





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Product Portfolio

PoE Injectors

Webcode: #1789						
Description	**PoE Injector INJ 1000**			**PoE Injector INJ 2000**		
Interfaces	RJ45 / RJ45	RJ45 / RJ45	RJ45 / RJ45	RJ45 / IDC	RJ45 / Push-in	RJ45 / Screw
Temperature range	0 °C ... +60 °C	-40 °C ... +75 °C	-40 °C ... +75 °C	-40 °C ... +75 °C	-40 °C ... +75 °C	-40 °C ... +75 °C
Galvanic isolation	No		Yes			
Surge protect., shield cur.	No			Yes		
Typ Art.-Nr. PoE at/af, 15/30W	INJ 1000 2703005	INJ 1000-T 2703006	INJ 1100-T 2703009	INJ 2102-T 2703012	INJ 2103-T 1004065	INJ 2101-T 2703011
Typ Art.-Nr. PoE++ 60W	INJ 1010 2703007	INJ 1010-T 2703008	INJ 1110-T 2703010	INJ 2112-T 2703014	INJ 2113-T 1004066	INJ 2111-T 2703013



PoE-Injector with
2 Port PoE
10/100 mbps, 2x15W

FL IF 2PSE
2-Port-PoE-Injector,
Extension module for
FL SWITCH GHS
10/100 mbps, 2x15W

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Product Portfolio

Unmanaged PoE-Switches





	FL SWITCH 1708 M12 POE	FL SWITCH 1001-4POE
Ports	8 POE+	4 POE+
Temperature Range	-40 … +70°C	-40 … +75°C
Power supply	24 V DC (18-30 VDC)	18-57 VDC
Protection	IP 67	IP 20
Max Power Data Rate	200 W / 30W max/Port 10/100/1000 mbps	120 W / 30W per Port 10/100 mbps

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Product Portfolio

1000 Series Unmanaged PoE Switch

* USP

1000 Series Unmanaged				
Description	FL SWITCH 1000T-2POE-GT-2SFP	FL SWITCH 1001T-4POE-GT	FL SWITCH 1001T-4POE-GT-SFP	FL SWITCH 1000T-8POE-GT-2SFP
Article	1026765	1026937	1026932	1026929
Ports	2 RJ45 POE x 2 SFP	5 RJ45 (4 POE)	5 RJ45 (4 POE) x 1 SFP	8 RJ45 POE x 2 SFP
Speed	10/100/1000 Mbit/s *	10/100/1000 Mbit/s *	10/100/1000 Mbit/s *	10/100/1000 Mbit/s *
Power Port/Module	30 Watt / 60 Watt	30 Watt / 120 Watt	30 Watt / 120 Watt	30 Watt / 120 Watt
Input Voltage	52 – 57 VDC	18 - 57 VDC *	18 - 57 VDC *	18 - 57 VDC *
Dimensions	42.8 x 100 x 100 *	30 x 149 x 108	30 x 149 x 108	64 x 145 x 136

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Surveillance Infraestructure

PoE portfolio



Video PoE products

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Product Portfolio

4000 Series Managed PoE Switch

* USP

4000 Series Managed			
Description	FL SWITCH 4000T-SFP	FL SWITCH 4000T-8POE-2SFP	FL SWITCH 4004T-8POE-4SFP
Article	1026924	1026923	1026922
Ports	4 RJ45 POE, 1 SFP	8 RJ45 POE, 2 SFP	12 RJ45 (8 POE), 4 SFP
Speed	10/100 Mbit/s RJ45 1000 Mbit/s SFP	10/100 Mbit/s RJ45 1000 Mbit/s SFP	10/100/1000 Mbit/s*
Power Port/Module	60 Watt / 180 Watt*	60 Watt / 180 Watt*	60 Watt / 240 Watt*
Input Voltage	52 – 57 VDC	52 – 57 VDC	52 – 57 VDC
Dimensions	75 x 170 x 152	75 x 170 x 152	68 x 170 x 152 *

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Product Portfolio

4000 Series Managed PoE Switch

* USP

4000 Series Managed			
Description	FL SWITCH 4000T-SFP	FL SWITCH 4000T-8POE-2SFP	FL SWITCH 4004T-8POE-4SFP
Article	1026924	1026923	1026922
Ports	4 RJ45 POE, 1 SFP	8 RJ45 POE, 2 SFP	12 RJ45 (8 POE), 4 SFP

- Power management for each port
- PoE Watchdog
- Diagnostics and alert
- Auto/Forced Modes
- Power Priority
- Power Down Alarm
- Time management to save energy costs

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Product Portfolio

4000 Series Managed Features



Introducing 3 New Managed Features

- PoE Configuration
  - Allows configuration of all PoE functions, by port
- PoE Scheduling
  - Allows PoE power to be scheduled by hour of day and day of week
- PoE Watchdog
  - Allows connected PDs to be monitored, and automatically rebooted or powered off in the event of a failure

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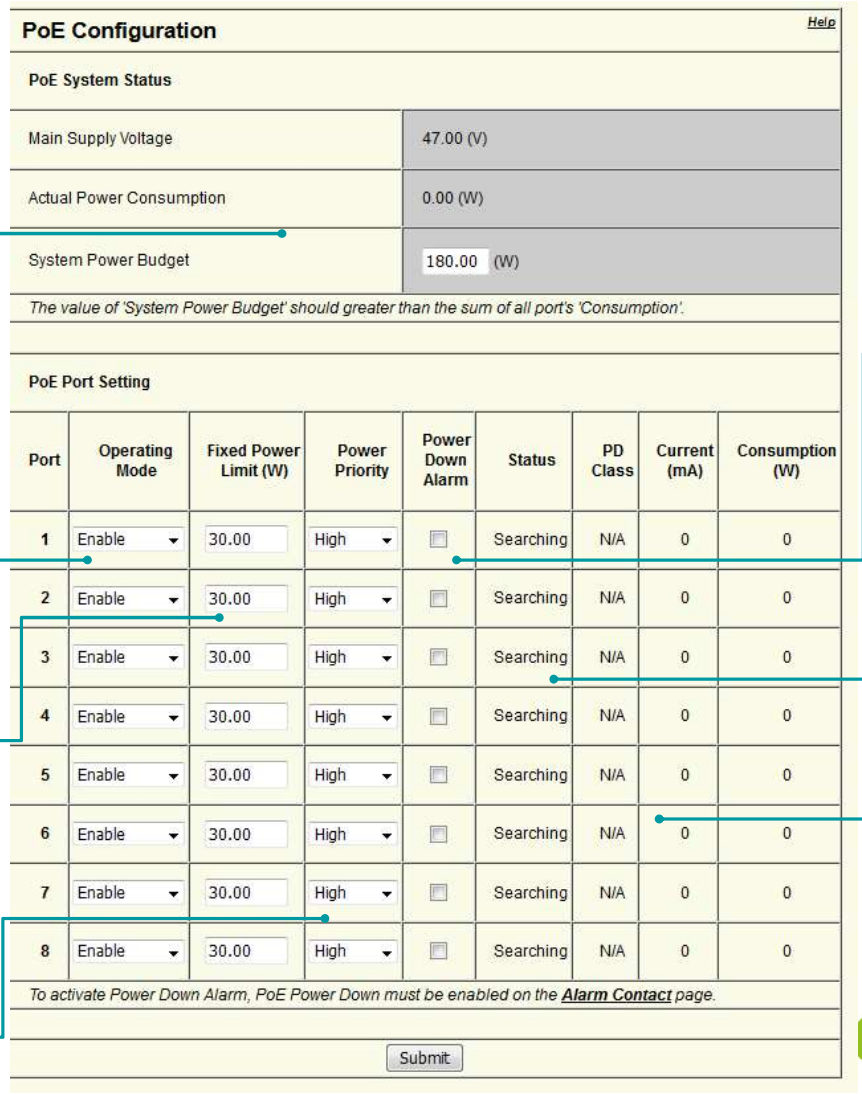
PoE Configuration

View overall PoE system settings such as power supply, consumption, and configuration of power budget

Enable/Disable PoE per port

Configure the power budget by port

Set port power priority by port in event of power requirements exceeding “System Power Budget”



PoE Configuration

Help

PoE System Status

Main Supply Voltage	47.00 (V)
Actual Power Consumption	0.00 (W)
System Power Budget	180.00 (W)

The value of 'System Power Budget' should greater than the sum of all port's 'Consumption'.

PoE Port Setting

Port	Operating Mode	Fixed Power Limit (W)	Power Priority	Power Down Alarm	Status	PD Class	Current (mA)	Consumption (W)
1	Enable	30.00	High	☐	Searching	N/A	0	0
2	Enable	30.00	High	☐	Searching	N/A	0	0
3	Enable	30.00	High	☐	Searching	N/A	0	0
4	Enable	30.00	High	☐	Searching	N/A	0	0
5	Enable	30.00	High	☐	Searching	N/A	0	0
6	Enable	30.00	High	☐	Searching	N/A	0	0
7	Enable	30.00	High	☐	Searching	N/A	0	0
8	Enable	30.00	High	☐	Searching	N/A	0	0

*To activate Power Down Alarm, PoE Power Down must be enabled on the **Alarm Contact** page.*

Submit

Check this box to trigger an alarm in PoE power is not being delivered to the PD

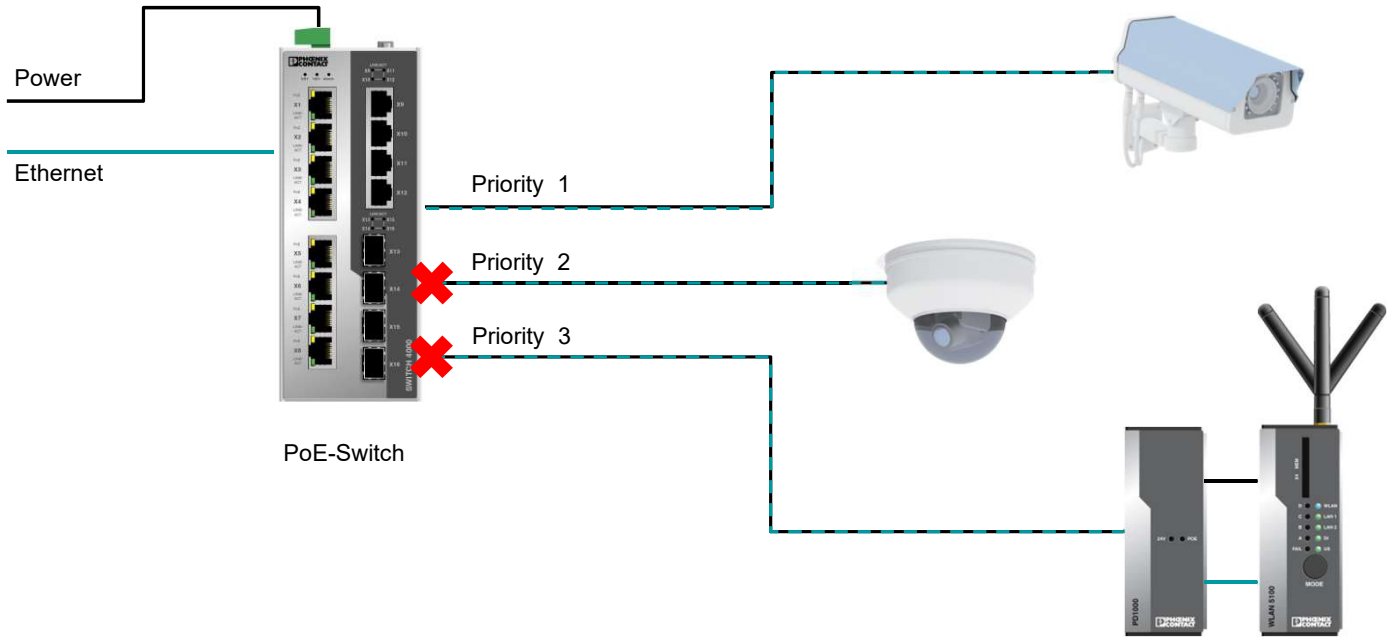
Displays the operating status of the PoE port

Displays monitoring data for the attached PDs in the form of PD class, current draw, and current consumption

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Product Portfolio

4000 Series Managed – PoE Prioritization



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Surveillance Infraestructure

INJ and PoE



Video presentation of INJ Injector and PoE products

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IEEE 802.3 bt - the new standard

