



PROFESSIONAL SOLUTIONS  
FOR MORE SECURITY

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Transmission Monitors  
Video management Illuminators WiFi cameras  
Safes Thermal image True WDR CCTV cameras  
IP cameras Video analysis Electronic door locking systems  
4K/Ultra HD Speed dome HD-CVI  
Housings



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PRODUCT CATALOGUE  
EDITION 17

SANTEC BW AG · PRODUCT CATALOGUE EDITION 17



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PROFESSIONAL SOLUTIONS  
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## Innovative and professional for more security:

The current SANTEC product portfolio.

This catalogue contains the latest SANTEC products.

We have included many new products in our portfolio, but you will also find well-established products on the following pages.

This catalogue thus complements our personal consulting with a large amount of technical specifications and other product-related information. You can expect from us first-class advice and above all top products! We deliver both: Our sales representatives cover all of Germany, Austria and Switzerland. They provide comprehensive project-based on-site support. Our product portfolio offers you a solution for nearly all kinds of applications. If you have any questions, please don't hesitate to contact us!

Transmission Monitors  
Video management Illuminators WiFi cameras  
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Housings

### Notes

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Effective as of 1 October 2016

## Professional solutions for more security.

Since its foundation in 1974, SANTEC has become one of the leading brands for video security applications in industry, trade and public authorities. Thanks to a number of regional offices, we cover the whole German market and we are represented across Europe by a network of international partners. Our employees are ready to assist you with their expertise.

Discover the versatile options and applications of our products. Whether using analogue technology or IT-supported or as an individual or integrated solution – our video security concepts ensure that literally nothing will escape your customers.

When purchasing our products, you can always be sure that you will receive innovative and proven systems. To ensure this, product management and quality control of SANTEC products take place in Germany.

Quality is part of our philosophy. SANTEC provides a well-structured logistical system and our own modern service centre. Moreover, we provide on-site support and continuous training of our partners.

Always in the picture:  
SANTEC video surveillance solutions  
always provide the right image in the best quality  
at the right time.



## The whole range of SANTEC solutions



Analogue CCTV cameras in a wide variety of models



HD-CVI cameras and accessories  
Full HD via coaxial cable



IP cameras with up to 4K/UHD resolution



Motor zoom cameras and speed dome



Extensive accessories and network components



Professional monitors  
10" to 42" screen size



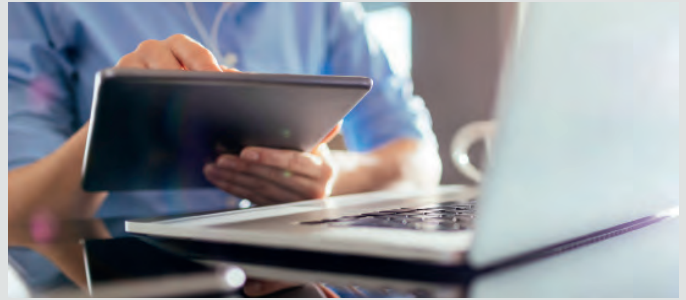
Digital recording systems for IP, HD-CVI and CCTV



Video management and software solutions



**On-site support:**  
Our technicians assist you with the installation at your site.



**Well informed, easy ordering:**  
In our newsletter, you can read about the latest news.



**Development:**  
The software and hardware for our products are designed and developed.



**Product quality:**  
In order to ensure a high standard, product management and quality.



**Maintenance and service:**  
Your products are maintained and repaired in our service centre.



**Logistics centre:**  
In our logistics centre, our employees ensure that your order will be shipped within 24 hours.

**Professional solutions**  
For more security from  
**Ahrensburg**

We are represented throughout Europe  
by our international sales network.



- IP
- HD-CVI
- CCTV
- Speed dome
- Housings
- Illuminators
- Monitors
- Video management
- Video sensors
- Transmission
- Accessories
- Electronic door locking systems
- Safes
- Services

## Information and products at www.santec-video.com

On our website, you will quickly find the latest information about our products and service offering. In addition to the webshop under "Products & Shop", you will also find there all current "News and Newsletters", our contact information as well as all sorts of downloads and references to our events.

Place your orders online any time at:  
www.santec-video.com – Products & Shop



## Products & Shop – Products and everything that goes with them

Are you already a registered partner? If not, why not do it now? Our webshop is the easiest way for retailers to order from SANTEC. Moreover, you will have access to the registered partner area which provides you with price lists and additional download options.



At a glance, the webshop gives you an overview on the latest and most important information about our products. The webshop is logically organised by areas and product groups so that with only a few clicks you can find the desired information, such as high resolution product images, operating instructions and data sheets for the product you are looking for. All available information is directly assigned to the product. Your current purchase price is displayed via a direct connection of the webshop to our inventory control.

Your advantages:

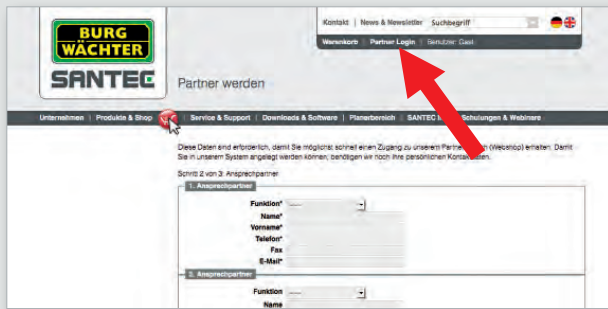
- Easy and fast ordering
- Personalised data sheets
- Firmware updates and software
- High resolution product images
- Operating instructions
- Technical drawings

## Easy & fast: Your online order

Your order is forwarded directly to our system, which saves time. Just add the selected products to your shopping cart. Our staff immediately processes your order, which is then shipped to you. Orders which are submitted to us before 13:00 are usually shipped the same day. Your shopping cart displays the products you have selected so far. Your personal discounts are already included in the price.



## You're not yet a partner of SANTEC?



SANTEC products are available exclusively through our retail partners. Become a SANTEC partner today and take advantage of always purchasing innovative systems that are already well-proven in practice.

On our website, it is easy and fast to register as a partner. The registration page is available at:  
[www.santec-video.com](http://www.santec-video.com) – Partner Login – Become a Partner

## Newsletter – Always up-to-date and well-informed



As a recipient of our SANTEC newsletter, you will regularly receive exclusive news, information and tips about our products – so that you can always work successfully! Furthermore, you will receive information on special offers and on webinars (see also page 126).



## Become a fan on Facebook



SANTEC is on Facebook. Follow SANTEC on Facebook at [www.facebook.com/santec.bw.ag](http://www.facebook.com/santec.bw.ag) and no longer miss out on any news from the SANTEC world.

## Free-of-charge training: Webinars



On our website, we have summarised all current trade shows and upcoming webinar dates. Under the "Webinars" section are listed the topics and dates, where you can also download the registration form. Once you have registered for a webinar, you can also use the website to directly log in to it. Just click on "Attend a webinar now" to get started (also see page 126).

Like all technology sectors, the video surveillance industry is also subject to constant ongoing development of products as well as creation of new device functions. Every year new product features are offered on the market and are also in demand. Consequently there are always new trends and topics that are currently "in fashion" in the video surveillance industry. From these many trends and technical innovations, SANTEC always carefully selects those that usefully complement our cameras, monitors and recorders and that thus offer our customers real added value.

### Intelligent Video Analysis (IVA and IVA+)

The Intelligent Video Analysis of SANTEC IP cameras offers not only a substantial added value for your security application but also decision-making tools for business processes and evaluation options.

#### Features and advantages of Intelligent Video Analysis:

- Support for recognition of prohibited, unusual and dangerous situations
- Targeted surveillance of sensitive areas
- Ease the burden of security/guard staff
- Reduce false alarms (alarms are triggered only in relevant situations)
- Measure and optimise business processes (e.g. consumer behaviour)
- Video analysis is set up and configured directly in the camera

#### Intelligent Video Analysis (IVA) includes the following functions:

- Setting up virtual trip wires (also direction-based)
- Setting up special surveillance zones
- Face recognition (e.g. as a type of access control)
- Recognition if an object has been added or removed
- Recognition if a scene has changed (expansion of camera sabotage recognition)
- Volume surveillance

IP cameras that have expanded video analysis (so-called IVA+) have the following additional functions:

- People counting (e.g. recording visitor flow)
- Heat map (identify highly and less frequented areas).



Function	IVA	IVA+
Trip wire	Yes	Yes
Zone surveillance	Yes	Yes
Face recognition	Yes	Yes
Object added/removed	Yes	Yes
Scene change	Yes	Yes
Volume	Yes	Yes
People counting	No	Yes
Heat map	No	Yes
IP camera model (You will find technical data in the "IP Cameras" chapter starting on page 9)	SNC-231RBIA SNC-231RZNA SNC-231RDIA SNC-231RSIA SNC-231RSNA SNC-331DLNN SNC-431RDIA SNC-431RBIA SNC-431FDIF SNC-431FEIF SNC-431FBIF SNC-431RLNN	SNC-831DBIA SNC-831DDIA SNC-831DLNN SNC-241DDIA SNC-241DBIA

# ULTRA HD



### 4K / Ultra HD

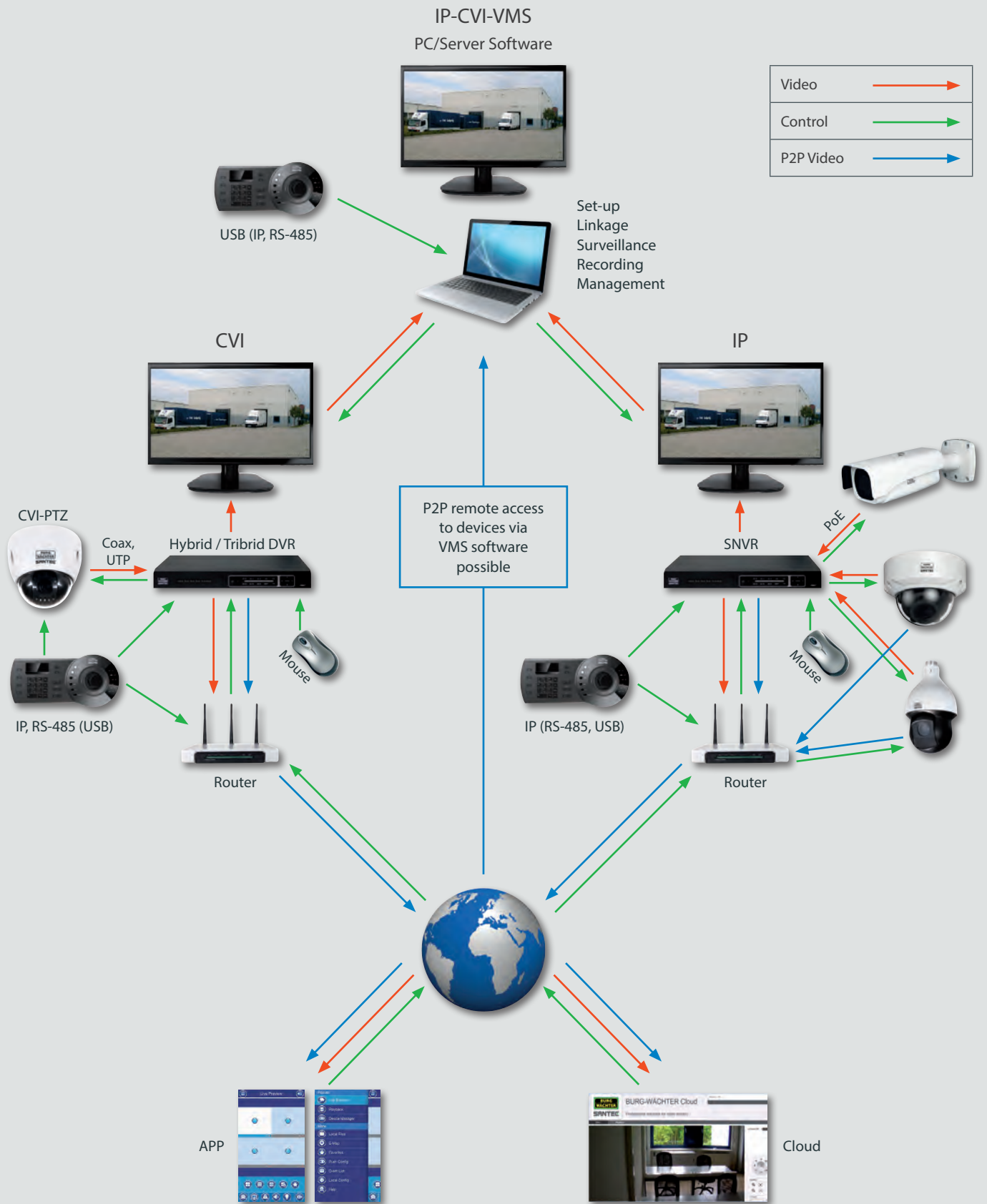
Compared to the currently customary full HD (1920 x 1080), twice as many pixels are used in height and width with ultra HD. That equals 8.3 megapixels – therefore four times as many pixels as with full HD. The display is thus unbelievably clear even from a very short viewing distance. You thus have the option of relying on an impressive level of detail for projects in which a high resolution is indispensable.

SANTEC offers a complete range of 4K/UHD devices that are perfectly synchronised with each other:

- IP cameras (up to 12 MP): SNC-831DLNN, SNC-831DDIA and SNC-831DBIA (see starting on page 12)
- Network recorder SNVR-2812P, SNVR-23212P (see starting on page 79)
- Monitor: SLS-284K (see page 71)



SANTEC offers not only individual devices and components for different technologies such as HD-CVI and IP. Our goal is to also optimally synchronise these devices with each other and link them with each other to a unified overall system. This "system concept" facilitates for uses the set-up of the different devices. Below an illustrative linking of HD-CVI and IP devices is schematically presented:



IP	<b>IP cameras</b>	Box cameras . . . . . 12 Dome cameras . . . . . 13 Bullet cameras . . . . . 16 Speed dome and mini PT dome . . . . . 18	Fisheye camera . . . . . 20 Accessories, lenses, power supply . . . . . 22 Thermal cameras . . . . . 30 WiFi cameras . . . . . 34
HD-CVI	<b>HD CVI cameras</b>	Box cameras . . . . . 39 Dome cameras . . . . . 40 Bullet cameras . . . . . 41	Speed dome . . . . . 42 Accessories . . . . . 43 Lenses and power supply units . . . . . 44
CCTV	<b>CCTV cameras</b>	Box cameras . . . . . 47 Camera sets . . . . . 48 Dome cameras . . . . . 49 Bullet cameras . . . . . 51	Motor zoom camera . . . . . 51 Mini and discreet cameras . . . . . 52 Accessories . . . . . 53 Lenses, power supply units, dummy cameras . . . . . 54
Speed dome	<b>Speed dome</b>	Speed dome and IP mini PT dome . . . . . 57 HD-CVI/Analogue speed dome . . . . . 59 Accessories . . . . . 60	Power supply units . . . . . 61 Control keyboards . . . . . 61 Ulisse pan/tilt systems . . . . . 62
Housings	<b>Housings</b>	Camera housings . . . . . 64	Accessories . . . . . 66
Illuminators	<b>Illuminators</b>	Infrared illuminators . . . . . 67	Accessories . . . . . 68
Monitors	<b>Monitors</b>	4K/UHD monitor . . . . . 71 LED monitors . . . . . 72	Monitor stand and wall brackets . . . . . 74
Video management	<b>Video management</b>	Apps, HDDs . . . . . 77 Tribrid digital video recorder . . . . . 78 4K/UHD network video recorder . . . . . 79 VMS software . . . . . 80 NUUO network recorder . . . . . 81	NUUO Enterprise recorder . . . . . 82 NUUO software . . . . . 83 NUUO main console recorder (tribrid) . . . . . 84 NUUO video analytics . . . . . 85 NUUO accessories . . . . . 86
Video sensors	<b>Video sensors</b>	Video sensor for CCTV cameras . . . . . 88 Video sensor for IP cameras . . . . . 88	Passive infrared sensors (PIR) . . . . . 88
Transmission	<b>Transmission</b>	2-wire system technology . . . . . 91 Distributors, amplifiers, converters, transformers . . . . . 92 Senders/receivers . . . . . 93	Network switches . . . . . 93 PoE midspan power supply units . . . . . 94
Accessories	<b>Accessories</b>	Power supply units . . . . . 96 Plugs and tools . . . . . 97	Plugs and cables for HD-SDI . . . . . 98 Coaxial cable . . . . . 98
Electronic door locking systems	<b>Electronic door locking systems</b>	secuENTRY . . . . . 101 secuENTRY easy . . . . . 105	TSE PRIME . . . . . 108 TSE 4000 HOME . . . . . 110
Safes	<b>Safes</b>	Freestanding safes Diplomat and Karat . . . . . 114 Safety cabinets Combi-Line . . . . . 118 Wall safes Karat . . . . . 120	Safety cabinets OfficeLine . . . . . 121 Freestanding safes OfficeLine . . . . . 122 Filing cabinets OfficeLine . . . . . 124
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**SANTEC**

PROFESSIONAL SOLUTIONS  
FOR MORE SECURITY



## IP cameras

**Favour**

Functional

P2P and cloud

Best price-performance ratio

ONVIF

Complete

**Royal**

Ease of use

ONVIF

P2P and cloud

120dB WDR (True WDR)

Auto focus

Versatile

**Diamant**

Low light

SSA

H.265

4K/UHD

Intelligent video analysis

ONVIF

140dB WDR (True WDR)

P2P and cloud



## SANTEC IP cameras: Always state of the art technology

The further development of IP cameras is advancing at breakneck speed. New functions are being continually developed that offer users even more extensive surveillance options. Thanks to higher resolutions, the images are also becoming more and more detailed and sharper. It is thus not always easy for the user to maintain an overview of the various options and functions that the IP cameras provide and to select the appropriate model for the user's application. SANTEC has thus divided its IP cameras into three categories, "Favour", "Royal" and "Diamant" to make comparing models and selecting cameras easier.

There are several exciting highlights in the new IP camera generation from SANTEC. These include Intelligent Video Analysis function (IVA), with which most models of the "Favour" and "Royal" series are equipped. Also included are functions such as scene change, virtual trip wire, zone surveillance, recognition of added/removed objects or face recognition. The models of the "Diamant" series have an expanded Intelligent Video Analysis (IVA+), with which in addition functions such as people counting and heat map are also possible. These functions are especially interesting for applications in which an assessment of e.g. customer flows or number of visitors are desired.

The new H.265 video codec standard has found its way into SANTEC IP cameras. Several models of the "Diamant" series already thus have via H.265, which – compared to H.264 – makes possible twice as strong compression with consistent quality. This is especially an advantage with the compression efficiency in the case of high image resolutions, such as you find with HD or UHD images.

The newest member of the SANTEC IP camera family are the 4K/UHD models with H.265 decoders. SANTEC currently offers three different camera models, namely as box camera, dome camera and bullet camera. These models have over 12 MP resolution with 4000x3000 pixels. No detail will escape you with these cameras with additional functions such as the expanded Intelligent Video Analysis (IVA+). For the ideal display of 4K/UHD video images, SANTEC offers a 4K/UHD monitor (model SLS-284K; see page 71) as well as two recorders (model SNVR-2812P and SNVR-23212P; see page 79), which likewise support 4K/UHD.



4K/UHD cameras and recorders:  
Even sharper images, even greater details



Intelligent Video Analysis (IVA): Everything in sight – everything under control and avoiding false alarms

	Favour	Royal	Diamant
Models:			
Box camera	No	Yes	Yes
Dome camera	Yes	Yes	Yes
Bullet camera	Yes	Yes	Yes
PT dome, speed dome	Yes (mini PT dome)	Yes (speed dome)	No
Resolutions	2-4 MP	2-4 MP	2-12 MP (4K/UHD)
H.265 Video Code	No	No	Yes, depending on model
Video Streaming	Dual, triple	Dual, triple, quad	Triple
Lenses	Fixed lens, 4x motor zoom	4x motor zoom, 3x auto focus, auto back focus (ABF)	4x motor zoom, auto back focus (ABF)
Wide Dynamic Range (WDR)	BLC, HLC, DWDR, 120 dB true WDR	BLC, HLC, DWDR, 120 dB true WDR	BLC, HLC, DWDR, 140 dB true WDR
Smart Scene Adaptive (SSA)	No	No	Yes
Intelligent Video Analysis (IVA)	Depending on model	Depending on model	Yes, IVA+ as well
Remote access via "Burg Cam" app	Yes	Depending on model	Yes

## Favour

The SANTEC cameras in the “Favour” series are functional and robust. Despite their excellent price-performance ratio, these cameras do not compromise on image quality and stability. If a system should be functional and economical, then the “Favour” products are the right choice!

- Genuine glass fixed lenses
- Functional
- Versatile
- Compact
- Video analysis
- 120 dB True WDR

All SANTEC IP cameras have different protocols for integration, control or security such as HTTPS, BONJOUR, DHCP, RTSP or ONVIF.

(Functions dependent on models)



## Royal

The cameras of the Royal series include various camera types, such as box cameras or speed domes. All cameras produce excellent images in high quality, even under low light conditions, and are very stable. Functions such as high-performance WDR (True WDR) and day/night function are just as much a matter of course as an intuitive GUI and additional functions such as motion detection, one push lens adjustment and support of mobile devices.

- Outstanding image quality with up to 4 megapixel resolution
- Wide versatile product range
- Optimised streaming
- Intelligent video analysis
- 120dB WDR (True WDR) (depending on model)
- Motorised and auto focus lenses

(Functions dependent on models)



## Diamant

The camera models of the “Diamant” series are extremely high-performance and are available as box cameras, bullet cameras, dome cameras and fisheye cameras. The series includes 2 MP dome or bullet cameras with full HD resolution (SNC-241DDIA, SNC-241DBIA) as well as 12 MP camera models that can also generate 4K/UHD images with 4000x3000 pixels (box camera SNC-831DLNN, dome camera SNC-831DDIA, bullet camera SNC-831DBIA and fisheye camera SNC-831DFIF).

- Up to 12 MP resolution (4000x3000 pixels 4K/UHD) or full HD (1920x1080), depending on model
- Intelligent Video Analysis (partly also with IVA+)
- Bullet camera with special 16:9 sun shield
- Up to 140dB True WDR (depending on model)
- Low light sensor, for clear visibility at minimum light (depending on model)
- Also available with H.265 video codec
- All Diamond models come with Smart Scene Adaptive (SSA): An automatic settings adjustment to the given or changing lighting conditions is made here.

(Functions dependent on models)



## IP box cameras, IP camera sets

### IP box cameras

Royal



Royal



Diamant



Part number	500006	500004	500005
Part designation	SNC-211RLNA	SNC-431RLNN	SNC-831DLNN
Type	IP day/night box camera	IP day/night box camera	4K/UHD IP Box camera
Image sensor	1/2.8" Exmor CMOS	1/3" Progr. Scan CMOS	1/1.7" Progr. Scan CMOS
Resolution (pixel)	2 MP (1920x1080)	4 MP (2688x1520)	12 MP (4000x3000)
Video codec	H.264, MJPEG	H.264, H.264H, H.264B, MJPEG	H.264, H.264H, H.264B, MJPEG
Max. frame rate (fps)	25/30 at 1080p	20 at 4 MP, 25/30 at 3 MP	15 at 12 MP, 25/30 at 8 MP/1080p
No. of video streams	3 (main and sub)	3 (individually configurable)	3 (individually configurable)
Lens mount	Internal	C/CS	C/CS
Aperture control	Auto/manual	DC	DC
Lens type	30x zoom lens (internal)	Delivered without lens	Delivered without lens
Focus adjustment	Auto focus	Auto back focus	Auto back focus
Focal length	4.3 – 129 mm, F1.6 – F5	—	—
Angle of view (horizontal)	65.1° – 2.3°	—	—
Sensitivity	0.005 lux (b/w)	0.01 lux (colour), 0.001 lux (b/w)	0.01 lux (colour), 0.001 lux (b/w)
Wide Dynamic Range (WDR)	BLC, HLC, 120 dB True WDR	BLC, HLC, 120 dB True WDR	BLC, HLC, DWDR
Audio support	Bi-directional (1/1)	Bi-directional (1/1)	Bi-directional (1/1)
Switch contacts I/O	2/1	2/1	2/1
Motion detection	Yes (4)	Yes (4)	Yes (4)
Region-of-Interest (ROI)	Yes	Yes	Yes
Intelligent video analysis	Yes	Yes	Yes, (expanded IVA+)
Operating voltage / max. power consumption	12 V DC, 24 V AC, PoE / 10 Watt	12 V DC, 24 V AC, PoE / 10 Watt	12 V DC, 24 V AC, PoE / 12 Watt
Micro SD card slot	Yes	Yes	Yes
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +60
Dimensions W x H x D (mm)	70 x 70 x 160	74 x 65 x 135	74 x 65 x 135
Weight	1,000 g	300 g	300 g
Special features	30 x optical zoom, image fade-in, EIS, Defog, SVC (Scalable Video Codec)	Image fade-in, corridor mode	Smart Scene Adaptive (SSA), corridor mode, SVC (Scalable Video Codec)

### IP camera sets

Royal



Royal



Diamant



Part number	590019	590015	590020
Part designation	SNCS-211RLNA-AZIR65	SNCS-431RLNN-AZIR65	SNCS-831DLNN-AZIR65
Type	IP camera set with IR	IP camera set with IR	IP camera set with IR
Camera	SNC-211RLNA	SNC-431RLNN	SNC-831DLNN
Focal length	4.3 – 129 mm	5 – 50 mm	5 – 50 mm
Housing type	HEL-IR65D	HEL-IR65D	HEL-IR65D
Heater	Yes	Yes	Yes
Integrated IR illuminator	Yes, up to 70 metres	Yes, up to 70 metres	Yes, up to 70 metres
Voltage	230 V AC	230 V AC	230 V AC

## IP dome cameras

Favour



Favour



Favour



Part number	500111	500117	500113
Part designation	SNC-431FEIF	SNC-431FDIF	SNC-211FDIA
Type	IP day/night mini IR dome camera	IP day/night mini IR dome camera	IP day/night IR dome camera
Image sensor	1/3" Progr. Scan CMOS	1/3" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS
Resolution (pixel)	4 MP (2688×1520)	4 MP (2688×1520)	2 MP (1920×1080)
Video codec	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG	H.264, MJPEG
Max. frame rate (fps)	20 at 4 MP, 25 at 3 MP	20 at 4 MP, 25 at 3 MP	25 at 2 MP
No. of video streams	3 (individually configurable)	3 (individually configurable)	2 (main and sub)
Lens type	Fixed lens	Fixed lens	Motorised DC zoom lens
Focal length	3.6 mm / F2.0	2.8 mm	2,7 – 12 mm / F1.4
Angle of view (horizontal)	84°	106°	82° – 28°
Sensitivity	0.01 lux (colour), 0 lux (IR)	0.01 lux (colour), 0 lux (IR)	0.01 lux (colour), 0 lux (IR)
IR cut filter / Infrared	ICR / yes, up to 30 m	ICR / yes, up to 15 m	ICR / yes, up to 20 m
Digital noise reduction	2D NR, 3D NR	2D NR, 3D NR	3D NR
Wide Dynamic Range (WDR)	120 dB True WDR, BLC, HLC	120 dB True WDR, BLC, HLC	120 dB True WDR, BLC, HLC
Motion detection	Yes (4)	Yes (4)	Yes (4)
Region-of-Interest (ROI)	Yes	Yes	No
Privacy zones	Yes (4)	Yes (4)	Yes (4)
Intelligent video analysis	Yes	Yes	No
Switch contacts I/O	— / —	— / —	— / —
Classification / vandal-proof	IP-66 / No	IP-66 / IK10	IP-66 / IK10
Operating voltage / max. power consumption	12 V DC, PoE / 5 Watt	12 V DC, PoE / 5 Watt	12 V DC, PoE / 8.5 Watt
Micro SD card slot	Yes	Yes	Yes
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +60
Dimensions D x H (mm)	94 × 79,5	106 × 50,3	122 × 89
Weight	350 g	350 g	500 g
Special features	Smart IR, image fade-in, corridor mode	Smart IR, wide angle, image fade-in, corridor mode	Smart IR, smart codec

### Notes

1. You can find matching accessories for IP cameras starting on page 22.
2. The range of the IR illuminator is greatly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.

### More on IP cameras



## IP dome cameras

### IP dome cameras

Royal



Royal



Royal



Royal



Part number	500116	500112	500105	500110
Part designation	SNC-231RDIA	SNC-431RDIA	SNC-4323IR	SNC-6323IRH
Type	IP day/night IR dome camera	IP day/night IR dome camera	IP day/night IR dome camera	IP day/night IR dome camera
Image sensor	1/2.7" Progr. Scan CMOS	1/3" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS
Resolution (pixel)	2 MP (1920×1080)	4 MP (2688×1520)	3 MP (2048×1536)	3 MP (2048×1536)
Video codec	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG	H.264, MJPEG	H.264, MJPEG
Max. frame rate (fps)	25/30 at 1080p	20 at 4 MP, 25/30 at 3 MP	15 at 3 MP, 25 at 2 MP	15 at 3 MP, 25 at 2 MP
No. of video streams	3 (individually configurable)	3 (individually configurable)	4 (individually configurable)	4 (individually configurable)
Lens type	4-fold motorised DC zoom lens	4-fold motorised DC zoom lens	3-fold autofocus lens	3-fold autofocus lens
Focal length	2.7 – 12 mm	2.7 – 12 mm	3 – 9 mm	3 – 9 mm
Angle of view (horizontal)	99° – 34°	100° – 33°	29° – 83° at 3 MP, 27° – 79° at 2 MP,	31° – 95° at 3 MP, 28° – 90° at 2 MP,
Sensitivity	0,01 lux, F1.4	0,01 lux, F1.4	0.2 lux	0.2 lux
IR cut filter / infrared	ICR / yes, up to 50 m	ICR / yes, up to 50 m	ICR / yes, up to 25 m	ICR / yes, up to 25 m
Digital noise reduction	2D NR, 3D NR	2D NR, 3D NR	2D NR, 3D NR, SPQ	2D NR, 3D NR, SPQ
Wide Dynamic Range (WDR)	120 dB True WDR, BLC, HLC	120 dB True WDR, BLC, HLC	4 levels, digital	4 levels, digital
Motion detection	Yes (4)	Yes (4)	Yes (4)	Yes (4)
Region-of-Interest (ROI)	Yes	Yes	Yes	Yes
Privacy zones	Yes (4)	Yes (4)	Yes (5)	Yes (5)
Intelligent video analysis	Yes	Yes	No	No
Switch contacts I/O	1/1	1/1	1/1	1/1
Audio	1/1	1/1	1/1	1/1
Classification / vandal-proof	IP-66 / IK10	IP-66 / IK10	IP-44 / No	IP-66 / IK10
Operating voltage / max. power consumption	24 V AC, PoE / 10 Watt	24 V AC, PoE / 10 Watt	12 V DC, 24 V AC, PoE / 4 Watt	12 V DC, 24 V AC, PoE / 7 Watt
Micro SD card slot	Yes	Yes	Yes	Yes
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +50	-20 to +60
Dimensions D x H (mm)	159 x 118	159 x 118	117 x 89	151 x 130
Weight	800 g	800 g	382 g	820
Special features	Smart IR, image fade-in, corridor mode	Smart IR, image fade-in, corridor mode	—	Heating (via external power supply)

#### Notes

1. You can find matching accessories for IP cameras starting on page 22.
2. The range of the IR illuminator is greatly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.



## IP dome cameras

Diamant



Diamant



Part number	500118	500115
Part designation	SNC-241DDIA	SNC-831DDIA
Type	IP day/night IR dome camera	4K/UHD IP day/night IR dome camera
Image sensor	1/2.8" Exmor R CMOS	1/1.7" Progr. Scan CMOS
Resolution (pixel)	2 MP (1920×1080)	12 MP (4000×3000)
Video codec	H.265, H.264, MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	25/30 at 1080p	15 at 12 MP, 25/30 at 8 MP (4K/UHD)
No. of video streams	3 (individually configurable)	3 (individually configurable)
Lens type	Motorised DC zoom lens	Motorised DC zoom lens
Focal length	2.7 – 12 mm	4,1 – 16.4 mm / F1.5
Angle of view (horizontal)	99° – 34°	84.5° – 34°
Sensitivity	0.005 lux, F1.4 (colour) / Low Light	0.01 lux, F1.4
IR cut filter / Infrared	ICR / yes, up to 50 m	ICR / yes, up to 50 m
Digital noise reduction	3D NR	3D NR
Wide Dynamic Range (WDR)	140 dB True WDR, BLC, HLC	BLC, HLC, DWDR
Motion detection	Yes (4)	Yes (4)
Region-of-Interest (ROI)	Yes	Yes
Privacy zones	Yes (4)	Yes (4)
Intelligent video analysis	Yes, (expanded IVA+)	Yes, (expanded IVA+)
Switch contacts I/O	1/1	1/1
Audio	1/1	1/1
Classification / vandal-proof	IP-66 / IK10	IP-66 / IK10
Operating voltage / max. power consumption	12 V DC, 24 V AC, PoE / 15 Watt	12 V DC, 24 V AC, PoE / 24 Watt
Micro SD card slot	Yes	Yes
Operating temperature (°C)	-20 to +60	-20 to +60
Dimensions D x H (mm)	159 x 118	159 x 118
Weight	800 g	1,100 g
Special features	Heat map, people counting, smart IR, 140dB WDR, H.265, Smart Scene Adaptive (SSA), low light, image fade-in, defog, EIS, corridor mode	Heat map, people counting, smart IR Smart Scene Adaptive (SSA), image fade-in, defog, EIS, corridor mode, picture-in-picture (web interface)
Items included in delivery	Junction box SNCA-MK-4632	Junction box SNCA-MK-4632

### Notes

1. You can find matching accessories for IP cameras starting on page 22.
2. The range of the IR illuminator is greatly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.

## IP bullet cameras

### IP bullet cameras

Favour



Royal



Royal



Part number	500305	500304	500316
Part designation	SNC-431FBIF	SNC-431RBIA	SNC-231RBIA
Type	IP day/night mini IR bullet camera	IP day/night IR bullet camera	IP day/night IR bullet camera
Image sensor	1/3" Progr. Scan CMOS	1/3" Progr. Scan CMOS	1/2.7" Progr. Scan CMOS
Resolution (pixel)	4 MP (2688×1520)	4 MP (2560×1440)	2 MP (1920×1080)
Video codec	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	20 at 4 MP, 25 at 3 MP	20 at 4 MP, 25 at 3 MP	25/30 at 2 MP
No. of video streams	3 (individually configurable)	3 (individually configurable)	3 (individually configurable)
Lens type	Fixed lens	Motorised DC zoom lens	Motorised DC zoom lens
Focal length	3.6 mm / F2.0	2.7 – 12 mm / F1.4	2.7 – 12 mm / F1.4
Angle of view (horizontal)	84°	100° – 33°	99° – 34°
Sensitivity	0.01 lux (colour), 0 lux (IR)	0.01 lux (colour), 0 lux (IR)	0.01 lux (colour), 0 lux (IR)
IR cut filter / Infrared	ICR / yes, up to 30 m	ICR / yes, up to 50 m	ICR / yes, up to 50 m
Digital noise reduction	2D NR, 3D NR	2D NR, 3D NR	2D NR, 3D NR
Wide Dynamic Range (WDR)	120 dB True WDR, BLC, HLC	120 dB True WDR, BLC, HLC	120 dB True WDR, BLC, HLC
Motion detection	Yes (4)	Yes (4)	Yes (4)
Region-of-Interest (ROI)	Yes	Yes	Yes
Privacy zones	Yes (4)	Yes (4)	Yes (4)
Intelligent video analysis	Yes	Yes	Yes
Switch contacts I/O	— / —	2/1	2/1
Audio	— / —	1/1	1/1
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / No
Operating voltage / max. power consumption	12 V DC, PoE / 6 Watt	12 V DC, PoE / 11.5 Watt	24 V AC, PoE / 11.5 Watt
Micro SD card slot	No	Yes	Yes
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +60
Dimensions W × H × D (mm)	70 × 70 × 178	280 × 95 × 95	280 × 95 × 95
Weight	800 g	1,100 g	1,100 g
Special features	Smart IR, image fade-in, corridor mode	Smart IR, 16:9 sun shield, image fade-in, corridor mode	Smart IR, 16:9 sun shield, image fade-in, corridor mode

### Notes

1. You can find matching accessories for IP cameras starting on page 22.
2. The range of the IR illuminator is greatly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.

# IP bullet cameras



## IP bullet cameras

Royal



Diamant



Diamant



Part number	500303	500319	500315
Part designation	SNC-5323IR	SNC-241DBIA	SNC-831DBIA
Type	IP day/night IR bullet camera	IP day/night IR bullet camera	4K/UHD IP day/night IR bullet camera
Image sensor	1/2.8" Progr. Scan CMOS	1/2.8" Exmor R CMOS	1/1.7" Progr. Scan CMOS
Resolution (pixel)	3 MP (2048x1536)	2 MP (1920x1080)	12 MP (4000x3000)
Video codec	H.264, MJPEG	H.265, H.264, MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	15 at 3 MP, 25 at 2 MP	25/30 at 1080p/720p	15 at 12 MP, 25/30 at 8 MP (4K/UHD)
No. of video streams	4 (individually configurable)	3 (individually configurable)	3 (individually configurable)
Lens type	3-fold autofocus lens	Motorised DC zoom lens	Motorised DC zoom lens
Focal length	3 – 9 mm / F1.2	2.7 – 12 mm / F1.4	4.1 – 16.4 mm / F1.53
Angle of view (horizontal)	95° – 31° at 3 MP, 90° – 28° at 2 MP	99° – 35°	84.5° – 34°
Sensitivity	0.2 lux (colour), 0 lux (IR)	0.005 lux (colour), 0 lux (IR)	0.05 lux (colour), 0 lux (IR)
IR cut filter / Infrared	ICR / yes, up to 25 m	ICR / yes, up to 50 m	ICR / yes, up to 50 m
Digital noise reduction	2D NR, 3D NR, SPQ	3D NR	3D NR
Wide Dynamic Range (WDR)	4 levels, digital	140 dB True WDR, BLC, HLC	BLC, HLC, DWDR
Motion detection	Yes (4)	Yes (4)	Yes (4)
Region-of-Interest (ROI)	Yes	Yes	Yes
Privacy zones	Yes (5)	Yes (4)	Yes (4)
Intelligent video analysis	No	Yes, (expanded IVA+)	Yes, (expanded IVA+)
Switch contacts I/O	1/1	2/1	2/1
Audio	1/1	1/1	1/1
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / No
Operating voltage / max. power consumption	12 V DC, 24 V AC, PoE / 11.6 Watt	12 V DC, 24 V AC, PoE / 15 Watt	12 V DC, PoE / 24 Watt
Micro SD card slot	Yes	Yes	Yes
Operating temperature (°C)	-20 to +50	-20 to +60	-20 to +60
Dimensions W x H x D (mm)	92 x 88 x 296	280 x 95 x 95	280 x 95 x 95
Weight	1,100 g	1400 g	800 g
Special features	Smart IR	People counting, heat map, smart IR, 16:9 sun shield, 140dB WDR, H.265, Smart Scene Adaptive (SSA), low light, image fade-in, EIS, defog, corridor mode	People counting, heat map, smart IR, 16:9 sun shield, Smart Scene Adaptive (SSA), image fade-in, defog, corridor mode

### Notes

1. You can find matching accessories for IP cameras starting on page 22.
2. The range of the IR illuminator is greatly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.

## IP speed domes and IP mini PT domes

Favour



Royal



Part number	500101	500114
Part designation	SNC-311FSNF	SNC-231RZNA
Type	IP mini PT dome	IP Speed dome
Image sensor	1/3" Progressive Scan CMOS	1/2.7" Progr. Scan CMOS
Resolution (pixel)	3 MP (2048x1536)	2 MP (1920x1080)
Video codec	H.264 / MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	20 at 3 MP, 25 at 2 MP	25 at 2 MP
No. of video streams	3 (individually configurable)	3 (individually configurable)
Lens type	Fixed lens	Autofocus lens
Focal length	3.6 mm / F1.2	2.7 – 11 mm / F1.6 – F2.8
Zoom (optical / digital)	— / 3 x	4 x / 16 x
Angle of view (horizontal)	72.5°	93.5° – 30.24°
Sensitivity	0.01 lux (colour)	0.05 lux (colour), 0.005 (B/W)
IR cut filter / Infrared	ICR / no	ICR / no
Digital noise reduction	3D NR	2D NR, 3D NR
Wide Dynamic Range (WDR)	HLC, BLC, DWDR	HLC, BLC, 120dB True WDR
Rotation radius / Tilt angle	355° / 10° – 90°	355° / 10° – 90° (auto flip)
Preset positions / rotation speed	25 / 100°/s	300 / 100°/s
Region-of-Interest (ROI)	No	No
Privacy zones	Yes (4)	Yes (24)
Intelligent video analysis	No	Yes
Switch contacts I/O	0/0	0/0
Audio	0/0	0/0
Classification / vandal-proof	IP-66 / IK10	IP-66 / IK10
Operating voltage / max. power consumption	12 V DC, PoE / 3 Watt	12 V DC, PoE / 10 Watt
Micro SD card slot	Yes	Yes
Operating temperature (°C)	-20 to +50	-20 to +60
Dimensions D x H (mm)	130 x 58	122 x 89
Weight	250 g	600 g
Special features	—	Defog, video Analysis, 120dB True WDR

Note

You can find matching accessories for IP cameras starting on page 22.

### More on IP speed domes



# IP speed domes and IP mini PT domes



## IP speed domes and IP mini PT domes



Part number	500500	500503	500901
Part designation	SNC-211RSIA	SNC-231RSIA	SNC-231RSNA
Type	IP IR speed dome	IP Speed dome	IP Speed dome
Image sensor	1/2.7" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS
Resolution (pixel)	2 MP (1920x1080)	2 MP (1920x1080)	2 MP (1920x1080)
Video codec	H.264 / MJPEG	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	25 at 2 MP / 50/60 at 720p	25/30 at 1080p, 50/60 at 720p	25/30 at 1080p, 50/60 at 720p
No. of video streams	2 (main and sub)	3 (individually configurable)	3 (individually configurable)
Lens type	Motor zoom lens	Motorised zoom lens	Motorised zoom lens
Focal length	5.5 – 110 mm / F1.6 – F3.5	4.7 – 94.9 mm 7 / F1.4 – F2.6	4.7 – 94.9 mm / F1.4 – F2.6
Zoom (optical / digital)	20 x / 16 x	20 x / 16 x	20 x / 16 x
Angle of view (horizontal)	51° – 2.6°	56.1 – 3.1°	56.1 – 3.1°
Sensitivity	0.05 (colour) / 0.005 (b/w)	0.05 lux (colour), 0.005 (B/W)	0.05 lux, F1.4
IR cut filter / Infrared	ICR / yes, up to 100 m	ICR / yes, up to 100 m	ICR / no
Digital noise reduction	2DNR / Ultra 3DNR	2D NR, Ultra 3D NR	2D NR, Ultra 3D NR
Wide Dynamic Range (WDR)	DWDR, HLC, BLC, Defog	BLC, HLC, DWDR	BLC, HLC, DWDR
Rotation radius / Tilt angle	360° / -15° – 180° (auto flip)	360° continuous / -15° – 180° (auto flip)	360° continuous / -15° – 180° (auto flip)
Preset positions / rotation speed	300 / 400°/s	300 / 400°/s	300 / 500°/s
Region-of-Interest (ROI)	No	Yes	Yes
Privacy zones	Yes (24)	Yes (24)	Yes (24)
Intelligent video analysis	No	Yes	Yes
Switch contacts I/O	2 / 1	2/1	2/1
Audio	1/1	1/1	1/1
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / IK10
Operating voltage / max. power consumption	24 V AC, PoE+ / 23 Watt	24 V AC, PoE+ / 23 Watt	24 V AC, PoE+ / 23 Watt
Micro SD card slot	Yes	Yes	Yes
Operating temperature (°C)	-20 to +50	-20 to +50	-20 to +60
Dimensions D x H (mm)	186 x 309	186 x 309	186 x 253
Weight	3500 g	3,500 g	2,500 g
Special features	P2P/cloud, smart IR, power supply and wall bracket included in delivery	Smart IR, power supply and wall bracket included in delivery, defog, SVC (Scalable Video Codec), video analysis	Power supply and wall bracket included in delivery, defog, SVC (Scalable Video Codec), video analysis

### Note

You can find matching accessories for IP cameras starting on page 22.

## Fisheye Camera

The new 360° fisheye camera SNC-831DFIF is not just small and inconspicuous. With its 12 MP resolution, it supports 4K/UHD images. Its video analysis functions – heat map and people counting – are special features to be highlighted. This camera also has a dewarping function as well as the new SmartTrack function (together with a speed dome and the VMS software). This fisheye camera is thus the ideal solution when it's about 360° surveillance of large areas or spaces such as public places, businesses, sports stadiums, etc.

Features of the SNC-831DFIF fisheye camera:

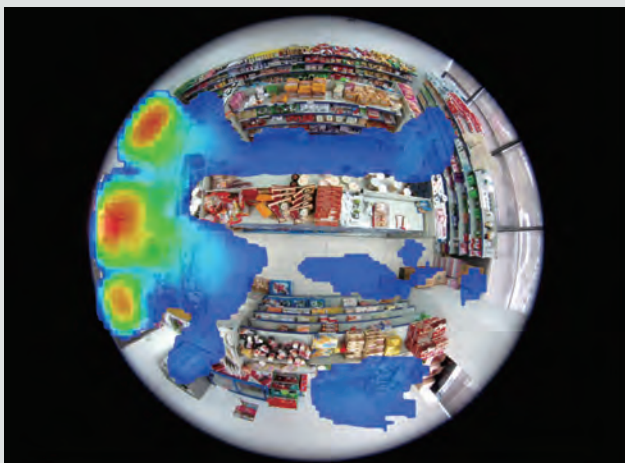
- 360° all-around view
- Perfect recording of the entire scene without "blind spots"
- Up to 12 MP resolution
- Electronic PTZ control (ePTZ)
- Integrated IR emitter with up to 10 m range
- Weather and vandalism protection (IP-66, IK10)
- Heat map, people counting, dewarping, SmartTrack



## Heat map and people counting

Activities in a selected area are measured with the heat map. For example, how many people or vehicles enter a particular area and exit it again can be recorded. The different activity flows are displayed in colour in the video image with the heat map. A statistical assessment in the form of tables or graphics can also be made. The heat map function can be used in multiple ways and consulted for analytical purposes, e.g. to optimise business processes.

- Identification of more or less frequented areas, e.g. in businesses with particular shelves or promotional areas. The effectiveness of product placement can thus be checked.
- Businesses or sales areas can be set up and designed in such a way that dead areas are avoided.
- The people counting function can check how high the visitor frequency is on particular workdays or at particular times. A more efficient deployment of staff can be made to be able to better absorb peak times.
- The people counting function can record how many people enter an area and also leave it again at this place.

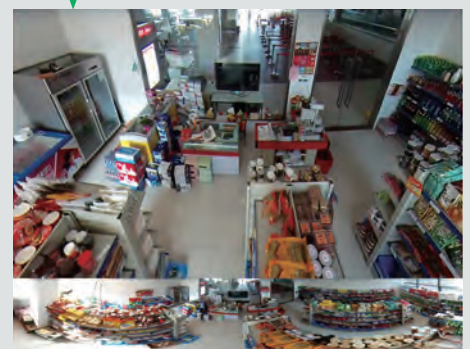


## Dewarping

The fisheye camera delivers a 360° view of the scene, therefore an all-around view. The view is, however, thereby distorted and displayed circularly, similar to a peep-hole. The dewarping function makes it possible to straighten out the images and thus display them to the viewer in their original dimensions and points of view – which is often more comfortable and familiar to the human eye. With dewarping, the 360° all-around image can thus be displayed on the monitor either as a 180° panoramic view or as a split view, or you select a particular area in the image, which then is straightened and displayed in the usual form. Using fisheye camera's e-PTZ function, you can then move back and forth in the straightened image, move the view and look at details.



Dewarping



## SmartTrack function



Fisheye Camera  
(SNC-831DFIF)



Speed dome  
(e.g. SNC-231RSNA)



VMS software  
(BW-IP-CVI-VMS)

With the SmartTrack function, the fisheye camera works together with a speed dome. The fisheye camera is attached directly above a speed dome so that both cameras record the same scene. The fisheye camera and one or more speed domes can communicate with each other via the network and the VMS software (BW-IP-CVI-VMS).

Due to its 360° view, the fisheye camera records the entire scene. If only one person, object, or event is of special interest and is to be recorded by the fisheye camera, this information can be reported to the speed dome. Using the speed dome, details of the scene can then be recorded or persons or vehicles “tracked” and looked at in detail.

The SNC-831DFIF fisheye camera can be combined with the SANTEC speed domes for the SmartTrack function.

## Fisheye Camera

Part number	500900
Part designation	SNC-831DFIF
Type	4K/UHD 360° fisheye camera
Image sensor	1/2.3" Progressive Scan CMOS
Resolution (pixel)	12 MP (4000×3000)
Video codec	H.264H, H.264, MJPEG, JPG
Max. frame rate (fps)	15 at 12 MP (4000×3000) 25/30 at 3 MP (2048×1536)
No. of video streams	2
Dewarp views	Panorama, 4/5/6 field display
Lens type	360° panorama lens, fixed focal length
Focal length	1.57 mm / F2.2
Field of view	185° / 185° / 185°, panoramic view
Sensitivity	0.05 lux (colour) F1.4, 0 lux (IR)
IR cut filter / Infrared	ICR (swivel-mounted)/ yes, up to 10m
Digital noise reduction	3D NR
Backlight compensation	BLC, HLC, DWDR
Privacy zones	Yes (4)
Alarm input/output	2/1
Audio input/output	1/1 (built-in microphone)
Audio compression	G.711a, G.711u, PCM
Micro SD card slot	Yes (max. 64 GB)
Classification / vandal-proof	IP-66 / IK10
Operating voltage / max. power consumption	12 V DC, PoE / 13 Watt
Operating temperature (°C)	-20 to +60
Dimensions D x H (mm)	150 x 50.7
Weight	580 g
Special features	Heat map, people counting, dewarping, E-PTZ, smart tracking

## Diamant



Note

You can find matching accessories for IP cameras starting on page 22.

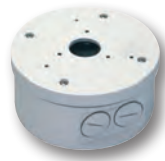
## Accessories for IP cameras: Overview

						
SNC-431FDIF	SNCA-WM-204W	SNCA-MK-4533	SNCA-PM-4661			
						
SNC-431FEIF	SNCA-MK-4530	SNCA-WM-204W	SNCA-MK-4534	SNCA-PM-4661		
						
SNC-211FDIA, SNC-231RZNA	SNCA-ICM-PFB200C	SNCA-WM-4644	SNCA-MK-4631	SNCA-PM-4661		
						
SNC-231RDIA, SNC-431RDIA, SNC-241DDIA, SNC-831DDIA	SNCA-ICM-PFB201C	SNCA-MK-4633	SNCA-CMT-4852	SNCA-MK-4632 (with SNC-241DDIA and SNC-831DDIA included in delivery)	SNCA-PM-4661	SNCA-WM-4645
						
SNC-831DFIF	SNCA-WM-4645	SNCA-MK-4630	SNCA-CMT-4852	SNCA-MK-4536	SNCA-CM-4670	SNCA-PM-4661
						
SNC-6323IRH	WB-HDHW	CMP-220W	SNCA-ICM-3620			
						
SNC-311FSNF	SNCA-WM-4643					
						
SNC-211RSIA, SNC-231RSIA, SNC-231RSNA	SNCA-JB-4640	SNCA-EXT-113	SNCA-EXT-4852	SNCA-CMT-4852	SNCA-CM-4670	SNCA-PM-4660
						
SNC-231RBIA, SNC-241DBIA, SNC-431RBIA, SNC-831DBIA, SNC-431FBIF	SNCA-MK-4530	SNCA-PM-4661	SNCA-CM-4670			
						
SNC-5323IR	JB-500	CMP-220W				



# IP camera accessories

## SANTEC IP camera accessories



incl. clamps

Part number	582031	582051	582032	582046   582047
Part designation	JB-500	WB-HDHW	CMP-220W	VA-13WIK   VA-13WIK/10
Type	Installation/junction box	Camera bracket	Corner / pole mounting	Camera bracket
Installation site / Camera	Outdoor / SNC-5323IR	Outdoor / SNC-6323IRH	Outdoor / SNC-5323IR	Indoor / Box cameras
Cable management	Yes	No	No	Yes
Material	Metal	Metal	Metal	Metal
Colour	White	White	White	White
Suitable for accessories	WB-HDHW, CMP-220W	JB-500	WB-HDHW, JB-500	—
Dimensions (mm)	141 × 68 (D × H)	143 × 102 × 265 (W × H × D)	164 × 116 × 99 (W × H × D)	25 × 130 (D × L)
Special features	IP-66, 2 × PG fitting, internal bracket for power adapter	—	Incl. clamps	Also available as 10-pack VA-13WIK/10



Part number	582076	582077	582078
Part designation	SNCA-ICM-PFB200C	SNCA-MK-4533	SNCA-MK-4534
Type	In-ceiling bracket	Junction box	Junction box
Installation site	Indoors	Indoors and outdoors	Indoors and outdoors
Cable management	Yes	Yes	Yes
Material / Colour	Metal, plastic / white	Aluminium, IP-66 / white	Aluminium, IP-66 / white
Dimensions (mm)	166 × 75.8	108 × 28.5	96.8 × 33.5
Suitable for	SNC-211FDIA, SNC-211RDIA, SNC-231RZNA	SNC-431FDIF	SNC-431FEIF



Part number	582071	582072	582081	582086
Part designation	SNCA-MK-4632	SNCA-MK-4633	SNCA-WM-4645	SNCA-ICM-PFB201C
Type	Junction box	Adapter plate	Wall bracket	In-ceiling bracket
Installation site	Indoors and outdoors	Indoors and outdoors	Indoors and outdoors	Indoors
Cable management	Yes	Yes	Yes	Yes
Material / Colour	Aluminium, IP-66 / white	Aluminium / White	Aluminium, IP-66 / white	Metal, plastic / white
Dimensions (mm)	161 × 38	159 × 35	134 × 134 × 187.5	211 × 88
Suitable for	SNC-231RDIA, SNC-241DDIA, SNC-431RDIA, SNC-831DDIA	SNC-231RDIA, SNC-241DDIA, SNC-431RDIA, SNC-831DDIA	SNC-231RDIA, SNC-241DDIA, SNC-431RDIA, SNC-831DDIA, SNC-831DFIF	SNC-231RDIA, SNC-241DDIA, SNC-431RDIA, SNC-831DDIA

## SANTEC IP camera accessories



<b>Part number</b>	<b>582083</b>	<b>582009</b>
<b>Part designation</b>	SNCA-MK-4536	SNCA-MK-4630
<b>Type</b>	Junction box	Adapter plate
<b>Installation site</b>	Indoors and outdoors	Indoors and outdoors
<b>Cable management</b>	Yes	Yes
<b>Material / Colour</b>	Aluminium, IP-66 / white	Aluminium
<b>Dimensions (mm)</b>	155 x 155 x 39	150.8 x 37
<b>Suitable for</b>	SNC-831DFIF	SNC-831DFIF



incl. clamps

<b>Part number</b>	<b>582022</b>	<b>582018</b>	<b>582016</b>
<b>Part designation</b>	SNCA-PM-3660	SNCA-ICM-3620	SNCA-CM-3610
<b>Type</b>	Pole mount adapter	In-ceiling bracket	Corner adapter
<b>Installation site / camera</b>	Outdoors / —	Indoor / SNC-6323IRH	Indoor / SNC-6323IRH
<b>Cable management</b>	Yes	Yes	Yes
<b>Housing material</b>	Metal	Metal / plastic	Metal
<b>Colour</b>	White	White	White
<b>Dimensions (mm)</b>	170 x 270 x 60 (W x H x D)	180 x 100 (D x H)	218 x 75 (D x H)
<b>Suitable for accessories</b>	SNCA-WM-3640	—	—



<b>Part number</b>	<b>582025</b>	<b>582014</b>	<b>582015</b>	<b>582021</b>
<b>Part designation</b>	SNCA-WM-3640	SNCA-CMT-3652	SNCA-CMT-3655	SNCA-OH-3630
<b>Type</b>	Wall bracket	Ceiling bracket	Ceiling bracket	Camera housing
<b>Installation site / Camera</b>	Outdoor	Indoors	Indoors	Outdoor / SNC-6323IRH
<b>Cable management</b>	Yes	Yes	Yes	Yes
<b>Housing material</b>	Metal	Metal	Metal	Metal
<b>Colour</b>	White	White	White	White
<b>Dimensions (mm)</b>	104 x 137 x 348 (W x H x D)	140 x 250 (D x L)	140 x 500 (D x L)	170 x 129 (D x H)
<b>Suitable for accessories</b>	SNCA-OH-3630 / SNCA-IMK-3820	SNCA-OH-3630 / SNCA-IMK-3820	SNCA-OH-3630 / SNCA-IMK-3820	SNC-6302 / SNC-6323IRH / SNC-6315IRH

## SANTEC IP camera accessories



Part number	582013	582054	582002
Part designation	SNCA-WM-4643	SNCA-WM-4644	SNCA-WM-204W
Type	Wall bracket	Wall bracket	Wall bracket
Installation site / Camera	Outdoors / SNC-311FSNF	Outdoors / SNC-211FDIA, SNC-231RZNA	Outdoors / SNC-431FEIF, SNC-431FDIF
Cable management	Yes	Yes	Yes
Material / Colour	Aluminium,ABS / white	Aluminium / white	Aluminium / white
Dimensions (mm)	160 × 120 × 74	160 × 122 × 76	160 × 122 × 76
Suitable for accessories	—	—	—
Special features	—	—	—



incl. clamps



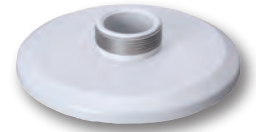
Part number	582055	582058
Part designation	SNCA-PM-4661	SNCA-MK-4631
Type	Pole mount adapter	Adapter / junction box
Installation site / Camera	Outdoors / —	Outdoors / SNC-211FDIA, SNC-231RZNA
Cable management	Yes	Yes
Material / Colour	Metal / White	Aluminium / white
Dimensions (mm)	118 × 87 × 21	122 × 33.8
Suitable for accessories	SNCA-MK-4530, SNCA-MK-4531, SNCA-MK-4730, SNCA-MK-4631	—
Special features	Incl. clamps	1 x M20 screw fitting



incl. clamps

Part number	582006	582004	582011
Part designation	SNCA-JB-4640	SNCA-CM-4670	SNCA-PM-4660
Type	Junction box / mounting box	Corner adapter	Pole mount adapter up to 127 mm
Installation site / camera	Outdoors / SNC-211RSIA, SNC-231RSIA, SNC-231RSNA	Outdoors / —	Outdoors / —
Cable management	Yes	Yes	Yes
Material / Colour	Metal / White	Metal / White	Metal / White
Dimensions (mm)	297 × 248 × 107	130 × 170 × 45	243 × 170 × 138
Suitable for accessories	SNCA-CM-4670, SNCA-PM-4660, SNCA-WM-4642	SNCA-WM-4642	SNCA-WM-4642
Special features	IP-66, 5 x M20 screw fitting	—	Incl. clamps

## SANTEC IP camera accessories



Part number	582007	582059	582009
Part designation	SNCA-MK-4530	SNCA-MK-4730	SNCA-MK-4630
Type	Adapter plate / junction box	Junction box	Adapter plate
Installation site / camera	Outdoors SNC-431FBIF, SNC-431RBIA, SNC-231RBIA, SNC-831DBIA	Outdoors / SNC-311FSNF	Outdoors / SNC-831DFIF
Cable management	Yes	Yes	Yes
Material / Colour	Aluminium / White	Aluminium / White	Metal / White
Dimensions (mm)	134 × 134 × 55	134 × 134 × 51	151 × 37
Suitable for accessories	SNCA-CM-4670, SNCA-PM-4660	SNCA-PM-4661	SNCA-WM-4642, SNCA-CMT-4852, SNCA-EXT-4852
Special features	—	—	—



Part number	582003	582005	582079
Part designation	SNCA-CMT-4852	SNCA-EXT-4852	SNCA-EXT-113
Type	Ceiling bracket	Extension	Extension
Installation site / Camera	Indoors / —	Indoors / —	Indoors / —
Cable management	Yes	Yes	Yes
Material / Colour	Aluminium / white	Aluminium / white	Aluminium / white
Dimensions (mm)	133 × 235	53 × 220	53 × 420
Suitable for	—	SNCA-CMT-4852, SNCA-MK-4830	SNCA-CMT-4852, SNCA-MK-4830
Special features	Extension by 235 mm	Extension by 220 mm	Extension by 420 mm

# Lenses for IP megapixel cameras



## Lenses for IP megapixel cameras



Part number	583002	583003
Part designation	17131DN	18161DN
Type	DC vario lens	DC vario lens
Format	1/2.8"	1/2.5"
Mount	CS	CS
Max. resolution	3 MP (2048x1536)	5 MP (2560x1920)
Day/night correction (IR)	Yes	Yes
Focal length (mm)	2.8 – 10 / F1.6	9 – 22 / F1.8
Angle of view (horizontal)	94°–32°@1/2.8" / 86°–29°@1/3"	37°–16°@1/2.5" / 34°–15°@1/2.7" / 30°–13°@1/3"



Part number	583006	583009
Part designation	17550DN	19012DN
Type	DC vario lens	DC vario lens
Format	1/2.7"	1/1.7"
Mount	CS	C/CS
Max. resolution	4 MP (2688x1520)	12 MP (4000x3000)
Day/night correction (IR)	Yes	Yes
Focal length (mm)	5 – 50 / F1.6	10.5 – 42 / F1.5
Angle of view (horizontal)	70° – 52°	46.9° – 14.2°

# Power supply for IP cameras

## Power supply for SANTEC IP cameras



Part number	581015	581016	579526
Part designation	SanPower-MS01L	SanPower-MS01BL	SanPower-MS01C
Type	1-channel PoE power supply	1-channel PoE power supply	1-channel PoE power supply
Number of Ethernet ports	1	1	1
Ethernet standards	10/100/1000M Base-T	10/100/1000M Base-T	10Base-T / 100Base-TX / 1000Base-TX
Input voltage	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC
Output voltage	48 V DC	56 V DC	56 V DC
PoE output voltage	15.4 W	30 W	33.6 W
PoE standard	IEEE802.3af	IEEE802.3at	IEEE802.3at / IEEE802.3af
Dimensions W × H × D (mm)	96 × 44 × 30	121 × 58 × 33	166 × 44 × 80
Operating temperature (°C)	0 to +40	0 to +40	-20 to +50
Weight	105 g	172 g	500 g



Part number	581006	581001	581000	581008
Part designation	VCA-12V-1.5ASA	SNPS-12D2	VCA-12V-1.5AE	VCA-12V-5ASA
Type	Plug-in power supply	Plug-in power supply	Power supply	Power supply
Input voltage	230 V AC	230 V AC	230 V AC	230 V AC
Output voltage	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised max 1.5 A	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised Max 5 A
Cable end	Plug	Plug	Open cable end	Plug
Housing material	Plug housing, plastic	Plug housing, plastic	Grouted, plastic, IP-64	Desktop housing, cable connection at both ends
Dimensions (mm)	70 × 34 × 72 (W × H × D)	51 × 37 × 95 (W × H × D)	54 × 33 (D × H)	65 × 40 × 120 (W × H × D)

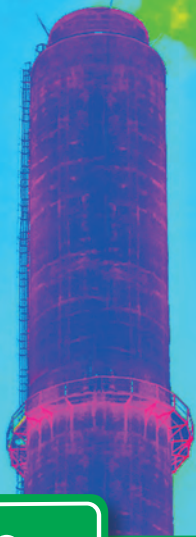


Part number	581011	581010	581007	581005
Part designation	VCA-200	VCA-500	VCA-12V-2A/A	VCA-600/A
Type	Power supply	Power supply	Power supply	Power supply
Input voltage	230 V AC	230 V AC	230 V AC	230 V AC
Output voltage	24 V DC, max 2.1 A	24 V DC, max 5 A	12 V DC, stabilised, max 2 A	24 V DC, max 5 A
Cable end / output	Open cable end	Open cable end	Screw terminal	Screw connection
Housing material	Desktop housing, with cables at both ends	Desktop housing, with cables at both ends	Weather-proof housing (IP-66)	Weather-proof housing (IP-66)
Dimensions W × H × D (mm)	110 × 65 × 135	110 × 65 × 170	110 × 90 × 210	110 × 90 × 210



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## IP Thermal imaging cameras

Fire warning

Hybrid Camera

Darkness

Long distance

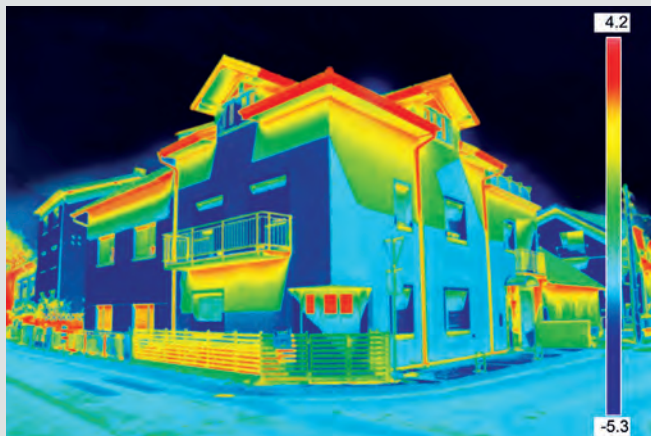
Tribrid connection

Video analysis



## Thermal imaging technology

A thermal imaging camera, often also referred to as a thermal camera, thermographic or infrared camera, in principle works like a normal camera. While normal cameras, however, can only record visible light, thermal imaging cameras function in the mid to far infrared range (3.5 – 15  $\mu\text{m}$ ) and thus in a wave length range that is not detectable by the human eye. Not only every living thing but also every inorganic object emits a certain amount of infrared radiation, which can be recorded by the thermal imaging camera. A thermal imaging camera thus functions independently from the ambient brightness, since it processes the emitted object radiation.



The quantity and intensity of the thermal radiation that an object gives off to its surroundings depends on its own warmth/temperature as well as the ability to give off again previously absorbed energy (emissivity). Hot and strongly emitting objects give off more than cooler objects. This thermal radiation, however, is not visible to the human eye but possibly may be felt. In order to make the thermal radiation visible, thermal images can be displayed either in colour or shades of grey, where the different colours represent different temperature ranges.

### Application areas for thermal imaging cameras:

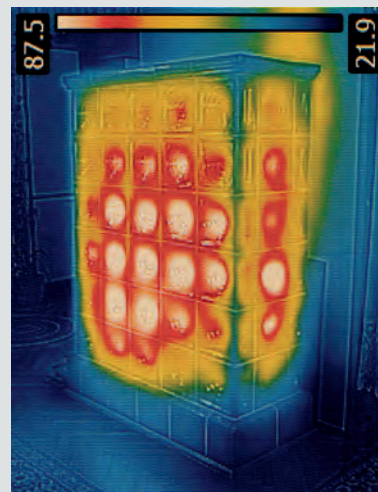
Thermal imaging cameras come into use where an uninterrupted day and night surveillance is required or no additional light sources (e.g. street lamps, building lighting) are available. Greater distances also usually have to be overcome.

Typical application areas are:

- Perimeter protection (properties, fences)
- Border security, coastal surveillance (e.g. harbour areas)
- Energy industry, e.g. surveillance of power lines or detecting leaks in pipelines
- Production processes (detecting energy loss, protection against machine overheating)
- Video surveillance in residential areas (discreet surveillance without additional light source)
- Transport and traffic

### Advantages of thermal imaging technology:

- Independent of ambient brightness, i.e. video surveillance not only during poor visibility conditions (fog, smoke) but also particularly in complete darkness
- Additional light sources (spotlights) are not necessary
- Detection of objects also over very great distances
- Temperatures can be measured on the object and thus temperature changes or differences can be determined, with temperature alarm if need be
- Very bright points of light, e.g. approaching car headlights, are offset by backlight compensation (no fades)





# Thermal imaging cameras



## IP thermal imaging cameras from Dahua

IP thermal imaging cameras from Dahua are available in various versions and models. SANTEC offers a bullet camera and speed dome as well as a PTZ dome with different lenses and different functions.

### Features:

- Tribrid video output for supporting HD-CVI, IP as well as analogue signals
- Models of the T series support temperature measurement, temperature analysis and temperature alarm
- Intelligent video analysis (trip wire, intrusion, object detection)
- Tracking (target tracking of people or vehicles)
- Fire detection and alarm activation
- PTZ dome with 2 integrated lenses: Real-time images as well as thermal images can be displayed simultaneously



## IP thermal imaging camera: Overview

									
Type	Bullet camera			Speed dome			PTZ dome		
Possible image resolutions (pixels) / lenses	336x256	640x512		336x256	640x512		336x256		
	7.5 mm 13 mm 19 mm			7.5 mm 13 mm 19 mm			35 mm 60 mm 100 mm		
Tribrid video output (IP, HD-CVI, analogue)	Yes			Yes			Yes		
Available lens focal length / viewing angle (H / V)	7.5 mm	13 mm	19 mm	7.5 mm	13 mm	19 mm	35 mm (thermal lens)	60 mm (thermal lens)	100 mm (thermal lens)
	45° / 35° 90° / 69°	25° / 19° 45° / 37°	17° / 13° 32° / 26°	45° / 35° 90° / 69°	25° / 19° 45° / 37°	17° / 13° 32° / 26°	9.3° / 7.1°	5° / 4°	3.3° / 2.5°
Digital zoom	16-fold 24-fold			16-fold 24-fold			16-fold		
Temperature measurement	Yes (models of the T series)			Yes (models of the T series)			No		
Temperature alarm	Yes (models of the T series)			Yes (models of the T series)			No		

### Note

Please contact us for special requirements for the thermal imaging cameras that were not specified above.

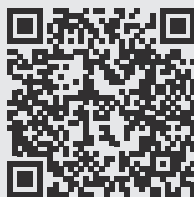
# IP thermal imaging cameras from Dahua

## IP thermal imaging cameras from Dahua

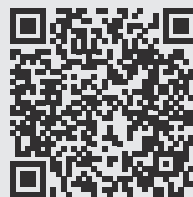


Part number	504310	504508	504511
Part designation	DH-TPC-BF5300-T-7.5	DH-TPC-SD5600-T-13	DH-TPC-PT8320-60
Type	IP bullet thermal imaging camera	IP speed dome thermal imaging camera	IP PTZ dome thermal imaging camera
Image sensor	Long-lasting, uncooled VOx microbolometer	Long-lasting, uncooled VOx microbolometer	Long-lasting, uncooled VOx microbolometer
Resolution (pixels)	336×256	640×512	336×256
Pixel size	17 μm	17 μm	17 μm
Temperature sensitivity	< 40mK / F1.0	< 40mK / F1.0	< 40mK / F1.0
Video codec	H.264, H.264H, MJPEG	H.264, H.264H, MJPEG	H.264, H.264H, MJPEG
Max. output frame rate (fps)	30 at 1280×1024, 30 at 720p	30 at 1280×1024, 30 at 720p	30 at 720p / 1280×1024 (thermal)
Video output	Tribrid (IP, HD-CVI, analogue), switchable BNC output (HD-CVI/analogue)	Tribrid (IP, HD-CVI, analogue), switchable BNC output (HD-CVI/analogue)	Tribrid (IP, HD-CVI, analogue), switchable BNC output (HD-CVI/analogue)
Lens	Athermalised lens	Athermalised lens	2 lenses: Real image and thermal image
Focal length	7.5 mm	13 mm	Thermal 60 mm / real image: 6-180 mm
Spectral range	7–14 μm	7–14 μm	7-13.5 μm
Viewing angle (H / V)	45° / 35°	45° / 37°	Thermal 95° / 4° real image 51.2° / 1.8°
Digital zoom	16-fold	24-fold	16-fold (thermal/real image)
Region-of-Interest (ROI)	Yes	Yes	Yes
Motion detection	Yes	Yes	Yes
Intelligent Video Analysis (IVA)	Yes	Yes	Yes
Temperature measurement	Yes	Yes	No
Temperature alarm	Yes	Yes	No
Preset positions	—	255	300
Preset speed	—	Panning: 300°/s, tilting: 200°/s	Panning: 160°/s, tilting: 60°/s
Tours	—	8	8
Pattern	—	5	5
Auto-pan / auto-scan	— / —	Yes / Yes	Yes / Yes
Panning radius	—	360° continuous	360° continuous
Panning speed	—	300°/s	160°/s
Tilt angle	—	-15° to 90°	0.1° to 60°
Tilt speed	—	120°/s	120°/s
Audio inputs	1	1	1
Alarm inputs / outputs	2 / 1	1 / 1	7 / 1
SD card slot	Yes (max. 128 GB)	Yes (max. 128 GB)	Yes (max. 128 GB)
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / No
Voltage	12 V DC, 24 V AC, PoE	24 V AC	24 V AC
Power consumption (watt)	6	17	70
Operating temperature (° C)	-40 to +60	-40 to +60	-40 to +60
Dimensions W × H × D (mm)	270 × 103 × 97	268 × 109 × 100	360 × 252 × 464
Weight	1.37 kg	3.5 kg	18.0 kg

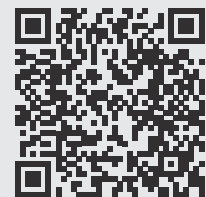
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### Note

The models mentioned above are illustrative for the different versions that are available. You can find a complete overview on page 31.



**BURG  
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## WiFi cameras

Fast

Remote access P2P

Inconspicuous

Easy

Compact

WiFi

Security at home





# BURG-WÄCHTER WiFi cameras

## Secure your home – with BURG-WÄCHTER WiFi cameras

Not only during holiday periods and after dark: The number of apartment and house break-ins has steadily risen in recent years. However, only a small number of these break-ins can be cleared up. Home owners can, however, do several things for the security of their residential property. These also include video surveillance, among other things.

Yet video surveillance cannot just be beneficial against break-ins or other troublemakers. Also in everyday life you can always track with video surveillance what is going on right now at your home. For no matter whether you are on the go, on holiday or in the office: You can always have your home in sight via your smartphone or tablet.

### Advantages of home video surveillance:

- See at a glance whether everything is OK at home.
- Video surveillance cameras increase your feeling of security, especially during a longer absence. (business travel, holiday, excursion, etc.)
- Cameras that are mounted visibly in an outdoor area help prevention. In this way undesirable individuals can be scared off.
- Thanks to high resolution images, criminals can be better identified. Even if the perpetrator is disguised, the search for this person can be more precise with the help of stature and clothing.
- Perpetrators can possibly be caught on site if the alarm is signalled in a timely manner.
- Parking spaces, entrances or paths to the house can be monitored. In this way you can see who has entered the property.
- The safety of children or pets can be improved using video surveillance.