IEEE Standard → PoE bt

- PTZ cameras, PanTilt Zoom with infrared lighting and heating
- Monitors
- PCs / HMI
- Kiosks
- POS terminals
- thin clients
- LED lighting



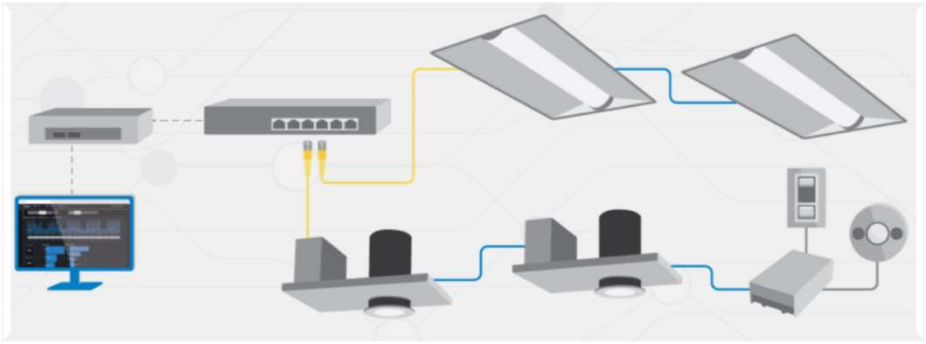












PHOENIX CONTACT
INSPIRING INNOVATIONS

IEEE 802.3 bt - the new standard

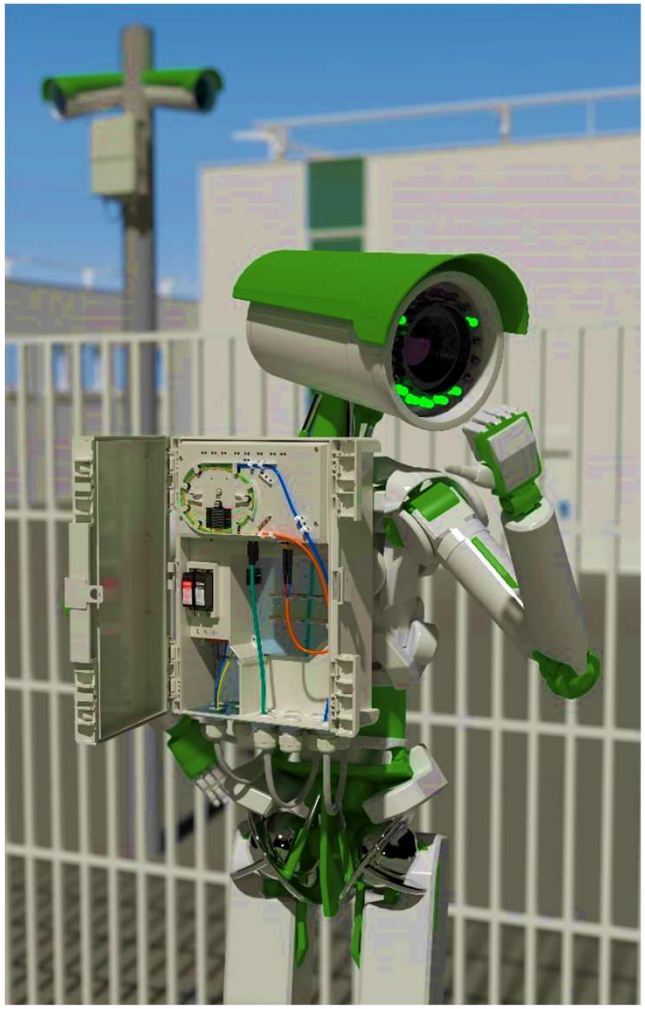
IEEE Standard → PoE bt

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.