## Advantages of the BURG-WÄCHTER WiFi camera series

- Different models are available for indoor and outdoor use
- Cameras are small, inconspicuous and uncomplicated – thus ideal for private home use
- Easy installation
  - Camera set up also possible without a PC
  - Also possible with old route models without WPS function
  - Set-up possible via app
- Push alarm notifications on your smartphone / tablet
- Long term recordings via the BURGcam REC recorder possible (up to 6 days of continuous recording by 2 cameras with a 1 TB HDD) or movement-specific recording
- Data storage on micro SD card in the camera
- Management of the devices via the BURG-WÄCHTER cloud as free service
- Own BURG-WÄCHTER cloud server in Germany
- Compatible with matching SANTEC devices
- BURGcam REC recorder is small, light and quiet and can thus be placed inconspicuously in the house



## Surveillance of a single-family house (example)



# BURG-WÄCHTER WiFi cameras



## BURG-WÄCHTER WiFi cameras



Part number	39030	39040	39050	39060
Part designation	BURGcam MOVE 301	BURGcam SMART 302	BURGcam DOME 303	BURGcam BULLET 304
Type	WiFi panning/ tilt camera	WiFi camera with swivel base	WiFi dome camera	WiFi bullet cameras
Application area	Interior	Interior	Interior and exterior	Interior and exterior
Image sensor	1/4" Progressive Scan CMOS	1/4" Progressive Scan CMOS	1/3" Progressive Scan CMOS	1/3" Progressive Scan CMOS
Sensor resolution (pixels)	1280×720 (720p HD)	1280×720 (720p HD)	3 MP: 2048×1536; 1080p: 1920×1080 (Full HD);	3 MP: 2048×1536; 1080p: 1920×1080 (Full HD);
Video codec	H.264, MJPEG	H.264	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	25 at 720p	25 at 720p	20 at 3MP, 25/30 at 1080p	20 at 3MP, 25/30 at 1080p
Lens type	Fixed focal length	Fixed focal length	Fixed focal length	Fixed focal length
Focal length	3.6 mm, F1.8	3.3 mm, F2.0	2.8 mm F2.0	2.8 mm F2.0
Angle of view (horizontal)	62°	56.7°	90°	90°
Digital noise reduction	3D NR	3D NR	3D NR	3D NR
White balance	Automatic	Automatic	Automatic	Automatic
Backlight compensation	BLC, HLC, WDR	BLC, HLC, WDR	BLC, HLC, DWDR	BLC, HLC, DWDR
Rotation radius / Tilt angle	355° / 0–90°	—	—	—
Preset positions / rotation speed	25 / 100°/s	—	—	—
Number of rotations	8	—	—	—
Audio support	Yes, bi-directional (loud- speaker, microphone)	Yes, bi-directional (loud- speaker, microphone)	No	No
Privacy zones	Yes (4)	Yes (4)	Yes (4)	Yes (4)
Integrated IR illuminator	Yes, up to 10 m	Yes, up to 5 m	Yes, up to 30 m	Yes, up to 30 m
Local access	Web browser	Web browser	Web browser	Web browser
Remote access	BurgCam App	BurgCam App	BurgCam App	BurgCam App
Set-up	Via WiFi (WPS key), LAN, app (smartphone, tablet)	Via WiFi (WPS key), app (smartphone, tablet)	Via WiFi (WPS key), LAN, app (smartphone, tablet)	Via WiFi (WPS key), LAN, app (smartphone, tablet)
SD card slot	Yes (max. 64 GB)	Yes (max. 64 GB)	Yes (max. 128 GB)	Yes (max. 128 GB)
Classification / vandal-proof	— / No	— / No	IP-66 / IK10	IP-66 / No
Operating voltage / max. power consumption	5 V DC / 7.5 watt	5 V DC / 3 watt	12 V DC / 4.5 watt	12 V DC / 4.5 watt
Operating temperature (°C)	0 to +45	0 to +45	-30 to +60	-30 to +60
Dimensions (mm)	94 × 94 × 94	65 × 85 × 20	Ø 110 × 81	Ø 70 × 165
Weight	360 g	75 g	470 g	430 g
Mounting	Standing, wall/ceiling (screw mounting)	Standing, wall/ceiling (adhesive mounting)	Wall/ceiling (screw mounting)	Wall/ceiling (screw mounting)
Special features	Swivel and tilt function; power supply unit not included in scope of delivery.	Swivel tilt base, micro USB power cable included in scope of delivery	Screw antenna, power supply unit included in scope of delivery.	Bracket, removable sun shield, screw antenna, power supply unit included in scope of delivery

Learn more:



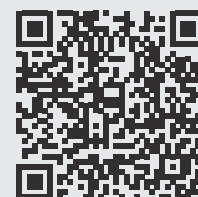
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## BURG-WÄCHTER WiFi cameras

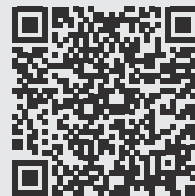
### Matching recorder for supporting the WiFi cameras

<b>Part number</b>	<b>39070</b>
Part designation	BURGcam REC 351
Type	Digital network recorder for up to 4 BURG-WÄCHTER WiFi cameras
HDD capacity (internal)	Via side slot without tools (HDD not included in scope of delivery)
HDD capacity (max.)	2 TB
Max. number of HDD (internal)	1 × SATA (2,5")
HDD can be externally connected	No
USB interface	2 × USB 2.0
Monitor outputs	1 × VGA, 1 × HDMI
Video export interfaces	USB, Network
Control devices (external)	PC mouse
Ethernet connector	1 × RJ-45 (10Base-T/100Base-TX)
Compression methods	H.264/MJPEG (video), G.711 (audio)
Max. resolution	Full HD (1920x1080)
Max. frame rate (fps)	25 at 2 × 1080p, 25 at 4 × 720p
Access	Web interface, local monitor
Remote access	P2P, BURG-WÄCHTER cloud
Housing colour	White
Voltage / Power consumption	5 V DC / 10 watt (without HDD)
Operating temperature (°C)	0° to +55° C
Dimensions (W x H x D)	195 × 35 × 130 mm
Weight	300 g (without HDD)
Recommended HDD	SANTEC HDD-525HV: 2.5" HDD, 500GB, 24/7 tested



Recommended HDD  
(HDD-525HV)

Learn more:



### Recommended HDD for recorder

<b>Part number</b>	<b>579613</b>
Part designation	HDD-525HV
Type	HDD
HDD capacity (max.)	500 GB
Interface	Serial ATA/600
Dimensions	2.5" housing
Specials	24/7 tested; optimised for video applications



### Recommended accessories for IP cameras:



<b>Part number</b>	<b>582080</b>
Part designation	SNCA-MK-136
Type	Installation box (IP 66)
Mounting option	Ceiling/wall mounting
Dimensions (mm)	110 × 33.5
Suitable for	BURGcam DOME 303



<b>Part number</b>	<b>582008</b>
Part designation	SNCA-MK-4531
Type	Adapter / junction box
Mounting option	Ceiling/wall mounting
Dimensions (mm)	134 × 55
Suitable for	BURGcam BULLET 304



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HD-CVI



## HD-CVI cameras

RG59/RG6

500 m (1080p) via coax

Dual Video

Full HD

No latency

Real time

Economical

True WDR



## Resolution in full HD via coax

HD-CVI – the High Definition Composite Video Interface – is the new video standard for analogue modulated signals in full HD via coaxial cable (RG59 / RG6) and UTP cable. With the SANTEC SCC series, you get the latest generation of HD-CVI cameras with full HD resolution and a wide product range that leaves nothing to be desired. In addition to multi-megapixel IP cameras and HD-SDI cameras, you now have the option of installing SANTEC HD-CVI cameras with 720p, 1080p or CVBS 960H resolution. The model range includes everything from the box camera to the PT dome as well as multi-norm recorders for HD-CVI, analogue and IP cameras. If you are looking for a high-resolution video system for long transmission paths that is also easy to install and extremely cost efficient, then HD-CVI is your best choice!

- Full HD via coax, without latency and IT components  
Transmit images in 720p (1280x720) and 1080p (1920x1080), without delays and record them in real time. In doing so, utilise as usual point to point coaxial connections (RG59 / RG6) or UTP connections. IT components such as routers or switches are not necessary.
- Extremely long transmission paths by means of an automatic signal fit 1080p (720p) up to 500 m (700 m) via coax, up to 300 m via UTP at 720p, completely without a repeater!
- Combined video, audio, OSD and PTZ signals  
HD-CVI transmit simultaneously video and audio data as well as PTZ signals and OSD control commands over a standard coaxial or UTP cable. This enables you to adjust zoom and focus conveniently via the recorder. This saves you both material and a lot of time during the installation and set-up.
- Cost-effective and without problems  
Convert your analogue CCTV video system now to full HD with our new CVI hybrid and tribrid recorders and cameras: Easy, fast and cost-effective – at prices that will delight you!



Learn more:



## The HD-CVI standard

High resolution videos are transmitted in full HD (1920x1080) and 720p (1280x720). With analogue/digital modulation, the data are transmitted uncompressed. The modulation makes possible a nearly interference-free real-time transmission in HD quality. Coaxial cable (RG59 / RG6) or UTP cable are used for the transmission of the video images. The point to point connections from the camera to the recorder have the advantage that no additional latencies result, and the set-up can be carried out at lightning speed. HD-CVI from SANTEC has an automatic signal fit and permits long transmission paths of up to 700 m. Combined video, audio, OSD and PTZ signals are transmitted over one cable. All adjustments of the camera can be thus be made directly from the recorder.

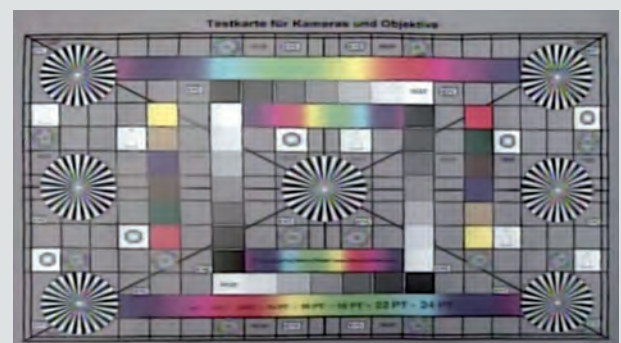
### Advantages:

- Practically no noise due to interference in the transmission path
- Brilliant colour reproduction
- Significantly less motion blur than comparable analogue systems
- Videos in full HD quality
- Longer transmission paths without a repeater
- PTZ / OSD control without additional cables or adapters
- Convenient adjustment and installation via the recorder
- Transmission over more economical UTP cable possible
- Our hybrid and tribrid recorders make it possible for you to operate old and new technologies at the same time and thus to be able to offer the best price-performance ratio and your system system upgrade.

### Image comparison of analogue and HD-CVI



HD-CVI (1920x1080)



960H (960x582) – 16:9



# HD-CVI box camera



## SANTEC HD-CVI box camera

Karat



<b>Part number</b>	503001
Part designation	SCC-220KLNN
Type	HD-CVI day/night box camera
Installation	Interior / installation in housing
Sensor type	1/2.9" Progressive Scan CMOS
Video norm	PAL
Video output	HD-CVI / 960H CVBS (analogue)
Resolution (pixel)	1080p / 960H
Max. frame rate (fps)	25 at 1080p, 50 at 720p
Lens type	No lens included
Focal length	—
Angle of view (horizontal)	—
Sensitivity	0.05 lux
IR cut filter / illuminator	Mechanical / No
Digital noise reduction	3DNR
Backlight compensation	HLC, BLC, DWDR
Motion detection	Yes (via recorder)
Privacy zones	Yes (16)
Switch contacts I/O	No
Classification / vandal-proof	IP-44 / No
Voltage	12 V DC / 24 V AC
Power consumption (watt)	2.5
Operating temperature (°C)	-20 to +50
Dimensions (mm)	58 × 62 × 128
Weight	370 g

## Accessories



<b>Part number</b>	582048	583002	582042
Part designation	WA-8SP	17131DN	HEL-62D
Type	Camera bracket	Lens	Weather-proof housing

### Notes

1. The lens pictured is not included in the scope of delivery (see page 44 for additional lenses).
2. We recommend the power supply unit VCA-12V-1.5ASA for the power supply with 12 V DC (see page 44 for others).

## Camera set

<b>Part number</b>	593002
Part designation	SCCS-220KLNN-39D1
Type	Camera set with heating and thermostat
Camera	SCC-220KLNN
Focal length	2.8 – 10 mm
Integrated IR illuminator	No
Heater	Yes
Voltage	100-240V AC (incl. built-in power supply OHOTPS1)



# HD-CVI dome cameras

## HD-CVI dome cameras



Part number	503308	503502	503102	503107
Part designation	SCC-240KEIF	SCC-241KDIM	SCC-241KEIM	SCC-251KDIA
Type	HD-CVI day/night IR dome camera	HD-CVI day/night IR dome camera	HD-CVI day/night IR dome camera	HD-CVI day/night IR dome camera
Image sensor	1/2.7" Progressive Scan CMOS	1/2.8" Progressive Scan CMOS	1/2.8" Progressive Scan CMOS	1/2.7" Progressive Scan CMOS
Video norm	PAL	PAL	PAL	PAL / NTSC
Sensor resolution (pixels)	2.1 MP (1928x1088)	2.4 MP (1984x1255)	2.4 MP (1984x1255)	2.1 MP (1928x1088)
Video output	HD-CVI 1080p, HD-CVI 720p, CVBS	HD-CVI 1080p, HD-CVI 720p, CVBS	HD-CVI 1080p, HD-CVI 720p, CVBS	HD-CVI 1080p, HD-CVI 720p, CVBS
Max. frame rate (fps)	25 at 1080p, 50 at 720p	25/30 at 1080p, 25/30/50/60 at 720p	25/30 at 1080p, 25/30/50/60 at 720p	25/30 at 1080p, 25/30/50/60 at 720p
Lens type	Fixed focal length	Manual zoom lens	Manual zoom lens	Motorised zoom lens
Focal length	3.6 mm	2.7 – 12 mm	2.7 – 12 mm	2.7 – 12 mm
Angle of view (horizontal)	85°	93° – 35°	93° – 35°	99° – 37°
Sensitivity	0.03 lux (colour) / F2.0, 0 lux (IR)	0.05 lux (colour) / F1.4, 0 lux (IR)	0.05 lux (colour) / F1.4, 0 lux (IR)	0.03 lux (colour) / F1.4, 0 lux (IR)
IR cut filter / Infrared	IRC / yes, up to 40 m	IRC / yes, up to 30 m	IRC / yes, up to 30 m	IRC / yes, up to 30 m
Digital noise reduction	2D NR, 3D NR	2D NR, 3D NR	2D NR, 3D NR	2D NR, 3D NR
Wide Dynamic Range (WDR)	HLC, BLC, 120dB True WDR	HLC, BLC	HLC, BLC, WDR	HLC, BLC, 120dB True WDR
Motion detection	Yes (via recorder)	Yes (via recorder)	Yes (via recorder)	Yes (via recorder)
Privacy zones	Yes (4)	Yes (4)	Yes (4)	Yes (4)
Classification / vandal-proof	IP-66 / No	IP-66 / IK10	IP-66 / No	IP-66 / IK10
Operating voltage / max. power consumption	12 V DC / 4.5 watt	12 V DC / 5.8 watt	12 V DC / 4.5 watt	12 V DC, 24 V AC / 10 watt
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Dimensions D x H (mm)	106 x 94	122 x 89	119 x 97	122 x 89
Weight	470 g	450 g	550 g	450 g
Specials	Dual Video, True WDR	HD/SD switchable	HD/SD switchable	Dual Video, Dual Voltage, True WDR

## Matching accessories



# HD-CVI bullet cameras



HD-CVI

## HD-CVI bullet cameras



Part number	503307	503304	503302
Part designation	SCC-240KBIF	SCC-241KBIM	SCC-251KBIA
Type	HD-CVI day/night IR bullet camera	HD-CVI day/night IR bullet camera	HD-CVI day/night IR bullet camera
Image sensor	1/2.7" Progressive Scan CMOS	1/2.8" Progressive Scan CMOS	1/2.7" Progressive Scan CMOS
Video norm	PAL	PAL / NTSC	PAL / NTSC
Sensor resolution (pixels)	2.1 MP (1928×1088)	2.4 MP (1928×1255)	2.1 MP (1928×1088)
Video output	HD-CVI 1080p, HD-CVI 720p, CVBS	HD-CVI 1080p, HD-CVI 720p, CVBS (switchable)	HD-CVI 1080p, HD-CVI 720p, CVBS (parallel, 2x BNC)
Max. frame rate (fps)	25 at 1080P, 50 at 720P	25/30 at 1080P, 25/30/50/60 at 720P	25/30 at 1080P, 25/30/50/60 at 720P
Lens type	Fixed focal length	Manual zoom lens	Motorised zoom lens
Focal length	3.6 mm	2.7 – 12 mm	2.7 – 12 mm
Angle of view (horizontal)	85°	90° – 33°	99° – 37°
Sensitivity	0.03 lux (colour) / F2.0, 0 lux (IR)	0.05 lux (colour) / F1.4, 0 lux (IR)	0.03 lux (colour) / F1.4, 0 lux (IR)
IR cut filter / Infrared	Mechanical / yes, up to 40 m	Mechanical / yes, up to 60 m	Mechanical / yes, up to 60 m
Digital noise reduction	2D NR, 3D NR	2D NR, 3D NR	2D NR, 3D NR
Wide Dynamic Range (WDR)	HLC, BLC, 120dB True WDR	BLC, WDR	HLC, BLC, 120dB True WDR
Motion detection	Yes (via recorder)	Yes (via recorder)	Yes (via recorder)
Privacy zones	Yes (4)	Yes (4)	Yes (4)
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / No
Operating voltage / max. power consumption	12 V DC / 5.5 watt	12 V DC / 8.5 watt	12 V DC, 24 V AC / 8.5 watt
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +60
Dimensions W × H × D (mm)	180 × 70 × 70	213 × 80 × 72	213 × 80 × 72
Weight	400 g	550 g	590 g
Specials	True WDR	—	True WDR

## Matching accessories



# HD-CVI speed dome

## HD-CVI speed dome



Part number	503103	503901	503501
Part designation	SCC-242KZNA	SCC-241KZNA	SCC-243KSIA
Type	HD-CVI day/night speed dome	HD-CVI mini PT dome	HD-CVI IR speed dome
Image sensor	1/2.8" Exmor CMOS	1/2.7" Progressive Scan CMOS	1/2.8" Exmor CMOS
Video norm	HD-CVI, PAL	HD-CVI, PAL	HD-CVI, PAL
Sensor resolution (pixels)	1080p	2 MP (1944x1092)	2 MP (1920x1080)
Video output	HD-CVI 1080p, HD-CVI 720p, CVBS 960H (switchable)	HD-CVI 1080p, HD-CVI 720p, CVBS 960H (switchable)	HD-CVI 1080p, HD-CVI 720p, CVBS 960H (switchable)
Max. frame rate (fps)	25 at 1080P	25 at 1080p	25 at 1080p
Lens type	Autofocus lens	Autofocus lens	Autofocus lens
Focal length	5.1 – 61.2 mm, F1.6 – F3.0	2.7 – 11 mm, F1.4 – F2.6	4.7 – 94 mm, F1.4 – F2.6
Angle of view (horizontal)	51.3° – 4.64°	112.5° – 39°	54.1° – 3.1°
Zoom range (opt./dig.)	12 x / 16 x	4 x / 16 x	20 x / 16 x
Sensitivity	0.05 lux (colour) F1.6	0.05 lux (colour) F1.6	0.05 lux (colour) F1.6, 0 lux (IR)
IR cut filter / Infrared	Mechanical / no	Mechanical / no	Mechanical / yes, up to 100 m
Digital noise reduction	2D NR, 3D NR	2D NR, 3D NR	2D NR, 3D NR
Wide Dynamic Range (WDR)	BLC, HLC, DWDR	BLC, HLC, DWDR	BLC, HLC, DWDR
Rotation radius / Tilt angle	360° continuous / -2° to 90° (auto flip)	355° / 0°-90° (auto flip)	360° continuous / -15° to 90° (auto flip)
Preset positions / rotation speed	255 / 300°/s	300 / 100°/s	255 / 400°/s
Motion detection	Adjustable via recorder	Adjustable via recorder	Adjustable via recorder
Privacy zones	Yes, 24	Yes, 24	Yes, 24
RS-485 connection	Yes	Yes	Yes
Switch contacts I/O	2/1	— / —	2/1
Audio	Yes, 1 x input	No	Yes, 1 x input
Classification / vandal-proof	IP-66 / IK10	IP-66 / IK10	IP66 / No
Operating voltage / max. power consumption	24 V AC / 12 watt	12 V DC / 10 watt	24 V AC / 25 watt
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +50
Dimensions D x H (mm)	170 x 155	122 x 89	186 x 310
Weight	1800 g	520 g	3,500 g
Special features	Switching between HD-CVI and analogue (SD) mode possible	Switching between HD-CVI and analogue (SD) mode possible	Wall bracket/wall bracket adapter included in scope of delivery.

## Matching accessories

SCC-242KZNA	SNCA-MK-4831	SNCA-WM-4645	SNCA-CM-4670	SNCA-PM-4660	SNCA-CMT-4852
SCC-241KZNA	SNCA-MK-4631	SNCA-WM-4644	SNCA-PM-4661	SNCA-ICM-PFB200C	

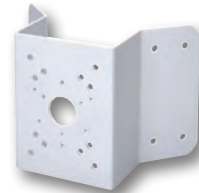
### Notes

Accessories for SCC-243KSIA: See accessories for speed dome SNC-211RSIA / SNC-231RSIA on page 60

# HD-CVI accessories



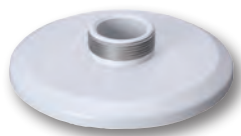
## HD-CVI accessories



<b>Part number</b>	<b>582007</b>	<b>582076</b>	<b>582004</b>	<b>582055</b>
Part designation	SNCA-MK-4530	SNCA-ICM-PFB200C	SNCA-CM-4670	SNCA-PM-4661
Type	Junction box	In-ceiling bracket	Corner adapter	Pole adapter incl. clamps
Installation site / Camera	Outdoor / SCC-240KBIF	Indoors / SCC-241KDIM, SCC-241KZNA, SCC-251KDIA	Outdoors / —	Outdoors / —
Cable management	Yes	Yes	No	No
Material / Colour	Aluminium / White	Metal, plastic / white	Metal / White	Metal / White
Dimensions (mm)	134 × 134 × 55	166 × 75.8	130 × 170 × 45	n.A.
Suitable for accessories	SCA-CM-4670, SNCA-PM-4660, SNCA-PM-4661	—	SNCA-MK-4530, SNCA-MK-4531	SNCA-MK-4530, SNCA-MK-4531

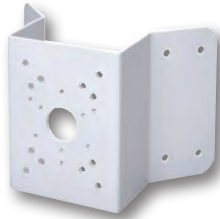


<b>Part number</b>	<b>582058</b>	<b>582054</b>	<b>582077</b>	<b>582084</b>
Part designation	SNCA-MK-4631	SNCA-WM-4644	SNCA-MK-4533	SNCA-MK-4537
Type	Adapter / junction box	Wall bracket	Junction box	Junction box
Installation site / Camera	Outdoors / SCC-241KDIM, SCC-241KZNA, SCC-251KDIA	Indoors / SCC-241KDIM, SCC-241KZNA, SCC-251KDIA	Outdoors / SCC-240KEIF	Outdoors / SCC-241KBIM, SCC-251KBIA
Cable management	Yes	Yes	Yes	Yes
Material / Colour	Aluminium / white	Aluminium / white	Aluminium / white	Aluminium / white
Dimensions (mm)	122 × 33.8	160 × 122 × 76	108 × 28.5	90 × 33.7
Suitable for accessories	—	—	—	—



<b>Part number</b>	<b>582057</b>	<b>582081</b>	<b>582003</b>
Part designation	SNCA-MK-4831	SNCA-WM-4645	SNCA-CMT-4852
Type	Adapter plate	Wall bracket	Ceiling bracket
Installation site / Camera	Outdoor / SCC-242KZNA	Outdoor / SCC-242KZNA	Indoor / SCC-242KZNA
Cable management	Yes	Yes	Yes
Material / Colour	Metal / White	Aluminium / White	Aluminium / white
Dimensions (mm)	169 × 37	134 × 13 × 187.5	133 × 235
Suitable for accessories	SNCA-CMT-4852, SNCA-WM-4645	SNCA-MK-4831	SNCA-MK-4831

## HD-CVI accessories



incl. clamps

Part number	582004	582011
Part designation	SNCA-CM-4670	SNCA-PM-4660
Type	Corner adapter	Pole mount adapter up to 127 mm
Installation site / Camera	Outdoors / —	Outdoors / —
Cable management	Yes	Yes
Material / Colour	Metal / White	Metal / White
Dimensions (mm)	130 × 170 × 45	243 × 170 × 138
Suitable for accessories	SNCA-WM-4642	SNCA-WM-4642
Specials	—	Incl. clamps

## Lenses for HD-CVI Cameras



Part number	583002	583003
Part designation	17131DN	18161DN
Type	DC vario lens	DC vario lens
Format	1/2.8"	1/2.5"
Mount	CS	CS
Max. resolution	3 MP (2048×1536)	5 MP (2560×1920)
Day/night correction (IR)	Yes	Yes
Focal length (mm)	2.8 – 10 / F1.6	9 – 22 / F1.8
Angle of view (horizontal)	94°–32°@1/2.8" / 86°–29°@1/3"	37°–16°@1/2.5" / 34°–15°@1/2.7" / 30°–13°@1/3"

## Power supply



Part number	581006	581001	581000	581008
Part designation	VCA-12V-1.5ASA	SNPS-12D2	VCA-12V-1.5AE	VCA-12V-5ASA
Type	Plug-in power supply	Plug-in power supply	Power supply	Power supply
Input voltage	230 V AC	230 V AC	230 V AC	230 V AC
Output voltage	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised max 1.5 A	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised Max 5 A
Cable end	Plug	Plug	Open cable end	Plug
Housing material	Plug housing, plastic	Plug housing, plastic	Grouted, plastic, IP-64	Desktop housing, cable connection at both ends
Dimensions (mm)	70 × 34 × 72 (W × H × D)	51 × 37 × 95 (W × H × D)	54 × 33 (D × H)	65 × 40 × 120 (W × H × D)



**SANTEC**

PROFESSIONAL SOLUTIONS  
FOR MORE SECURITY



CCTV



CCTV cameras

Coax

Sensitive

Easy installation

Wide range of applications

960H

Many settings options



## Analogue CCTV cameras

SANTEC provides a wide range of various analogue camera models for video surveillance. They are specially developed for a number of applications, such as for use in retail spaces, underground stations, underground garages, lifts, public buildings, prisons or office spaces. Cameras from SANTEC are equipped with features such as integrated backlight compensation, Wide Dynamic Range (WDR) and digital noise reduction (DNR).

### CCTV box cameras

The day/night colour cameras of the SANTEC 8000 series offer many performance features combined in one camera, which provide greater convenience, better image quality during the day and at night and more flexible applications. The resolution of these cameras is up to 700 TVL or 960H. All cameras of the 8000 series are thus the perfect cameras for 24-hour use even under the most difficult conditions.

- High resolutions with up to 700 TVL or 960H
- Up to 25 images / second
- Day/night function
- Backlight compensation (BLC, HLC, DWDR)
- Camera setting via OSD
- Private zones adjustable (up to 4 zones)
- Compact design



### CCTV dome cameras

The design that is most often used for CCTV cameras is the dome camera. SANTEC offers a broad range of dome cameras with fixed and vario lenses (adjustable). There are dome cameras available e.g. as with surface and ceiling mounting, in vandalism protected housings or simple plastic housings.

- High resolutions with up to 700 TVL or 960H
- Up to 25 images / second
- Day/night function
- Integrated IR emitter with up to 30 m range
- Backlight compensation (BLC, HLC, DWDR)
- Camera setting via OSD
- Private zones adjustable (up to 4 zones)
- Compact designs



### CCTV outdoor cameras

The SANTEC day/night compact cameras VTC-279IRHWD and VTC-289IRHWD have been developed for outdoor areas and have the protection class IP 66. The range of application is very versatile due to integrated IR illuminator, triplex vario lens, high resolution of 700 TV lines or 960H as well as mechanical IR cut filter and settings options.

- High resolutions with up to 700 TVL or 960H
- Up to 25 images / second
- Day/night function
- Integrated IR LED illuminator with up to 40 m range
- Backlight compensation (BLC, HLC, DWDR)
- Camera setting via OSD
- Private zones adjustable (up to 4 zones)
- Compact designs



## The 960H standard

960H is the standard for surveillance cameras and digital video recorders. High resolution images are provided by means of the latest image sensors. Surveillance cameras with 960H consequently produce images with 960 horizontal and 582 vertical pixels (960 x 582)

The 960H is 34% larger as a conventional D1 image and furthermore is in the 16:9 format for wide screen.

You can continue to use existing RNC cables, recorders and monitors and thus only need to replace the camera. If you want to benefit however from the improved image quality, then you should also replace the recorder and monitor.



960H (960x582) – 16:9



D1 (720x582) – 4:3  
(stretched at 16:9)



# CCTV box cameras



## SANTEC CCTV Box cameras

Value



Value



Part number	502001	502000
Part designation	VTC-8520H	VTC-8525H
Type	Day/night box camera	Day/night box camera
Video norm	PAL	PAL
Sensor format	1/3"	1/3"
Sensor type	Sony CCD chip	Sony CCD chip
Horizontal resolution (TVL)	700 / 960H	700 / 960H
S/N ratio	> 52 dB	> 52 dB
Lens mount	C/CS	C/CS
Iris control	DC / manual	DC / manual
IR cut filter	IR cut filter (mechanical)	IR cut filter (mechanical)
Sensitivity (lux)	0.05 (colour) / 0.001 (b/w)	0.05 (colour) / 0.001 (b/w)
Backlight compensation	DWDR, BLC, HLC	DWDR, BLC, HLC
Wide Dynamic Range (WDR)	Yes	Yes
Day/night setting	Automatic / external contact Contact	Automatic / external contact Contact
Camera setting	OSD, multi-language	OSD, multi-language
Digital zoom	n/a	n/a
Motion detection zones	4	4
Privacy zones	4	4
Title display	52 digits	52 digits
Video output	BNC, 75 Ohm 1Vpp	BNC, 75 Ohm 1Vpp
Switch input contacts	1. day/night switching	1. day/night switching
Switch output contacts	No	No
Interface	No	No
Tamper / sabotage protection	No	No
Self-test function	No	No
Housing colour	Grey / black	Grey / black
Housing material	Aluminium	Aluminium
Voltage	100 – 240 V AC	12 V DC / 24 V AC
Power consumption (watt)	1.5	1.5
Operating temperature (°C)	-30 to +45	-30 to +45
Dimensions W × H × D (mm)	58 × 62 × 128	58 × 62 × 128
Weight	370 g	370 g

### Notes

1. The lenses shown above are not included in the delivery.
2. We recommend the power supply unit VCA-12V-1.5ASA for the power supply with 12 V DC (see page 54 for others).

Learn more about  
CCTV cameras



CCTV

## CCTV camera sets

### Infrared camera sets



Value

Part number	592002
Part designation	IR65-SET-8520H
Type	Camera set with IR LEDs
Housing type	HEL-IR65D
Camera	VTC-8520H
Focal length	5 – 50 mm
Integrated IR illuminator	Yes
IR range (m)	Up to 70
Heater	Yes
Voltage	230 V AC

### Individually built

We offer you as a service ready-made camera sets. These are individually produced in our Service Center. The camera sets consist of proven and matching components and thus provide a time and cost-saving solution during the installation phase.

Included are:

- VTC-8520H camera
- IR coated DC lens
- Camera housing, depending on version, with IR illuminator, heater or fan
- 2 metre supply line made of UV-resistant, halogen-free cable that is especially suited for outdoor use

### Camera sets



Value

Value

Value

Part number	592004	592003	592018
Part designation	VTC-8520H-A62	VTC-8520H-AZ62	VTCS-8520H-39D1
Type	Camera set without IR LEDs	Camera set without IR LEDs	Camera set with heater and thermostat
Housing type	HEL-62D	HEL-62D	HOT39D1A000
Camera	VTC-8520H	VTC-8520H	VTC-8520H
Focal length	2.8 – 12 mm	5 – 50 mm	2.8 – 10 mm
Integrated IR illuminator	No	No	No
IR range (m)	—	—	—
Heater	Yes	Yes	Yes
Voltage	230 V AC	230 V AC	100-240V AC

### Option for camera sets



584003  
KS-EXT-1  
Cable for sets

For camera sets the feed cables can be extended on request. When placing your order for KS-EXT-1 please indicate the required cable length.

### Notes

1. The range of the IR emitter is greatly dependent on the deployment location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.
2. You can find the technical data to the camera housings on page 64.

# CCTV dome cameras



## SANTEC CCTV dome cameras

Value



Value



Value



CCTV

Part number	502101	502104	502103
Part designation	VTC-265H	VTC-322HWD	VTC-432IRHWD
Type	Colour dome camera	Day/night dome camera Vandalism protected	Day/night IR dome camera Vandalism protected
Application	Indoors	Outdoors	Outdoors
Horizontal resolution (TVL)	700 / 960H	700 / 960H	700 / 960H
Lens	Manual zoom lens	Manual zoom lens	Manual zoom lens
Focal length	2.8 – 11 mm / F1.4	2.8 – 12 mm / F1.4	2.8 – 12 mm / F1.2
Angle of view	84° – 25°	84° – 23°	84° – 23°
Sensitivity (lux)	0.05 (colour)	0.05 (colour) / 0.001 (b/w) / 0 (IR)	0.05 (colour) / 0.0 (IR)
IR cut filter	No	IR cut filter (mechanical)	IR cut filter (mechanical)
Backlight compensation	BLC, HLC, ATR (DWDR)	BLC, HLC, DWDR	BLC, HLC, DWDR
Classification / vandal-proof	IP-44 / No	IP-66 / IK10	IP-66 / IK10
Camera mounting	Surface mount	Surface mount	Surface/ceiling mount
IR range (m)	—	—	Up to 20
Voltage	12 V DC / 24 V AC	12 V DC	12 V DC / 24 V AC
Power consumption (watt)	1	3	6
Operating temperature (°C)	-30 to +40	-10 to +50	-20 to +50
Dimensions D x H (mm)	128 x 90	110 x 80	144 x 120
Weight	270 g	550 g	1050 g

### Notes

1. The range of the built-in IR-LEDs is strongly dependent on the location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.
2. We recommend our power supply unit VCA-12V-1.5ASA for the power supply via 12 V DC (see page 54) and via 24 V AC the power supply unit VCA-200 (see page 96).



## SANTEC CCTV dome cameras

Value



Value



Part number	502102	502106
Part designation	VTC-375IRHW	VTC-375IRHG
Type	Day/night IR dome camera white	Day/night IR dome camera grey
Application	Outdoor	Outdoor
Horizontal resolution (TVL)	700 / 960H	700 / 960H
Lens	Manual zoom lens	Manual zoom lens
Focal length	2.8 – 11 mm	2.8 – 11 mm
Angle of view	84° – 25°	84° – 25°
Sensitivity (lux)	0.1 (colour) / 0 (IR)	0.1 (colour) / 0 (IR)
IR cut filter	IR cut filter (mechanical)	IR cut filter (mechanical)
Backlight compensation	BLC, HLC, ATR (DWDR)	BLC, HLC, ATR (DWDR)
Classification / vandal-proof	IP-66 / No	IP-66 / No
Camera mounting	Surface mount	Surface mount
IR range (m)	Up to 20	Up to 20
Voltage	12 V DC / 24 V AC	12 V DC / 24 V AC
Power consumption (watt)	4.8	4.8
Operating temperature (°C)	-30 to + 40	-30 to + 40
Dimensions D x H (mm)	120 x 100	120 x 100
Weight	680 g	680 g

### Notes

1. The range of the built-in IR-LEDs is strongly dependent on the location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.
2. We recommend our power supply unit VCA-12V-1.5ASA for the power supply via 12 V DC (see page 54) and via 24 V AC the power supply unit VCA-200 (see page 96).



# CCTV bullet cameras, CCTV motor zoom camera



## SANTEC Bullet cameras

Value



Value



Value



Part number	502304	502302	502303
Part designation	VTC-249IRH	VTC-279IRHWD	VTC-289IRHWD
Type	Day/night IR bullet camera	Day/night IR bullet camera	Day/night IR bullet camera
Application	Outdoor	Outdoor	Outdoor
Horizontal resolution (TVL)	700 / 960H	700 / 960H	700 / 960H
Lens	Manual zoom lens	Manual zoom lens	Manual zoom lens
Focal length	4 – 9 mm / F1.6	2.8 – 12 mm / F1.0	5 – 50 mm / F1.4
Angle of view	68° – 31°	84° – 23°	53° – 5.3°
Sensitivity (lux)	0.1 (colour) / 0 (IR)	0.05 (colour) / 0 (IR)	0.05 (colour) / 0 (IR)
IR cut filter	IR cut filter (mechanical)	IR cut filter (mechanical)	IR cut filter (mechanical)
Backlight compensation	BLC	BLC, HLC, DWDR	BLC, ECLPS, DWDR
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / No
Camera mounting	Wall mounting	Wall mounting	Wall mounting
IR range (m)	Up to 20	Up to 40	Up to 40
Voltage	12 V DC	12 V DC / 24 V AC	12 V DC / 24 V AC
Power consumption (watt)	3.5	9.6	9.6
Operating temperature (°C)	-10 to +50	-20 to +50	-20 to +50
Dimensions W × H × D (mm)	59 × 59 × 190	82 × 78 × 260	82 × 78 × 260
Weight	400 g	1050 g	1050 g

## SANTEC motor zoom camera

Value

Part number	502003
Part designation	VTC-652DNP
Type	Day/night motor zoom camera
Horizontal resolution (TVL)	700 / 960H
Lens type	Built-in Motor zoom lens
Focal length	3.8 – 85.8 mm
Angle of view	50° – 2.4°
Zoom range (opt./dig.)	22 × / 16 ×
Sensitivity	0.5 / 0.001 lux
IR cut filter	IR cut filter (mechanical)
Backlight compensation	BLC, WDR
Privacy zones	16
Auto focus	Automatic / manual
Interface	RS-422 / RS-485
Control protocols	Pelco D and others
OSD	Multilingual
Voltage	12 V DC
Power consumption (watt)	4.5
Operating temperature (°C)	-10 to +50
Dimensions W × H × D (mm)	62 × 70 × 120
Weight	335 g



### Notes

1. A remote control is available optionally for the VTC-652DNP. (RC-60)
2. We recommend our power supply unit VCA-12V-1.5ASA for the power supply with 12 V DC (see page 54 for others).