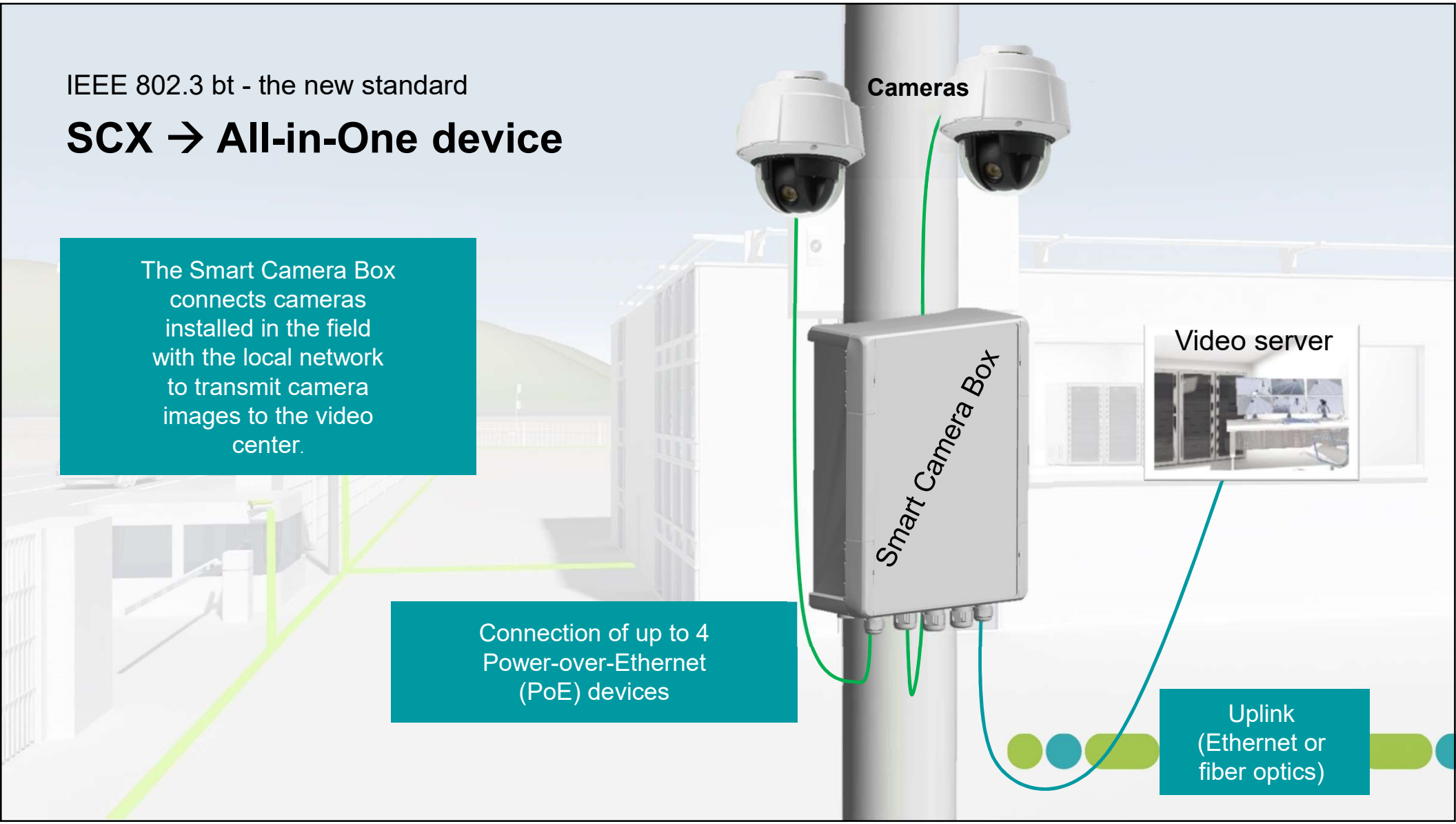


PHOENIX CONTACT
INSPIRING INNOVATIONS

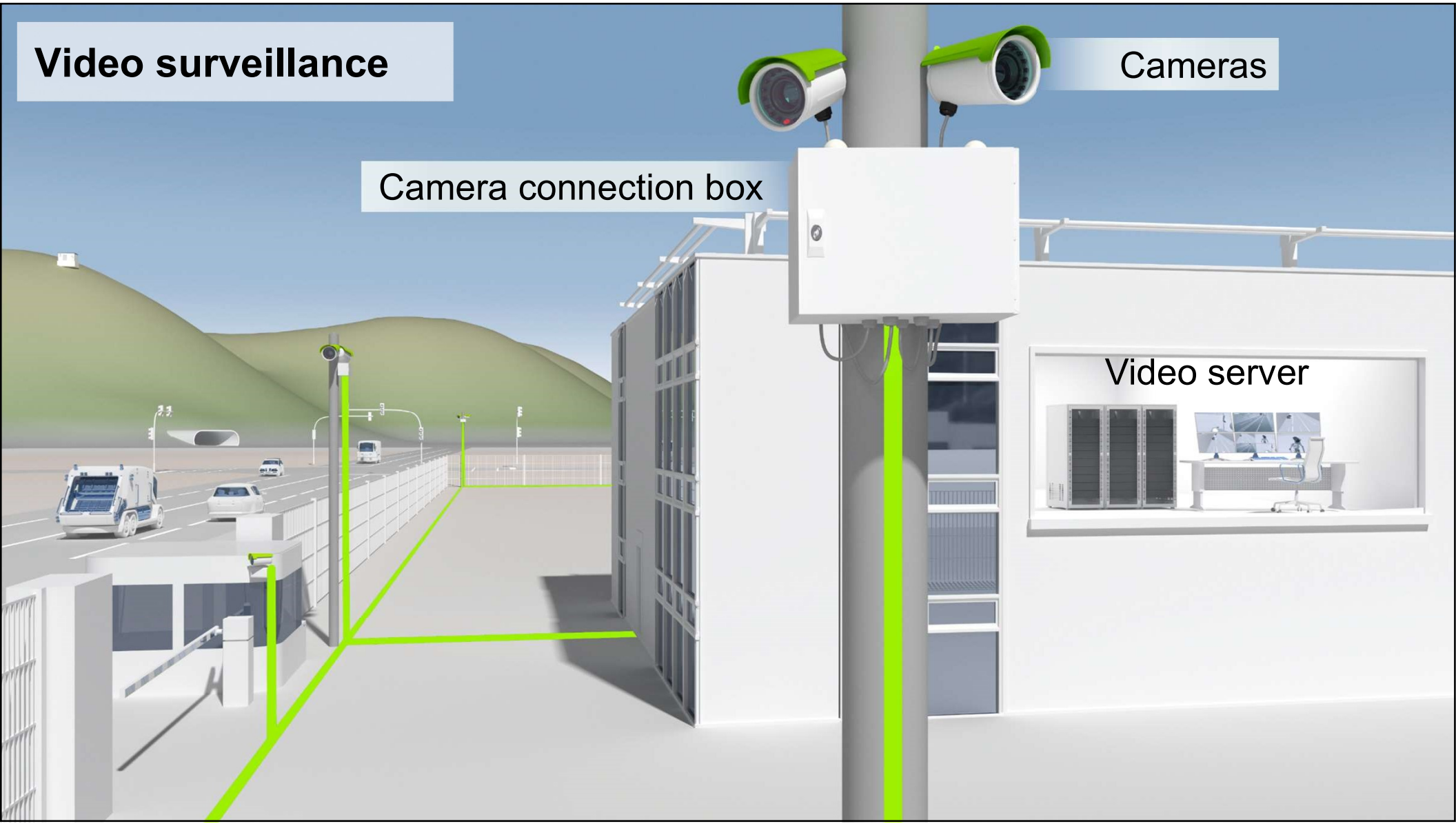
IEEE 802.3 bt - the new standard

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

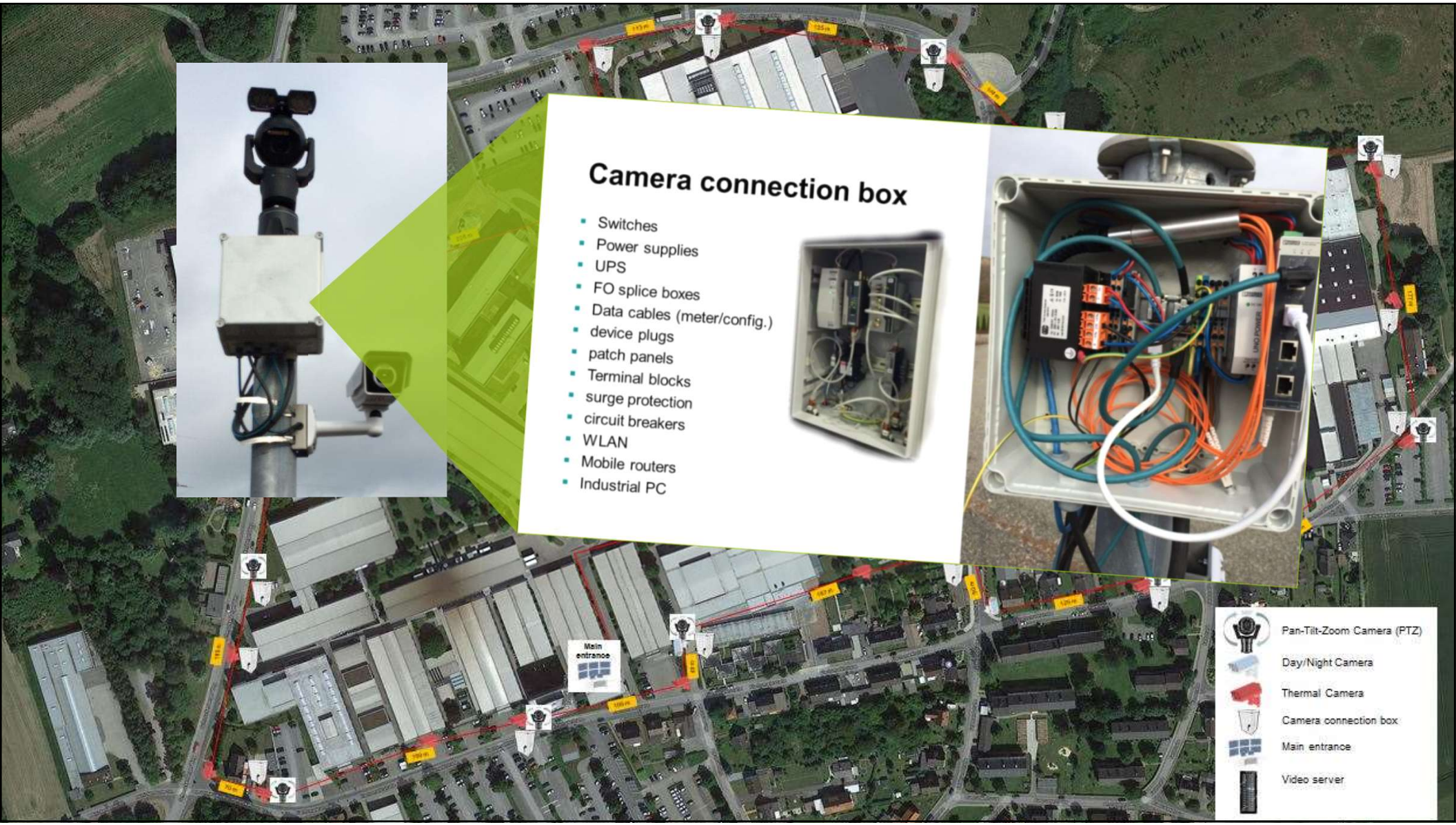

Video surveillance
Cameras
Camera connection box
Video server

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

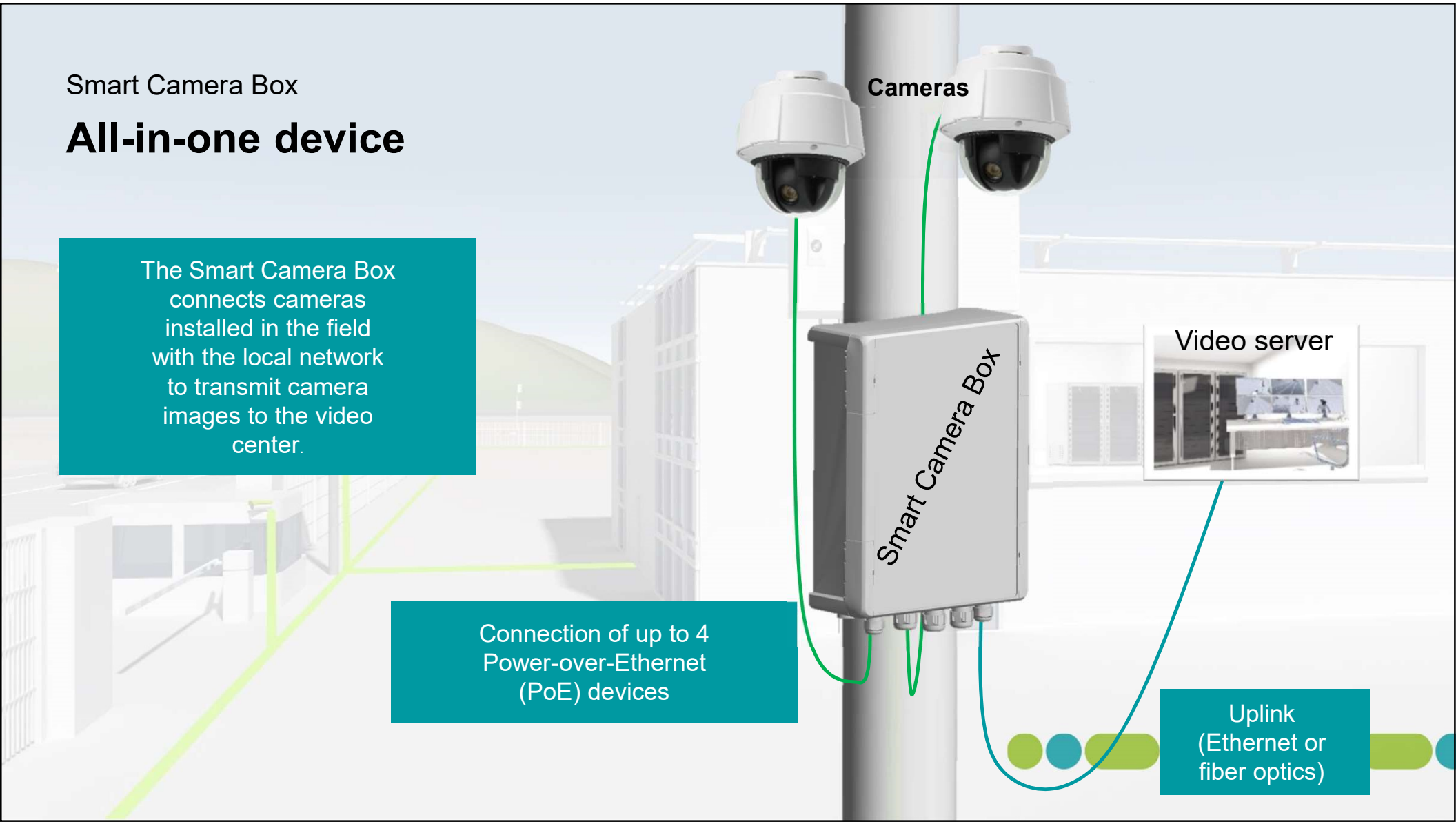
Some examples of surveillance applications



Smart Camera Box

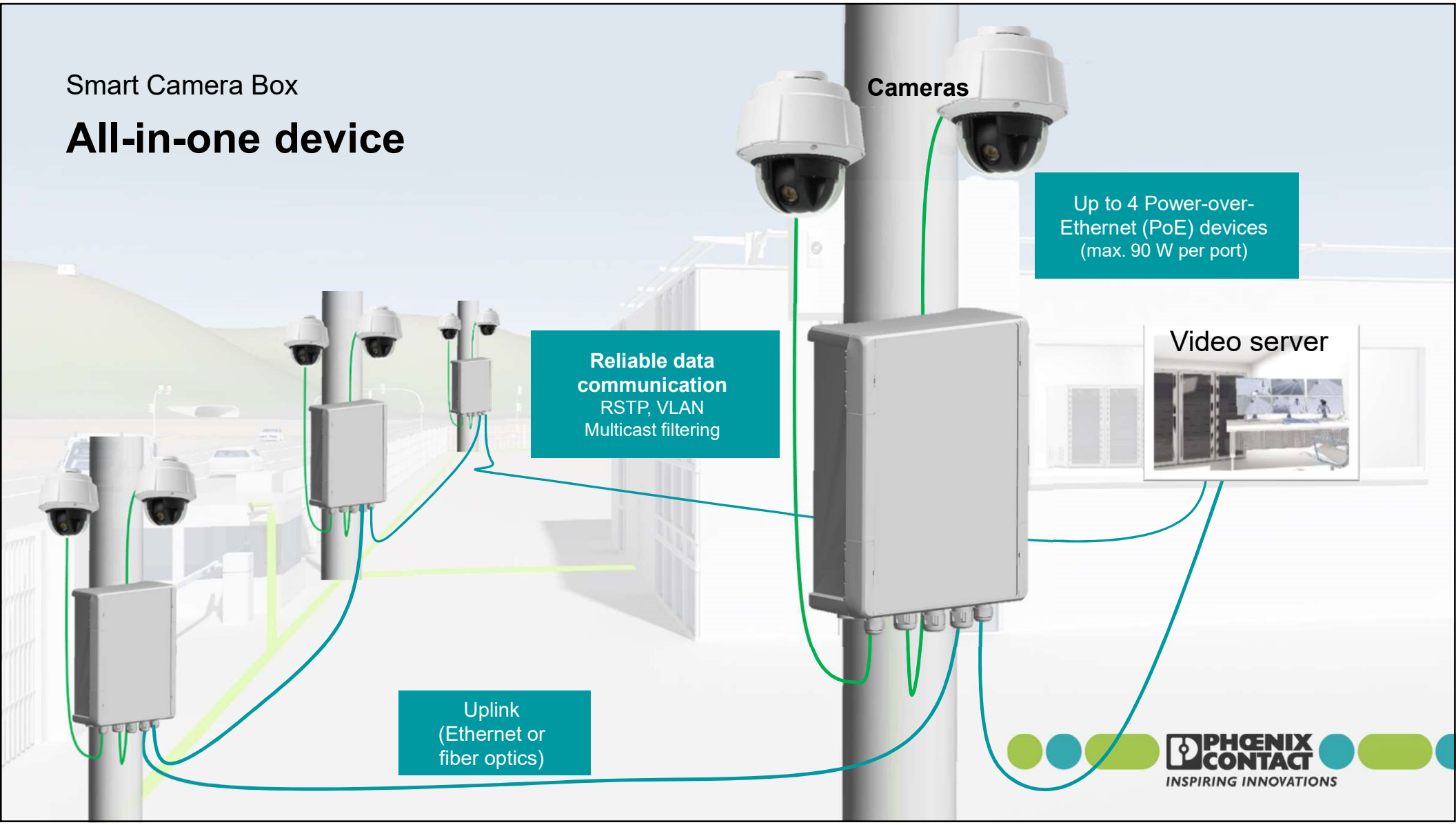
All-in-one device