## SANTEC mini and discrete cameras

<b>Part number</b>	<b>502305</b>
Part designation	VTC-258IRH
Type	Colour mini camera
Application	Indoors and outdoors
Horizontal resolution (TVL)	700 / 960H
Lens	Fix lens
Focal length	3.6 mm
Angle of view	69°
Sensitivity (lux)	0.1 lux / 0 lux (IR on)
IR cut filter	No
Backlight compensation	—
Classification / vandal-proof	IP-66 / No
Camera mounting	Wall bracket included in scope of delivery.
IR range (m)	Up to 20
Voltage	12 V DC (included in delivery)
Power consumption (watt)	2.4
Operating temperature (°C)	-20 to +50
Dimensions (mm)	32.3 × 63.6 (D × H)
Weight	150 g

Value



<b>Part number</b>	<b>502600</b>
Part designation	VTC-E220IRP
Type	Day/night camera for corner mount
Horizontal resolution (TVL)	700 / 960H
Lens type	Fix lens
Focal length	3.6 mm
Angle of view	70°
Sensitivity	0.5 lux
Classification	IP-44
Integrated IR illuminator	Yes
IR range (m)	up to 5
Voltage	12 V DC
Power consumption (watt)	4
Operating temperature (°C)	-10 to +50
Dimensions W × H × D (mm)	210 × 140 × 45
Weight	430 g

Value

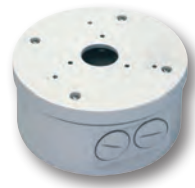


### Note

The VTC-258RH is delivered with a matching power supply unit. We recommend for the VTC-E220IRP the power supply unit VCA-12V-1.5ASA.

# Accessories for CCTV cameras:

## Accessories for CCTV cameras



incl. clamps

Part number	582031	582050   582051	582043   582044	582032
Part designation	JB-500	WB-HDH   WB-HDHW	JB-300G   JB-300W	CMP-220W
Type	Installation/junction box	Wall bracket	Installation/junction box	Corner/pole mount adapter
Installation site	Outdoor area	Outdoor area	Outdoor area	Outdoor area
Suitable for	various SANTEC cameras / WB-HDH, WB-HDHW	various SANTEC cameras / JB-500, CMP-220W	VTC-375IRHG   VTC-375IRHW	VTC-249, -279, -289, VCHD-2792IR, WM-500, JB-500, WB-HDH, WB-HDHW
Cable management	Yes	Yes	Yes	No
Housing material	Metal	Metal	Metal	Metal
Colour	White	White	Grey / white	White
Dimensions (mm)	141 × 68 (D × H)	143 × 102 × 265 (W × H × D)	120 × 45 (D × H)	164 × 116 × 99 (W × H × D)
Special features	IP 66, 2 × PG gland, internal bracket for power supply	—	—	Includes clamps



Part number	582030	582052
Part designation	CABD322W	WB-105
Type	Cover plate	Wall bracket
Installation site	Indoor	Outdoor
Mounting option	VTC-322HWD	VTC-375IRHW
Colour	White	White
Loading capacity	—	—
Dimensions (mm)	—	120 × 85 × 185 (W × H × D)
Special features	—	—



Part number	582046   582047	582048   599000
Part designation	VA-13WIK   VA-13WIK/10	WA-8SP   WA-8SP/10
Type	Camera bracket	Camera bracket
Installation site	Indoors	Indoors
Mounting option	Wall mounting	Wall mounting
Colour	White	Black / plastic
Loading capacity	2 kg	1.5 kg
Dimensions (mm)	25 × 130 (D × L)	26 × 175 (D × L)
Special features	Also available as pack of 10 pcs.	Also available as pack of 10 pcs.

## Lenses for CCTV cameras (D1)



<b>Part number</b>	<b>583005</b>	<b>583001</b>
Part designation	14132DNC	14161DNC
Type	Lens	Lens
Format	1/3"	1/3"
Mount	CS	CS
Max. resolution	D1 (720x576)	D1 (720x576)
Day/night correction (IR)	Yes	Yes
Focal length (mm)	2.8 – 12 / F1.4 – F360	5 – 50 / F1.6 – F360
Angle of view (horizontal)	85° – 27°	49° – 5°

## SANTEC dummy cameras



<b>Part number</b>	<b>582029</b>	<b>582028</b>
Part designation	VTC-8525H-DUM	VTC-265-DUM
Type	Dummy box camera	Dummy dome camera
Camera mounting	Screw connection top/bottom	Surface mount
Housing colour	Black	White
Housing material	Aluminium	Plastic
Dimensions (mm)	62 × 65 × 130 (W × H × D)	140 × 96 (D × H)
Weight	280 g	350 g

## Power supply



<b>Part number</b>	<b>581006</b>	<b>581001</b>	<b>581000</b>	<b>581008</b>
Part designation	VCA-12V-1.5ASA	SNPS-12D2	VCA-12V-1.5AE	VCA-12V-5ASA
Type	Plug-in power supply	Plug-in power supply	Power supply	Power supply
Input voltage	230 V AC	230 V AC	230 V AC	230 V AC
Output voltage	12 V DC stabilised, max. 1.5 A	12 V DC stabilised, max. 1.5 A	12 V DC stabilised, max. 1.5 A	12 V DC stabilised, max. 5 A
Cable end	Plug	Plug	Open cable end	Plug
Housing material	Plug housing, plastic	Plug housing, plastic	Grouted, plastic, IP-64	Desktop housing, cable connection at both ends
Dimensions (mm)	70 × 34 × 72 (W × H × D)	51 × 37 × 95 (W × H × D)	54 × 33 (D × H)	65 × 40 × 120 (W × H × D)

## AC/DC converter

<b>Part number</b>	<b>584006</b>
Part designation	VACDC-12V-1A
Type	AC/DC converter (24 V AC to 12 V DC)
Input voltage	20-30 V AC
Output voltage	12 V DC
Dimensions W × H × D (mm)	72 × 28 × 23







**SANTEC**

PROFESSIONAL SOLUTIONS  
FOR MORE SECURITY



Speed dome



Speed domes

Flexible

Versatile

Zoom

Precise

Fast

Compact



SANTEC speed dome cameras are fast compact pan/tilt day/night cameras with integrated motor zoom lenses. These dome cameras provide versatile application options due to various programming and controlling features. Special features: Privacy zones, flip function, digital zoom and alarm. These cameras are perfect for installation in department stores, storage transfer sites, car parks, open-air grounds and entrances – simply everywhere where movements and activities in different directions is to be tracked quickly or particular large areas have to be monitored.

## Speed dome for IP systems

The IP speed dome and the mini PT dome are compatible with the network recorders of the SNVR, STVR series as well as the systems from NUUO. The domes can be completely controlled by these. If a device is installed with the NUUO main console, then the dome can also be controlled via the control keyboard KSC-USB-NET.

- Up to 20 x optical zoom
- Up to 2 MP resolution
- Weather and vandalism protection (IP 66, IK10 housing)
- 3 adjustable video streams that are independent of each other
- Speed dome SNC-231RSIA also with integrated IR illuminator (range up to 100 m)



## Speed dome for HD-CVI systems

The speed dome SCC-242KZNA is compatible with the HD-CVI recorders of the STVR series. This speed dome can be operated both in HD-CVI and in the analogue mode by switching the video output.

- For HD-CVI as well as analogue operation
- Zoom: 12 x optically, 16 x digitally
- 2 MP resolution
- 24 privacy zones
- Weather and vandalism protected IP 66/K10 housing



## Mini speed-dome as IP or CVI/CVBS

The models SCC-241KZNA (CVI/CVBS) and SNC-231RZNA are mini speed domes with PTZ function in a very compact design. Thanks to the zoom lens with 16 x digital zoom, nothing will escape you.

- Zoom: 4 x optically, 16 x digitally
- 2 MP resolution
- 24 privacy zones
- Weather and vandalism protected IP 66/K10 housing



## Speed dome and matching recorders

		Tribrid recorder (HD-CVI, IP, analogue)	SNVR recorder (IP)	NUUO (IP)	NUUO main console (tribrid)
		STVR-3411 STVR-3811 STVR-31612	SNVR-1812P SNVR-23212P	NVRsolo, Crystal Titan	SCB-IP+
<b>IP cameras</b>					
SNC-311FSNF	IP mini PT dome	Yes	Yes	Yes	Yes
SNC-231RSIA, SNC-211RSIA	Speed dome	Yes	Yes	Yes	Yes
SNC-231RZNA	Speed dome	Yes	Yes	Yes	Yes
SNC-231RSNA	Speed dome	Yes	Yes	Yes	Yes
<b>HD-CVI / analogue cameras</b>					
SCC-242KZNA	Speed dome	Yes	No	No	Yes (as CVBS)
SCC-241KZNA	Speed dome	Yes	No	No	Yes (as CVBS)

# IP speed dome and IP mini PT dome



## IP speed dome and IP mini PT dome

Favour



Royal



Part number	500101	500114
Part designation	SNC-311FSNF	SNC-231RZNA
Type	IP mini PT dome	IP Speed dome
Image sensor	1/3" Progressive Scan CMOS	1/2.7" Progr. Scan CMOS
Resolution (pixel)	3 MP (2048x1536)	2 MP (1920x1080)
Video codec	H.264 / MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	20 at 3 MP, 25 at 2 MP	25 at 2 MP
No. of video streams	3 (individually configurable)	3 (individually configurable)
Lens type	Fix lens	Autofocus lens
Focal length	3.6 mm / F1.2	2.7 – 11 mm / F1.6 – F2.8
Zoom (optical / digital)	— / 3 x	4 x / 16 x
Angle of view (horizontal)	72.5°	93.5° – 30.24°
Sensitivity	0.01 lux (colour)	0.05 lux (colour), 0.005 (B/W)
IR cut filter / Infrared	ICR / no	ICR / no
Digital noise reduction	3D NR	2D NR, 3D NR
Wide Dynamic Range (WDR)	HLC, BLC, DWDR	HLC, BLC, 120dB True WDR
Rotation radius / Tilt angle	355° / 10° – 90°	355° / 10° – 90° (auto flip)
Preset positions / rotation speed	25 / 100°/s	300 / 100°/s
Region-of-Interest (ROI)	No	No
Privacy zones	Yes (4)	Yes (24)
Intelligent video analysis	No	Yes
Switch contacts I/O	0/0	0/0
Audio	0/0	0/0
Classification / vandal-proof	IP-66 / IK10	IP-66 / IK10
Operating voltage / max. power consumption	12 V DC, PoE / 3 watt	12 V DC, PoE / 10 watt
Micro SD card slot	Yes	Yes
Operating temperature (°C)	-20 to +50	-20 to +60
Dimensions D x H (mm)	130 x 58	122 x 89
Weight	250 g	600 g
Specials	—	Defog, video Analysis, 120dB True WDR

### Note

You can find matching accessories for IP cameras on page 60.

More on IP speed domes



## IP speed dome and IP mini PT dome

### IP speed dome and IP mini PT dome



Part number	500500	500503	500901
Part designation	SNC-211RSIA	SNC-231RSIA	SNC-231RSNA
Type	IP IR speed dome	IP Speed dome	IP Speed dome
Image sensor	1/2.7" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS	1/2.8" Progr. Scan CMOS
Resolution (pixel)	2 MP (1920x1080)	2 MP (1920x1080)	2 MP (1920x1080)
Video codec	H.264 / MJPEG	H.264, H.264B, H.264H, MJPEG	H.264, H.264B, H.264H, MJPEG
Max. frame rate (fps)	25 at 2 MP / 50/60 at 720p	25/30 at 1080p, 50/60 at 720p	25/30 at 1080p, 50/60 at 720p
No. of video streams	2 (main and sub)	3 (individually configurable)	3 (individually configurable)
Lens type	Motor zoom lens	Motorised zoom lens	Motorised zoom lens
Focal length	5.5 – 110 mm / F1.6 – F3.5	4.7 – 94.9 mm 7 / F1.4 – F2.6	4.7 – 94.9 mm / F1.4 – F2.6
Zoom (optical / digital)	20 × / 16 ×	20 × / 16 ×	20 × / 16 ×
Angle of view (horizontal)	51° – 2.6°	56.1 – 3.1°	56.1 – 3.1°
Sensitivity	0.05 (colour) / 0.005 (b/w)	0.05 lux (colour), 0.005 (b/w)	0,05 lux, F1.4
IR cut filter / Infrared	ICR / yes, up to 100 m	ICR / yes, up to 100 m	ICR / no
Digital noise reduction	2DNR / Ultra 3DNR	2D NR, Ultra 3D NR	2D NR, Ultra 3D NR
Wide Dynamic Range (WDR)	DWDR, HLC, BLC, Defog	BLC, HLC, DWDR	BLC, HLC, DWDR
Rotation radius / Tilt angle	360° / -15° – 180° (auto flip)	360° continuous / -15° to 180° (auto flip)	360° continuous / -15° to 180° (auto flip)
Preset positions / rotation speed	300 / 400°/s	300 / 400°/s	300 / 500°/s
Region-of-Interest (ROI)	No	Yes	Yes
Privacy zones	Yes (24)	Yes (24)	Yes (24)
Intelligent video analysis	No	Yes	Yes
Switch contacts I/O	2 / 1	2/1	2/1
Audio	1/1	1/1	1/1
Classification / vandal-proof	IP-66 / No	IP-66 / No	IP-66 / IK10
Operating voltage / max. power consumption	24 V AC / PoE+ / 23	24 V AC, PoE+ / 23 watt	24 V AC, PoE+ / 23 watt
Micro SD card slot	Yes	Yes	Yes
Operating temperature (°C)	-20 to +50	-40 to +70	-30 to +60
Dimensions D x H (mm)	186 x 309	186 x 309	186 x 253
Weight	3,500 g	3,500 g	2,500 g
Special features	P2P/cloud, smart IR, power supply and wall bracket included in delivery, SVC (Scalable Video Codec)	Smart IR, power supply and wall bracket included in delivery, defog, SVC (Scalable Video Codec), video analysis	Power supply and wall bracket included in delivery, defog, SVC (Scalable Video Codec), video analysis

#### Note

You can find matching accessories for IP cameras starting on page 60.



# HD-CVI/analogue speed dome



## HD-CVI/analogue speed dome

Karat



Favour



Part number	503103	503901
Part designation	SCC-242KZNA	SCC-241KZNA
Type	HD-CVI/analogue speed dome	HD-CVI/analogue mini PTZ speed dome
Application	Interior and exterior	Interior and exterior
Image sensor	1/2.8" Exmor CMOS	1/2.7" 2 megapixel CMOS
Video norm	PAL / NTSC	PAL / NTSC
Video output	HD-CVI (1080p/720p) / 960H CVBS (analogue)	1x BNC (HD-CVI, CVBS)
Resolution (pixels)	1080p / 960H	1944x1092, > 1000 TVL
Max. frame rate (fps)	25 at 1080p, 50 at 720p	25/30 at 1080p, 25/30/50/60 at 720p
Lens type	Motor zoom lens	Zoom lens
Focal length	5.1 – 61.2 mm / F1.6 – F3.0	2.7 – 11 mm
Zoom (optical / digital)	12 x / 16 x	4 x / 16 x
Angle of view (horizontal)	51.3° – 4.64°	112.5° to 39°
IR cut filter / illuminator	IR cut filter (mechanical) / no	Mechanical / no
Digital noise reduction	3DNR	2D NR, 3D NR
Backlight compensation	BLC, HLC, DWDR	BLC, HLC, WDR
Rotation radius / Tilt angle	360° continuous / -2° - 180° (auto flip)	355° / 0.1° to 90°/s
Preset positions / rotation speed	255 / 300°/s	300 / 100°/s
Privacy zones	Yes (24)	Yes (24)
Intelligent video analysis	No	No
Switch contacts I/O	2/1	0 / 0
Classification / vandal-proof	IP-66 / IK10	IP-66 / IK10
Operating voltage	24 V AC	12 V DC
Max. power consumption	10 watt	10 watt
Operating temperature (°C)	-10 to +60	-30° to +60° C
Dimensions D x H (mm)	170 x 155	122 x 89
Weight	1800 g	Approx. 520 g

### Notes

- Both of these speed domes can be set to the "960H CVBS (analogue)" mode by switching the video output via the OSD. The speed dome is in the HD-CVI mode when delivered.
- For the SCC-242KZNA, a matching supply unit is included in the scope of delivery; you can find a matching exterior power supply unit (IP 66) on page 61.



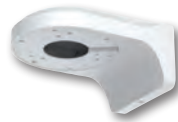
# Speed dome accessories

## Speed dome accessories

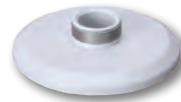
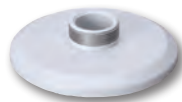


incl. clamps

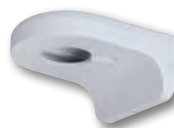
Part number	582006	582012	582004	582011
Part designation	SNCA-JB-4640	SNCA-WM-4642	SNCA-CM-4670	SNCA-PM-4660
Type	Junction box / mounting box	Wall bracket	Corner adapter	Pole mount adapter
Installation site / Camera	Outdoors / —	Outdoors / —	Outdoors / —	Outdoors / —
Cable management	Yes	Yes	No	No
Material / Colour	Metal / White	Metal / White	Metal / White	Metal / White
Dimensions (mm)	297 × 248 × 107	285 × 115 × 160	130 × 170 × 45	243 × 170 × 138
Suitable for accessories	SNCA-CM-4670, SNCA-PM-4660, SNCA-WM-4642	SNCA-JB-4640, SNCA-CM-4670, SNCA-PM-4660, SNCA-MK-4630 / 4830 / 4633	Corners	Poles up to 127 mm



Part number	582013	582003	582005
Part designation	SNCA-WM-4643	SNCA-CMT-4852	SNCA-EXT-4852
Type	Wall bracket	Ceiling bracket	Extension
Installation site / Camera	Outdoor / SNC-311FSNF	Indoor / SCC-242KZNA	Indoors / —
Cable management	Yes	Yes	Yes
Material / Colour	Aluminium, ABS / white	Aluminium / white	Aluminium / white
Dimensions (mm)	160 × 120 × 74	133 × 235	53 × 220
Suitable for accessories	—	SNCA-MK-4831	SNCA-CMT-4852



Part number	582057	582072	582081
Part designation	SNCA-MK-4831	SNCA-MK-4633	SNCA-WM-4645
Type	Adapter plate	Adapter plate	Wall bracket
Installation site / Camera	Outdoor / SCC-242KZNA	Outdoor / SCC-241KZNA	Outdoor / SCC-242KZNA
Cable management	Yes	Yes	Yes
Material / Colour	Metal / White	Aluminium / White	Aluminium, IP-66 / white
Dimensions (mm)	169 × 37	159 × 35	134 × 134 × 187.5
Suitable for accessories	SNCA-CMT-4852, SNCA-WM-4645	SNCA-CMT-4852, SNCA-WM-4645	SNCA-MK-4831, SNCA-MK-4633



incl. clamps

Part number	582076	582054	582058	582055
Part designation	SNCA-ICM-PFB200C	SNCA-WM-4644	SNCA-MK-4631	SNCA-PM-4661
Type	In-ceiling bracket	Wall bracket	Adapter / junction box	Pole mount adapter
Installation site / Camera	Indoor / SCC-241KZNA	Outdoor / SCC-241KZNA	Outdoor / SCC-241KNZA	Outdoor / SCC-241KZNA
Cable management	Yes	Yes	Yes	Yes
Material / Colour	Metal, plastic / white	Aluminium / White	Aluminium / White	Metal / White
Dimensions (mm)	166 × 75.8	160 × 122 × 76	122 × 33.8	118 × 87 × 21
Suitable for accessories	—	—	—	SNCA-MK-4530/4531/4730/4631

# Power supply units and control keyboards



## Power supply for speed dome



Part number	581015	581016	579526
Part designation	SanPower-MS01L	SanPower-MS01BL	SanPower-MS01C
Type	1-channel PoE power supply	1-channel PoE power supply	1-channel PoE power supply
Number of Ethernet ports	1	1	1
Ethernet standards	10/100/1000M Base-T	10/100/1000M Base-T	10Base-T / 100Base-TX / 1000Base-TX
Input voltage	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC
Output voltage	48 V DC	56 V DC	56 V DC
PoE output voltage	15.4 W	30 W	33.6 W
PoE standard	IEEE802.3af	IEEE802.3at	IEEE802.3at / IEEE802.3af
Dimensions W x H x D (mm)	96 x 44 x 30	121 x 58 x 33	166 x 44 x 80
Operating temperature (°C)	0 to +40	0 to +40	-20 to +50
Weight	105 g	172 g	500 g

## Power supply



Part number	581006	581001	581011	581007
Part designation	VCA-12V-1.5ASA	SNPS-12D2	VCA-200	VCA-12V-2A/A
Type	Plug-in power supply	Plug-in power supply	Power supply	Power supply
Input voltage	230 V AC	230 V AC	230 V AC	230 V AC
Output voltage	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised max 1.5 A	24 V DC, max 2.1 A	12 V DC, stabilised, max 2 A
Cable end	Plug	Plug	Open cable end	Screw terminal
Housing material	Plug housing, plastic	Plug housing, plastic	Desktop housing, with cables at both ends	Weather-proof housing (IP-66)
Dimensions (mm)	70 x 34 x 72 (W x H x D)	51 x 37 x 95 (W x H x D)	110 x 65 x 135	110 x 90 x 210

## Control keyboards



Part number	580008	570000
Part designation	KSC-USB-NET	DCZ
Type	Control keyboard	USB control keyboard
Password protection	Yes	No
Joystick / Keys	Yes, 3-axis / function keys	Yes, 3-axis / function keys
Interface	RS-485, RS-232, USB, RJ-45 (network)	USB 2.0
Power supply	230 V AC / 12 V DC power supply unit (in scope of delivery)	USB
Suitable for	SNVR recorder, STVR recorder, speed dome	Windows XP, 2000, Vista, Windows 7

Speed dome

### ULISSE pan/tilt systems

The ULISSE pan/tilt system has explicitly been designed for outdoor day/night video surveillance. The system integrates a powerful pan/tilt head, a camera housing and a telemetry receiver – all in one unit. The system can additionally be equipped with two IR illuminators. The ULISSE MAXI has been developed for large optics and ensures an extremely high degree of positioning accuracy at long distances. The ULISSE systems are ideally suited for monitoring borders, motorways, city centres, stadiums, prisons and military facilities.

You can find information about this system on the Videotec website or at:

[www.santec-video.com](http://www.santec-video.com)

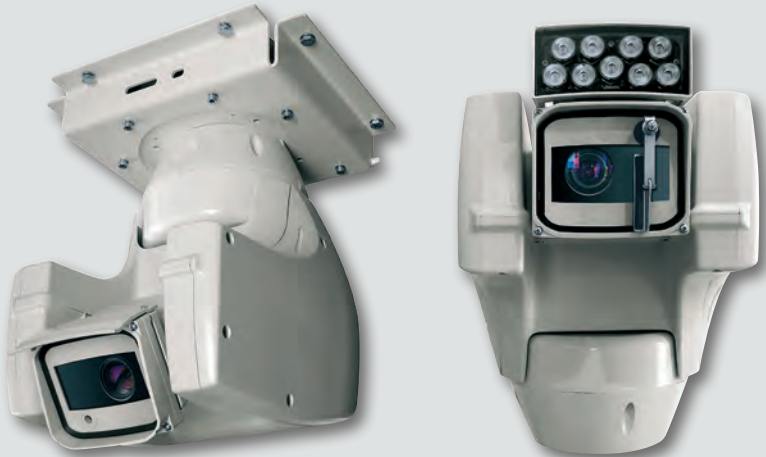


### ULISSE COMPACT pan/tilt systems

The ULISSE COMPACT system combines a high performance day/night camera with a pan/tilt head and a telemetry receiver in one system with a particularly compact design. ULISSE COMPACT is available with several optical zooms (10x, 18x and 36x) and is suitable for various application options. ULISSE COMPACT is also available with integrated IR illuminators.

You can find information about this system on the Videotec website or at:

[www.santec-video.com](http://www.santec-video.com)



### ULISSE COMPACT THERMAL pan/tilt system

ULISSE COMPACT THERMAL combines a thermal camera with a day/night motor zoom camera in a pan/tilt system. This solution makes surveillance applications possible for a wide variety of situations such as fog, total darkness or rain. The combination of two cameras ensures that all details are captured by the system. ULISSE COMPACT THERMAL has two independent video outputs. A simultaneous analysis of both cameras is possible.

You can find information about this system on the Videotec website or at:

[www.santec-video.com](http://www.santec-video.com)







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## Exterior accessories

### Housings

Easy to install

Robust material

Cable management

Protection

Infrared light

Vandalism protection

Appealing design

### Illuminators

IR illuminator

Operation at night

IR camera housing

Vision

Range



## Camera protective housings

### Camera protective housings



Part number	582042	582041
Part designation	HEL-62D	HEL-IR65D
Type	Weather-proof housing	IR weather-proof housing
Classification	IP-66	IP-66
Housing material	Aluminium	Aluminium
Housing colour	Silver-grey	Silver-grey
Sun shield	Yes	Yes
Heater / fan	Yes / Yes	Yes / Yes
Thermostat	Yes	Yes
Integrated IR illuminator	No	Yes
IR range (m)	No	Up to 70
IR illumination angle (horizontal)	No	30°
Integrated wall bracket	Yes	Yes
Operating temperature (°C)	-20 to +60	-20 to +60
Inner dimensions (W × H × D), mm	90 × 65 × 180	90 × 65 × 180
Outer dimensions (W × H × D), mm	150 × 160 × 374	150 × 160 × 374
Voltage	230 V AC	230 V AC
Power consumption (watt)	22	32
Weight	3.5 kg	3.5 kg

#### Notes

1. The housings are also available as ready-made sets (see pages 12, 25 and 48).
2. The range of the built-in IR LED illuminators is strongly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.

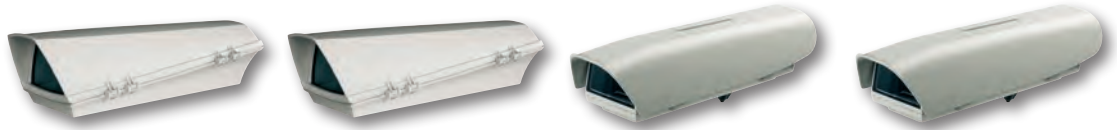


Part number	570005	570006	570007
Part designation	HPV42K1A000	HPV42K2A000	HPV42K2A700
Type	Weather-proof housing	Weather-proof housing	Weather-proof housing for IP cameras
Classification	IP-66	IP-66	IP-66
Housing material	High-strength technopolymer (polycarbonate)	High-strength technopolymer (polycarbonate)	High-strength technopolymer (polycarbonate)
Housing colour	RAL 9002 (grey-white)	RAL 9002 (grey-white)	RAL 9002 (grey-white)
Sun shield	Yes	Yes	Yes
Heater / fan	Yes / No	Yes / No	Yes / No
Thermostat	Yes	Yes	Yes
Cooling	No	No	No
Operating temperature (°C)	-20 to +60	-20 to +60	-30 to +60
Inner dimensions (W × H × D), mm	70 × 70 × 270	70 × 70 × 270	70 × 70 × 270
Outer dimensions (W × H × D), mm	156 × 115 × 466	156 × 115 × 466	156 × 115 × 230
Voltage	100–240 V AC	12 V DC / 24 V AC	IPM module, PoE/Hi-PoE supply, 24 W, 12 V DC
Weight	1.5 kg	1.5 kg	1.5 kg

# Camera protective housings



## Camera protective housings



Part number	570001	570002	570003	570004
Part designation	HOT39D1A000	HOT39D2A000	HOV32K1A000	HOV32K2A000
Type	Weather-proof housing	Weather-proof housing	Weather-proof housing	Weather-proof housing
Classification	IP-66 / IP-67	IP-66 / IP-67	IP-66 / IP-67	IP-66 / IP-67
Housing material	High-strength technopolymer (polycarbonate)	High-strength technopolymer (polycarbonate)	Aluminium	Aluminium
Housing colour	RAL 9002 (grey-white)	RAL 9002 (grey-white)	RAL 9002 (grey-white)	RAL 9002 (grey-white)
Sun shield	No	No	Yes	Yes
Heater	Yes	Yes	Yes	Yes
Thermostat	Yes	Yes	Yes	Yes
Fan	No	No	No	No
Cooling	No	No	No	No
Integrated wall bracket	No	No	No	No
Operating temperature (°C)	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Inner dimensions (W x H x D), mm	70 x 70 x 250	70 x 70 x 250	100 x 70 x 250	100 x 70 x 250
Outer dimensions (W x H x D), mm	146 x 128 x 391	146 x 128 x 391	140 x 160 x 514	140 x 160 x 514
Voltage	100-240 V AC	12 V DC / 24 V AC	100-240 V AC	12 V DC / 24 V AC
Weight	1.0 kg	1.0 kg	3.0 kg	3.0 kg

Housings

## Vandal-proof housings

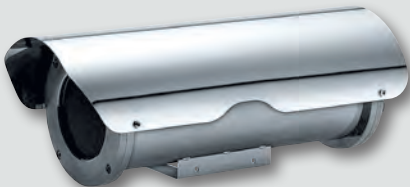


Videotec's vandal-proof housings can be used in various applications due to their special features. Special focus has been put on the design and construction of these housings. These vandal-proof housings are made of high-strength steel sheet produced in painted steel using epoxy polyester powder.

You can find information about this system on the Videotec website or at:

[www.santec-video.com](http://www.santec-video.com)

## Stainless steel housings



The Videotec stainless steel housings and pan/tilt heads have been designed to protect the cameras from particularly aggressive environmental conditions. They are entirely made of AISI 304 or AISI 316 stainless steel.

You can find information about this system on the Videotec website or at:

[www.santec-video.com](http://www.santec-video.com)

## Explosion-proof housings



The Videotec explosion-proof systems have been designed to meet rigorous requirements and installations in hazardous areas where flammable gases and powders may be present. All these housings are certified to meet the ATEX, IECEx and GOST-R standards.

You can find information about this system on the Videotec website or at:

[www.santec-video.com](http://www.santec-video.com)

## Accessories for camera housings

### Accessories for camera housings



Part number	570013	570015   570016	570017	570018
Part designation	WBJA	WBOVA2   WBOVA2-IP66/A	WCM5A	WCWA
Type	Wall bracket	Wall bracket	Ceiling bracket	Corner adapter
Mounting option	Wall mounting	Wall mounting	Ceiling mount	Corner mount
Cable management / Classification	No / —	Yes / IP-54 / Yes / IP-66	No / —	No / —
Colour	RAL 9002 (grey-white)	RAL 9002 (grey-white)	RAL 9002 (grey-white)	RAL 9002 (grey-white)
Suitable for	HOT, HPV, HOV housings	HOT, HPV, HOV housings	HOT, HPV, HOV housings	WBJA / WBOVA2
Loading capacity	25 kg	25 kg	25 kg	30 kg
Length (mm)	285	200	390	—



incl. clamps



HOT39 series with sun shield  
(housing not in scope of delivery)

Part number	570019	582040	570010
Part designation	WSFPA	HEL-IRMAST	OHOTS
Type	Pole mount	Pole mount	Sun shield
Mounting option	Pole mount	Corner and pole mount	—
Cable management	No	No	—
Suitable for	WBJA / WBOVA2	HEL-62D, HEL-IR65D, HEL-IR75D	HOT39D1A000 / HOT39D2A000
Loading capacity	50 kg	—	—
Pole diameter (mm)	65 to 110	90 to 170	—
Dimensions W × H × D (mm)	175 × 110	140 × 120 × 75	—



Part number	570009	570008	570011	570012
Part designation	OHOTPS1	OHEPS19B	OHOVPS1B	OHPVV3
Type	Power supply	Power supply	Power supply	Fan for heater
Voltage	100–240 V AC	100–240 V AC	230 V AC	100–240 V AC
Voltage output	12 V DC	12 V DC	12 V DC	12 V DC
Suitable for	HOT39D1A000	HPV42K series	HOV32K1 series	HPV42K series

## GEKO LED illuminators

The LED illuminators of the GEKO series provide perfect illumination for video cameras with D1 up to megapixel resolution.

The GEKO illuminators use the latest generation of LED SMD and ensure perfect night vision up to 240 m with low energy consumption.

The illuminators cover a temperature range of -50° C to +60° C. Throughout their whole lifetime, they are very reliable. Such an illuminator has a lifetime of 11 years.

Illuminator models GEKO IRN come with a bracket for wall mounting. GEKO IRH models match Videotec housings which can be installed together with WBJA, WBOVA2 or WBOVA2/A (suitable bracket: OSUPPIR).



Part number	580001	582041
Part designation	IR-180GD	HEL-IR65D
Type	IR LED all-around illuminator	IR weather-proof housing
Classification	IP-44	IP-66
IR range (m)	100 m <sup>2</sup>	up to 70
IR illumination angle (horizontal)	180°	30°
Voltage	12 V DC / 24 V AC	230 V AC
Power consumption (watt)	8	32
Dimensions W x H x D (mm)	108 x 70 (D x H)	150 x 160 x 374

### Notes

1. The range of the built-in IR LED illuminators is strongly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.
2. Further technical specifications for HEL-IR65D can be found on page 64.



## SANTEC infrared illuminators



Part number	570033	570034	570035
Part designation	IRN10B8AS00	IRN30A8AS00	IRN60A8AS00
Type	IR LED illuminator	IR LED illuminator	IR LED illuminator
Classification	IP66 / IP67	IP66 / IP67	IP66 / IP67
IR range (m)	240	130	80
IR illumination angle (horizontal)	10°	30°	60°
Voltage	90 / 240 V AC	90 / 240 V AC	90 / 240 V AC
Power consumption (watt)	30	30	30
Dimensions W × H × D (mm)	187 × 111 × 176	187 × 111 × 176	187 × 111 × 176
Special features	Standalone, incl. wall bracket	Standalone, incl. wall bracket	Standalone, incl. wall bracket



Part number	570029	570030	570031	570032
Part designation	IRH30H8A	IRH30L8A	IRH60H8A	IRH60L8A
Type	IR LED illuminator	IR LED illuminator	IR LED illuminator	IR LED illuminator
Classification	IP66 / IP67	IP66 / IP67	IP66 / IP67	IP66 / IP67
IR range (m)	84	60	56	40
IR illumination angle (horizontal)	30°	30°	60°	60°
Voltage	12/24 V DC / 24 V AC	12/24 V DC / 24 V AC	12/24 V DC / 24 V AC	12/24 V DC / 24 V AC
Power consumption (watt)	12	6	12	6
Dimensions W × H × D (mm)	133 × 65 × 108	133 × 65 × 108	133 × 65 × 108	133 × 65 × 108
Special features	Housing installation possible; incl. wall bracket	Housing installation possible; incl. wall bracket	Housing installation possible; incl. wall bracket	Housing installation possible; incl. wall bracket

### Notes

1. The range of the built-in IR LED illuminators is strongly dependent on the site location and the surroundings. Highly absorbent areas such as dark rough structures (ground, lawn, asphalt) can lead to a significant reduction of the maximum range.
2. The IR LED illuminators IRH can, in combination with the accessory OSUPPIR, be mounted between the HPV, HOT, HOV housings. You can find additional information about this at [www.santec-video.com](http://www.santec-video.com)

## Accessories for illuminators



Part number	582040
Part designation	HEL-IRMAST
Type	Pole mount
Mounting option	Corner and pole mount
Cable management	No
Suitable for	HEL-62D, HEL-IR65D, HEL-IR75D
Loading capacity	—
Pole diameter (mm)	90 to 170
Dimensions W × H × D (mm)	140 × 120 × 75





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Monitors



Monitors

Anti-reflective

Full HD

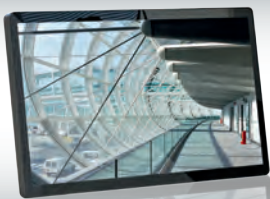
4K/UHD

Visualisation

Robust

Design

Monitoring



## Monitors by comparison

### SANTEC SLS series – the design monitors with state-of-the-art technology

The monitors of the SLS series impress with their timeless design and professional technology and are ideal for applications where technology and appearance matter equally.

- Modern design in metal housing
- Full HD resolution (from 21.5")
- Front screen made of hardened acrylic, scratch-proof and anti-reflective
- HDMI, DVI, VGA, 2 × FBAS (BNC) IN/OUT
- Picture-in-picture (PIP) and picture-on-picture (POP)
- LED backlight technology
- Low power consumption



### SANTEC SLM-21HCV monitor – full HD for the highest demands

The LCD 21.5" monitor SLM-21HCV is characterised by a very good image quality and special fast response time for the CCTV technology. This monitor is versatile thanks to its full HD resolution, VGA and HDMI inputs as well as functions such as deinterlace and 2D comb filter.

- Full HD resolution (1920×1080)
- 16:9 image format
- Front screen made of hardened acrylic, scratch-proof and anti-reflective
- With removable stand
- Multilingual OSD menu



### 4K/ultra HD monitor SLS-284K – razor-sharp UHD image quality

The SLS-284K monitor is the ideal solution if you want to display images from a 4K/UHD camera in perfect resolution. Thanks to its 16:9 format, backlight technology and HDMI connection, the monitor is versatile for everyone for whom attention to detail is indispensable in the professional sector.

- 4K/UHD display (3840×2160) of the corresponding camera models (see camera models SNC-831DBIA, SNC-831DDIA and SNC-831DLNN)
- Matching 4K/UHD recorder
- 16:9 image format
- HDMI input
- 28" screen diagonal



## Monitor series by comparison

Model series	SLM-21HCV	SLS series	SLS-284K
Available screen sizes	21"	10.4" to 42"	28"
Housing material	Plastic	Metal	Plastic
Front screen / anti-reflective	Hardened acrylic / yes	Hardened acrylic / yes	Hardened acrylic / yes
Backlight technology	LED	LED	LED
Full HD resolution	—	Yes, as of 21.5"	4K/Ultra HD (3840x2160)
Connections	VGA and HDMI video inputs	2 × BNC (IN/OUT), 1 × Y/C, VGA, HDMI, DVI (from 15")	HDMI
Remote control	—	IR remote control	No
Power consumption in standby mode	< 0.3 watt	< 0.3 watt	< 0.3 watt
Power supply	External	External	External
Speakers	No	Yes	No
Monitor stand included	Yes, removable	Yes (optionally mountable)	Yes, with tilt function

### Notes

1. Monitors certified for mobile applications are available on demand.
2. In order always to be able to offer the latest model at the best possible price, our range of 4K/UHD monitors will vary. Please contact us to enquire about current models and prices.