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

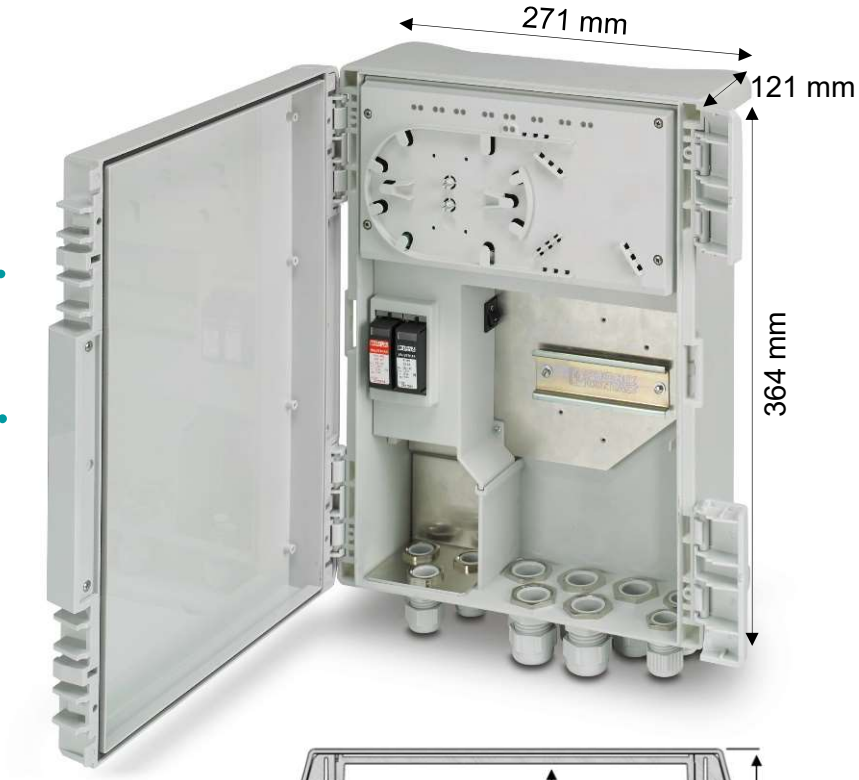


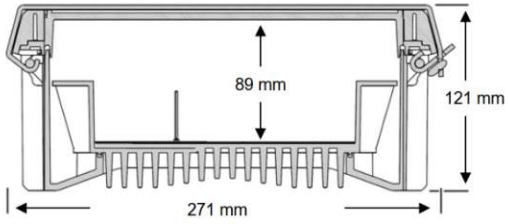
Smart Camera Box

Overview

Housing for outdoor use
IP65/IP67
IK10

Mounting adapter
for pole and wall





PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Housing

Front view



Back view



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

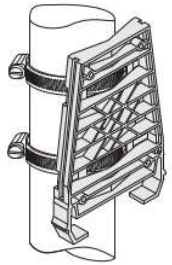
Mounting adapter
Provides secure fit
Hidden release mechanism, can only be released with a tool

Wall mounting
Holes for direct mounting on a wall

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Mounting adapter



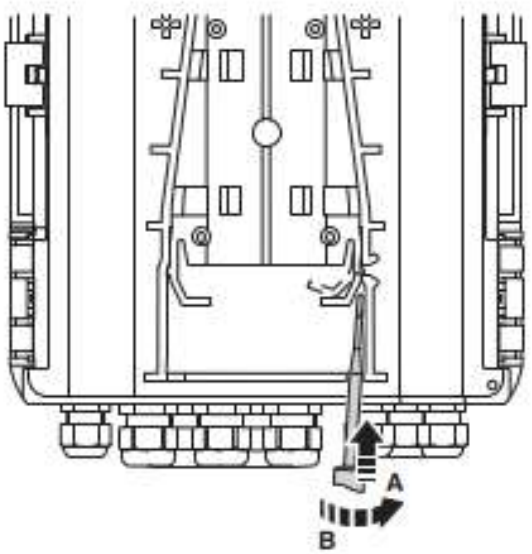


Mounting adapter for pole and wall

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

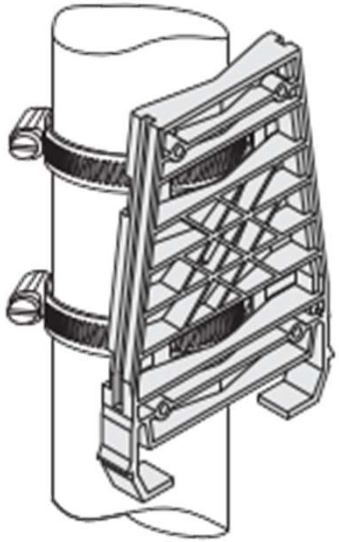
Installation - mounting - mounting adapter



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

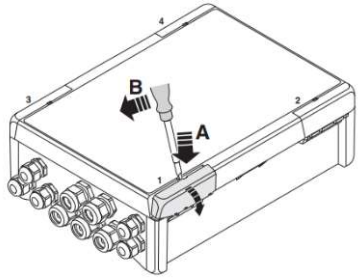


Metal door interlock
Enables safe locking of the door

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Flexible door mounting





Door hinge right



Door hinge left



Door removable

PHOENIX CONTACT
INSPIRING INNOVATIONS

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



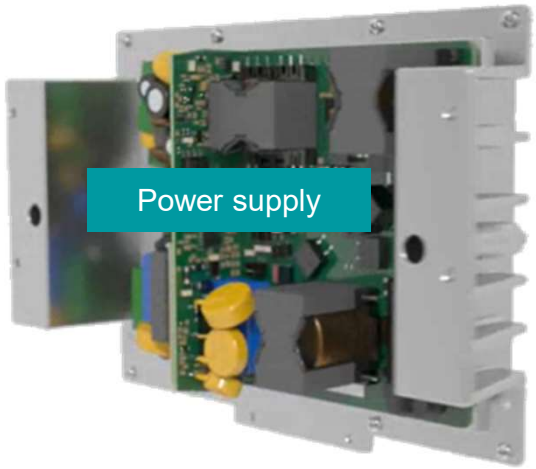
PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box Features

Reliability - Heat sink

Integrated heat sink

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



Heat sink



PHOENIX CONTACT
INSPIRING INNOVATIONS

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



Cable entry

PHOENIX CONTACT
INSPIRING INNOVATIONS

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 !



PHOENIX CONTACT
INSPIRING INNOVATIONS

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



Device switch on/off

Cable entry

PHOENIX CONTACT
INSPIRING INNOVATIONS

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



Device switch on/off

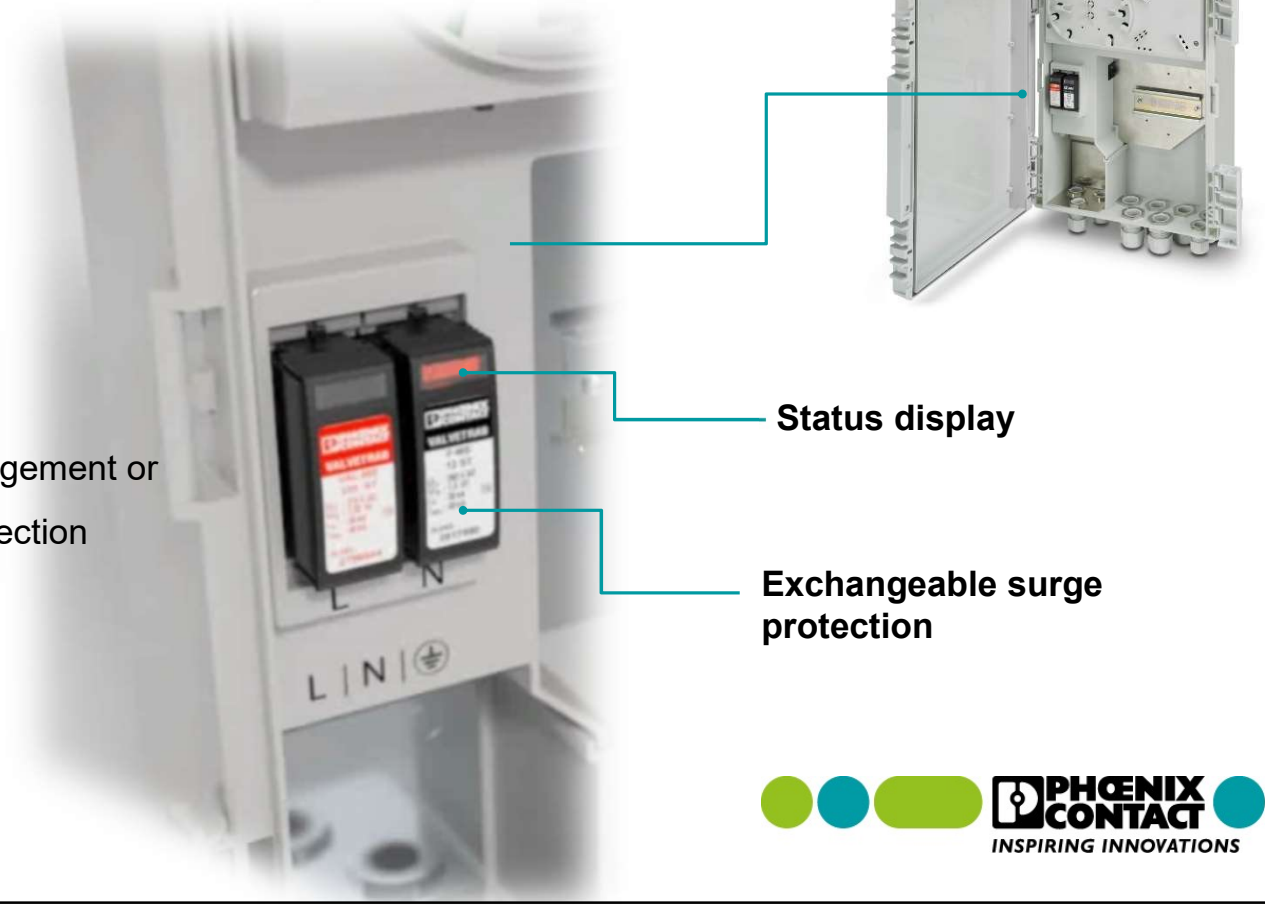
Cable entry

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

PHOENIX CONTACT
INSPIRING INNOVATIONS

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

PHOENIX CONTACT
INSPIRING INNOVATIONS

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
Exchangeable and status via SNMP

Cable entry

PHOENIX CONTACT
INSPIRING INNOVATIONS

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

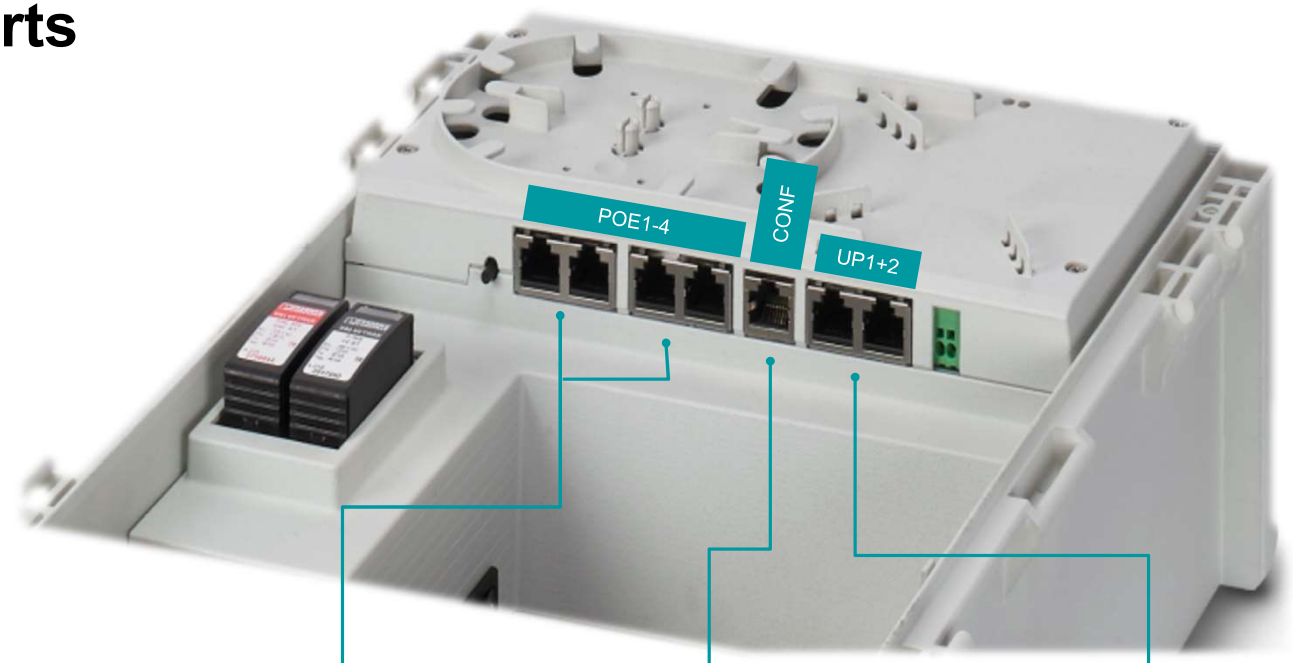
- web-based management
- FL NETWORK Manager software support
- SNMP, CLI



PHOENIX CONTACT
INSPIRING INNOVATIONS

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)

PHOENIX CONTACT
INSPIRING INNOVATIONS

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

PHOENIX CONTACT
INSPIRING INNOVATIONS

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
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