# 4K/UHD monitor



## 4K/Ultra HD monitor

Part number	510200
Part designation	SLS-284K
Type	4K/Ultra HD monitor
Screen diagonal	28.
Video norm	PAL, NTSC
Sensor resolution (pixels)	3840x2160
Image format	16:9
Background lighting	LED
PC video inputs	HDMI
Housing colour	Black
Housing material	Plastic
Special feature	Mounted stand



### Note

In order always to be able to offer the latest model at the best possible price, our range of 4K/UHD monitors will vary. The monitor model described above serves as an example. Please contact us to enquire about current models and prices.



## LED monitors

### LED CCTV monitors



Part number	511000	511001
Part designation	SLS-1045D	SLS-1505D
Type	LED monitor	LED monitor
Screen diagonal	10.4" (26 cm)	15" (38 cm)
Backlight technology	LED	LED
Video norm	PAL, NTSC	PAL, NTSC
Resolution pixel / TVL	800×600 / 800	1024×768 / 800
Video inputs	1 × BNC (IN/OUT)	2 × BNC (IN/OUT), 1× Y/C
PC video inputs	VGA, HDMI	VGA, HDMI
POP (picture-on-picture)	No	Yes
PIP (picture-in-picture)	No	Yes
Audio inputs	1 × 3.5 mm	1 × cinch, 1 × 3.5 mm
Voltage	12 V DC via ext. power sup.	12 V DC via ext. power sup.
Power consumption / Standby (watt)	12 / 0.5	15 / 0.5
Dimensions W × H × D (mm)	236.2 × 196.8 × 38.1	335.3 × 277.8 × 46.2
Weight	2.5 kg	3.8 kg
VESA standard (mm)	MIS-D 100×100	MIS-D 100×100
Items included in delivery	IR rem. control, power sup., VGA cable	IR rem. control, power sup., VGA cable
Special features	Stand (removable)	Stand (removable)



Part number	511002	511003
Part designation	SLS-1705D	SLS-1905D
Type	LED monitor	LED monitor
Screen diagonal	17" (43 cm)	19" (48 cm)
Backlight technology	LED	LED
Video norm	PAL, NTSC	PAL, NTSC
Resolution pixel / TVL	1280×1024 / 800	1280×1024 / 800
Video inputs	2 × BNC (IN/OUT), 1 × Y/C	2 × BNC (IN/OUT), 1 × Y/C
PC video inputs	VGA, HDMI	VGA, HDMI
POP (picture-on-picture)	Yes	Yes
PIP (picture-in-picture)	Yes	Yes
Audio inputs	1 × cinch, 1 × 3.5 mm	1 × cinch, 1 × 3.5 mm
Voltage	12 V DC via ext. power sup.	12 V DC via ext. power sup.
Power consumption / Standby (watt)	18 / 0.5	20 / 0.5
Dimensions W × H × D (mm)	367.9 × 319.4 × 43.6	405.5 × 346.8 × 43.1
Weight	6.8 kg	8.35 kg
VESA standard (mm)	MIS-D 100×100	MIS-D 100×100
Items included in delivery	IR rem. control, power sup., VGA cable	IR rem. control, power sup., VGA cable
Special features	Stand (removable)	Stand (removable)

#### Note

Matching monitor brackets and stands are available from page 74.

## LED monitors



### LED CCTV monitors



Part number	511101	511102	511103
Part designation	SLS-2150D	SLS-3200D	SLS-4200D
Type	LED monitor	LED monitor	LED monitor
Screen diagonal	21.5" (54.6 cm)	32" (81 cm)	42" (106 cm)
Backlight technology	LED	LED	LED
Video norm	PAL, NTSC	PAL, NTSC	PAL, NTSC
Resolution pixel / TVL	1920×1080 / 800	1920×1080 / 800	1920×1080 / 800
Video inputs	1 × BNC (IN/OUT), 1 × Y/C	1 × BNC (IN/OUT), 1 × Y/C	1 × BNC (IN/OUT), 1 × Y/C
PC video inputs	VGA, DVI, HDMI	VGA, DVI, HDMI	VGA, DVI, HDMI
POP (picture-on-picture)	Yes	Yes	Yes
PIP (picture-in-picture)	Yes	Yes	Yes
Audio inputs	1 × cinch, 1 × 3.5 mm	1 × cinch, 1 × 3.5 mm	1 × cinch, 1 × 3.5 mm
Voltage	12 V DC via ext. power sup.	230 V AC built-in power supply	230 V AC built-in power supply
Power consumption / Standby (watt)	30 / 0.3	70 / 1	80 / 0.5
Dimensions W × H × D (mm)	508.6 × 349.6 × 155	744.6 × 499.7 × 200	977.8 × 636.4 × 270
Weight	6 kg	16 kg	18 kg
VESA standard (mm)	MIS-D 100×100	MIS-E 200×200	MIS-E 200×200 / MIS-F 400×400
Items included in delivery	IR remote control, power sup. VGA and HDMI cable	IR remote control, power sup. VGA and HDMI cable	IR remote control, power sup. VGA and HDMI cable
Special features	Stand	Stand	Stand

Monitors

### LED monitors

Part number	510100
Part designation	SLM-21HCV
Type	LED monitor
Screen diagonal	21" (53 cm)
Backlight technology	LED
Video norm	PAL, NTSC
Resolution pixel / TVL	1920×1080 / >700
Brightness (cd/m <sup>2</sup> ) / contrast	250 / 1000:1
Video inputs	VGA, HDMI
Audio inputs	none
Voltage	100–240 V AC
Power consumption (standby)	< 25 (0.3)
Operating temperature (°C)	0 to +40
Dimensions W × H × D (mm)	511 × 392 × 203 (with stand)
Weight	3.0 kg
VESA bracket	MIS-D 100×100
Items included in delivery	Power cable, HDMI cable
Special feature	With removable stand



## SANTEC monitor stand

Part number	582000
Part designation	SMS-100D
Type	Stand
Colour	Black
Suitable for	Up to 24" monitors
Unit (U)	—
VESA standard (mm)	MIS-D 75x75 / 100x100
Dimensions W x H x D (mm)	250 x 384 x 220



## Monitor accessories – wall brackets

Part number	579500
Part designation	VA-VESA-171
Type	Monitor bracket
Colour	Black
VESA standard (mm)	MIS-D 75x75 / 100x100
VESA mounting option	Ceiling and wall mounting
Length / wall distance (mm)	74
Loading capacity	10 kg
Special features	Pan / tilt / rotate 180°



Part number	579534
Part designation	VA-3240
Type	Monitor wall bracket
Colour	Silver-grey
VESA standard (mm)	MIS-D 75x75 / 100x100
VESA mounting option	Wall mounting
Length / wall distance (mm)	Max. 537
Loading capacity	32 kg TÜV/GS 5x
Special features	Pan / tilt

Part number	579535
Part designation	VA-5210
Type	Monitor wall bracket
Colour	Black
VESA standard (mm)	MIS-F max. 418x355
VESA mounting option	Wall mounting
Length / wall distance (mm)	61
Loading capacity	75 kg TÜV/GS 5x
Special features	Pan 0°,5°,10°,15°



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Video management



# Video management

4K/UHD

P2P

Dewarping

Reliable

Tribrid

Video analysis

Easy to use



## SANTEC tribrid digital video recorder for HD-CVI, IP and analogue

The SANTEC recorders of the STVR series are tribrid recorders that can process HD-CVI, analogue, and IP signals. They can operate analogue or HD-CVI cameras at the same time with IP cameras on the same recorder. Existing systems can thereby be upgraded in a particularly easy way or very efficient mixed systems can be set up in which you can select from all the cameras those that you really need for your applications.

- Combination of analogue cameras, HD-CVI and IP cameras with one recorder
- Top price/performance ratio
- Integration new technologies in existing systems
- Compatible with the Burg Cam app
- Supports second spot monitor (depending on model)
- Supports IVA (Intelligent Video Analysis) for HD-CVI (depending on model)
- Supports more IP channels than HD-CVI channels, e.g. 4 × HD-CVI or up to 6 × IP channels



## SANTEC network video recorder

The new 4K/UHD recorders of the SNVR series support IP cameras with up to 12 MP. In addition an app and CMS software provide full flexibility.

- Ultra HD resolution
- IP cameras with up to 12 MP resolution (Ultra HD)
- Monitor outputs HDMI and VGA
- Updates can easily be installed via a USB of the NVR on the cameras
- P2P/cloud capable (Burg Cam & Burg Cam Pro)
- PoE support on all channels
- New cameras are automatically recognised and integrated when connected to the PoE port. Reduction of time and effort during set-up.
- 10/100/1000Mbps network compatible
- RS-232 and RS-485 interface for SANTEC third-party PTZ dome
- Compatible with the Burg Cam app
- Set-up of IVA (Intelligent Video Analysis) for fixed cameras via local interface
- Supports second spot monitor (depending on model)
- Subsequent video analysis via recordings possible
- Supports dewarping of fisheye cameras



## NUUO systems (NVRsolo, Crystal Titan, Mainconsole, IVS)

### Mainconsole family (NVRsolo, SCB)

The NUUO Mainconsole family is once more in our product range in many different forms. The SCB software and all products of the NVRsolo series are compatible and can be combined for example in the common client and/or CMS software. While the NVRsolo products already provide included hardware, you have the option with the SCB-IP software of installing it on your own server. You can find additional information about the systems with SCB software on page 84.

- Intelligent search and playback of the events found
- Integration of POS, I/O devices, access control and alarm systems
- Smart Guard with detection of 10 events and 10 immediate reactions
- Digital PTZ and camera multi-view
- Privacy zones
- Intelligent Video Surveillance (IVS)
- E-map
- 4 eyes principle
- Digital watermark
- Automatic backup
- iPhone, iPad, Android apps



### Crystal Titan

The network record (NVR) of the NUUO Crystal Titan series are Linux-based Enterprise solutions that are suitable both for small and large applications. The Crystal Titan series is a cross-platform system. "NuClient" runs both with Windows and Mac platforms. Several servers, clients and cameras can be centrally controlled from any place by Software Client and Web Client.

- Linux based
- Turn, modify and merge camera images
- Dual stream support of the cameras
- E-map with video pop-up and toolbar facilitates fast access to often used functions
- Speed up to 250 Mbps
- Up to 32 TB recording capacity
- Dual GB Ethernet ports
- Backup on FTP server



## App overview for SANTEC and NUUO recorders

Recorder series	STVR recorder	SNVR recorder	NUUO
Recorder models	STVR-3411 STVR-3811 STVR-31612	SNVR-11612P SNVR-2812P SNVR-23212P	SCB-IP+ NVRsolo NVR Crystal Titan
Supported cameras	HD-CVI, IP and analogue cameras	IP cameras	IP cameras
App for iPhone/iPad	Burg Cam (for smartphones, free of charge) Burg Cam Pro (for smartphones, for a fee) Burg Cam HD Pro (for tablets, free of charge) Burg Cam HD Pro (for tablets, for a fee)	Burg Cam (for smartphones, free of charge) Burg Cam Pro (for smartphones, for a fee) Burg Cam HD Pro (for tablets, free of charge) Burg Cam HD Pro (for tablets, for a fee)	NUUO iViewer
App for Android	Burg Cam (for smartphones, free of charge) Burg Cam Pro (for smartphones, for a fee) Burg Cam HD Pro (for tablets, free of charge) Burg Cam HD Pro (for tablets, for a fee)	Burg Cam (for smartphones, free of charge) Burg Cam Pro (for smartphones, for a fee) Burg Cam HD Pro (for tablets, free of charge) Burg Cam HD Pro (for tablets, for a fee)	NUUO iViewer
App features	Burg Cam: Basic functions, e.g. Image settings, snapshots, local shot  Burg Cam Pro (in addition): Expanded functions, e.g. Image settings, stream quality, push notifications	Burg Cam: Basic functions, e.g. Image settings, snapshots, local shot  Burg Cam Pro (in addition): Expanded functions, e.g. Image settings, stream quality, push notifications	Live view with 64 channels Several recorders/servers Snapshot PTZ ezNUUO Recording playback

## NUUO iViewer App

The NUUO iViewer app allows you to very easily connect via a WiFi or a UMTS connection with the NUUO systems and to view the surveillance images from a distance on your iPhone, Android smartphone, iPad or tablet.

The app is compatible with all NUUO solutions such as NDVR recorders or the NVRsolo. Support for the NUUO NVRsolo is already integrated via ezNUUO in the current version of the app.

### Features:

- Up to 64 live view channels, supports several servers
- Multi-channel display (3x2, 2x2)
- Touch screen PTZ (digital and physical)
- Megapixel resolution and speaking/listening audio support
- Playback, snapshot creation, push notifications, event list
- Supports ezNUUO (P2P, for NUUO NVRsolo)



## HDDs for recorders



Part number	579505	579506	579559
Part designation	HDD-2000HV	HDD-4000HV	HDD-6000HV
Type	HDD	HDD	HDD
HDD capacity (maximum)	2 TB	4 TB	6 TB
Interface	SATA-II	SATA-II	SATA-II
Dimensions	3.5" housing	3.5" housing	3.5" housing
Special features	24/7 tested / optimised for video applications	24/7 tested / optimised for video applications	24/7 tested / optimised for video applications

# SANTEC tribrid digital video recorder

Tribrid digital video recorder  
(analogue, IP and HD-CVI)

Royal

Royal

Royal



Part number	523003	523004	523005
Part designation	STVR-3411	STVR-3811	STVR-31612
Type	HD Tribrid digital video recorder	HD Tribrid digital video recorder	HD Tribrid digital video recorder
Video inputs	4 × BNC, 1 × RJ45	8 × BNC, 1 × RJ45	16 × BNC, 1 × RJ45
Supported standards	HD-CVI: 1080p, 720p, analogue: 960H, IP: 5 MP	HD-CVI: 1080p, 720p, analogue: 960H, IP: 5 MP	HD-CVI: 1080p, 720p, analogue: 960H, IP: 5 MP
Audio inputs / outputs	1 / 1 (Cinch)	4 / 1 (Cinch)	4 / 1 (Cinch)
Alarm inputs / outputs	0 / 0	8 / 3	16 / 3
HDD capacity max.	6TB	6TB	12TB
HDD capacity internal	1 × 3.5" SATA up to 6 TB	1 × 3.5" SATA up to 6 TB	2 × 3.5" SATA up to 2 × 6 TB
Interface	1 × RS-485	1 × RS-485	1 × RS-485
USB interface	1 × USB 3.0, 1x USB 2.0	1 × USB 3.0, 1x USB 2.0	1 × USB 3.0, 1 × USB 2.0
Monitor outputs	1 × HDMI, 1x VGA	1 × HDMI, 1x VGA (opt. spot)	1 × HDMI, 1 × VGA (opt. spot)
Internal RAID	No	No	Yes
Ethernet ports / speed	1/10/100/1000 Mbit	1/10/100/1000 Mbit	1/10/100/1000 Mbit
Cloud / P2P	Yes / Yes	Yes / Yes	Yes / Yes
Video norm	PAL, NTSC, HD-CVI	PAL, NTSC, HD-CVI	PAL, NTSC, HD-CVI
Compression	MJPEG, H.264, H.264+ (video) / G.711 (audio)	MJPEG, H.264, H.264+ (video) / G.711 (audio)	MJPEG, H.264, H.264+ (video) / G.711 (audio)
Supported resolutions	5MP, 4MP, 3MP, 1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF	5MP, 4MP, 3MP, 1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF	5MP, 4MP, 3MP, 1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF
Max. frame rate	25/30 fps	25/30 fps	25/30 fps
Max. screen resolution	1920×1080	1920×1080	1920×1080
Picture data export	USB, Network	USB, Network	USB, Network
Intelligent video analysis	Yes, in HD-CVI operation	Yes, in HD-CVI operation	Yes, in HD-CVI operation
Voltage	12 V DC, 2A, ext. Power supply	12 V DC, 2A, ext. Power supply	12 V DC, 5A
Power consumption (watt)	10 watt (without HDD)	10 watt (without HDD)	15 watt (without HDD)
Operating temperature (°C)	-10 to +55	-10 to +55	-10 to +55
Dimensions W × H × D	325 × 255 × 55 mm	325 × 255 × 55 mm	375 × 285 × 55 mm
Weight	1.5 kg (without HDD)	1.5 kg (without HDD)	2.35 kg (without HDD)
Items included in delivery	Power supply, IR remote control, mouse	Power supply, IR remote control, mouse	Power supply, IR remote control, mouse
Special feature	Supports 4 × hybrid/tribrid operation or 6 × IP operation (up to 5 MP)	Supports 8 × hybrid/tribrid operation or 12 × IP operation (up to 5 MP)	Supports 16 × hybrid/tribrid operation or 24 × IP operation (up to 5 MP)

Note

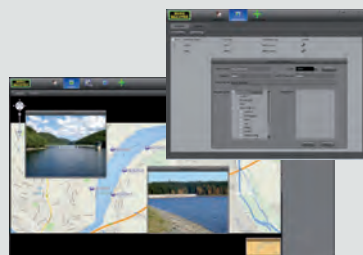
You can find maximum bandwidth and decoder performance in the technical data sheet or contact us.

## BURG-WÄCHTER IP-CVI VMS

With the BURG-WÄCHTER IP-CVI VMS, IP cameras can be displayed on a computer (up to 64) or recorded (up to 16). In addition, the recorders of the STVR and SNVR series can also be managed with it.

Features:

- Support of ONVIF capable devices
- Display of up to 64 channel / recording of up to 16 channels
- Manageable devices max. 256 / manageable channels max. 2000



You can find additional information at [www.santec-video.com](http://www.santec-video.com)

## BURG-WÄCHTER Cloud

The "BURG-WÄCHTER Cloud" is a platform that allows you remote access to supported devices (cameras, recorders). It is possible to manage and adjust devices and to look at the live image and recordings.

You can access the "BURG-WÄCHTER Cloud" via the browser of your computer or mobile device.

[www.cloud1.burg.biz](http://www.cloud1.burg.biz)

Features:

- Direct Peer-to- Peer (P2P) connection between camera/recorder and computer
- No DNS settings necessary
- Normally no router or firewall settings necessary



# SANTEC 4K/UHD network video recorder



4K/UHD  
network video recorder

Karat

Karat



Part number	523006	523007
Part designation	SNVR-2812P	SNVR-23212P
Type	4K/UHD network video recorder	4K/UHD network video recorder
Number of supported channels	8	32
Supported resolutions	12MP/8MP/6MP/5MP/4MP/3MP/1080P/ 720P/ D1&etc.	12MP/8MP/6MP/5MP/4MP/3MP/1080P/ 720P/ D1&etc.
Screen resolutions	3840×2160, 1920×1080, 1280×1024, 1280×720, 1024×768	3840×2160, 1920×1080, 1280×1024, 1280×720, 1024×768
Max. bandwidth	320 Mbps	320 Mbps
Screen display	1/4/8	1/4/8/9/16/25/36
Supported standards	ONVIF	ONVIF
Audio inputs / outputs	1 / 1 (Cinch)	1 / 1 (Cinch)
Alarm inputs / outputs	4 / 2	4 / 2
HDD capacity max.	12 TB	12 TB
HDD capacity internal	2 × SATA 3,5" (max. 6 TB each)	2 × SATA 3,5" (max. 6 TB each)
External HDD possible	—	—
Interface	1 × RS-485, 1 × RS232	1 × RS-485, 1 × RS232
USB interface	1 × USB 3.0, 1 × USB 2.0	1 × USB 3.0, 1 × USB 2.0
Monitor outputs	1 × HDMI, 1 × VGA	1 × HDMI, 1 × VGA
Internal RAID	Yes	Yes
Control devices (external)	Display, IR remote control, mouse, service desk	Display, IR remote control, mouse, service desk
Ethernet ports / speed	1 / 10/100/1000 Mbit	1 / 10/100/1000 Mbit
Cloud / P2P	Yes / Yes	Yes / Yes
Compression	H.265/H.264/MJPEG/MPEG4 (video) / G.711 (audio)	H.265/H.264/MJPEG/MPEG4 (video) / G.711 (audio)
Picture data export	USB, network, USB/SATA burner (not included)	USB, network, USB/SATA burner (not included)
Intelligent video analysis	Yes	Yes
Voltage	AC 100~240V, 50/60 Hz	AC 100~240V, 50/60 Hz
PoE	8 × (IEEE802.3af/at) each max.15.4W / 130W overall	16 × (IEEE802.3af/at) each max.15.4W / 130W overall
Power consumption (watt)	15.4 watt (without HDD)	25.5 watt (without HDD)
Operating temperature (°C)	-10 to +55	-10 to +55
Dimensions W × H × D	375 × 327 × 53 mm	375 × 327 × 53 mm
Weight	2.6 kg (without HDD)	2.7 kg (without HDD)
Items included in delivery	Power supply, IR remote control, mouse	Power supply, IR remote control, mouse
Special feature	Supports IP cameras up to 12 MP, 4K/UHD cameras, fisheye dewarping, subsequent video analysis of recordings	Supports IP cameras up to 12 MP, 4K/UHD cameras, fisheye dewarping, subsequent video analysis of recordings

Video management

## Burg Cam app



With the "Burg Cam Pro" app, you have the option of easily connecting to the SNVR (IP) and STVR recorders from SANTEC. Use WiFi or the UMTS network to connect to it. You can view the surveillance images from a distance on your smartphone/tablet as well as carry out a few adjustments and use features.

- For iPhone, iPad and Android devices
- Multilingual app (German, English, French, among others)
- Manage relay outputs on the recorder
- With Alarm Push, you receive immediate notifications on your mobile device about current incidents
- Make image adjustments and adjust stream quality
- Create an E-map and have full control

Note

You can find matching HDDs on page 77.

## SANTEC VMS software for SANTEC IP cameras and recorders

With the BURG-WÄCHTER IP-CVI VMS 2 you monitor, control and manage with one comprehensive tool SANTEC IP cameras and recorders. The software provides you an easy to understand and operate user interface. All video sources can be integrated into a complete security system.

### Special features:

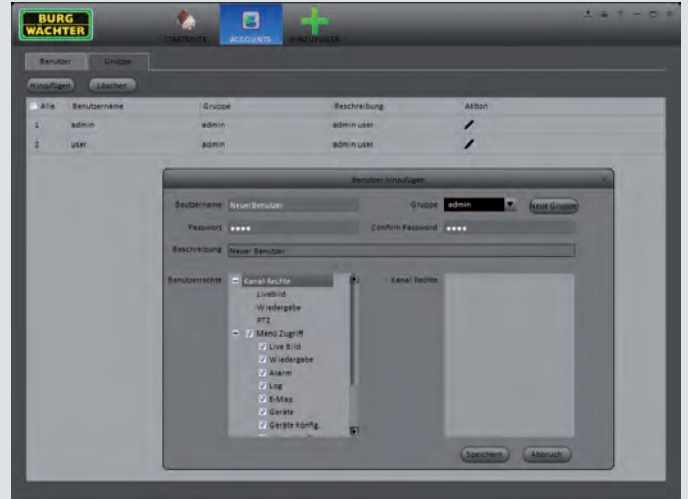
- Usable as a CMS with up to 2000 channels or 256 devices
- Integration of SANTEC BW P2P/Cloud devices
- Supports the display of ONVIF video devices
- Recording function and management of supported video devices (see below)

### Compatible with:

- SANTEC IP cameras of the series SNC-211, SNC-231, SNC-311, SNC-331, SNC-431, SNC-241, SNC-831
- SANTEC recorders of the series SNVR, STVR and SCVR

### Main features:

- Management of up to 256 devices or 2000 channels
- Up to 32 channels can be locally recorded
- Playback of up to 36 channels at the same time (local + remote)
- Event search
- Export formats: .dav / .avi / .mp4 / .asf
- Supports up to 4 monitors with 64 live images each
- Supports 4K cameras and H.265 streams
- Manages IPv6 addresses
- Integrates fisheye cameras (360° panorama cameras)
- Digital PTZ and multi-view
- SmartTrack in connection with a fisheye and PTZ camera
- Individual channels can be displayed in different windows



- Complete IVS and alarm management of the devices with action selection
- Schedule management
- E-Map function with display
- P2P device integration
- People counting with evaluation
- PTZ control via GUI or joystick
- Time synchronisation
- ONVIF device support
- Audio support
- Digital watermark
- User management with distribution of roles
- Logfile management of the remote as well as local devices



### Product overview

Royal

Part number	Part designation	Description
599001	BW-IP-CVI-NVR-1	PC base with video management software PC2 desktop, NVR keyboard, BW-IP-CVI-VMS
599002	BW-IP-CVI-NVR-2	PC base with video management software PC2 desktop, NVR keyboard, BW-IP-CVI-VMS, NVR 2nd graphic card

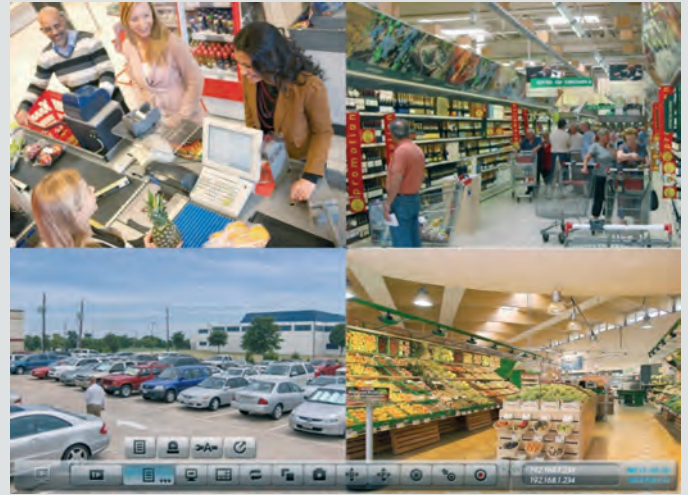
## NUUO network recorder NVRsolo

The smart recorder – Easy. Quick. Efficient.

The smart stand-alone from NUUO makes IP video surveillance a piece of cake. The new NUUO NVRsolo is a Linux-based stand-alone network recorder that has an HDMI or VGA video output. The system is displayed in Full HD resolution (1080p) and with 25 images / second on a connected monitor. You can therefore use the device locally and also via the remote access.

The NVRsolo is compatible with the SANTEC IP cameras and with 70 additional manufacturers. Monthly free updates ensure that the latest generations of cameras are also compatible with the device. The NVRsolo has two new and revolutionary functions: the one-click set-up and ezNUUO. One-click set-up saves time during the camera configuration by searching the cameras in the network and automatically adding these cameras in NVRsolo. ezNUUO facilitates the process for NVR solo in establishing Internet access. No additional router settings for remote access and mobile display (iPhone, iPad, Android) are required.

NUUO NVRsolo is easy to operate, and users who already use NUUO devices (SCB-IP+, NUUO NVR and NDVR) will quickly find their way around. In addition, the NVRsolo is compatible with the NUUO Central Management System (CMS). The small NVR is thus suitable for a number of applications, whether for small video surveillance at home or in a boutique or for larger facilities such as a bank or supermarket (projects with POS support).



NUUO NS-2080



### Local main features

- 8 channel NVR (NS-8065-EU upgradable to up to 16 channels)
- Recording with 100 images at 1080p (2 MP) resolution (200 images with 720p)
- HDMI and VGA output
- Real live image display with 25 images at 1080p resolution
- 2 x 3.5" HDD @ 4 TB, also as RAID 0,1
- RAID 0,1 for maximum capacity or data protection
- Camera I/O integration
- Real-time digital output and email alert
- NTP server synchronisation
- Direct integration of the SANTEC IP cameras
- ezNUUO - easy access to the NVR via browser and smartphone apps
- Point-of-Sale (POS) support
- Supports more than 70 IP camera manufacturers
- Alarm source for NUUO Central Management System (CMS)
- Linux embedded system - a safer solution against PC breakdowns and virus attacks
- IR remote control

### Remote main features

#### Remote Client application

- Supports stream profile for remote live view with integrated bandwidth control (original / 300 kbps / 100 kbps)
- Apps: Supports mobile devices (iPhone / iPad / Android)
- Up to 128 channels for remote live view with several monitors

#### Web browser

- Web-based configuration, live viewer, playback (compatible with IE8 or higher)
- Setting of recording schedule
- 360° panorama PTZ (e.g. ImmerVision)
- Digital PTZ and multi-view
- Playback with intelligent event search (5 search options)
- E-Map with display
- Digital watermark

## Product overview

Royal

Part number	Part designation	Description
570594	NS-2040-EU	NUUO NVRsolo 4-channel network video recorder, HDMI/VGA
570595	NS-2080	NUUO NVRsolo 8-channel network video recorder, HDMI/VGA
570596	NS-2080-2000	NUUO NVRsolo 8-channel network video recorder, HDMI/VGA, incl. 2 TB HDD
570525	NS-8065-EU	NUUO NVRsolo 19" rackmount 6-channel network video recorder, HDMI/VGA, room for 8 HDDs (not included in delivery)
570522	NS-SOLO-UP-01	NUUO 1 channel upgrade license for NUUO NVRsolo NS-1040-EU and NS-8065-EU
570582	NS-SOLO-UP-02-OEM	NUUO 2 channel upgrade license for NUUO NVRsolo NS-1040-EU and NS-8065-EU
570524	NS-SOLO-UP-04	NUUO 4 channel upgrade license for NUUO NVRsolo NS-1040-EU and NS-8065-EU

## NUUO Enterprise recorder Crystal Titan



NUUO CT-4000

NUUO CT-4000R / 8000R / 8000RP

### Central management

Crystal Titan supports an unlimited number of cameras, third-party access control systems and POS and I/O devices. Different levels of access rights, surveillance points and event processing can be assigned. Together with the intuitive NuClient software for central live view and playback of video images, Crystal Titan provides its users complete control over the entire system. Crystal Titan has a failover function to ensure server availability and uninterrupted performance. Crystal Titan's failover mechanism enables the assignment of servers and management in clusters so that the recording can be protected even more efficiently.

### Powerhouse for megapixel recordings

Using customised recording technology known as File Ring, Crystal Titan is able to handle recordings with many megapixels so that a data throughput of up to 250 Mbps for a single volume can be reached, 400 Mbps for two volumes and 500 Mbps for three volumes.

### Cutting edge video technology

Crystal Titan supports an unlimited number of video wall displays with up to 100 channels per monitor. Adjusting the views occurs by drag & drop of the different image grids using the built-in wizards. Crystal Titan also provides image fusion to display several views in a single image. In combination with the PTZ joystick control, fisheye dewarp algorithm and video tour mode, reviewing and monitoring becomes easier than ever before.

### Advanced modular design

The advantage of a modular system design is that it not only can be managed centrally but also every module works independently of each other on a process level. When a process is defective, this module switches off and the rest of the system continues to function normally.



### Server Highlights

- Centralised management for an unlimited number of devices and events for NuClients
- Linux-based system
- Records up to 64 megapixel cameras per recorder
- High throughput from 250 – 550 Mbps; supports up to 64 5 megapixel cameras\*1
- Recorder failover (Ultimate v2.1 and higher)
- Metadata server (POS, access control) for third-party integration
- Supports more than 2,000 camera models of more than 80 brands and RTSP video stream

### Client Highlights

- Cross-platform for Windows and Mac
- Complete NuClient for remote configuration and viewing
- Unlimited channels for live view and playback
- Unlimited channels for NuMatrix video wall (Ultimate)

### External support

- External storage via third parties (DAS, iSCSI)
- Supports third parties for POS and access control
- Supports up to 256 NUUO and I/O boxes per server
- Supports APC uninterrupted power supply

\*1 250 Mbps: 64 x 5-megapixel cameras (based on H.264, 10 fps, at moderate data traffic)

## Product overview

Royal

Part number	Part designation	Description
570503	CT-4000	Crystal Titan Linux NVR, standalone, up to 64 IP channels, up to 4 HDDs
570504	CT-4000R	Crystal Titan Linux NVR, stand-alone, up to 64 IP channels, up to 4 HDDs, 19" rackmount
570505	CT-8000R	Crystal Titan Linux NVR, stand-alone, up to 64 IP channels, up to 8 HDDs, 19" rackmount
570506	CT-8000RP	Crystal Titan Linux NVR, standalone, up to 64 IP channels, up to 8 HDDs, 19" rackmount, redundant power supply
570500	CT-CAM-ENT	Camera license for 1 IP camera for NUUO Crystal Titan
570501	CT-CAM-ULT	License for 1 IP camera for NUUO Crystal Titan incl. recording, failover and video wall
570502	CT-CAM-UPU	Easy upgrade of Enterprise Ultimate without needing to reset the whole system.

## NUUO video management software



The NUUO software can process as a standalone solution up to 64 cameras at the same time and up to 3 monitors (2 × Live, 1 × Playback). Furthermore, the software provides intelligent detection modes, immediate notifications, PTZ control and a graphic easy to use user interface.

In addition to the viewing tool provided, which can be installed at remote stations, it is also possible to access recordings and live views in many different ways. Every NUUO recorder includes a web interface for the easy remote access. In addition to e-map, which displays an existing alarm on a map, NUUO signs every video and image with a watermark.

### Product overview Royal

Part number	Part designation	Description
570547	SCB-IP-P01	1-channel PC-based NUUO video management software
570548	SCB-IP-P04	4-channel PC-based NUUO video management software
570549	SCB-IP-P08	8-channel PC-based NUUO video management software
570550	SCB-IP-P12	12-channel PC-based NUUO video management software
570551	SCB-IP-P16	16-channel PC-based NUUO video management software
570552	SCB-IP-P25	25-channel PC-based NUUO video management software
570553	SCB-IP-P32	32-channel PC-based NUUO video management software
570554	SCB-IP-P36	36-channel PC-based NUUO video management software

Video management

## NUUO Central Management System (CMS)



The NUUO Central Management System can manage an unlimited number of analogue and IP cameras. The software evaluates all the data provided by the respective NUUO servers. The CMS receives the alarm and displays it on the corresponding floor plans or maps, which may have an unlimited depth. You can also set up unlimited matrices with the CMS and view at any time any camera at any location and access the archive data as well as the alarm history. Remote access to the video server is also possible. The CMS furthermore monitors the status of each camera and each NUUO NVR.

### Product overview Royal

Part number	Part designation	Description
570507	NCS-Base	NUUO CMS basic licence incl. 48 cameras, 8 I/O connections
570508	NCS-CN-CAM	NUUO CMS licence extension, 1 camera analogue/IP
570509	NCS-CN-IO	NUUO CMS licence extension, 1 I/O connection
570510	NCS-CN-POS	NUUO CMS licence extension, 1 POS

Note

We also offer pre-configured systems on which the NCS-Base software has already been installed (see page 85).

## NUUO Mainconsole tribrid systems



### Flexible, intelligent and powerful

The NUUO Mainconsole is the best choice when you have existing older analogue systems but also want to upgrade with IP cameras. It provides a smooth integration between older and newer camera types. Mainconsole is flexible: Choose between analogue CCTV, IP and HD-SDI cameras. More information is available at [www.santec-video.com](http://www.santec-video.com).

### Compatible with HD-SDI, analogue and IP cameras

Using video capture cards that enable a connection via Ethernet or coaxial cables, the NUUO Mainconsole can handle signals from different models of cameras, irrespective of their type.

### Cutting edge video technology

The NUUO Mainconsole can also be equipped with a video analytics (IVS) function (see page 85). This means that as long as you connect a supported camera, you can enjoy the advantages of IVS, even if the camera itself does not have this function!

### Smooth third party integration

The Mainconsole is a solution platform for IVS, POS, access control and LPR.

### Features

- POS, I/O device, LPR and access control integration
- Advanced and embedded video analytics
- Smart Guard with detection of 6 events
- Supports multi-stream for live view and playback
- Counting function (via IVS, see page 73)
- Supports dual recording
- Intelligent search and playback
- Windows Active Directory
- Privacy zones
- Apps for iPhone, iPad and Android devices
- E-map
- Digital watermark
- Boost recording (automatic switching to low and high resolution in case of motion)
- Dual password validation
- Edge motion detection of network cameras
- OnGuard (software watchdog)
- Failover recording server
- Auto backup
- Flexible video recycle management options
- Digital PTZ and multi-view
- Two-way audio

### SANTEC solutions

SANTEC provides different recording solutions for HD-SDI, analogue and IP cameras in both desktop and rackmount housings. These hybrid or tribrid recorders are built in Ahrensburg and configured for you. We build you your tailor-made solution. You can find additional information at our website at:

[www.santec-video.com](http://www.santec-video.com)

– Products – Video management & recording

## NUUO Remote PCs and CMS servers

Royal

Royal

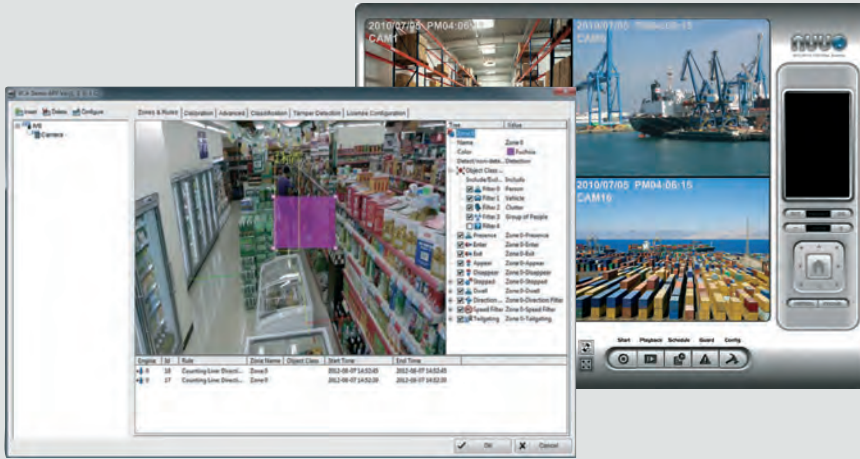
Royal

Royal



Part number	570540	570541	570538	570539
Part designation	NUUO-RPCD-1	NUUO-RPCD-2	NUUO-CMSP	NUUO-RPCD-CMS
Type	Remote PC, desktop	Remote PC, desktop	CMS Server incl. NCS-Base software	Remote PC, desktop
USB interface	USB 1.1 / 2.0	USB 1.1 / 2.0	USB 1.1 / 2.0	USB 1.1 / 2.0
PC video output	1 x HDMI, 1 x DVI, 1 x VGA	2 x HDMI, 2 x DVI, 2 x VGA	1 x HDMI, 1 x DVI, 1 x VGA	1 x HDMI, 1 x DVI, 1 x VGA
Max. monitor outputs	2	4	2	2
Redundant power supply	No	No	Yes, with NDVRP-REDNT	No
Storage / DVD-RW	2 TB / Yes	2 TB / Yes	2 TB / Yes	2 TB / Yes
Number of Ethernet ports	1	1	1	1
Ethernet speed	10/100/1000 Mbit	10/100/1000 Mbit	10/100/1000 Mbit	10/100/1000 Mbit
Internal operating system	Microsoft Windows 10	Microsoft Windows 10	Microsoft Windows 10	Microsoft Windows 10
Dimensions W x H x D (mm)	425 x 120 x 425	425 x 120 x 425	522 x 430 x 176	425 x 120 x 425
Weight	22 kg	22 kg	32 kg	22 kg

## NUUO IVS video analytics (Intelligent Video Surveillance)



The NUUO Intelligent Video Surveillance (IVS) provides an a sophisticated and precise video analysis both for IP cameras and analogue cameras. The IVS can track, classify and analyse the behaviour of individuals or groups over long distances. The efficiency of a surveillance can thereby be significantly improved.