Reliable data communication
RSTP, VLAN
Multicast filtering

Temperature range
-40°C ... +70°C



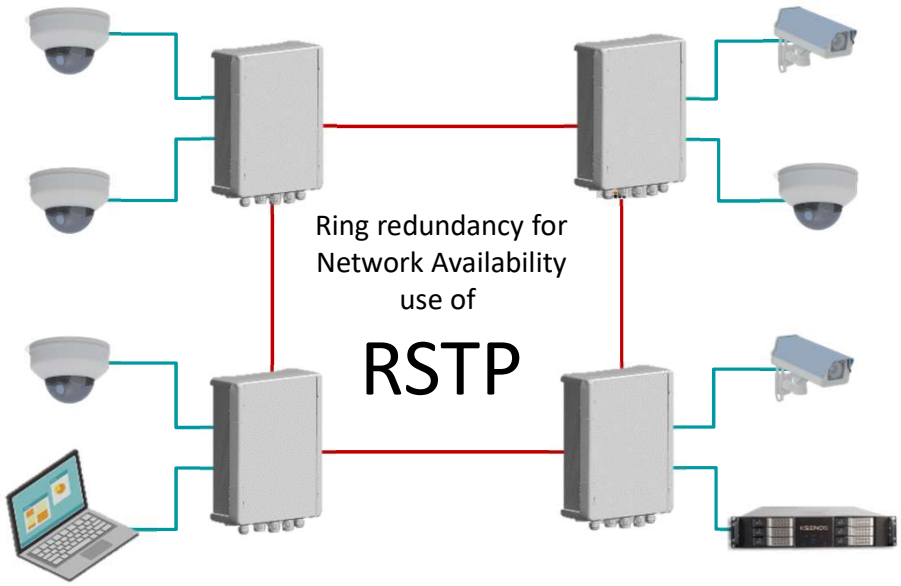
Overvoltage protection
for 230 V AC supply
Exchangeable and status via
SNMP

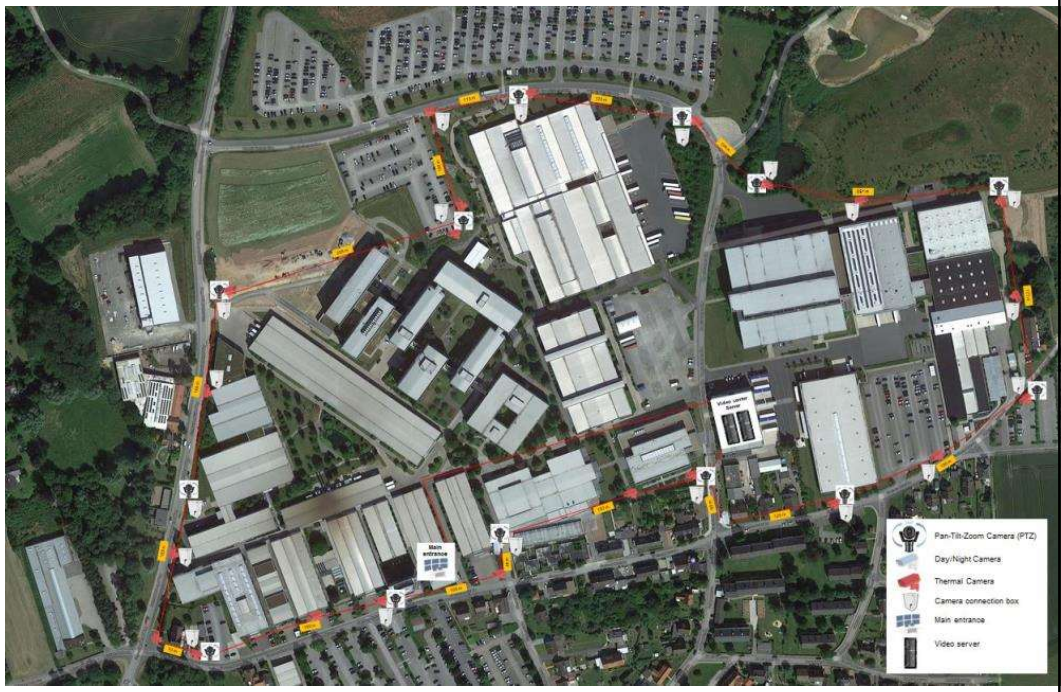
Cable entry

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Network structure

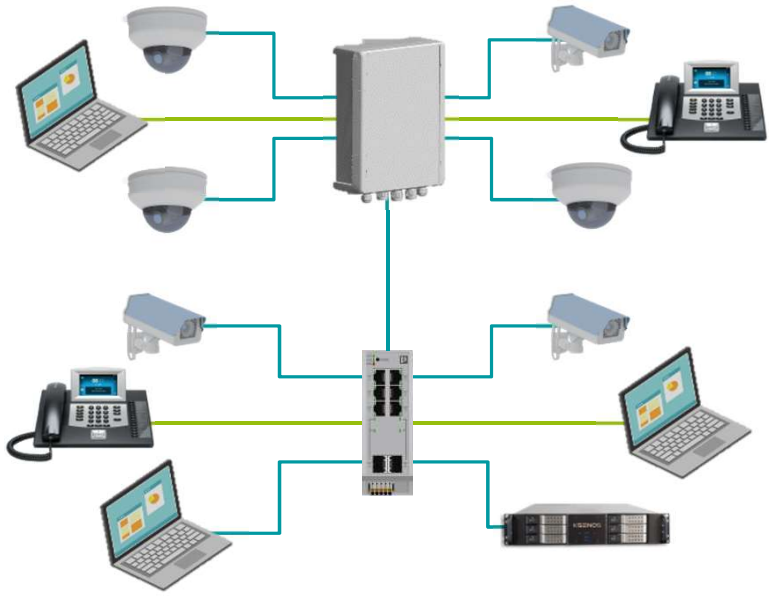




PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Network structure



Video Security

Office

Combination of both networks

Use of VLAN for

Safety and

Priority setting

PHOENIX CONTACT
INSPIRING INNOVATIONS

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

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

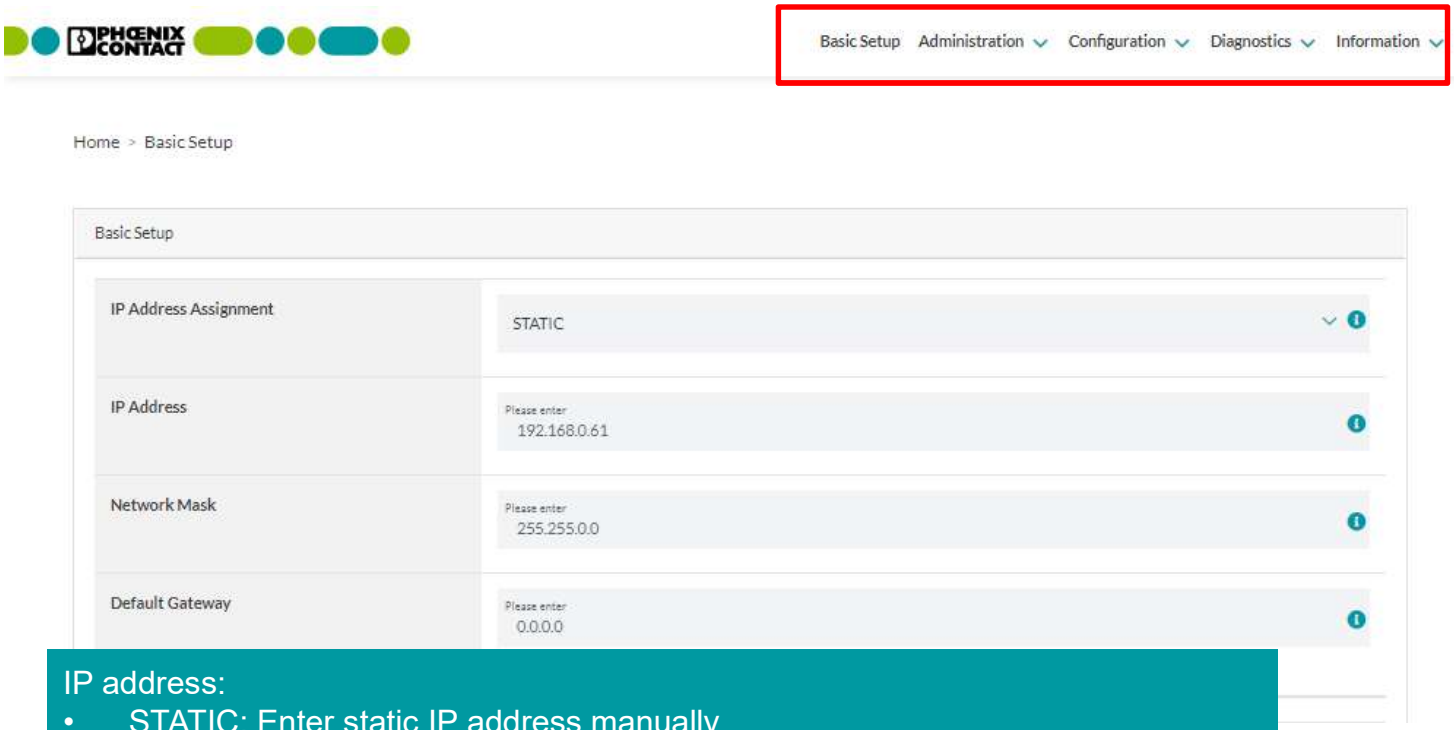
Overvoltage protection
for 230 V AC supply
Exchangeable and status via
SNMP

Cable entry

PHOENIX CONTACT
INSPIRING INNOVATIONS

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

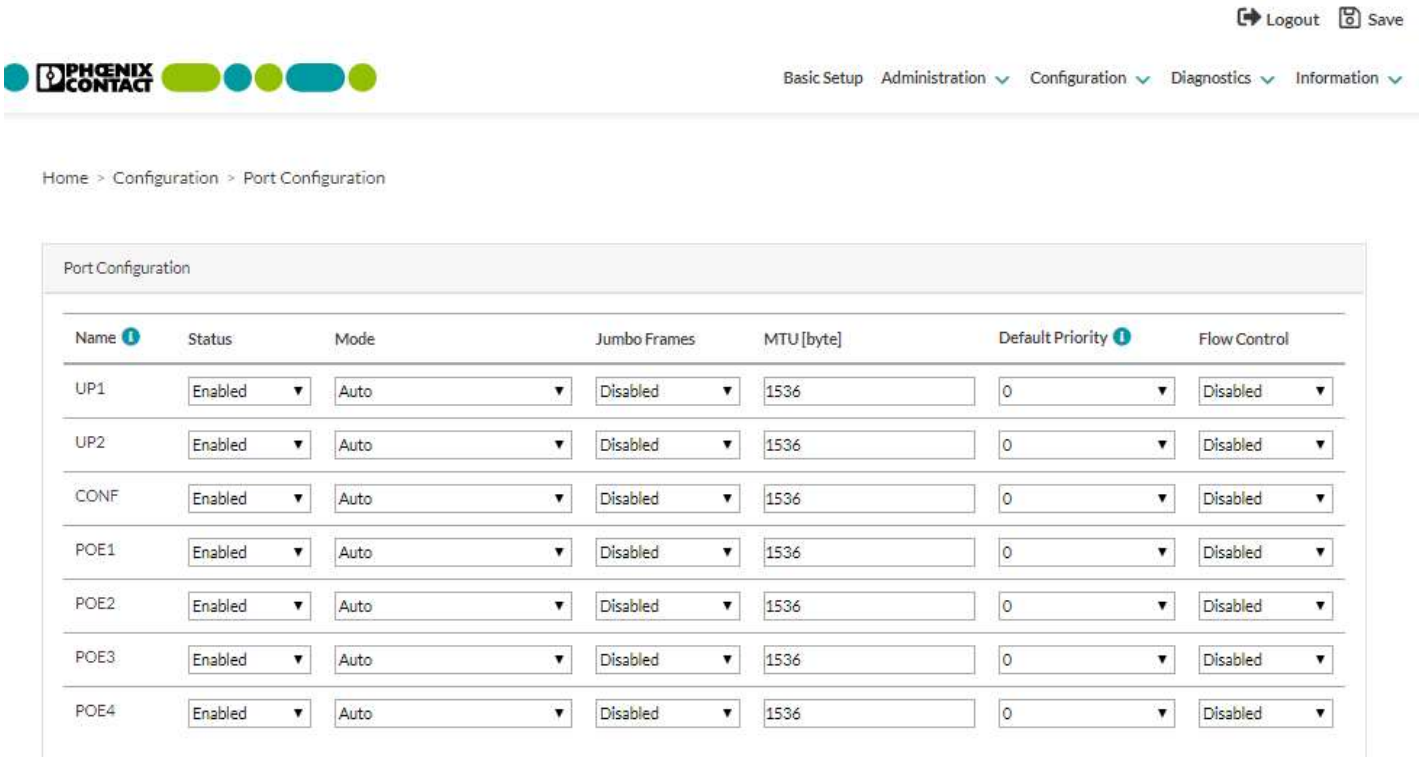
Homepage

- basic setup
- Administration
- Configuration
- Diagnosis
- Information

INSPIRING INNOVATIONS

Smart Camera Box

web-based management

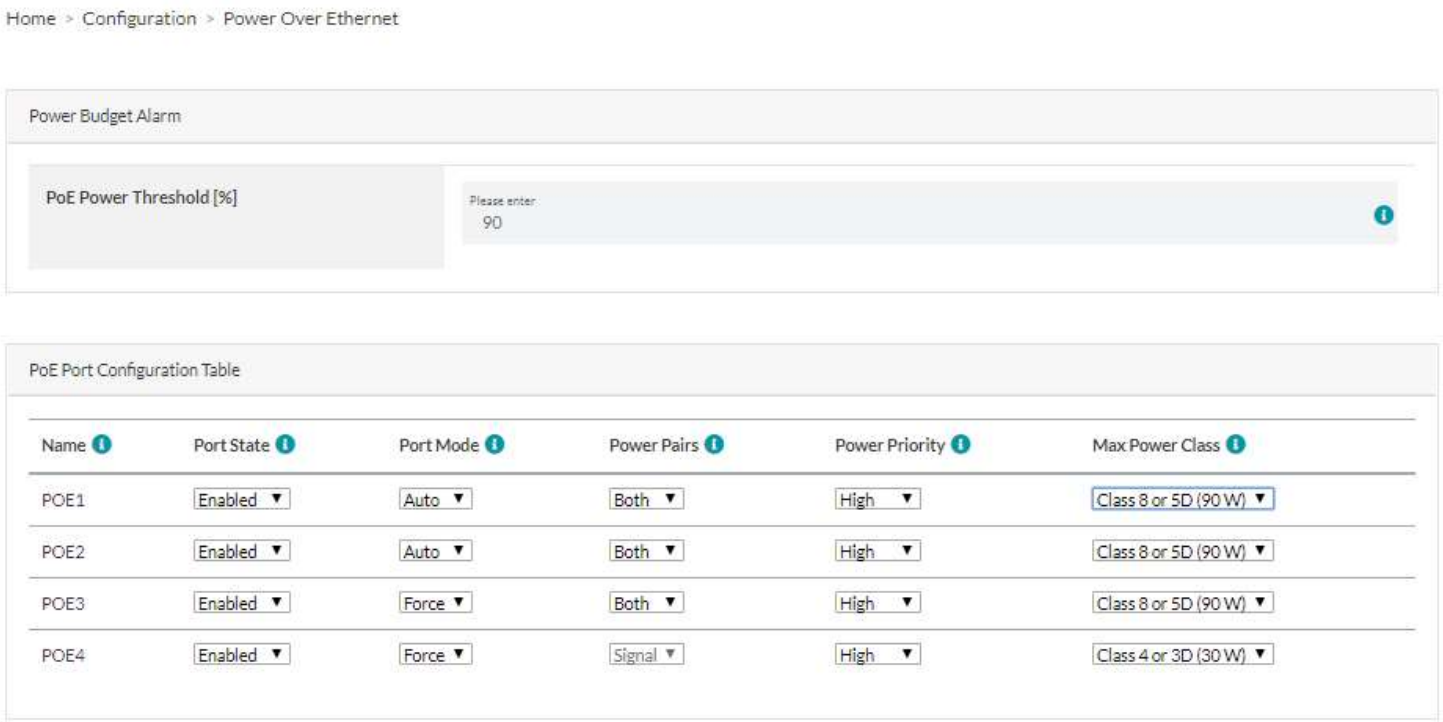


Port Configuration

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

web-based management



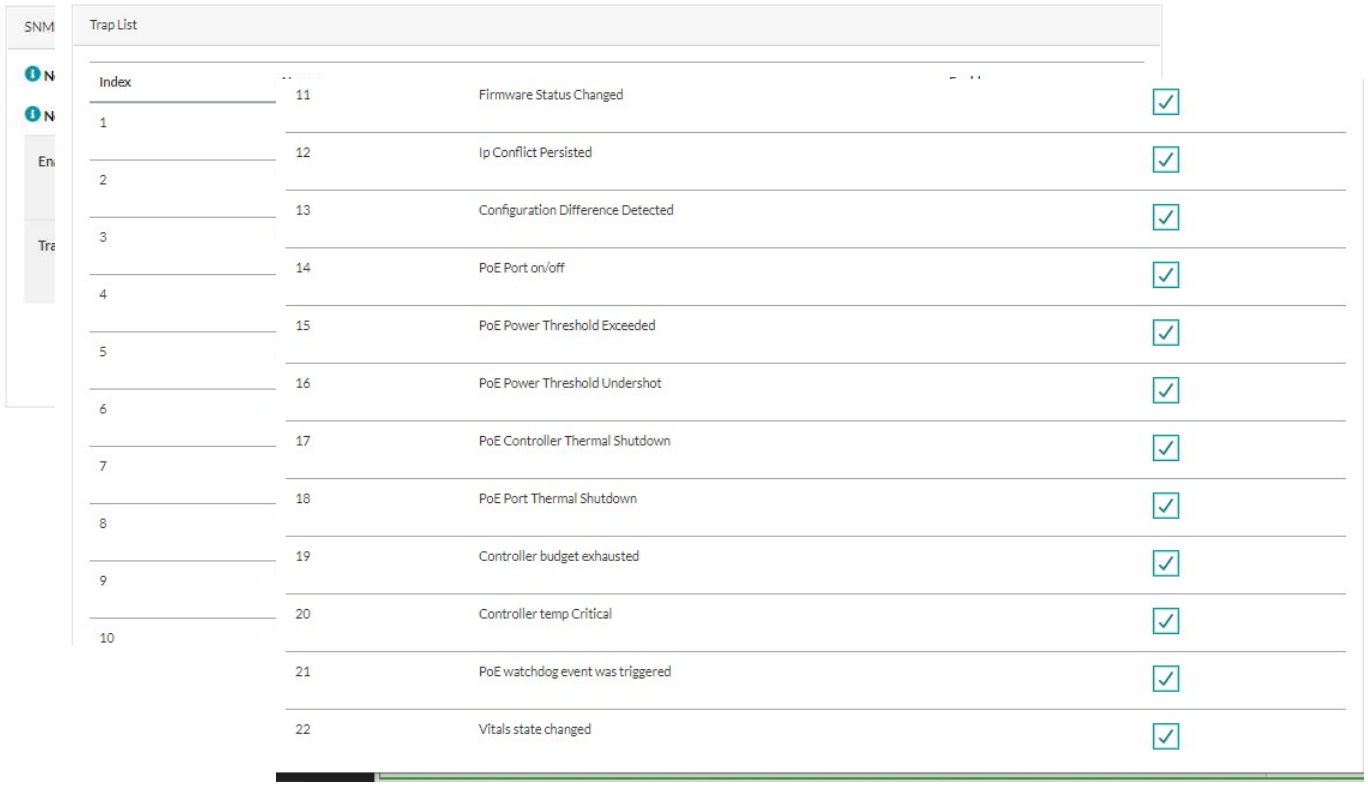
Power-over-Ethernet Configuration

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

web-based management

Home > Configuration > SNMP



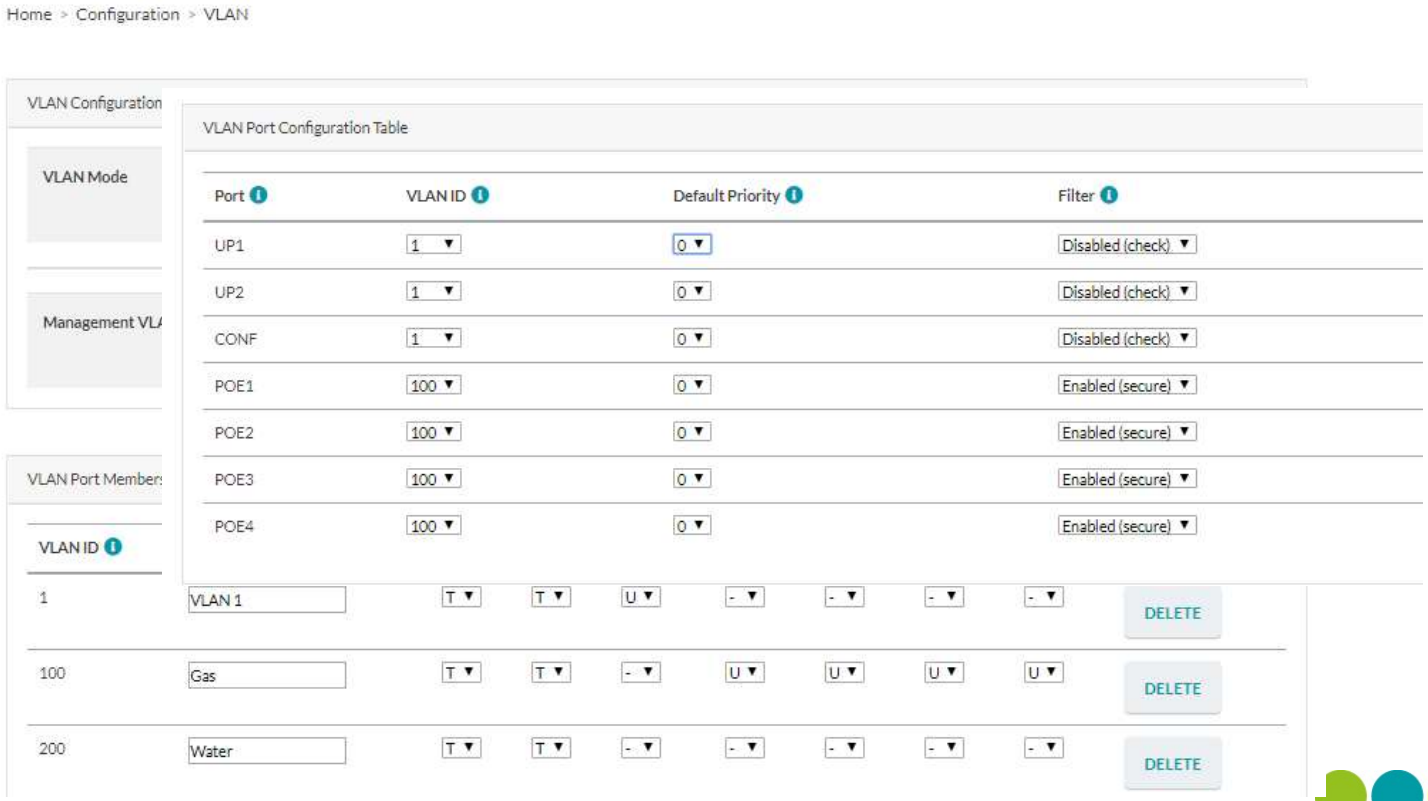
Simple Network Management Protocol

SNMP Traps

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

web-based management



VLAN

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

web-based management

Home > Configuration > Network Redundancy

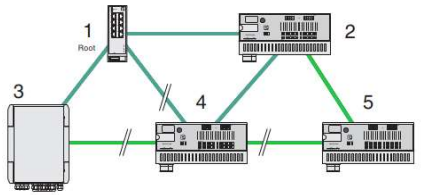
Spanning-Tree Configuration

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



PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Security - Sabotage Alarm

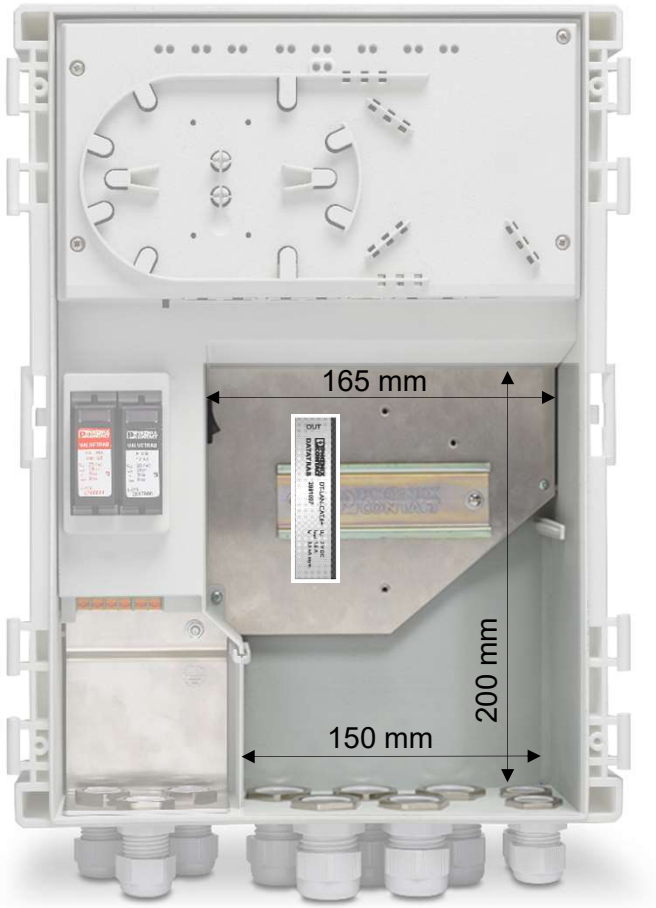
Integrated sensor

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



Smart Camera Box

Individual extension

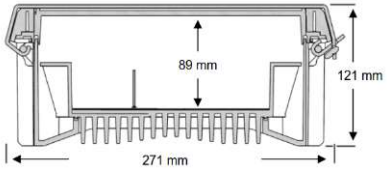


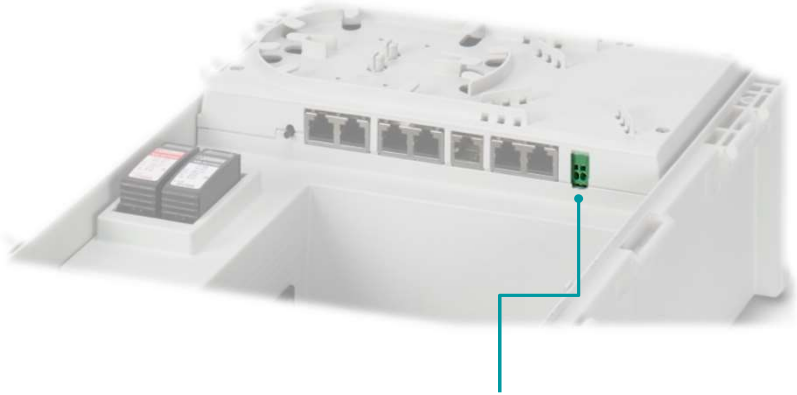


Integrated DIN rail

Allows the use of additional equipment, e.g.