Note:

So that you can use NUUO IVS without any limitations, install the latest NUUO Mainconsole version (v 5.0.22 or newer).

### Main features:

- Compatible with IP cameras and analogue cameras
- Compatible with existing NUUO Mainconsole (SCB-IP)
- IVS recording & recording transcoding
- Scalable and flexible
- Supports 10 signalings
- Intelligent video event search
- Easy set-up
- Cost efficient
- Low system load (CPU)
- Intuitive and unique 3D grid calibration
- Sets up up to 40 detection zones and 100 targets per camera
- Self-learning algorithm automatically adapts to environment changes
- Suitable for PTZ cameras and thermal imaging cameras

### IVS product overview:

Part number / function	SCB-IP-P-IVS COUNTING	SCB-IP-P-IVS PRESENCE	SCB-IP-P-IVS SURVEILLANCE	SCB-IP-P-IVS ADVANCED
People counting	X			X
Manipulation detection	X	X	X	X
Max. detection zones	40	40	40	40
Vehicle counting	X			X
Camera stabilisation		X	X	X
Camera calibration			X	X
Presence (tripwire)		X	X	X
Appear and disappear			X	X
Enter and exit			X	X
Dwelling			X	X
Stopping			X	X
Tailgating			X	X
Direction			X	X
Object moved			X	X

### Product overview

Part number	Part designation	Description
570558	SCB-IP-P-IVS-C01	1 x video analytics licence COUNTING for NUUO SCB software (as of version 4.0)
570559	SCB-IP-P-IVS-C04	4 x video analytics licence COUNTING for NUUO SCB software (as of version 4.0)
570560	SCB-IP-P-IVS-P01	1 x video analytics licence PRESENCE for NUUO SCB software (as of version 4.0)
570561	SCB-IP-P-IVS-P04	4 x video analytics licence PRESENCE for NUUO SCB software (as of version 4.0)
570562	SCB-IP-P-IVS-S01	1 x video analytics licence SURVEILLANCE for NUUO SCB software (as of version 4.0)
570563	SCB-IP-P-IVS-S04	4 x video analytics licence SURVEILLANCE for NUUO SCB software (as of version 4.0)
570556	SCB-IP-P-IVS-A01	1 x video analytics licence ADVANCED for NUUO SCB software (as of version 4.0)
570557	SCB-IP-P-IVS-A04	4 x video analytics licence ADVANCED for NUUO SCB software (as of version 4.0)

## NUUO accessories

<b>Part number</b>	<b>570543</b>
<b>Part designation</b>	SCB-C24
<b>Description</b>	16-channel digital output for PC-based NUUO NVR and DVR. SCB-C24 provides 16 optically decoupled digital output contacts. This item has to be used in combination with SCB-C08 or SCB-C31A.
<b>Interface</b>	1 × RS-485
<b>Relay type</b>	No
<b>Dimensions</b>	151 × 75 × 26



<b>Part number</b>	<b>570542</b>
<b>Part designation</b>	SCB-A08
<b>Description</b>	Ethernet I/O box for communication between surveillance systems and different devices. This box has several input and output contacts as well as RS-232/422 and 485 interfaces.
<b>Interface</b>	8 × input, 8 × output, 1 × RS-232/422/485, Ethernet
<b>Relay type</b>	No
<b>Dimensions</b>	114 × 143 × 28



<b>Part number</b>	<b>570545</b>
<b>Part designation</b>	SCB-C31A
<b>Description</b>	NUUO 1-channel POS box. The POS box is able to integrate – together with a NUUO NVR/DVR – financial transactions from a cash system. Note: Verify if your cash system is compatible before ordering this item.
<b>Interface</b>	RS-232/485
<b>Relay type</b>	No
<b>Dimensions W × H × D (mm)</b>	85 × 115 × 23

<b>Part number</b>	<b>570546</b>
<b>Part designation</b>	SCB-C31APOS
<b>Description</b>	NUUO 1-channel POS system consisting of SCB-C31A and 1-channel POS licence. The system is able to integrate – together with a NUUO NVR/DVR – financial transactions from a cash system. Note: Verify if your cash system is compatible before ordering this item.
<b>Interface</b>	1 × RS-232/485, Ethernet
<b>Relay type</b>	No
<b>Dimensions W × H × D (mm)</b>	85 × 115 × 23

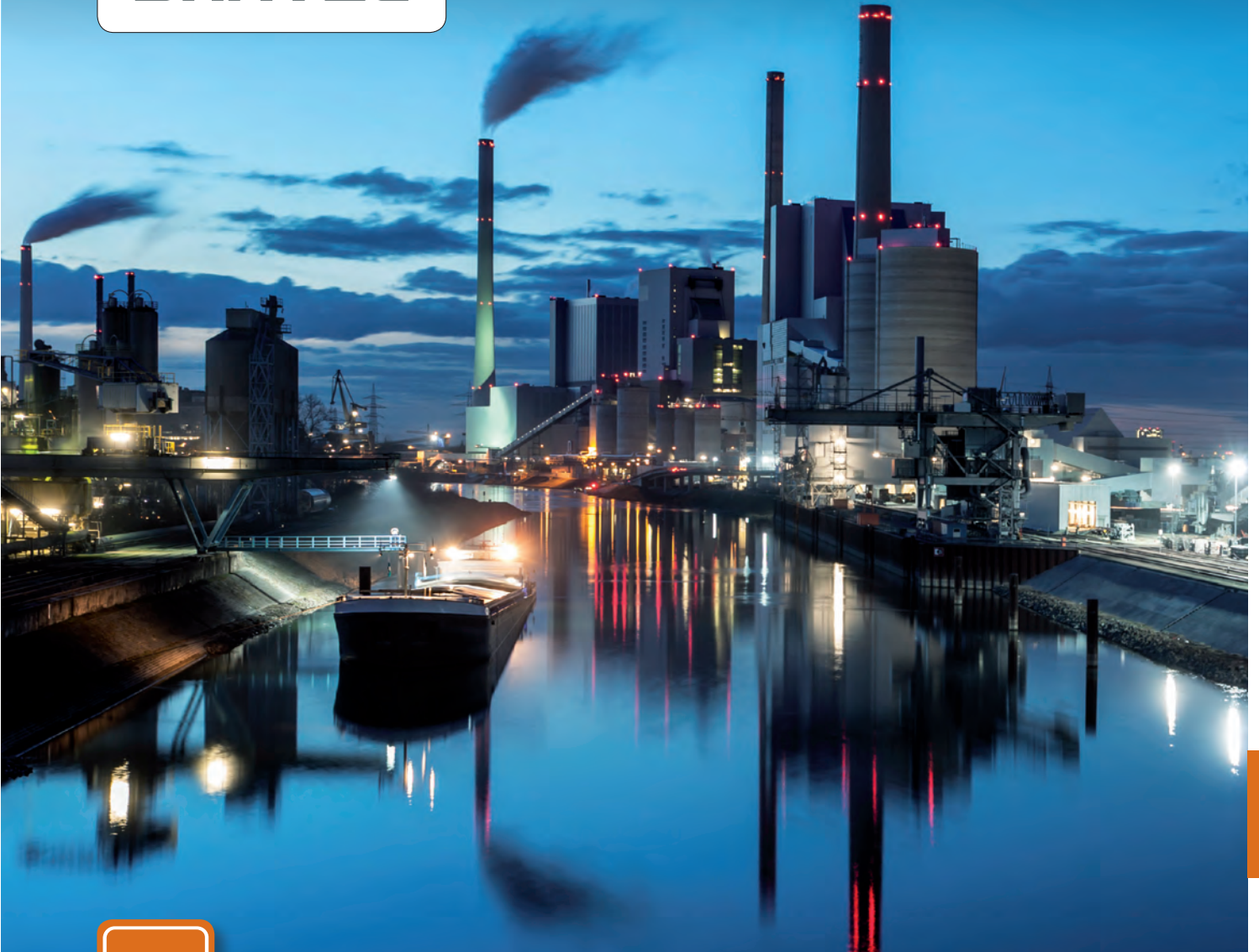
<b>Note</b>	For the converter SCB-C31APOS we offer the appropriate upgrade licences for additional channels: – SCB-IP-P-POS01: 1 channel license for SCB-C31APOS, part number: 570564 – SCB-IP-P-POS04: 4 channel license for SCB-C31APOS, part number: 570565
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Video sensors



## Video sensors

Fewer false alarms

Passive and active video surveillance

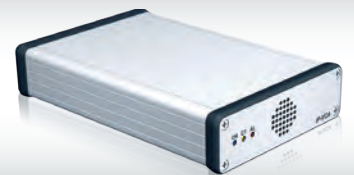
Reliable

## Avoid damage

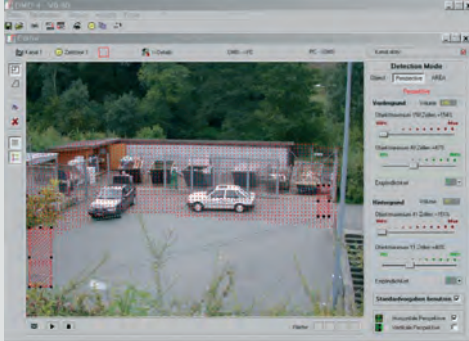
Detection logic

PIR detection

Secure detection indoors and out



## Video sensors



The digital video sensor DMD-4 provides an ideal solution for a fully automatic and continuous surveillance of a video scene. When securing buildings, outdoor facilities or access ramps, the DMD-4 detects potential dangers at an early stage and notifies the user. Due to its versatile functions, the DMD-4 has been specially designed for security-critical outdoor areas. Due to weather related influences, these applications place the highest demands on the sensor's triggering security.

The IP-VCA is the ideal product to supplement IP cameras for implementing event-triggered video connections and recordings indoors and outdoors efficiently and independent of camera system manufacturers. The IP-VCA ensures the highest level of detection security, combined with an image analysis for marketing statistics as an integrated solution for existing IP video systems or as a standalone solution for demanding applications.

## Video sensors



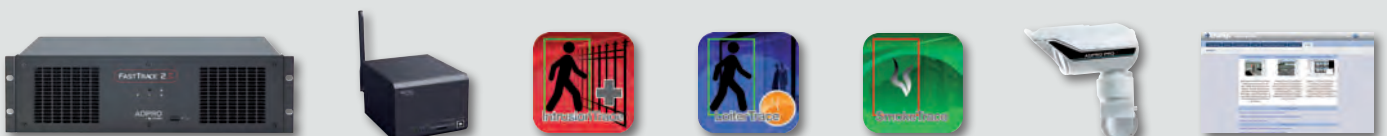
Part number	DMD-4	IP-VCA
Model number	579504	579508
Type	Video sensor for 4 CCTV cameras	Video sensor for 1 IP camera
Special features	4 video inputs, 4 alarm inputs, 4 alarm outputs, RS-232, RS-485, LAN interfaces	2 x Ethernet (10/100), 2 alarm inputs, 1 alarm output

## Passive infrared detector (PIR) ADPRO PRO E

The passive infrared detector (PIR) ADPRO PRO E provides comprehensive perimeter protection combined with extraordinary detection accuracy, reliability and range. The new generation of passive infrared detectors evolved from the Xtralis defence-grade perimeter protection technology and the proven series of ADPRO PRO PIRs. This PIR portfolio is unparalleled, with innovative functions such as 220 m detection range, 360PROtect tamper protection, iCommission for one-man installation and wireless communication.

Many useful supplements have been developed for ADPRO PRO E

- FastTrace 2E – The best solution currently available for video recording, alarm transmission and alarm verification. FastTrace 2E is the centrepiece of the system with a low number of false alarms due to the seamless integration of detection technologies such as the video analysis tools IntrusionTrace, LoiterTrace and SmokeTrace as well as PRO E detectors.
- Cam4mobile – shock-resistant (mobile) image recording and transmission system
- IntrusionTrace – early and reliable motion detector at any time of day
- LoiterTrace – detection of unwanted loitering indoors or outdoors
- SmokeTrace – provides fast visual remote smoke verification
- Xtralis Xchange – the tool for easy and convenient installation and commissioning
- ADPRO PRO E – passive infrared detector (PIR)
- iTrace app for FastTrace 2/2E – live view for connected cameras, management and control
- iCommission – commissioning and maintenance via your smartphone



For further information please contact our sales team or visit the website at [www.heitel.com](http://www.heitel.com) or [www.santec-video.com](http://www.santec-video.com).



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# Transmission

Extender

Twisted pair technology

PoE

Network

IP over coax

Midspan

IP 66



Transmission

## Video baluns M-500AK and M-509A

The passive compact video baluns M-500AK and M-509A have specially been designed for transmissions of video signals and power via a CAT cable (M-500AK) and the reliable transmission of video signals via twisted pair (M-509A).

Both video baluns are compatible with the active twisted pair receivers VEZ-4SYS and VEZ-16SYS.

- Transmission of a video signal and operating voltage via twisted pair (M-500AK) or CAT cable (M-509A)
- No operating voltage for video baluns required
- Can be used as sender or receiver
- Max. range up to 300 m, depending on quality of cable
- Small and compact

### Application example: SANTEC video balun M-509A (with twisted pair)



CCTV camera  
e.g. VTC-279IRHWD



Video balun  
M-509A



Video  
Twisted pair



Video balun  
M-509A



BNC cable



Recorder  
e.g. STVR-3411, STVR-3811,  
STVR-31612

### Application example: SANTEC video balun M-500AK (with Ethernet network cable)



CCTV camera  
e.g. VTC-279IRHWD



Video balun  
M-500AK



Video and power  
CAT5 / CAT6 / CAT7 cable



Video balun  
M-500AK



BNC cable



Recorder  
e.g. STVR-3411, STVR-3811,  
STVR-31612



Power supply  
VCA-24V-1A/B



## Twisted pair system technology, coaxial transmission

### Twisted pair system technology for CCTV cameras



Part number	586000   586006	586012	586013
Part designation	M-500AK   M-500AK-10	VEZ-4SYS	VEZ-16SYS
Type	Compact balun (sender or receiver)	4-channel twisted pair receiver, active	16-channel twisted pair receiver, active
Video inputs	1 × BNC 1Vpp (input / output)	4 × twisted pair (RJ-45 jack)	16 × twisted pair (RJ-45 jack)
Video outputs	1 × RJ-45 (input / output)	4 × BNC 1 Vpp	16 × BNC 1 Vpp
Max. cable length (m)	Up to 300 (CAT5 / CAT6 / CAT7 cable)	Up to 200 (CAT5 / CAT6 / CAT7 cable)	Up to 200 (CAT5 / CAT6 / CAT7 cable)
Transmission of (RJ-45)	Video, power	Video, power (24 V AC), data	Video, power (24 V AC), data
Operating voltage	—	24 V AC	24 V AC
Dimensions W × H × D (mm)	69 × 25 × 20.7	160 × 50 × 145	460 × 50 × 145
Suitable power supply	—	VCA-24V-1A/B / VCA-200	VCA-24V8A-SYS / VCA-24V-1A

### Twisted pair & coaxial transmission for CCTV cameras

Part number	586007   586008
Part designation	M-509A   M-509A-10
Type	Compact balun (sender or receiver)
Video inputs / outputs	1 × BNC 1 Vpp
Twisted pair inputs / outputs	1 × screw terminal (input/output)
Max. cable length twisted wire (m)	Up to 300
Transmission of	Video
Operating voltage	-
Dimensions W × H × D (mm)	14.5 × 49.5 × 15.5



Part number	579548	579538	579547
Part designation	VSZ-STW	VEZ-STMK	VSZ-AK230
Type	Twisted wire sender, active	Twisted wire receiver, active	Twisted wire sender, active
Video inputs / outputs	Input 1 × BNC 1 Vpp	Output 1 × BNC 1 Vpp	Input 1 × screw terminal 1 Vpp
Twisted pair inputs / outputs	1 × screw terminal (output)	1 × screw terminal (input)	1 × screw terminal
Max. cable length twisted wire (m)	Up to 900	Up to 900	Up to 1000
Transmission of	Video	Video	Video
Operating voltage	12 V DC / 24 V AC	12 V DC / 24 V AC	230 V AC
Dimensions W × H × D (mm)	25 × 25 × 65	25 × 25 × 65	106 × 56 × 100

## Distributors & amplifiers for analogue CCTV cameras



Part number	586009	586010
Part designation	VKS-2100S/V	VPT-80
Type	Single cable coax transmitter/receiver	Ground loop isolator
Video inputs	1 × BNC 1 Vpp	1 × BNC 1 Vpp
Video outputs	1 × BNC 1 Vpp	1 × BNC 1 Vpp
Splitter	No	No
Operating voltage	15–27 V DC included power supply	No
Dimensions W × H × D (mm)	55 × 85 × 20	26 × 28 × 70
Specials	Video, audio and voltage transmission using coax cable	—

## Converters, distributors for HD-CVI



Part number	586015	586016	586017
Part designation	HDCVI-2105	HDCVI-2600	HDCVI-2690
Type	HD-CVI on HDMI converter	HD-CVI distributor	HD-CVI distributor
Number of connections	3 × BNC, 1 × HDMI, 1 × VGA, 1 × RS485	4 × BNC (1 input, 3 output)	BNC: 16 × input, 32 × output
LED displays	Video, power, data	Video, power, data	No
Operating voltage	12 V DC, 2A	12 V DC, 1A	100 – 240 V AC
Power consumption	15 W	5 W	2 W
Operating temperature (°C)	-10 to +55	-40 to +75	-10 to +55
Dimensions W × H × D (mm)	162 × 136.4 × 30	104.6 × 96.2 × 29.5	440 × 200 × 43.6
Weight	200 g	200 g	2.78 kg
Special features	Dust-protected housing; for wall mounting	Dust-protected housing; for wall mounting; amplifier for up to 1200 m	1U housing (19")

## AC/DC converters

Part number	584006
Part designation	VACDC-12V-1A
Type	AC/DC converter (24 V AC to 12 V DC)
Input voltage	20-36 V AC
Output voltage	12 V DC
Dimensions W × H × D (mm)	72 × 28 × 23



## PoC senders/receivers



<b>Part number</b>	586014
<b>Part designation</b>	HDCVI-810
<b>Type</b>	PoC senders/receivers
<b>Signal transmission</b>	1 channel HD-CVI / HDTVI / AHD / CVBS
<b>Transmission distance</b>	Up to 400 metres (at 720p / 1080p)
<b>Impedance</b>	75 ohm
<b>Input voltage</b>	24–36 V DC
<b>Output voltage</b>	12 V DC (max. 9 W) for cameras
<b>Power transmission</b>	RG59, 36V: up to 150 m 9W / up to 300 m 6W
<b>Operating temperature (°C)</b>	-10 to +55
<b>Dimensions L × H × D (mm)</b>	78 × 29 × 22
<b>Weight</b>	153 g
<b>Specials</b>	Protected against electrostatic charge, anti-interference

## Network switches



Part number	579529	579549	579528
<b>Part designation</b>	SanSwitch-M0404	SanSwitch-G8408	SanSwitch-G8108
<b>Type</b>	PoE switch	Gigabit switch	Gigabit switch
<b>Number of Ethernet ports</b>	8	8	8
<b>Ethernet standards</b>	10Base-T / 100Base-TX	10Base-T / 100Base-TX / 1000Base-TX	10Base-T / 100Base-TX / 1000Base-TX
<b>Power over Ethernet (PoE)</b>	Yes, 4 × 15.4W (af)	No	Yes, 8 × 15.4W (af) or 4 × 31.5W (at)
<b>PoE standard</b>	IEEE802.3af	—	IEEE802.3at / IEEE802.3af
<b>Supported protocols</b>	none	QoS, VLAN, SNMP	none
<b>VLAN</b>	No	Yes	No
<b>QoS (quality of service)</b>	No	Yes	No
<b>Integrated web interface</b>	No	Yes	No
<b>RS-232 interface</b>	No	No	No
<b>Housing</b>	Desktop	Desktop	Desktop
<b>Unit (U)</b>	1	1	1
<b>Fan</b>	No	No	No
<b>Power consumption (watt)</b>	68	12	150
<b>Dimensions W × H × D (mm)</b>	262 × 184 × 41	250 × 27 × 104	262 × 184 × 41
<b>Items included in delivery</b>	Power connector, CD	Power connector, CD	Power connector, RS-232 cable, CD

# Network switches, PoE midspan power supply units

## Network switches



Part number	579527	579557
Part designation	SANSWITCH-G2404	SANSWITCH-24POE
Type	Gigabit switch	Fast Ethernet switch
Number of connections	24 × RJ-45 / 4 × fibre optic SFP	24 × RJ-45 / 2 × Combo TX/SFP
Standards	10Base-T / 100/1000Base-TX (RJ-45) / 1000SX/LX (SFP)	10/100 Mbps (RJ-45) / 10/100/1000 Mbps (TX/SFP)
Power over Ethernet (PoE)	No	Yes, 24-port full PoE; 15.4 W per port (370 W max.)
Supported protocols	QoS, VLAN, NWAY, SNMP	QoS, VLAN, LACP
VLAN	Yes	Yes
QoS (quality of service)	Yes	Yes
Integrated web interface	Yes	Yes
RS-232 interface	Yes	No
Housing	19" rackmount	19" rackmount
Unit (U)	1	1
Fan	Yes	Yes
Operating voltage	100–240 V AC	100–240 V AC
Power consumption	13.2 W	420 W
Operating temperature (°C)	0 to +40	0 to +40
Dimensions W × D × H (mm)	441 × 130 × 44	440 × 220 × 44
Weight	2.23 kg	4.7 kg
Items included in delivery	Power connector, RS-232 cable, CD	Power connector, CD

### Notes

We offer matching fibre optic modules for the above-mentioned switches with fibre optic connection. These are not included in scope of delivery:

- SAN-GBIC-SX: Multi-mode module, LC /LC plug, range up to 500 m.
- SAN-GBIC-LX-10: Single mode module, LC /LC plug, range up to 10 km.

## PoE midspan power supply units



Part number	581015	581016	579526
Part designation	SanPower-MS01L	SanPower-MS01BL	SanPower-MS01C
Type	1-channel PoE power supply	1-channel PoE power supply	1-channel PoE power supply
Number of Ethernet ports	1	1	1
Ethernet standards	10/100/1000M Base-T	10/100/1000M Base-T	10Base-T / 100Base-TX / 1000Base-TX
Input voltage	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC
Output voltage	48 V DC	56 V DC	56 V DC
PoE output voltage	15.4 W	30 W	33.6 W
PoE standard	IEEE802.3af	IEEE802.3at	IEEE802.3at / IEEE802.3af
Dimensions W × H × D (mm)	96 × 44 × 30	121 × 58 × 33	166 × 44 × 80
Operating temperature (°C)	0 to +40	0 to +40	-20 to +50
Weight	105 g	172 g	500 g





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## Accessories

## Power supply

Special plugs

T plugs

Resistance

Tool

RJ-45

Cable



## Power supply



<b>Part number</b>	<b>581006</b>	<b>581001</b>	<b>581000</b>	<b>581008</b>
<b>Part designation</b>	VCA-12V-1.5ASA	SNPS-12D2	VCA-12V-1.5AE	VCA-12V-5ASA
<b>Type</b>	Plug-in power supply	Plug-in power supply	Power supply	Power supply
<b>Input voltage</b>	230 V AC	230 V AC	230 V AC	230 V AC
<b>Output voltage</b>	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised max 1.5 A	12 V DC, stabilised Max 1.5 A	12 V DC, stabilised Max 5 A
<b>Cable end</b>	Plug	Plug	Open cable end	Plug
<b>Housing material</b>	Plug housing, plastic	Plug housing, plastic	Grouted, plastic, IP-64	Desktop housing, cable connection at both ends
<b>Dimensions (mm)</b>	70 × 34 × 72 (W × H × D)	51 × 37 × 95 (W × H × D)	54 × 33 (D × H)	65 × 40 × 120 (W × H × D)



<b>Part number</b>	<b>581011</b>	<b>581010</b>	<b>581007</b>	<b>581005</b>
<b>Part designation</b>	VCA-200	VCA-500	VCA-12V-2A/A	VCA-600/A
<b>Type</b>	Power supply	Power supply	Power supply	Power supply
<b>Input voltage</b>	230 V AC	230 V AC	230 V AC	230 V AC
<b>Output voltage</b>	24 V DC, max 2.1 A	24 V DC, max 5 A	12 V DC, stabilised, max 2 A	24 V DC, max 5 A
<b>Cable end / output</b>	Open cable end	Open cable end	Screw terminal	Screw connection
<b>Housing material</b>	Desktop housing, with cables at both ends	Desktop housing, with cables at both ends	Weather-proof housing (IP-66)	Weather-proof housing (IP-66)
<b>Dimensions W × H × D (mm)</b>	110 × 65 × 135	110 × 65 × 170	110 × 90 × 210	110 × 90 × 210



<b>Part number</b>	<b>581003</b>	<b>581009</b>	<b>581004</b>	<b>584006</b>
<b>Part designation</b>	SNPS-12D5S9	VCA-24V8A-SYS	VCA-24V-8A16P	VACDC-12V-1A
<b>Type</b>	Multiple power supply	Power supply	Multiple power supply	AC/DC converter (24V AC to 12V DC)
<b>Input voltage</b>	230 V AC	230 V AC	230 V AC	24 V AC
<b>Output voltage</b>	12 V DC, 5 A	24 V AC, 8 A	24 V AC, 8 A	12 V DC
<b>Output</b>	9 × screw terminal, PTC fused	Screw terminal	16 × screw terminal, PTC fused	Screw terminal
<b>Housing material</b>	Metal	Metal 19" rackmount	Metal	Plastic
<b>Dimensions (mm)</b>	255 × 210 × 90	437 × 44 × 170	224 × 200 × 60	72 × 28 × 23
<b>Special features</b>	For wall mounting	—	For wall mounting	—

## Plugs and tools

### BNC plugs



Part number	579588	579587	579585
Part designation	BNC-C-TG/10	BNC-CK-TG/10	BNC-A75-TG/10
Type	BNC plug	BNC plug	BNC terminating resistor
Impedance (Ohm)	75	75	75
Bend protection	No	Yes	No
Package units (piece)	10	10	10
Suitable for	Only for Koax-0.6/100	Only for Koax-0.6/100	All BNC connectors



Part number	579589	579590	579591	579586
Part designation	BNC-T-TG/5	BNC-V-TG/10	BNC-W-TG/5	BNC-CIN-TG/10
Type	BNC T plugs	BNC connector	BNC angle plug	Adapter BNC jack/cinch plug
Impedance (Ohm)	75	75	75	75
Package units (piece)	5	10	5	10

### DC plugs



Part number	599003	599004	584001
Part designation	PA-M-5.5/10	PA-F-5.5/10	PCA-1-5
Type	DC plugs, male	DC plugs, female	Cable adapter, 1 input on 5 outputs
Package units (piece)	10	10	1

### Plugs and tools



Part number	579502	579523
Part designation	BNC-HD-CCTV-KIT	RJ-45-STXTG
Type	Crimping pliers set	RJ-45 plug
Impedance (Ohm)	—	—
Package units (piece)	1	1
Suitable for	BNC-HD-CCTV	AWG22-26 cable
Specials	Set: BNC-HSDSI-250/10 and crimping pliers	No tools required

## Plugs and cables for HD-SDI



Part number	579503	579522	579501	579519
Part designation	BNC-HD-CCTV/10	KOAX-0.6/100	BNC-HDSDI-250/10	KOAX-HDSDI-250
Type	HD-SDI BNC plug for KOAX-0.6/100	HD-SDI coaxial cable, black	HD-SDI BNC plug for KOAX-HDSDI-250	HD-SDI coaxial cable, black
Cable length (m)	—	100	—	250
Impedance (Ohm)	75	75	75	75
Package units (piece)	10	1	10	1
Suitable for	KOAX-0.6/100	BNC-HD-CCTV/10	KOAX-HDSDI-250	BNC-HDSDI-250/10
Number of cable cores	—	1 × RG59	—	1 × HD-SDI
Special features	High quality plug for SD and HD-SDI	—	Specially for HD-SDI transmission	Specially for HD-SDI transmission

## Coaxial cables



Part number	579520	579521
Part designation	KOAX-MULTI-SDI-100	KOAX-MULTI-SDI-250
Type	Cable	Cable
Cable type	Multi-cable RG59, SDI up to 100 m	Multi-cable RG59, SDI up to 100 m
Cable length (m)	100	250
Impedance (Ohm)	75	75
Number of cable cores	2 × 0.5 mm <sup>2</sup> + 1 × RG-59	2 × 0.5 mm <sup>2</sup> + 1 × RG-59
Specials	Video and power	Video and power

## Pre-assembled coaxial cables



Part number	579516	579517	579518
Part designation	KOAX-BNC-0.5/10	KOAX-BNC-1.0/10	KOAX-BNC-2.0/10
Type	Cable	Cable	Cable
Cable type	Video cable	Video cable	Video cable
Cable length (m)	0.5	1	2
Impedance (Ohm)	75	75	75
BNC plug pre-installed	Installed on both sides	Installed on both sides	Installed on both sides
Package units (piece)	10	10	10



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## Electronic door locking systems

Customised

Optimal

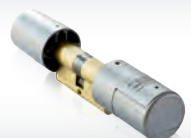
Expandable

Ingenious

Simple





Electronic

Electronic door  
locking systems





# Overview of electronic door locks

Model series	Identification media (depending on version)	Communication with cylinder
 <p>secu <b>ENTRY</b></p>	<ul style="list-style-type: none"> <li>• PIN code</li> <li>• Fingerprint</li> <li>• Smart devices (KeyApp)</li> <li>• Transponder</li> </ul>	<ul style="list-style-type: none"> <li>• Bluetooth 4.0 LE</li> <li>• RFID</li> </ul>
 <p>secu <b>ENTRY</b> <i>easy</i></p>	<ul style="list-style-type: none"> <li>• PIN code</li> <li>• Fingerprint</li> <li>• Smart devices (KeyApp)</li> </ul>	<ul style="list-style-type: none"> <li>• Bluetooth 4.0 LE</li> </ul>
 <p><b>TSE</b>   PRIME</p>	<ul style="list-style-type: none"> <li>• PIN code</li> <li>• Fingerprint</li> <li>• E-keys</li> </ul>	<ul style="list-style-type: none"> <li>• Burg-Wächter wireless (proprietary) WiFi-based</li> </ul>
 <p><b>TSE</b>   HOME</p>	<ul style="list-style-type: none"> <li>• PIN code</li> <li>• E-keys</li> </ul>	<ul style="list-style-type: none"> <li>• Burg-Wächter wireless (proprietary) WiFi-based</li> </ul>

For authorised service partners only! Please get in touch with your contact person or sales rep.

ATTENTION: For authorised dealers only!

secuENTRY

BURG  
WÄCHTER

NEW

## Electronic door lock secuENTRY 5702 FINGERPRINT

Complete set for interior and exterior doors: Electronic secuEntry cylinder with wireless connection (Bluetooth 4.0 LE) to the secuENTRY FINGERPRINT keypad.

This set includes: 1 electronic door cylinder, 1 keypad with fingerprint, 1 passive transponder, batteries, installation and operating instructions.

### ACCESS

1. Mobile via smartphone
  - App available in the App Store or Google Play Store\*
  - App available for Samsung Galaxy S4, S4 mini, S5 and S5 mini from Android version 4.3 KitKat or 5.0 Lollipop and Apple iPhone 4S, 5, 5S, 6, 6P from IOS 8.1.3 and Nexus 6\*\*
  - Keyless entry
2. Passive transponder
  - Modern passive transponder
  - 1 piece included in standard scope of delivery
3. PIN code via keypad
  - Illuminated keypad
  - Keypad operation via touchscreen
  - Mechanical ON button
4. Fingerprint via keypad
  - Fake finger detection
  - Access with your own fingerprint
  - Advanced sensor technology

### SECURE

- 6-digit secret code
- Programmable for up to 50 codes (incl. 1 administrator code); of these, a maximum of 24 fingerprints
- 1 million codes possible (PIN code)
- More than 1 billion codes possible (transponder)
- Optimum protection against manipulation
- Security-relevant data transmission AES encrypted
- Keypad installation only in weather-protected areas, protection class IP 55.

### COMPATIBLE

- For all doors with a thickness of up to 130 mm (67.5 / 62.5)
- For interior and exterior doors
- Knob diameter 30 mm
- Outside default setting 30 mm / inside not assembled
- Keypad to be mounted within approx. 4 m range of the door

### SIMPLE

- Electronic secuENTRY cylinder replaces the mechanical profile cylinder
- Existing fittings remain unchanged
- No drilling – easy to upgrade
- Low battery consumption due to Bluetooth 4.0 LE
- 2 years with activated Bluetooth; 3 years without Bluetooth (battery life, depending on frequency of use)
- Includes 2 LR 6 AA batteries (keypad) and 1 CR123A lithium battery (cylinder)

### APP

1. KeyApp
    - Cylinder opens via smartphone
    - Download in the AppStore or Google Play Store
    - Search term 'secuENTRY KeyApp'
    - Fast installation and immediate commissioning
    - Automatic updates possible
    - Free starter kit includes 30 opening procedures
    - Additional fee-based packages available
  2. ConfigApp
    - Usable with secuENTRY PC software only
    - To program locks and keypads
    - To read and display history
    - Free download in the AppStore or Google Play Store
    - Search term 'secuENTRY ConfigApp'
- Automatic updates possible

### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration
  - Administration of access rights
  - History read-out etc.



ENTRY 5702  
FINGERPRINT

Protection class IP 55

Art. no.  
ENTRY 5702 FINGERPRINT

EAN 40 03482...  
57020 3

\* Free demo version available

\*\* Please check whether the app is compatible with your smartphone

Access via app  
Turn your smartphone into  
the key.  
Key combinations through



## Electronic door lock secuENTRY 5701 PINCODE

Complete set for interior and exterior doors: Electronic secuEntry cylinder with wireless connection (Bluetooth 4.0 LE) to the secuENTRY PINCODE keypad.

This set includes: 1 electronic cylinder, 1 PINCODE keypad, 1 passive transponder, batteries, installation and operating instructions.



ENTRY 5701  
PINCODE

Protection class  
IP 65

### ACCESS

- Mobile via smartphone
  - App available in the AppStore or Google Play Store\*
  - App available for Samsung Galaxy S4, S4 mini, S5 and S5 mini from Android 4.3 KitKat or 5.0 Lollipop, Apple iPhone 4S, 5, 5S, 6, 6P from IOS 8.1.3 and Nexus 6 \*\*
  - Keyless Entry
- Passive transponder
  - Modern passive transponder
  - 1 piece included in standard scope of delivery
- PIN code via keypad
  - Illuminated keypad
  - Keypad operation via touchscreen
  - Mechanical ON button

### SECURE

- 6-digit secret code
- Programmable for up to 50 codes (incl. 1 administrator code)
- 1 million codes possible (PIN code)
- More than 1 billion codes possible (transponder)
- Optimum protection against manipulation
- Security-relevant data transmission AES encrypted
- Keypad weatherproof, protection class IP 65

### COMPATIBLE

- For all doors with a thickness of up to 130 mm (67.5 / 62.5)
- For interior and exterior doors
- Knob diameter 30 mm
- Outside default setting 30 mm / inside not assembled
- Keypad to be mounted within approx. 4 m range of the door

### SIMPLE

- Electronic secuENTRY cylinder replaces the mechanical profile cylinder
- Existing fittings remain unchanged
- No drilling – easy to upgrade
- Low battery consumption due to Bluetooth 4.0 LE
- 2 years with activated Bluetooth; 3 years without Bluetooth (battery life, depending on frequency of use)
- Includes 2 LR 6 AA batteries (keypad) and 1 CR123A lithium battery (cylinder)

### APP

- KeyApp
  - Cylinder opens via smartphone
  - Download in the AppStore or Google Play Store
  - Search term 'secuENTRY KeyApp'
  - Fast installation and immediate commissioning
  - Automatic updates possible
  - Free starter kit includes 30 opening procedures
  - Additional fee-based packages
- ConfigApp
  - Usable with secuENTRY PC software only
  - To program locks and keypads
  - To read and display history
  - Free download in the AppStore or Google Play Store
  - Search term 'secuENTRY ConfigApp'
  - Automatic updates possible

### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration
  - Administration of access rights
  - History read-out etc.



Art. no.

ENTRY 5701 PINCODE

EAN 40 03482...

57010 4

\* Free demo version available

\*\* Please check whether the app is compatible with your smartphone

Access via app  
Turn your smartphone into the key.  
Key combinations through in-app purchases.





ATTENTION: For authorised dealers only!

secuENTRY

**BURG  
WÄCHTER**

NEW

## Electronic door lock secuENTRY 5700 Basic Set

Complete set for interior and exterior doors: Electronic secuENTRY cylinder.  
This set includes: 1 electronic cylinder, 2 passive transponder, batteries, installation and operating instructions.