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





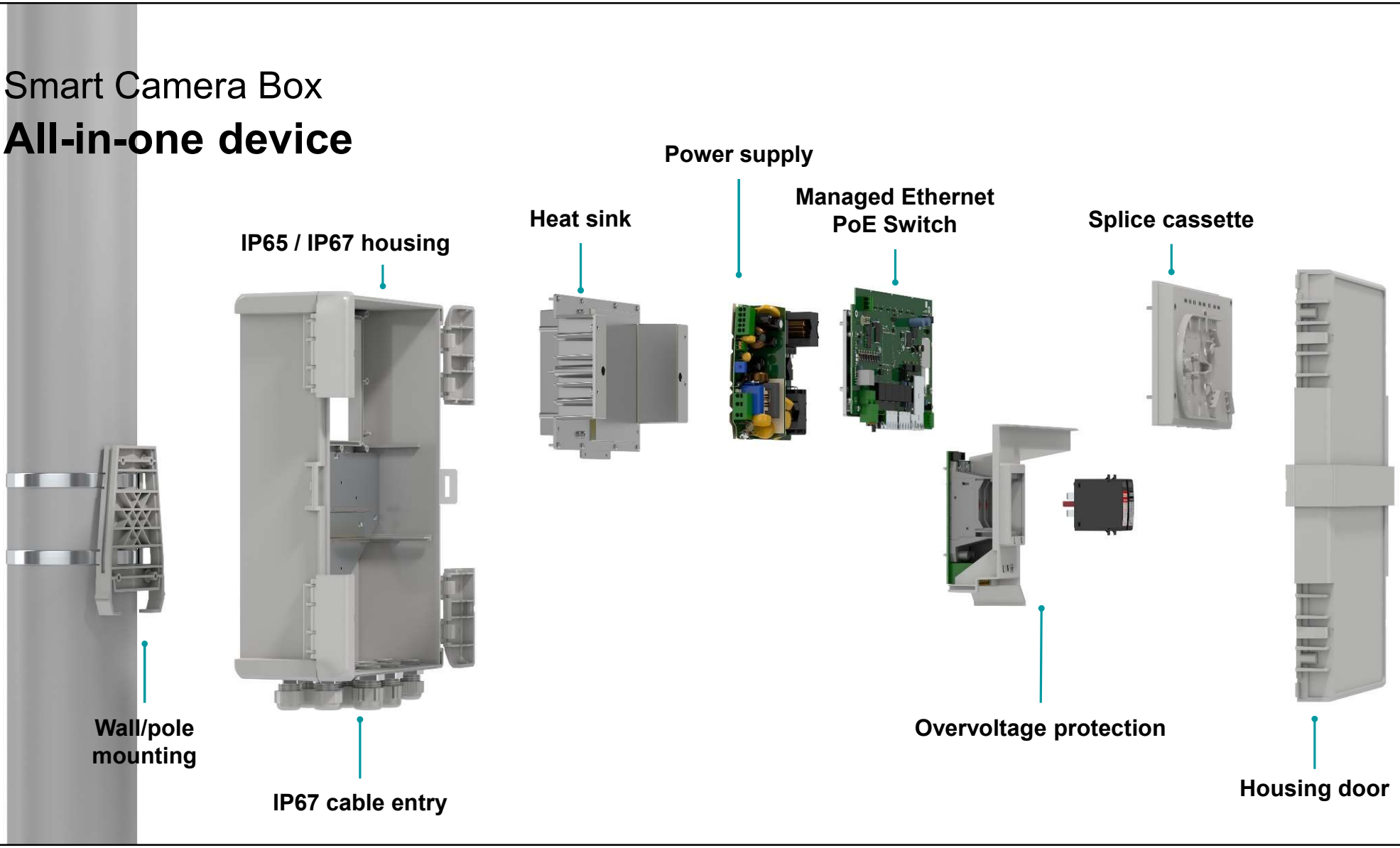
24 V DC output

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

PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

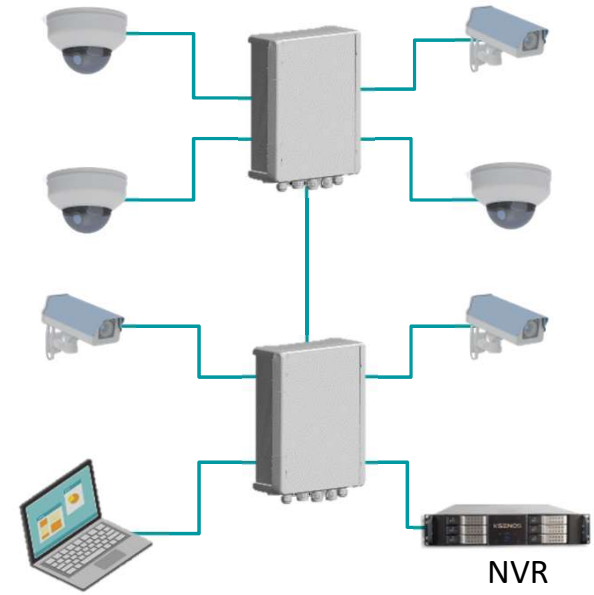
All-in-one device



Smart Camera Box

Network structure

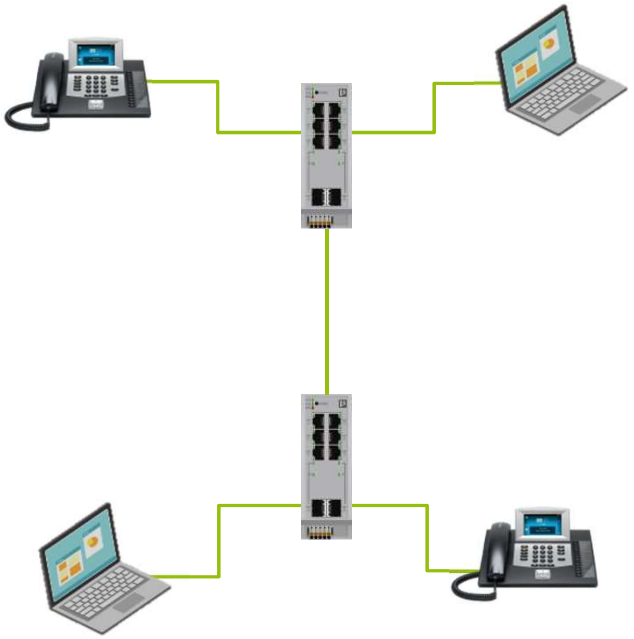
Video Security Network



NVR

Video Operator

Office Network

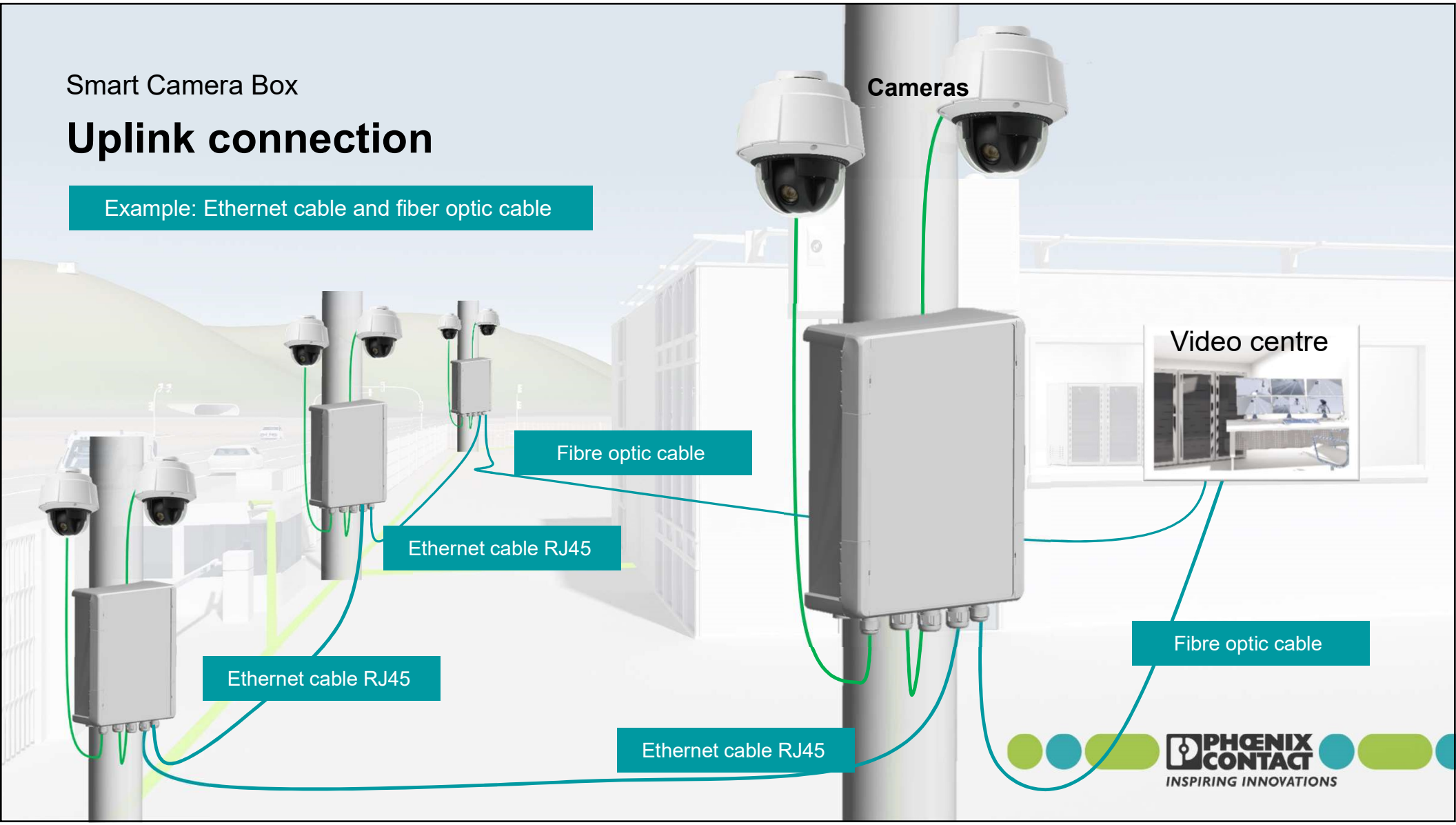


PHOENIX CONTACT
INSPIRING INNOVATIONS

Smart Camera Box

Uplink connection

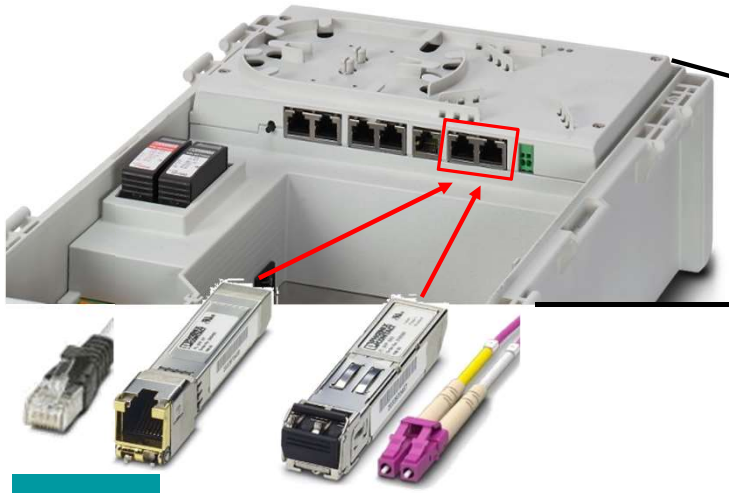
Example: Ethernet cable and fiber optic cable



Smart Camera Box

Uplink connection

Example: Ethernet cables and optical fibres



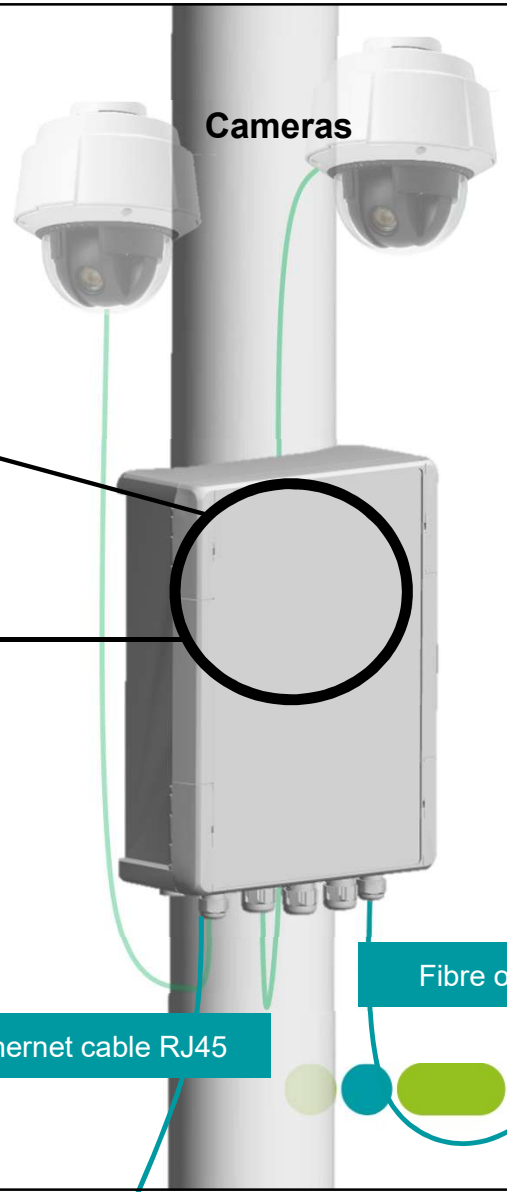
UP1

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!



Smart Camera Box

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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Smart Camera Box

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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Smart Camera Box

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

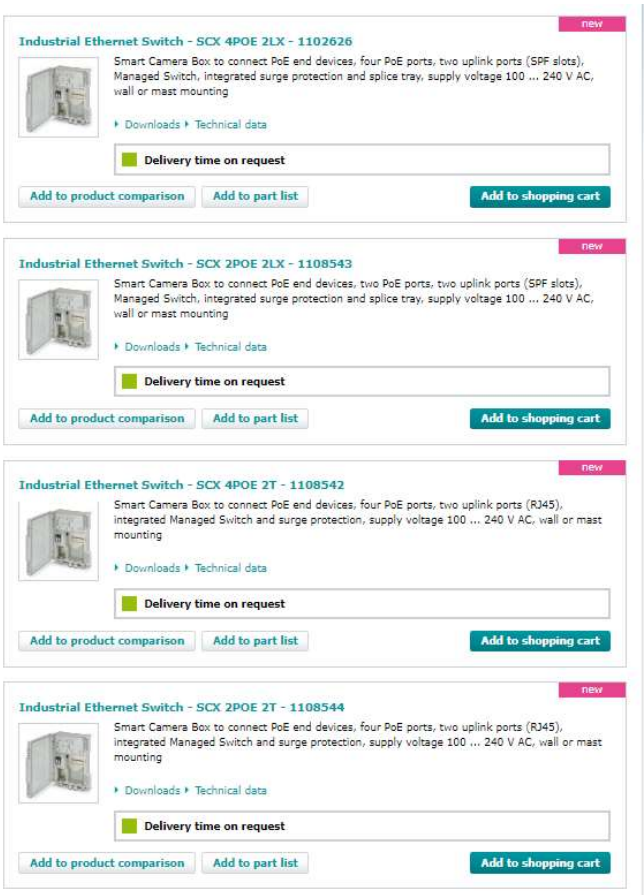


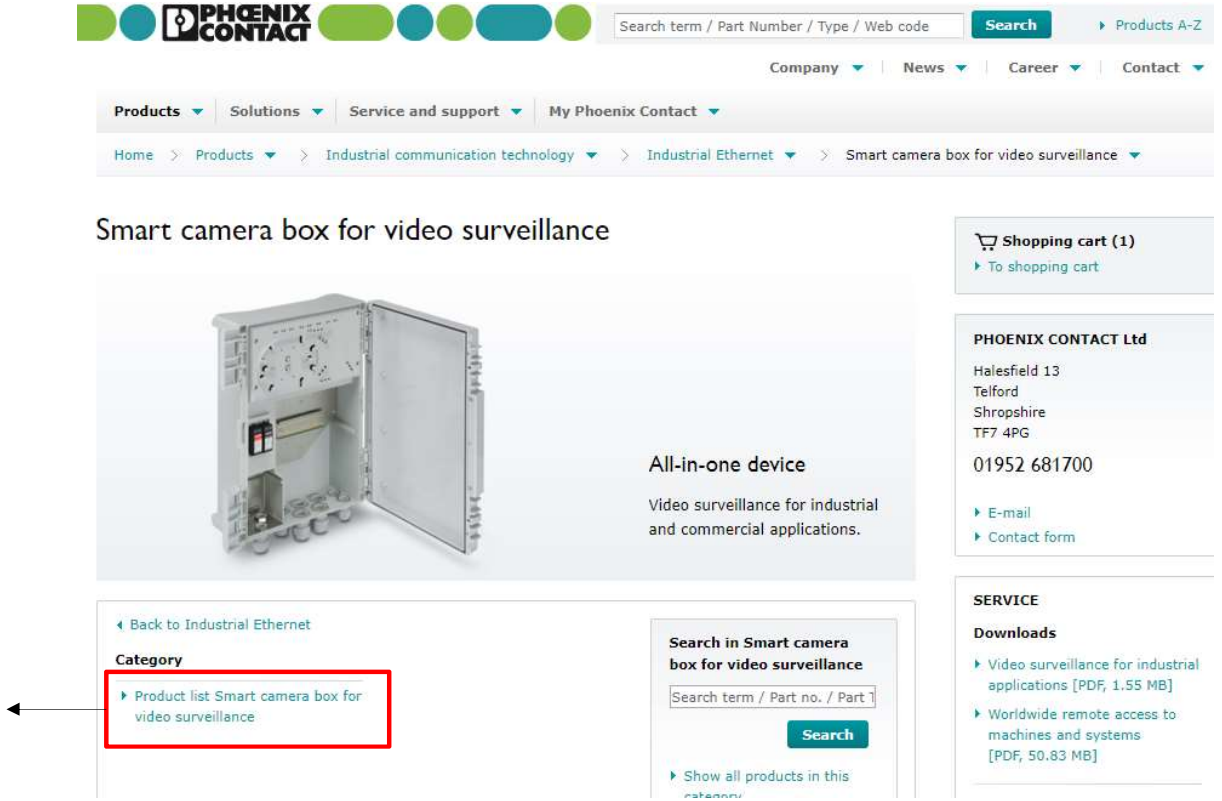
Video SMART CAMERA BOX

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Smart Camera Box

Product page

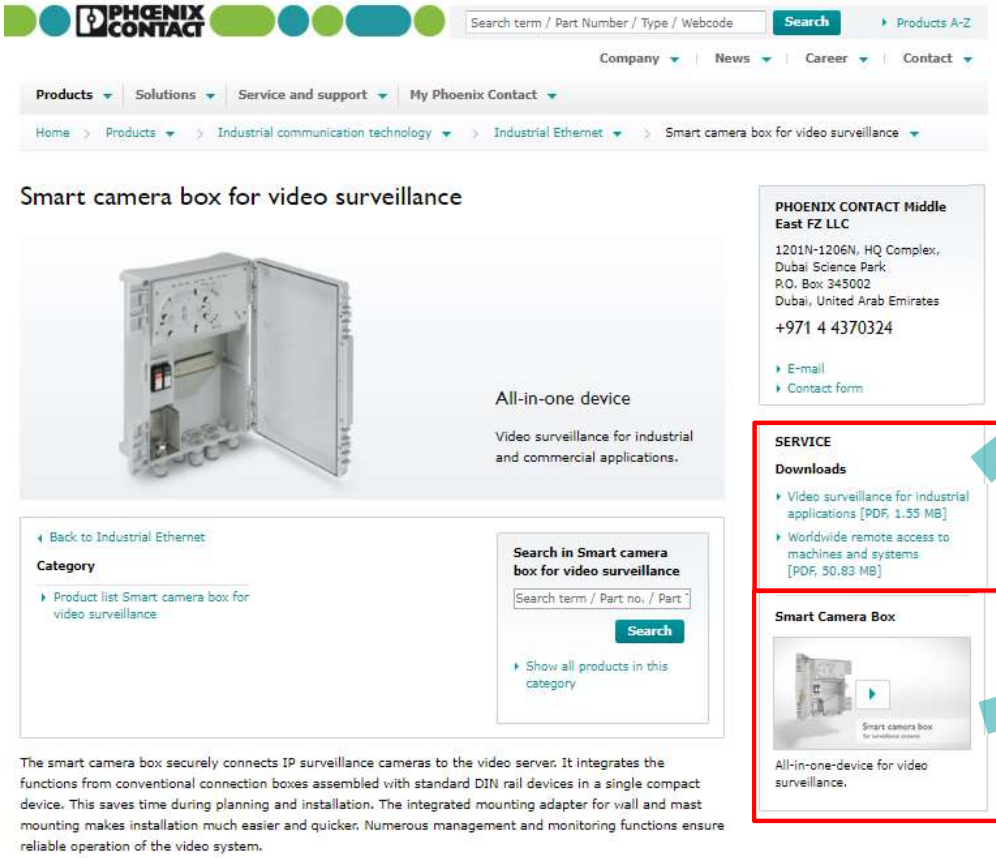




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Video surveillance

landing page

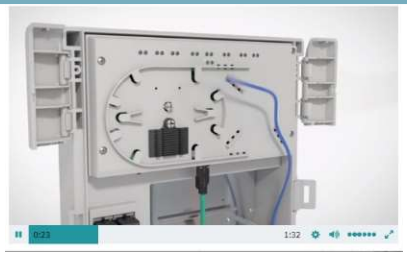


New brochure incl. Smart Camera Box

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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