### ACCESS

1. Mobile via smartphone
  - App available in the App Store or Google Play Store\*
  - App available for Samsung Galaxy S4, S4 mini, S5 and S5 mini from android version 4.3 KitKat or 5.0 Lollipop and Apple iPhone 4S, 5, 5S, 6, 6P from IOS 8.1.3 and Nexus 6\*\*
  - Keyless Entry
2. Passive transponder
  - Modern passive transponder
  - 2 pieces included in standard scope of delivery

### SECURE

- More than 1 billion codes possible (transponder)
- Up to 50 transponders programmable
- Optimum protection against manipulation
- Waterproof cylinder, protection class IP 65

### COMPATIBLE

- For all doors with a thickness of up to 130 mm (67.5 / 62.5)
- For interior and exterior doors
- Knob diameter 30 mm
- Outside default setting 30 mm / inside not installed

### SIMPLE

- Electronic secuENTRY cylinder replaces the mechanical profile
- Existing fittings remain unchanged
- No drilling - easy to upgrade
- Low battery consumption due to Bluetooth 4.0 LE
- 2 years with activated Bluetooth;  
3 years without Bluetooth (battery life, depending on frequency of use)
- including 1 CR123A battery (cylinder)

### APP

1. KeyApp
  - Cylinder opens via smartphone
  - Download in the AppStore or Google Play Store
  - Search term 'secuENTRY KeyApp'
  - Fast installation and immediate commissioning
  - Automatic updates possible
  - Free starter kit includes 30 opening procedures
  - Additional packages available in your store
2. ConfigApp
  - To program keypads and locks
  - To read and show history
  - Free download in the AppStore or Google Play Store
  - Search term 'secuEntry ConfigApp'
  - Usable with secuENTRY PC software only
  - Automatic updates possible

### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration
  - Administration of access rights
  - History read-out etc.



ENTRY 5700  
Basic Set

Protection class IP 65

Art. no.

ENTRY 5700 Basic Set

EAN 40 03482...

57000 5

\* Free demo version available

\*\* Please check whether the app is compatible with your smartphone

Access via app  
Turn your smartphone into  
the key.  
Key combinations through  
in-app purchases.

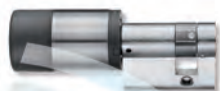




## secuENTRY

ATTENTION: For authorised dealers only!

NEW



### secuENTRY 5705 HALF

- Removable knob
- Activation via identification medium
- Acceptable identification media are: transponder and KeyApp (smartphone)
- Length 30/10 mm
- For up to 50 users - with history function and rights management via the secuENTRY software

- Batteries: 1 CR123A lithium battery
- Battery life: up to 3 years without Bluetooth, up to 2 years with Bluetooth (depending on frequency of use)
- Includes 2 transponders, batteries, installation and operating instructions



ENTRY 5705  
HALF

Art. no.

ENTRY 5705 HALF

EAN 40 03482...

57050 0

Information

half cylinder

You can find further information about controlling the cylinder via a smartphone on pages 101 to 103.



ENTRY 5710  
TRANSPONDER

### secuENTRY 5710 TRANSPONDER

- Modern passive transponder
- Easily programmable access rights and validity periods via optional components

- Ideal for hotel use and granting temporary access rights

NEW

Art. no.

ENTRY 5710 TRANSPONDER

EAN 40 03482...

57100 2

Information

transponder



ENTRY 5750  
SOFTWARE

### secuENTRY SOFTWARE

Configuration and programming made easy

- User-friendly PC software for locking systems with up to 15 users
- Configuration of BURG-WÄCHTER units via smartphones (ConfigApp) and / or Windows Software
- Apps available in the App Store or Google Play Store
- History read-out
- Special functions via in-apps available

- Display of the battery level in the cylinder
- System requirements Windows 7, Windows 8 or Windows 10 (Windows tablets from version 8.1) in standard configuration, USB port
- No permanent wireless connection between PC and lock unit required
- Recommended screen resolution 1200 × 1024 (notebooks also possible)

NEW

Art. no.

ENTRY 5750 SOFTWARE

EAN 40 03482...

57500 0

## Electronic door lock secuENTRY easy 5602 FINGERPRINT

Electronic secuEntry easy cylinder with wireless connection (Bluetooth 4.0 LE) to the secuENTRY easy Fingerprint keypad.

This set includes: 1 electronic secuEntry easy cylinder, 1 secuEntry easy Fingerprint keypad, batteries, installation and operating instructions.

### ACCESS

1. Mobile via smartphone
  - App available in the App Store or Google Play Store\*
  - App available for Samsung Galaxy S4, S4 mini, S5 and S5 mini from android version 4.3 KitKat or 5.0 Lollipop and Apple iPhone 4S, 5, 5S, 6, 6S from IOS 8.1.3 (for other devices please check [www.burg.biz](http://www.burg.biz)\*\*)
  - Keyless Entry
2. PIN code via keypad
  - Illuminated keypad
  - Keypad operation via touchscreen
3. PIN code via keypad
  - Illuminated keypad
  - Keypad operation via touchscreen
  - Mechanical ON button
4. Fingerprint via keypad
  - Fake finger detection
  - Access with your own fingerprint
  - Advanced sensor technology

### SECURE

- 6-digit secret code
- Up to 50 codes can be programmed (incl. 1 administrator code), or up to 24 fingerprints
- 1 million different codes possible (PIN code)
- Optimum protection against manipulation
- Includes mechanical emergency lock
- Security-related data transmission AES encrypted
- Keypad installation only in weather-protected area, protection class IP 55

### COMPATIBLE

- For all doors with a thickness of up to 118 mm (59/59)
- For interior and exterior doors
- Keypad to be mounted within approx. 4 m range of the door

### SIMPLE

- Electronic secuENTRY EASY cylinder replaces the mechanical profile lock
- Existing fittings remain unchanged\*\*\*
- No drilling - easy to upgrade

### APP

1. KeyApp
  - Cylinder opens via smartphone
  - Download in the AppStore or Google Play Store
  - Fast installation and immediate commissioning
  - Free starter kit includes 30 opening procedures
  - Additional packages available in your store
2. ConfigApp
  - Usable with secuENTRY PC software only
  - To program keypads and locks
  - To read and show history
  - Free download in the AppStore or Google Play Store

### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration
  - Administration of access rights
  - History read-out etc.



ENTRY easy  
5602 FINGERPRINT

Protection class IP 55

Art. no.  
ENTRY easy 5602 Fingerprint

EAN 40 03482...  
56022 8

\* Free demo version available

\*\* Please check whether the app is compatible with your smartphone

\*\*\*If a cylinder protector is used, the mechanical emergency key is not accessible!

Access via app  
Turn your smartphone into the key.  
Key combinations through in-app purchases.



## Electronic door lock secuENTRY easy 5601 PINCODE

Complete set for interior and exterior doors: Electronic secuEntry easy cylinder with wireless connection (Bluetooth 4.0 LE) to the secuENTRY easy PINCODE keypad. This set includes: 1 electronic secuEntry easy cylinder, 1 secuEntry easy PINCODE keypad, batteries, installation and operating instructions.



ENTRY easy  
5601 PIN

protection class  
IP 65

### ACCESS

1. Mobile via smartphone
  - App available in the App Store or Google Play Store\*
  - App available for Samsung Galaxy S4, S4 mini, S5 and S5 mini from Android version 4.3 KitKat or 5.0 Lollipop and Apple iPhone 4S, 5, 5S, 6, 6S from IOS 8.1.3 (for other devices please check [www.burg.biz](http://www.burg.biz)\*\*)
  - Keyless Entry
2. PIN code via keypad
  - Illuminated keypad
  - Keypad operation via touchscreen

### SECURE

- 6-digit secret code
- Up to 50 codes can be programmed (includes 1 administrator code)
- 1 million different codes possible (PIN code)
- Includes mechanical emergency lock
- Optimum protection against manipulation
- Security-related data transmissions AES encrypted
- Keypad weatherproof, protection class IP 65

### COMPATIBLE

- For all doors with a thickness of up to 118 mm (59/59)
- For interior and exterior doors
- Keypad to be mounted within approx. 4 m range of the door

### SIMPLE

- Electronic secuENTRY EASY cylinder replaces the mechanical profile lock
- Existing fittings remain unchanged\*\*\*
- No drilling - easy to upgrade

### APP

1. KeyApp
  - Cylinder opens via smartphone
  - Download in the AppStore or Google Play Store
  - Fast installation and immediate commissioning
  - Free starter kit includes 30 opening procedures
  - Additional packages available in your store
2. ConfigApp
  - Usable with secuENTRY PC software only
  - To program keypads and locks
  - To read and show history
  - Free download in the AppStore or Google Play Store

### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration
  - Administration of access rights
  - History read-out etc.

Art. no.

ENTRY easy 5601 PINCODE

EAN 40 03482...

56011 2

\* Free demo version available

\*\* Please check whether the app is compatible with your smartphone

\*\*\*If a cylinder protector is used, the mechanical emergency key is not accessible!

Access via app  
Turn your smartphone into  
the key.  
Key combinations through  
in-app purchases.



# Range and performance overview of secuENTRY



The secuENTRY  
product range:  
Everything at a glance!

	secuENTRY 5700 Basic	secuENTRY 5701 Pin	secuENTRY 5702 FP	secuENTRY easy 5601 Pin	secuENTRY easy 5602 FP
Possible code combinations	–	1 million	1 million	1 million	1 million
Number of digits in the PIN code	–	6 digits	6 digits	6 digits	6 digits
Number of administrator codes	1	1	1	1	1
Maximum number of codes	*	50	50	50	50
Maximum number of FINGERPRINTS	**	–	24	–	24
Max. number of passive transponders	50	50	50	–	–
Secure AES encryption					
Menu-controlled user guidance	–				
Multilingual menu guidance	–				
Protection class					
Cylinder			IP 65		
Operating element	–	IP 65	IP 55	IP 65	IP 55
Backset			30 mm		
Max. wireless range of keypad		4 m	4 m	4 m	4 m
Master key function with user administration		via secuEntry software (optional)			
Programming via keypad	–				
Software					
Timer functions			–		
Timer functions			–		
History function		via secuEntry software			
Stored historical events		last 600 events			
Power supply					
Keypad	–	2 × LR06	2 × LR06	2 × LR06	2 × LR06
Cylinder	1 × CR 123A	1 × CR 123A	1 × CR 123A	2 × LR06	2 × LR06
Battery life <sup>1)</sup>					
Transponder mode		approx. 4 years		–	–
Keypad mode	–	approx. 3 years		approx. 4 years	
Smartphone mode		approx. 2 years		approx. 2 years	
Battery exchange advice					
Memory protection without batteries					
Mechanical emergency lock		–			
1) Basis: 10 operations per day / 20°C ambient temperature					
* Can be retrofitted with PIN or FP keypad					
** Can be retrofitted with FP keypad					

Mistakes, changes and further technical developments reserved.



## TSE PRIME

NEW

### Electronic door lock TSE PRIME SET 5022 FINGERSCAN

Complete set for interior and exterior doors: Electronic TSE profile cylinder with wireless connection to the FINGERSCAN keypad; includes batteries, installation and operating instructions



TSE Set 5022  
FINGERSCAN

protection class  
IP 55

#### FEATURES

- New energy-saving technology
- Increased durability
- Greater lock convenience
- Reliable operation even in unfavourable light conditions

#### SECURE

- Programmable for up to 48 users (including 1 administrator code)
- Up to 24 fingerprints
- Additional users programmable with a 6-digit secret code or optional E-key
- 1 million codes possible
- Optimum protection against manipulation
- Includes mechanical emergency lock (2 keys)
- Keypad installation in weather-protected areas, protection class IP 55

#### COMPATIBLE

- For all doors with a thickness of up to 118 mm (59/59)
- For interior and exterior doors

#### WIRELESS

- Keypad can be installed up to 4 m range from door
- Illuminated keypad
- Keypad operation via touchscreen

#### SIMPLE

- Installation without wires, drilling etc.
- Electronic TSE profile cylinder replaces the mechanical profile lock
- Existing fittings remain unchanged
- No drilling - easy to upgrade (s. p. 48)
- Inside cylinder needs to be placed in weather-protected areas

#### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration exclusively by PIN codes or E-keys
  - User administration via fingerscan not possible
  - Administration of access time and access rights for PIN codes or E-keys
  - History readout etc. possible

Art. no.

TSE Set 5022 FINGERSCAN

EAN 40 03482...

55470 8

Information

standard cylinder

### Electronic door lock TSE PRIME SET 5021 PINCODE

NEW

Complete set for interior and exterior doors: Electronic TSE profile cylinder with wireless connection to the PINCODE keypad; includes batteries, installation and operating instructions



TSE Set 5021  
PINCODE

Protection class  
IP 65

#### FEATURES

- New energy-saving technology
- Increased durability
- Greater lock convenience
- Reliable operation even in unfavourable light conditions

#### SECURE

- Programmable for up to 48 users (including 1 administrator code)
- 1 million codes possible
- 6-digit secret code (optional wireless key TSE E-key)
- Optimum protection against manipulation
- Includes mechanical emergency lock (2 keys)
- Keypad weatherproof, protection class IP 65

#### COMPATIBLE

- For all doors with a thickness of up to 118 mm (59/59)
- For interior and exterior doors

#### WIRELESS

- Keypad can be installed up to 4 m range from door
- Illuminated keypad
- Keypad operation via touchscreen

#### SIMPLE

- Installation without wires, drilling etc.
- Electronically controlled TSE profile cylinder replaces mechanical profile cylinder
- Existing fittings remain unchanged
- No drilling – easy upgrade (s. p. 48)
- Inside cylinder needs to be placed in weather-protected areas

#### PC COMPATIBLE

- Our optional PC software has several functions available, such as:
  - User administration exclusively by PIN codes or E-keys
  - User administration via fingerscan not possible
  - Administration of access time and access rights for PIN codes or E-Keys
  - History readout etc. possible

Art. no.

TSE Set 5021 PINCODE

EAN 40 03482...

55460 9

Information

standard cylinder



Electronic door lock TSE PRIME SET 5013 E-KEY

Complete set for interior and exterior doors: Electronic TSE profile cylinder with wireless connection to wireless E-key; includes batteries, installation and operating instructions Unit with 1 TSE E-key

SECURE

- Up to 47 TSE E-keys programmable (register via TSE SOFTWARE)
- Optional TSE PINCODE/ FINGERSCAN keypad
- Optimum protection against manipulation
- Includes mechanical emergency lock (2 keys)

COMPATIBLE

- For all doors with a thickness of up to 118 mm (59/59)
- For interior and exterior doors

WIRELESS

- Operation without keypad via TSE E-key

SIMPLE

- Installation without wires, drilling etc.
- Electronic TSE profile cylinder replaces the mechanical profile cylinder
- Existing fittings remain unchanged
- No drilling - easy to upgrade (s. p. 48)
- Inside cylinder needs to be placed in weather-protected areas

PC COMPATIBLE

- Our optional PC software has several functions available, such as user administration, administration of access times and access rights, history read-out etc.



TSE Set 5013 E-KEY

Art. no.	EAN 40 03482...	Information
TSE Set 5013 E-KEY	55020 5	standard cylinder

Radio key TSE E-KEY

Electronic radio key – handy and attractive.

- Distance between radio key and door lock can be up to 3 m depending on surrounding conditions
- Manual mode: TSE Wireless opens at the push of a button – E-key has to be used
- Automatic mode (only 5021/5022): TSE Wireless opens after activating the keypad – TSE E-KEY does not have to be used

- Battery change display, power supply: standard CR2032 button battery
- Optimal use via PC software



TSE E-KEY

Art. no.	EAN 40 03482...	Information
TSE 5103 E-KEY SB	55030 4	optional E-KEYS can be used up to the above-mentioned number

TSE software for more functionality

Professional administration and configuration of your entire door locking system

- Naming users
- Programming of
  - PIN codes
  - Radio keys (TSE E-KEY)
- Administration of access times and rights, calendar function
- History readout
- When programming, distance between PC and TSE profile cylinder can be up to 10 m
- System requirements: Windows XP, Vista or Windows 7, Windows 8 or Windows 10 (Windows tablets as of version 8.1) in a standard configuration, USB port
- No permanent wireless connection between PC and TSE necessary
- Recommended screen resolution 1200 x 1024 (notebooks also possible)

Art. no.	EAN 40 03482...	Users up to	Door locks up to
TSE 5500 Software LIGHT SB	55310 7	15	8
TSE 6501 SOFTWARE SYSTEM	56460 8	250	200



Electronic door locking systems



## TSE 4000 HOME

### Electronic door lock TSE HOME SET 4001

The affordable entry-level solution for one door

Complete set for interior and exterior doors: Electronic TSE profile cylinder with wireless connection to the keypad; includes batteries, installation and operating instructions.



TSE Set 4001 HOME MCR

#### SECURE

- 1 million codes possible
- Programmable for up to 6 users:
  - 1 secret code (admin code, 6-digit) and 5 optional TSE E-KEYs
- Optimum protection against manipulation
- Without mechanical emergency lock

#### COMPATIBLE

- For all doors with a thickness of up to 120 mm (60/60)
- For interior and exterior doors

#### WIRELESS

- Keypad to be mounted within approx. 4 m range of the door

#### SIMPLE

- Installation without wires, drilling etc.
- Electronic TSE profile cylinder replaces the mechanical profile cylinder
- Existing fittings remain unchanged
- No drilling – easy to upgrade (s. p. 44)
- Installation in protected area possible

Art. no.	EAN 40 03482...	Information
TSE Set 4001 HOME W	54330 6	White
TSE Set 4001 HOME MCR	55040 3	matt chrome



TSE Stainless steel cover (Shown with 4001 keypad)

### TSE Stainless steel cover

Stainless steel cover protects against vandalism and unwanted notice when entering the code; can be refitted without any problem.

Art. no.	EAN 40 03482...	Information
TSE Stainless steel cover EBL SB	54680 2	Fits TSE keypads of TSE 4001 HOME

### Radio key TSE E-KEY

Electronic radio key – handy and attractive.

- Distance between radio key and door lock can be up to 3 m depending on surrounding conditions
- Manual mode: TSE Wireless opens at the push of a button – E-KEY has to be used
- Automatic mode (only 5021/5022): TSE Wireless opens after activating the KEYPAD – TSE E-KEY does not have to be used

- Battery change display, power supply: standard CR2032 button battery
- Optimal use via PC software
- Use the E-KEY as a master key for opening different cylinders or safes



TSE E-KEY





Art. no.	EAN 40 03482...	Information
TSE 5103 E-KEY SB	55030 4	optional E-KEYs can be used up to the above- mentioned number



# Program and performance overview of the series TSE 4000 and TSE 5000



The TSE product range:  
Everything at a glance!

	TSE Set 4001 HOME	TSE Set 5021 PINCODE	TSE Set 5022 FINGERSCAN	TSE Set 5013 E-KEY
				
Possible code combinations	1 million	1 million	1 million	–
Number of digits in the PIN code	6 digits	6 digits	6 digits	–
Number of possible users	6	48	48	48
Number of possible PIN codes	1	48	48	–
Number of possible FINGERSCANS	–	–	24 <sup>1)</sup>	–
Number of possible E-KEYS	5	47	47	47 <sup>2)</sup>
Secure AES encryption				
Menu-controlled user guidance	–			–
Multilingual menu guidance	–			–
Assembly control unit				
Keypad fixing position	Weather-protected outdoor area	IP 65	Weather-protected outdoor area (IP 55)	–
Backset	Inward opening door 25 mm <sup>3)</sup> Outward opening door 35 mm <sup>3)</sup>			
Positioning of operating elements	Up to 4 m in area surrounding door			–
Master key function with user administration	–	Via TSE SOFTWARE (optional) <sup>4)</sup>		–
Programming via keypad				–
Software	–			
Timer functions	–		via TSE SOFTWARE	
History function	–		via TSE SOFTWARE	
Stored historical events	–		Last 600 events	
Power supply				
Keypad	2 × LR06	2 × LR06	2 × LR06	–
Cylinder	2 × LR03	2 × LR06	2 × LR06	2 × LR06
E-Key	–	–	–	1 × CR 2032
Possible operations with one set of batteries <sup>5)</sup>				
Keypad	20,000	32,000	23,000	–
Cylinder	40,000	50,000	60,000	50,000
Standby-time				
Keypad	2.5 years	3.5 years	3.5 years	–
Cylinder	2.5 years	2.5 years	2.5 years	2.5 years
Battery exchange advice				
Memory protection without batteries				
Mechanical emergency lock	–			

1) Every finger occupies one user memory, for an additional CODE or E-KEY a second user memory will be occupied.  
 2) Registration via TSE SOFTWARE.  
 3) Applies to a door panel thickness where the profile cylinder does not protrude. For other doors please contact us.  
 4) Fingerscan data can only be programmed via the FS keypad unit. No transmission via software possible.  
 5) With an optimally adjusted radio channel.

Mistakes, changes and further technical developments reserved.

The keypad of the TSE 5000 BUSINESS series defies weather, water and dirt

**Weather-proof:**

The TSE PINCODE keypad has protection class IP 65 in accordance with EN 60529.

This ensures that it is absolutely dustproof and protects against water in any form.

The TSE FINGERSCAN keypad complies with protection class IP 55 and is suitable for installation in weather-protected areas.

**Convenient:**

New screen with full-touch technology – convenient handling. The system is activated by a mechanical ON button. It is operated safely thanks to its cool blue lighting.





# Installation steps – TSE electronic cylinder

Wireless technology enables easy installation. No drilling, sawing, wiring etc.

Easy to install yourself – in a few steps for electronic security for interior and exterior doors:

## TSE 4000 HOME series



1 Remove the existing profile cylinder and insert the electronic TSE profile cylinder from the outside.



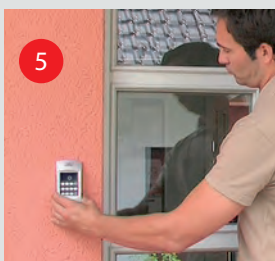
2 Fasten the electronic TSE profile cylinder on the door as usual.



3 Adjust to the door thickness using the integrated locking system.



4 Attach the knob by using the enclosed hex key.



5 TSE HOME Set 4001:  
Install the TSE keypad at an appropriate place. The distance between the TSE keypad and your door can be up to 4 m, depending on surrounding conditions. You can optionally register up to five E-keys.

## TSE PRIME series



1 Remove the existing profile cylinder and insert the electronic TSE profile cylinder from the inside.



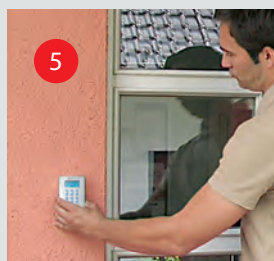
2 Fasten the electronic TSE profile cylinder on the door as usual.



3 Adjust to the door thickness using the integrated locking system.



4 Attach the knob by using the enclosed hex key.



5 TSE PRIME Set 5021 PINCODE, Set 5022 FINGERSCAN:  
Install the TSE PINCODE or FINGERSCAN\* keypad at an appropriate place. The distance between TSE PINCODE/ FINGERSCAN keypad and your door can be up to 4 m, depending on surrounding conditions.  
\* in weather-protected areas.

### TSE PRIME Set 5013 E-KEY:

Open and close the door easily and safely by pushing the button of your TSE E-KEY or entering a 6-digit user code into the TSE PINCODE or FINGERSCAN keypad that is optionally available.



Tip: We will get you ready for future business! Trainings for installing and using TSE PRIME, simply enquire at [tse@burg.biz](mailto:tse@burg.biz).



**BURG  
WÄCHTER**

PROFESSIONAL SOLUTIONS  
FOR MORE SECURITY



Safes

Certified

Proven

Protected

Tested

Locked

Robust

Long-lasting

Secure





# Commercial Freestanding Safes – Diplomat



Electronic version:  
Standard with fingerscan



**FIRE RESISTANCE GRADE LFS 60 P**  
Certified protection against fire



**RESISTANCE GRADE I**  
Certified protection against burglary



First VdS certified  
safe lock with  
fingerscan module



## MTD 34 F60 – MTD 38 F60 commercial freestanding safes 'Diplomat'

**RESISTANCE GRADE I, FIRE RESISTANCE GRADE LFS 60 P**

- Type-tested and supervised security by ECB-S/VdS
- Certified protection against burglary according to EN 1143-1
- Certified protection against fire according to EN 15659 (2009), 60 minutes fire protection for paper
- 3-walled body with armoured, special fireproof insulation
- BURG-WÄCHTER special insulation in body and door through FPC construction (Fire Protection Concrete)
- Special rear wall construction with additional armouring – advantage: low overall depth due to slim overall design
- Optimal use of internal space due to slim body and door
- 4-walled door
- Extensive armouring in front of bolt work and locking bolt
- 4-sided locking through strong round bolts
- Recessed concealed special door hinges – elegant
- Prepared for wall and floor anchoring, includes fixing material
- Security advantage:  
2 emergency locking systems, not resettable
- Convenient depth for standard-sized files
- Adjustable shelves (MTD 34 + 35 with 1 shelf, MTD 36 + 38 with 2 shelves)
- Silver metallic paint finish; special pain on request
- Recessed door
- Extensive intumescent seal that swells and seals the door in event of fire



SecuTronic – the first biometric safe lock with VdS certification. Developed by Burg Wächter

- VdS approved safe lock with fingerscan module, EN 1300 class 2
- programmable electronic combination lock
- In addition to the ten 6-digit PIN codes, you can program up to 20 fingerprints
- When opening with fingerscan, two different fingers have to be programmed/entered
- 1,000,000 possible combinations

- The scanner has a 'Fake Finger Detection' – this live finger detection excludes fake fingers during identification
- Precise and highly sensitive authentication procedure with different skin conditions, from extremely dry to moist
- The opening of a safe using the fingerscan is very fast and convenient

First VdS certified safe lock with fingerscan module



SecuSafe – the resettable high security safe lock

- VdS tested, ECB-S certified according to EN 1300, class 2/B
- 10 tumblers
- 50 million different key combinations
- When a key is lost, a new combination can be reset immediately
- Immediate implementation of keyed-alike combination with current safe (Example: Customer buys another safe and wants to open both safes with one key)
- On request, can be supplied with several keys at the time of purchase
- See page 121 for replacement and spare keys



# Commercial Freestanding Safes – Diplomat



## Version S



Resettable, armoured high-security safe lock 'SecuSafe', VdS tested, ECB-S approved EN 1300 class 2/B, 10 tumblers, with forced closure, 50 million different key combinations. Security advantage if a key is lost – immediately resettable to a new key combination. The locking armature protrudes 13 mm. For more information regarding spare keys and additional keys, see page 121.

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
MTD 34 F60 S	37500 6	380×500×462	255×370×300	255×337	112	28.3
MTD 35 F60 S	37520 4	470×500×462	345×370×300	345×337	130	38.5
MTD 36 F60 S	37540 2	625×500×462	500×370×300	500×337	161	55.8
MTD 38 F60 S	37560 0	985×500×462	860×370×300	860×337	233	96.0



MTD 34 F60 S



MTD 35 F60 E

## Version E



Programmable, electronic combination lock 'SecuTronic' with standard integrated fingerscan module, VdS approved, class 2. Intelligent user guidance. Administration of up to 10 user codes, up to 20 fingerscans and up to 300 optional TSE E-keys. User names, access times and rights, calendar functions, etc. programmed via optional TSE software packages. Includes 2 LR 6 AA batteries. The locking armature protrudes 27 mm.

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
MTD 34 F60 E	37510 5	380×500×462	255×370×300	255×337	112	28.3
MTD 35 F60 E	37530 3	470×500×462	345×370×300	345×337	130	38.5
MTD 36 F60 E	37550 1	625×500×462	500×370×300	500×337	161	55.8
MTD 38 F60 E	37570 9	985×500×462	860×370×300	860×337	233	96.0



MTD 36 F60 E

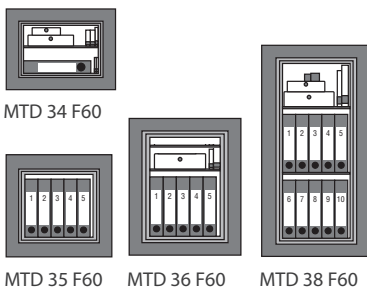
## Accessories

Art. no.	EAN 40 03482...	Information
IT MTD	37960 8	Interior safe for MTD 36 F60 - 38 F60 (H 180 x W 370 x D 260 mm)

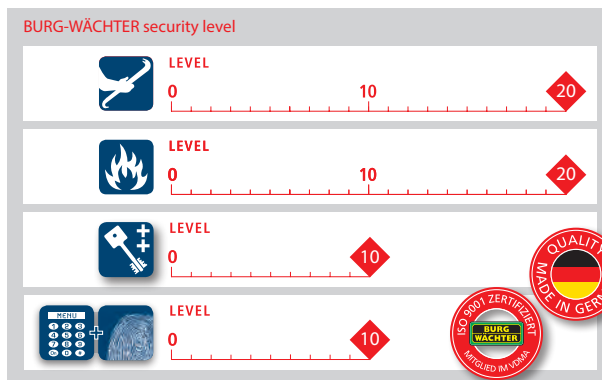
## Special paintwork Diplomat

Paint/size	Paint/size
RAL, MTD 34/35	Brilliant, MTD 34/35
RAL, MTD 36	Brilliant, MTD 36
RAL, MTD 38	Brilliant, MTD 38

## Utilisation of the interior space



MTD 34 F60 MTD 35 F60 MTD 36 F60 MTD 38 F60



MTD 38 F60 E

Suitable for joint storage of weapons and ammunition, according to § 36 of the current German Weapons Law.

BURG-WÄCHTER safes represent state of the art technology and are internationally recognised. BURG-WÄCHTER is a member of the VDMA security systems association and the European Security Systems Association e.V. (ESSA). Changes in dimension, weight and construction can occur due to technical adjustments.



## Domestic freestanding safes 'Karat'



Stainless steel body  
Protection against flame cutting



RESISTANCE GRADE N  
Certified protection against burglary



First VdS certified  
safe lock with  
fingerscan module



Electronic version:  
Standard with fingerscan



### MT 24 N – MT 26 N domestic freestanding safes 'Karat'

#### RESISTANCE GRADE N

- Type-tested and monitored security by ECB-S/VdS
- Protected against fire, certified protection against burglary according to EN 1143-1
- Triple-walled body with exterior walls of flame-cutting protected stainless steel material
- Double-walled door with additional armoring, door leaf thickness 7 mm SM steel
- Additional lock plating for extra protection
- Three-sided locking through strong square bolts, bolts on the top and on the bottom with integrated steel rolls - extreme protection against flame-cutting, drilling and puncturing
- Full-length gripping bar on the hinge side
- Prepared for back wall and floor anchoring with fixing material – extremely high breaking resistance to pulling out 1 centred drill hole each on the back wall and floor.
- Fire-protective material in accordance with DIN 4102-A1, body with all-round fire fold
- Convenient depth for standard files, 1 adjustable shelf
- Paint finish: platinum grey
- Security advantage:  
Thermal emergency locking mechanism and special puncture protection in front of each bolt



SecuTronic – the first biometric safe lock with VdS certification. Developed by Burg Wächter

- VdS approved safe lock with fingerscan module, EN 1300 class 2
- Programmable electronic combination lock
- In addition to the ten 6-digit self-programmable PIN codes, up to 20 fingerprints can be programmed
- When opening with fingerscan, two different fingers have to be programmed/entered
- 1,000,000 possible combinations

- The scanner has a 'Fake Finger Detection' – this live finger detection excludes fake fingers during identification
- Precise and highly sensitive authentication procedure with different skin conditions, from extremely dry to moist
- The opening of a safe using the fingerscan is very fast and convenient



SecuSafe – the resettable high security safe lock

- VdS tested, ECB-S certified according to EN 1300, class 2/B
- 10 tumblers
- 50 million different key combinations
- When a key is lost, a new combination can be repositioned immediately
- Immediate implementation of keyed-alike combination with present safe (Example: Customer buys another safe and wants to open both safes with one key)
- On request, can be supplied with several keys at the time of purchase



# Domestic freestanding safes 'Karat'



## Version S



Resettable, armoured high-security safe lock 'SecuSafe', VdS tested, ECB-S certified according to EN 1300 class 2/B, 10 tumblers, with forced closure, 50 million different key combinations. More security in case of losing the key – immediately resettable to a new key combination. The locking armature protrudes 3 mm. For detailed information on the resettable high security safe lock SecuSafe see p. 114.



MT 24 N S

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
MT 24 N S	16050 3	340×430×390	250×348×294	250×336	43	25.8
MT 26 N S	19090 6	530×430×390	440×348×294	440×336	60	45.3

## Spare keys and additional keys for MT 24-26 N S

Art. no.	EAN 40 03482...	Information
Set 55-80-2	08890 6	Key set 55-80-2: two key set, length: 80 mm
Set 55-80-4	08910 1	Key set 55-80-4: four key set, length: 80 mm
Set 55-80-6	06880 9	Key set 55-80-6: six key set, length: 80 mm
as per sample	08640 7	Key as per sample, lock class B, length of key 80 mm



MT 26 N S

## Version E



Programmable electronic combination lock 'SecuTronic', VdS tested, ECB-S approved EN 1300 class 2/B. Intelligent user guidance. Administration of up to 10 six-digit user codes, and up to 300 optional TSE E-keys. User names, access times and rights, calendar functions, can be programmed via optional TSE PC software. Includes 2 LR 6 AA batteries. The locking armature protrudes 16 mm.



MT 24 N E

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
MT 24 N E	19150 7	340×430×390	250×348×294	250×336	43	25.8
MT 26 N E	19020 3	530×430×390	440×348×294	440×336	60	45.3

## Version E FS



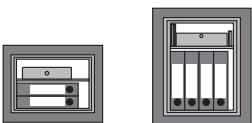
Programmable, electronic combination lock 'SecuTronic' with integrated fingerscan module, VdS approved, class 2. Intelligent user guidance. Administration of up to 10 user codes, up to 20 fingerscans and up to 300 optional TSE E-keys. User names, access times and rights, calendar functions, etc. programmed via optional TSE software packages. Includes 2 LR 6 AA batteries. The locking armature protrudes 30 mm.



MT 26 N E FS

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
MT 24 N E FS	32280 2	340×430×390	250×348×294	250×336	43	25.8
MT 26 N E FS	32290 1	530×430×390	440×348×294	440×336	60	45.3

## Utilisation of the interior space

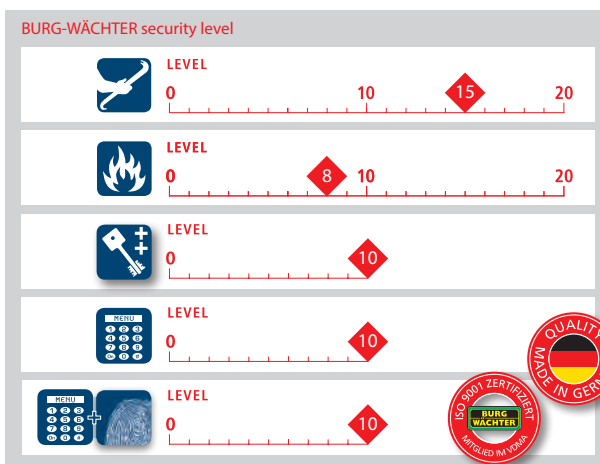


MT 24 N

MT 26 N



Suitable for joint storage of weapons and ammunition, according to § 36 of the current German Weapons Law.



Safes



# Safety cabinets Combi-Line



Electronic version:  
Standard with fingerscan



**FIRE RESISTANCE GRADE LFS 30 P**  
Certified protection against fire



**RESISTANCE GRADE S2**  
Certified protection against burglary



First VdS certified  
safe lock with  
fingerscan module



## CL 10 – CL 40 Safety cabinets Combi-Line

**Safety level S 2**  
**Fire resistance grade LFS 30P**



- Type tested and monitored security by ECB-S/VdS
- BURG-WÄCHTER safety cabinets with a certification which is valid all over Europe.  
For the safe storage of documents, cash, jewellery, arms or ammunition, coins and valuables.
- Security level S2 in accordance with DIN EN 14450
- Security level B in accordance with VDMA 24992, May 1995
- Fire resistance LFS 30P in accordance with EN 15659 – 30 minutes fire protection for paper
- Fire-protective material in accordance with DIN 4102
- Composite insulation in front of the door leaf provides heat protection for the lock and bolts

- Tested and certified protection against burglary and fire
- Double-walled construction
- Internal hinge
- Lateral locking through 25 mm diameter strong round bolts plus sliding bolt on the top
- Gripping rail on the hinge side
- Anchoring option in the back wall and floor, diagonally arranged drill holes, 2 each on the back wall and floor
- Fixing material included
- Colour: body dark grey, door light grey
- Version S generally supplied with 2 keys
- Standard with 1 shelf each



SecuTronic – the first biometric safe lock with VdS certification. Developed by Burg Wächter.

- VdS approved safe lock with fingerscan module, EN 1300 class 1
- Programmable electronic combination lock 'SecuTronic' with integrated fingerscan module
- In addition to the ten 6-digit self-programmable PIN codes, up to 10 fingerprints can be programmed
- 1,000,000 possible combinations

- When opening with fingerscan, two different fingers have to be programmed/entered
- The scanner has a 'Fake Finger Detection' – this live finger detection excludes fake fingers during identification.
- Precise and highly sensitive authentication procedure with different skin conditions
- The opening of a safe using the fingerscan is very fast and convenient



3 security standards in one safe.

The safety cabinets of the Combi-Line correspond to 3 security standards:

- Security level B in accordance with VDMA 24992, May 1995
- Security level S2 in accordance with DIN EN 14450
- Fire resistance LFS 30 P in accordance with EN 15659 – 30 minutes fire protection for paper

Technical special feature!

Sliding bolt on the top with additional protection against puncture.





# Safety cabinets Combi-Line



## Version S



Armoured security safe lock 'SecuSafe' –  
VdS tested; ECB-S certified EN 1300 class 1/A, 9 tumblers, 1 million different key combinations

Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
CL 10 S	33400 3	320×435×380	205×320×232	205×265	44	15
CL 20 S	33420 1	360×495×445	245×380×297	245×325	55	27
CL 40 S	33440 9	560×495×445	445×380×297	445×325	77	50



CL 10 S

## Replacement keys for CL 10 – 40 S

Key	EAN 40 03482...	Information
as per sample	16620 8	length of key 80 mm
TR key blank 55	33610 6	Key blank, VE 3 piece

## Version E



Electronic combination lock 'SecuTronic', VdS tested; ECB.S certified EN 1300 class 2/B  
1 million combinations, includes 3 LR 03 AAA batteries. The locking armature protrudes 7 mm.

Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
CL 10 E	33410 2	320×435×380	205×320×232	205×265	44	15
CL 20 E	33430 0	360×495×445	245×380×297	245×325	55	27
CL 40 E	33450 8	560×495×445	445×380×297	445×325	77	50



CL 20 S

## Version E FS



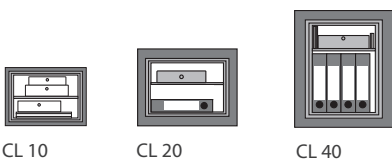
Programmable electronic combination lock 'SecuTronic' with integrated fingerscan module,  
VdS certified class 1. 1,000,000 different combinations possible. Includes 3 LR 6 AA batteries.  
In addition to a 6-digit self-programmed numerical code, up to 10 fingers can be programmed.  
For opening with a fingerscan, 2 fingers must be programmed/entered. The locking armature protrudes 13 mm.

Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H×W Opening (mm)	Weight (kg)	Volume (l)
CL 10 E FS	33460 7	320×435×380	205×320×232	205×265	44	15
CL 20 E FS	33470 6	360×495×445	245×380×297	245×325	55	27
CL 40 E FS	33480 5	560×495×445	445×380×297	445×325	77	50



CL 20 E


## Safety cabinets Combi-Line CL 10 – CL 40

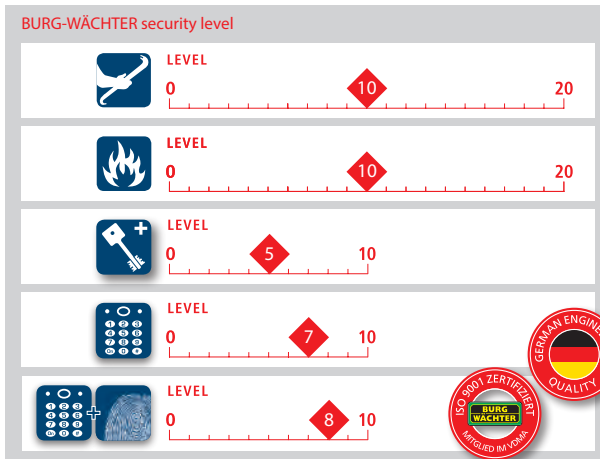


CL 10

CL 20

CL 40

 Suitable for joint storage of weapons and ammunition, according to § 36 of the current German Weapons Law.



CL 40 E FS





# Wall safes Karat



WT 12 S

## Wall safes WT 11 - WT 13 'Karat'



### SECURITY LEVEL B

- Security level B according to VDMA 24992, May 1995
- Wall safe series with variable depth – optimal utilisation of space due to the adjustable body of the safe
- Double-walled door
- Door panel of 7 mm SM steel
- Effective square-bolt locking
- Full-length gripping bar on the hinge side
- Door with fire-protective material in accordance with DIN 4102-A1
- Body with all-round fire fold
- Paint finish: scrap iron

### Version S

Armoured security safe lock 'SecuSafe', VdS tested; ECB-S certified EN 1300 class 1/A, 9 tumblers, with forced closure, more than 1 million different key combinations. For detailed information on replacement and additional keys, see p. 117 (Karat MT 24).



Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
WT 11 S	27800 0	170×240×119 – 163	110×190×74.5 – 118.5	110×130	7.5	1.55 – 2.4
WT 12 S	27810 9	205×290×119 – 163	145×240×74.5 – 118.5	145×190	10.2	2.6 – 4.1
WT 13 S	27830 7	250×350×233 – 351	190×300×188.5 – 306.5	190×251	18.0	10.7 – 17.4

### Version E

Electronic combination lock 'SecuTronic', VdS tested; ECB-S certified EN 1300 class 2/B, 1,000,000 possible combinations. Includes 3 LR 03 AAA batteries. The locking armature protrudes 13 mm.



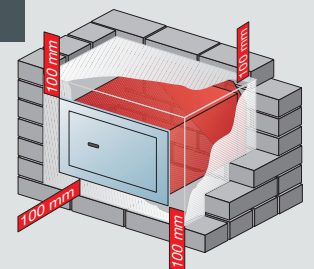
Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
WT 13 E	27820 8	250×350×233 – 351	190×300×188.5 – 306.5	190×251	18.0	10.7 – 17.4

### BURG-WÄCHTER security level



## Important installation instructions for wall safes – please note without fail

- After unpacking the safe, please check that your new safe is functioning perfectly.
- For your own safety, remove all batteries from the front panel.
- Insert the batteries only after completion of all work and when there is no longer any humidity present in the area surrounding the safe.
- In this way you will protect yourself against short-circuit damage due to humidity and prevent possible new coding by unauthorised persons.
- Prepare wall opening according to the adjacent drawing.
- The wall opening has to be large enough that the safe is surrounded on all sides with at least 100 mm of concrete.
- Cover and seal front panel of safe well with film.
- Insert safe plumb (pay attention to the 'up' imprint) into the opening, prop it with wedges and check with a level.
- Fill in and compress with concrete class C35/45, mixture 1:4; mixture should not be too wet.
- Open safe door approx. 2 days after filling with concrete, wipe off any remaining moisture and allow to dry.
- Safes and keys are not numbered for security reasons. Spare keys can only be made after submitting a sample key.
- Do not oil safe locks.
- In the case of safes with combination locks, you should store your PIN in a secure place.



Please note: When safe is installed in an exterior wall, condensation can occur due to temperature differences. The safe must then be appropriated insulated. We assume no liability for consequential damages due to condensation and improper installation.

# Safety cabinets OfficeLine



## Office Line 101 – 106



### SECURITY LEVEL B

- Freestanding safety cabinet/ freestanding commercial safe
- Security level B in accordance with VDMA 24992, May 1995
- Double-walled body
- Double-walled door
- Solid three-sided locking via 28 mm strong round bolts and additional rigid round bolts as grab bar on the hinge side
- Standard preparation for floor anchoring, with fixing material, 1 centred drill hole on the floor
- Depth for standard-sized files and adjustable shelves, also available with interior safe
- Standard version painted light grey RAL 7035, floor armature black



Office 102 E

### Version S

Resettable armoured high security "SecuSafe", ECB-S certified EN 1300 class 2/B, 10 tumblers, with forced closure, 50 million different key combinations. More security in case of losing the key – immediately resettable to a new key combination. The locking armature protrudes 25 mm. For detailed information on the resettable high security safe lock SecuSafe, see p. 114.

Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
Office 101 S	30610 9	626×641×554	476×498×370	476×498	110	87
Office 102 S	30630 7	816×641×554	666×498×370	666×498	126	122
Office 102 S 300	30850 9	816×641×554	666×498×370	666×498	300	122
Office 104 S	30650 5	1096×641×554	946×498×370	946×498	163	174
Office 104 S 300	30870 7	1096×641×554	946×498×370	946×498	300	174
Office 106 S	30840 0	1486×780×554	1336×638×370	1336×638	300	315

### Version E

Electronic combination lock 'SecuTronic', ECB-S certified EN 1300 class 2/B, 1,000,000 possible combinations. Includes 3 LR 6 AA batteries. The locking armature protrudes 50 mm.



Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
Office 101 E	30600 0	626×641×554	476×498×370	476×498	110	87
Office 102 E	30620 8	816×641×554	666×498×370	666×498	126	122
Office 102 E 300	30860 8	816×641×554	666×498×370	666×498	300	122
Office 104 E	30640 6	1096×641×554	946×498×370	946×498	163	174
Office 104 E 300	30880 6	1096×641×554	946×498×370	946×498	300	174
Office 106 E	30890 5	1486×780×554	1336×638×370	1336×638	300	315

### Interior safes with cylinder lock for Office 101 – 106

Several interior safes (interior depth 290 mm) can be installed one below the other.

Art. no.	EAN 40 03482...	suitable for:	H×W×D (mm)
IT - Office 1	15230 0	Office 101 – 104/300	151×498×290
IT - Office 2	15320 8	Office 106	151×638×290

### Practical accessories for Office 101 - 104

Art. no.	EAN 40 03482...	suitable for:
A-FB 100	04540 4	Office 101 – 104/300 Pull-out shelf Office
A-HR 100	04680 7	Office 101 – 104/300 Pull-out hanging frame Office



Office 101 S

### Additional keys for OL 101 – 126 and MTD 34 F60 – 38 F60 S

For detailed information on the resettable high security safe lock SecuSafe, see p. 114.

Key	EAN 40 03482...	Information
Set 55-124-2	08920 0	two key set, length: 124 mm
Set 55-124-4	09260 6	four key set, length: 124 mm
Set 55-124-6	06890 8	six key set, length: 124 mm
As per sample	08780 0	Lock class B, length of key 124 mm

Refers to door dimensions H×B: clear height of door opening in mm

# Freestanding safes OfficeLine



Office 112 S

## Office Line 111 – 116

### RESISTANCE GRADE I

- Freestanding safes/commercial safe
- Type tested and monitored security by ECB-S/VdS
- Protected against fire, certified protection against burglary according to EN 1143-1
- Double-walled body
- Double-walled door
- Solid 3-sided locking via 28 mm strong round bolts and additional rigid round bolts as engaging locking bar on the hinge side

- Standard preparation for floor anchoring, with fixing material, 1 centred drill hole on the floor
- Depth for standard-sized files and adjustable shelves, also available with interior safe
- Standard version painted light grey RAL 7035, floor armature black
- More security: non-resettable double emergency locking system within the door mechanics



### Version S

Resettable, armoured high-security safe lock 'SecuSafe', VdS tested, ECB-S certified according to EN 1300 class 2/B, 10 tumblers, with forced closure, 50 million different key combinations. Security advantage if key is lost – immediately resettable to a new key. The locking armature protrudes 25 mm. For detailed information on the resettable high security safe lock SecuSafe, see p. 114.

Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
Office 111 S	30670 3	626 × 641 × 554	476 × 498 × 370	476 × 498	121	87
Office 112 S	30690 1	816 × 641 × 554	666 × 498 × 370	666 × 498	205	122
Office 114 S	30710 6	1096 × 641 × 554	946 × 498 × 370	946 × 498	213	174
Office 114 S 300	30790 8	1096 × 641 × 554	946 × 498 × 370	946 × 498	305	174
Office 116 S	30930 8	1486 × 780 × 554	1336 × 638 × 370	1336 × 638	310	315

### Version E

Programmable electronic combination lock 'SecuTronic' with integrated fingerscan module, VdS approved class 2. Intelligent user guidance. Administration of up to 10 user codes, up to 20 fingerscans and up to 300 optional TSE E-keys. User names, access times and rights, calendar functions, etc. programmed via optional TSE software packages. Includes 2 LR 6 AA batteries. The locking armature protrudes 50 mm.



Art. no.	EAN 40 03482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
Office 111 E	30660 4	626 × 641 × 554	476 × 498 × 370	476 × 498	121	87
Office 112 E	30680 2	816 × 641 × 554	666 × 498 × 370	666 × 498	205	122
Office 114 E	30700 7	1096 × 641 × 554	946 × 498 × 370	946 × 498	213	174
Office 114 E 300	30780 9	1096 × 641 × 554	946 × 498 × 370	946 × 498	305	174
Office 116 E	30940 7	1486 × 780 × 554	1336 × 638 × 370	1336 × 638	310	315

### Interior safes with cylinder lock for Office 111 – 116

It is also possible to install several interior safes (interior depth 290 mm) one below the other (height in each case 154 mm).

Art. no.	EAN 40 03482...	suitable for:	H×W×D (mm)
IT - Office 1	15230 0	Office 111 – 114/300	151 × 498 × 290
IT - Office 2	15320 8	Office 116	151 × 638 × 290

### Practical accessories for Office 111 - 114

Art. no.	EAN 40 03482...	suitable for:
A-FB 100	04540 4	Office 111 – 114/300 Pull-out shelf Office
A-HR 100	04680 7	Office 111 – 114/300 Pull-out hanging frame Office

Technical modifications are planned for the further production series.

Optimal utilisation of the interior space of Office Line safes:



BURG-WÄCHTER safes of this series comply with the requirements of the European standard EN-1143-1. This is verified in the ECB-S certificates of the European Certification Board • Security Systems (certification authority in accordance with EN 45011). The ECB-S certification includes several annual unannounced inspections of the productions sites. A constant quality level is hereby ensured.



Office 114 E

# Freestanding safes OfficeLine



## Office Line 121 – 126



### RESISTANCE GRADE II

- Freestanding safes/commercial safe
- Type tested and monitored security by ECB-S/VdS
- Certified protection against burglary according to EN 1143-1
- Double-walled body
- Double-walled door
- Solid three-sided locking by 28 mm strong round bolts and additional rigid round bolts as engaging locking bars on the hinge side
- Standard preparation for floor anchoring, with fixing material, 1 centred drill hole on the floor
- Depth for standard-sized files and adjustable shelves, also available with interior safe
- Standard version painted light grey RAL 7035, floor armature black
- More security: non-resettable double emergency locking system within the door mechanism



Office 122 E



### Version S

Resettable, armoured high-security safe lock 'SecuSafe', VdS tested, ECB-S certified according to EN 1300 class 2/B, 10 tumblers, with forced closure, 50 million different key combinations. Security advantage if a key is lost – immediately resettable to a new key. The locking armature protrudes 25 mm. For detailed information on the resettable high security safe lock SecuSafe, see p. 114. For detailed information on replacement and additional keys, see p. 121 (OL 101-106).

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
Office 121 S	30020 6	626×641×554	476×498×370	476×498	205	87
Office 122 S	30040 4	816×641×554	666×498×370	666×498	205	122
Office 124 S	30060 2	1096×641×554	946×498×370	946×498	239	174
Office 126 S	30080 0	1486×780×554	1336×638×370	1336×638	336	315

### Version E



Programmable electronic combination lock 'SecuTronic' with integrated fingerscan module, VdS approved class 2. Intelligent user guidance. Administration of up to 10 user codes, up to 20 fingerscans and up to 300 optional TSE E-keys. User names, access times and rights, calendar functions, etc. programmed via optional TSE software packages. Includes 2 LR 6 AA batteries. The locking armature protrudes 50 mm.

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
Office 121 E	30030 5	626×641×554	476×498×370	476×498	205	87
Office 122 E	30050 3	816×641×554	666×498×370	666×498	205	122
Office 124 E	30070 1	1096×641×554	946×498×370	946×498	239	174
Office 126 E	30090 9	1486×780×554	1336×638×370	1336×638	336	315

### Interior safes with cylinder lock for Office 121 – 126

It is also possible to install several interior safes (interior depth 290 mm) one below the other (height in each case 154 mm).

Art. no	EAN 40 03482...	suitable for:	H×W×D (mm)
IT - Office 1	15230 0	Office 121 – 124	151 × 498 × 290
IT - Office 2	15320 8	Office 126	151 × 638 × 290

### Practical accessories for Office 121 - 124

Art. no	EAN 40 03482...	suitable for:
A-FB 100	04540 4	Office 121 – 124 Pull-out shelf Office
A-HR 100	04680 7	Office 121 – 124 Pull-out hanging frame Office

**Key safes**  
 On request the freestanding safes of the OfficeLine series in size 4 (models 104, 114, and 124) can be built as key safes. The interior contains 480 hooks on 3 solid and smooth-functioning fully extendible telescoping pull-outs. The key safe interior is not compatible with the interior safe.  
 EAN: 4003482 04840 5



Office 126 E



# Document safes – OfficeDoku



OfficeDoku 124 E

## Office Doku 121 - 124

### FIRE GRADE S 60 P AND RESISTANCE CLASS II

- Document safe, protection against burglary and fire
- 2 security levels in one; certified burglary protection in accordance with EN 1143-1 and certified fire protection in accordance with EN 1047-1
- Double-walled body, massively filled with fire protection material
- Double-walled door
- Solid 3-sided locking by 28 mm strong round bolts and in addition rigid round bolts as engaging locking bars on the hinge side
- Standard preparation for floor anchoring, with fixing material, 1 centred drill hole on the floor
- Tested fire protection in accordance with protection class S 60 P (1 hour fire test for paper, including drop test)
- Body with all-round fire fold
- Depth for standard-sized files and adjustable shelves, also available with interior safe
- Standard version painted light grey RAL 7035, floor armature black
- More security: non-resettable double emergency locking system within the door mechanics



### Version S

Resettable armoured high-security safe lock 'SecuSafe', ECB-S certified according to EN 1300 class 2/B, 10 tumblers, with forced closure, 50 million different key combinations. Security advantage if a key is lost – immediately resettable to a new key. The locking armature protrudes 25 mm.

For detailed information on the resettable high security safe lock SecuSafe, see p. 114.

Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
OfficeDoku 121 S	30730 4	626 × 641 × 555	476 × 498 × 336	476 × 498	300	79.6
OfficeDoku 124 S	30770 0	1096 × 641 × 555	946 × 498 × 336	946 × 498	450	158.3

### Version E

Programmable electronic combination lock 'SecuTronic' with integrated fingerscan module, VdS approved class 2 Intelligent user guidance. Administration of up to 10 user codes, up to 20 fingerscans and up to 300 optional TSE E-keys. User names, access times and rights, calendar functions, etc. programmed via optional TSE software packages. Includes 2 LR 6 AA batteries. The locking armature protrudes 50 mm.



Art. no.	EAN 4003482...	Exterior H×W×D (mm)	Interior H×W×D (mm)	Door H + W opening (mm)	Weight (kg)	Volume (l)
OfficeDoku 121 E	30720 5	626 × 641 × 555	476 × 498 × 336	476 × 498	300	79.6
OfficeDoku 124 E	30760 1	1096 × 641 × 555	946 × 498 × 336	946 × 498	450	158.3

## Interior safes with cylinder lock for Office Doku 121 – 124

It is also possible to install several interior safes (interior depth 290 mm) one below the other (height in each case 154 mm).

Art. no.	EAN 40 03482...	suitable for:	H×W×D (mm)
IT - Office 1	15230 0	Office 121 + 124	151 × 498 × 290

## Additional keys for OL 121+124 Doku

For detailed information on the resettable high security safe lock SecuSafe, see p. 114.

Key	EAN 40 03482...	Information
Set 55 GLK-2	09270 5	two key set, length 162 mm, with hinge
Set 55 GLK-4	09290 3	four key set, length 162 mm, with hinge
Set 55 GLK-6	06900 4	six key set, length 162 mm, with hinge
As per sample	08790 9	VdS lock class 2, key length 162 mm with hinge

BURG-WÄCHTER safes of this series comply with the requirements of the European standard EN-1143-1. This is verified in the ECB-S certificates of the European Certification Board • Security Systems (certification authority in accordance with EN 45011). The ECB-S certification includes several annual unannounced inspections of the productions sites. A constant quality level is hereby ensured. Errors and omissions excepted!



Models Office 111 E – 116 E, Office 121 E – 126 E  
Office Doku 121 E – 124 E come standard equipped with fingerscan module

More information on page 122.



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### Trainings – Sound knowledge from experts

Knowledge is a valuable commodity and provides a competitive advantage. In a constantly growing market that is becoming more and more complex, it is important to be up to speed with the latest technology and products. SANTEC is your partner for conveying comprehensive and up-to-date knowledge and know-how. You will thus be in a position to successfully offer, sell and install video surveillance technology.

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## Services from us for you

We see ourselves as your partner, whose service does not stop with the delivery of the product. We would like to be able to accompany you with our expertise through the entire project period – from planning to configuration to commissioning. We want to assist you in identifying and solving problems. Therefore we provide a comprehensive range of service offerings that will enable you to save time and money and that you can also offer to your customers.

## Remote support and commissioning from our qualified support team



Our qualified support team will assist you in all product-related questions and help you in case of problems.

For special support during commissioning, project development or for complex issues, we offer a remote support on a date chosen by you. Our support team will reserve this time-slot exclusively for you and support you over the phone, by remote maintenance tool (e.g. Teamviewer) or Internet access. You thus will receive perfect support and online briefings for your products, systems, and software so that you can carry out a smooth commissioning, configuration or problem solving on site.

Your advantages:

- Our support team member will be available for you at your requested time
- Remote support by an expert as if he were present on site
- Reasonably priced, calculable and flexible

When placing your order, just add the remote support and take advantage of this extra service.

Part number: 16925 – Remote support

## Support and technical assistance on site



In case the remote support is not sufficient, we would be happy to support you on site for commissioning, trouble-shooting, project development or factory approval.

Simply make an appointment with our colleagues from the support team.

You can choose from two different packages:

Part number: 16930 – Daily flat rate

Daily flat rate for an overall maximum of 10 hours working and travel time including travelling to and from the site. Appointment as needed

Part number: 16940 – 3 hour flat rate

Flat rate for an overall maximum of 3 hours on site. Appointment is made in consultation with us, since we always make these appointments separately.

## § 1 General Provisions,

### Scope of Application

- (1) The present General Terms of Sale (GTS) shall apply to the entire business relations with our customers (hereinafter: "Buyers"). These GTS shall only apply if the Buyer is a merchant, a public law entity or a public law fund.
- (2) These GTS shall particularly apply for sales contracts regarding the delivery of movables (hereinafter: „item“), regardless if the item is manufactured on the basis of our own templates or templates of the Buyer (§§ 433, 651 BGB – German Civil Code).
- (3) Our GTS shall apply only. Any diverging, opposing or supplementary purchase conditions of the Buyer shall not apply. Our GTS shall also apply if we effect delivery to the Buyer without reservation and in knowledge of any opposing or diverging purchase conditions.
- (4) Individual agreements with the Buyer shall override these GTS.
- (5) Legally relevant representations the buyer may issue to us after contract conclusion (deadlines, defect notices, rescission notices, reduction notices) shall be in writing or by e-mail to be legally valid.
- (6) Place of performance for the mutual contractual obligations is Ahrensburg, Germany.
- (7) Offsets rights and rights of retention may only be asserted by the Buyer, if his respective counterclaims are either ascertained by final judgement, undisputed or acknowledged by us.
- (8) Should individual provisions of the contracts concluded by the parties are invalid or unenforceable, the remaining provisions shall not be affected thereby. In place of the provision invalid or unenforceable, statutory regulations shall apply. In case of regulatory gaps the principles of supplementary legal interpretation shall apply.
- (9) References to statutory provisions made herein are for clarification purposes only. Even without express clarification the statutory provisions shall apply, unless expressly altered or expressly excluded by these GTS.

## § 2 Conclusion of Contracts

- (1) Unless otherwise expressly agreed, our offers are without engagement.
- (2) The Buyer's orders are deemed as legally binding offers. We are entitled to accept any offers within 3 weeks upon its reception.
- (3) Contract offers are to be accepted by us by written communication (order confirmation e. g.) or by delivery of the ordered items to the Buyer.
- (4) Images, drawings, indications of colour, weight and measurement are approximation only, unless expressly indicated as binding.
- (5) We do not provide any warranty or representation that the delivered items are compatible with the hardware or software installed at the Buyer or compatible to the hardware or software available on the market. Recommendation regarding usability, compatibility and regarding other performance features shall only be binding if set out in our brochures or if confirmed by us to the Buyer in writing.

## § 3 Time of Delivery

- (1) Days of delivery or periods of delivery shall only be binding if confirmed by us in writing.
- (2) Unless otherwise agreed, delivery periods commence with the day on which the order confirmation is dispatched by us.
- (3) As far as we are not capable to comply with binding delivery periods for reasons we are not responsible for (non-availability of performance) we shall notify the Buyer

respectively without undue delay and simultaneously notify the expected follow-up delivery period. In case the delivery is also not available within the follow-up period, we are entitled to rescind the contract partially or completely. Any payment already effected by the Buyer shall be refunded without undue delay. Delayed self-delivery by our suppliers is deemed as such case of non-availability of performance provided a congruent covering deal has been closed by us, neither we nor our supplier is responsible for the delay and no procurement obligation has been incurred by us insofar.

(4) Default in delivery is subject to statutory provision. Divergent to statutory provisions, our liability in case of ordinary negligence is limited to a lump-sum compensation. This lump-sum is per calendar week 0,5% of the order value affected by default, however, not more than 5% of the order value affected by default.

(5) The rights of the Buyer pursuant to § 11 of these GTS are not affected hereby.

## § 4 Delivery, Transfer of Risk,

### Acceptance, Default in Acceptance

- (1) Unless otherwise agreed upon, delivery is Ex Works.
- (2) In any case, however, the risk of accidental loss and accidental deterioration of the items shall pass to the Buyer upon the surrender, in case of the purchase to destination, upon the delivery of the items to the forwarding agent, the carrier, or any other person or institution charged with the execution of the shipment. As far as an acceptance is agreed upon, the risk transfer comes with the acceptance. Default of acceptance by the Buyer shall be equivalent to delivery or acceptance.
- (3) We will arrange for transport insurance if requested by the Buyer. The expenses incurred insofar are to be borne by the Buyer.
- (4) Transport packaging and sales packaging are taken back by us pursuant to the provisions of the German Packaging Ordinance at our premises within regular business hours. The Buyer shall bear the expenses of transport and disposal. The packaging is to return free from foreign materials and well sorted according to the type of packaging.
- (5) If the Buyer is in delay of acceptance, fails to perform a mandatory act of cooperation or is the delivery delayed for other reasons the Buyer is responsible for, we are entitled to claim for the damages including extra expenses (storage costs etc.).
- (6) We have the right to effect partial deliveries within reasonable scope.

## § 5 Cancellations and Modifications

### effected by the Buyer

- (1) If the Buyer places order cancellations or order modifications of custom-made items or if the Buyer places special orders, the Buyer shall compensate us for the expenses and loss of profit incurred thereby. We reserve the right to claim for further damages.
- (2) Modification requests of the Buyer prolong time of delivery until we have finalised the feasibility check by a period appropriate to implement these modification requests. The prices shall be adjusted in accordance with the requested modification.

## § 6 Force Majeure

Disruptions caused by force majeure prolong delivery periods as long as the disruption continues. Force majeure is deemed as an event which is according to the usual course of life not foreseeable and/or not avoidable. This also applies if the disruption occurs at our suppliers or during default. Is the disruption

not only temporarily, both parties are entitled to rescind the contract. In case of force majeure damage claims cannot be asserted.

## § 7 Prices, Invoices, Payment

- (1) Unless otherwise agreed, relevant prices are those indicated in our respective price list. Prices are deemed Ex Works plus the respective VAT rate. Packaging, transportation charges, insurance as well as possible customs duties or other public levies are borne by the buyer.
- (2) We are entitled to demand appropriate down-payment on the purchase price.
- (3) Does a delivery period exceeds two months we are entitled to increase or decrease the prices agreed, if and insofar significant changes in labour costs, material costs, commodity costs occur after contract conclusion and if we are not responsible for the increase. Is the price intended to be increased by more than 5%, the Buyer is entitled to rescind the contract within two weeks beginning with the reception of the increase notice.
- (4) Invoices shall be paid within 30 days upon invoice date without deduction free of charge to the payment point indicated by us. Should payment be carried out within 10 days upon invoice date we grant an early payment discount of 2% unless other receivables are due against the Buyer at that time. Payment is deemed to be effected only if the respective amount has been credited on our bank account.
- (5) Bills of exchange and checks are only accepted as conditional payment and are credited subject to the receipt of payment. Discount charges and collection charges shall be borne by the Buyer. These charges are instantly payable. The acceptance of our own or third-party bills of exchange does not constitute a right to demand a cash account.
- (6) Payment shall be effected only to the bank accounts indicated in our invoices. Our staff is not entitled to receive payment unless been given a written collection authority in advance.
- (7) Does it become apparent that our payment claim is jeopardised by the Buyer's incapability to pay (payment arrears e. g.), we are entitled to demand sureties or stage-by-stage settlement for all pending orders. Furthermore, we are entitled to refuse our performance until surety or consideration has been fully effected.
- (8) We are entitled to charge an interest on payment arrears of 8 percentage points above the relevant base interest rate, however, not less than 10 % p. a.

## § 8 Repossession of Defect-Free Items

- (1) The repossession of defect-free items is only voluntary and may be effected not more than 20 days after delivery. The repossession is subject to prior confirmation. For the repossession, we will calculate expenses in the amount of a flat rate of € 39.00 plus VAT.
- (2) In case an item returned by the Buyer turns out to defective, we are entitled – in spite of our original confirmation to repossess – either to refuse repossession or to charge the Buyer with the repair expenses. Missing accessories (cables, user manuals etc.) shall also be charged.
- (3) Any deduction of the amounts accruing pursuant to § 8/Subsection 1, 2 shall be made with the credit note.

## § 9 Retention of Title

- (1) Sold items shall remain in our ownership until all our current and future receivables arising out of the present sales contract and

the entire business relationship between us and the Buyer (secured receivables) are fully paid.

(2) As long as the items are under retention of title (hereinafter: „reserved items“) the Buyer is obliged to handle the items carefully and to maintain the items at his expenses. In particular, the Buyer is obliged to insure the reserved items at his own expense against loss and damage at sufficient reinstatement value. The Buyer shall produce the insurance documents and shall provide evidence on premiums paid if requested by us. The Buyer hereby cedes to us all claims arising out of the insurance contract on his behalf. We herewith accept this assignment.

(3) Processing of the reserved items is deemed to be carried out on our behalf, however, without obligating us. We hereby acquire co-ownership of the new item if a reserved item is mixed or connected with another one. Our co-ownership-share amounts to the invoice values of the items involved insofar.

(4) The Buyer is entitled to sell or to process the reserved items in the ordinary course of trade. Insofar, the following provisions shall apply:

(a) The reservation of title comprises the products which are made by processing, mixing or combining with our items at their full value, whereby we are deemed as the manufacturer. In case of processing, mixing or combining our items with products of a third party, we shall acquire co-ownership for those goods. The co-ownership is in proportion to the invoice values of the goods involved. Incidentally, the provisions herein regarding retention of title shall also apply to the goods made of/comprising our items.

(b) The Buyer hereby cedes all receivables he obtains against third parties for the resale of the items to the amount of our approximate co-ownership-share as surety. We hereby accept the assignment. The Buyer's obligations as set out in § 9/Section 2 of these GTS shall also apply to the ceded receivables.

(c) We and the Buyer are authorized to collect these receivables. We shall be obligated not to collect these receivables as far as the Buyer meets his payment obligations to us, the Buyer is not in payment default, no insolvency proceedings are applied for against the Buyer and no other deficiency in the Buyer's financial capacity occurs. If otherwise, we are entitled to demand that the Buyer informs us which receivables are comprised by the assignment and who the respective debtors are. Furthermore, the Buyer shall provide us with all information necessary for the collection, shall hand over the relevant documents to us and shall inform the debtors (third parties) of the assignment.

(5) The Buyer shall give us full information about the whereabouts of the reserved items and the revenue generated thereby and its payment. All business documentation (including the invoices) relating to the reserved items shall be disclosed to us or to our designated agents. The Buyer shall provide us insofar with copies on our request. If the receivables are at risk, the Buyer shall inform the third-party debtor about our ownership and the assignment and shall notify the third-party debtor to immediately effect payment to us.

(6) The reserved items may neither be pledged to third parties, nor assigned as collateral before the secured receivables are fully paid. The Buyer shall notify us immediately if any third-party seeks access to the reserved items.

(7) We are entitled to rescind the contract pursuant to the statutory requirements and to

claim the reserved items to be shipped back to us in case the Buyer breaches his contractual obligations, in particular in case of non-payment of due receivables. If the Buyer is in arrear we may assert these rights only if we have fruitlessly set the Buyer an appropriate time limit for payment or if such time limit is deemed dispensable pursuant to statutory provisions. If we rescind the contract, we are entitled to dispose of the reserved goods at our discretion.

(8) We shall release the securities due to us at the request of the Buyer insofar as the value of the securities exceeds the secured accounts receivable by more than 10 %.

## § 10 Warranty

(1) The Buyer's rights in case of quality defects and defects of title are subject to the statutory provisions for sales contracts as set out in §§ 437 et. seq. BGB as far as not provided otherwise hereinafter.

(2) The primary basis of our warranty shall be the agreement made concerning the quality of the items (§ 434 section 1 sentence 1 BGB). As quality agreement is in particular deemed the respective product descriptions that were made available to the Buyer before he has placed the order.

(3) The rights set out in §§ 437 et. seq. BGB shall only apply as far as the Buyer has complied with the inspection and reporting obligations as set out in §§ 377, 381 HGB (German Commercial Code). Insofar the following shall apply:

(a) A defect shall be reported to us in writing without undue delay if that defect becomes visible during the initial inspection or afterwards. Evident defects (including wrong delivery or short delivery) shall also be reported to us in writing without undue delay.

(b) A report is deemed to be effected without undue delay if the report has been issued within two weeks upon receipt of the item whereas the receipt of the report by us is relevant for this two-weeks period.

(c) A due defect report requires indication of date and number of the relevant delivery note and, if already available, date and number of the relevant invoice.

(d) Our warranty is excluded as far as the Buyer refrains from due defect inspection and/or due defect notification. The items affected insofar are returned to the Buyer at his expenses.

(e) For the purpose of prompt and efficient execution, the return shipment of defective items should be effected by using the return form (which can be requested at our Support Department) and the indication of a return number (RMA) which is to be obtained at our Support Department as well. The return forms can also be printed out from our website ([www.santec-video.com](http://www.santec-video.com)).

(4) In case of a defect we are in the first place entitled to subsequent performance which is at our discretion either repair or replacement. We are entitled to refuse our obligations until the purchase price is paid if due. The Buyer, however, is entitled to retain a part of the purchase price that in value appropriately corresponds to the defect. The Buyer shall allow us sufficient time to carry out our obligations, in particular to carry out due inspection. In case we have opted for replacement, the Buyer is obliged to return the defective items to us pursuant to the statutory provisions. Our obligations do not involve disassembling of the defective item in case we originally were not obliged to install. In case of a defect, we bear the expenses appropriate to carry out our warranty obligations, in particular shipping costs, road costs, labour

costs, material costs, however not the costs for mounting and dismounting.

(5) Our warranty obligations shall lapse if and as far as the defect is due to mal-operation, disregard of user instructions, the use of operating elements and attach devices which are not authorized by us or any other unauthorized treatment of the item. Our warranty obligations shall also lapse if the defect is due to wear and tear (in particular at TFT-Panels, mechanic parts in Dome-Systems, pan-tilt-units, hard drives, service desks and keyboards, infrared illuminants/LED etc.) or if the defect has been caused by force.

(6) Does the Buyer culpably launch an unjustified request for defect remedy, the Buyer is obligated to compensate us for the damages incurred thereby. The presumption of culpability as set out in § 280 section 1 sentence 2 BGB does apply insofar. The Buyer has, however, to reimburse inspection expenses in the amount of at least € 39,00 plus VAT. The Buyer retains the right to prove that the damage incurred is less than 39,00 EUR.

(7) To the extent that the defect is caused by a significant third-party product we are entitled to perform our warranty obligations in the first place by ceding the warranty claims to the Buyer we have against the supplier of that third-party product. If the settlement of the ceded claim fails or otherwise cannot be enforced, the Buyer is entitled to resort to the warranty claims as set out in § 10 of these GTS.

(8) The Buyer's claims for damages and the reimbursement of frustrated expenses are finally stipulated in § 11 of these GTS.

## § 11 Liability

(1) Unless otherwise provided by these GTS and its provisions hereinafter, our liability for the breach of contractual and non-contractual obligations are subject to the respective statutory provisions.

(2) We shall be liable for damages – no matter for what legal grounds – in cases of intent or gross negligence. In case of ordinary negligence we are solely liable for

a) damages arising from the loss of life, bodily injury and health damages,

b) damages arising from infringement of cardinal obligations of the contract (obligations which are indispensable for appropriate contract performance and on which the contract partner reasonably relies on and reasonably may rely on). In case of infringement of a cardinal obligation our liability for damages is limited in its amount to the foreseeable and typical damage.

(3) The limitation as set out before in sub-section 2 does not apply if the defect has been fraudulently concealed or if a quality guarantee has been assumed. The same applies to all claims based on the Produkthaftungsgesetz (German Products Liability Act).

(4) In case the breach of contract is not based on a defect of title or a defect of quality, the Buyer is only entitled to rescind or terminate the contract if we are responsible for the breach. An assumption-free right of the Buyer to rescind or to terminate the contract (in particular a right pursuant to §§ 651, 649 BGB) is excluded.

## § 12 Limitation

(1) Divergent to § 438 section 1 no. 3 BGB the general limitation period for claims based on defects of quality or defects of title is one year. This limitation period commences when the item has been delivered either to the Buyer, to a recipient specified by the Buyer or – as far as we are obliged to install the item – when the item is installed either at the

Buyer or at a recipient specified by the Buyer.

(2) The aforesaid limitation period shall apply to all contractual and non-contractual damage claims based on a defect of the delivered item, unless in a particular case general statutory limitation (§§ 195, 199 BGB) would result in a shorter limitation period. The limitation period of the Produkthaftungsgesetz (German Products Liability Act) is not affected hereby. For any other kind of damage claims raised by the Buyer, the statutory limitation exclusively applies in accordance with § 11 of these GTS.

## § 13 Third Parties' Rights

As far as we are instructed to produce according to the Buyer's templates or specifications, the Buyer guarantees hereby that these templates or specifications are not encumbered by third parties rights (in particular patents, design patents and copyrights). In case we are claimed for by third parties for infringement with regard to these templates or specifications – regardless if before court or out-of-court, founded or unfounded – the Buyer hereby exempts us against all damages resulted thereby. This exemption shall also comprise appropriate and necessary legal expenses.

## § 14 Repairs

(1) Repairs which are not part of our warranty obligations are effected only against payment and if the item is sent to us Franco Domicile, appropriately packed and with a detailed defect description enclosed therein. Otherwise the item shall be returned to the Buyer without attention at the Buyer's expenses.

(2) In case an item been sent in to us turns out to be flawless upon inspection, we have the right to impose an inspection lump-sum at the amount of 39,00 EUR plus shipping costs and VAT.

(3) In case hardware products of other providers had been installed, we reserve the right to decline a Buyer's repair request. Return shipment of repaired items and spare parts shipment are effected by us only on a cash-on-delivery basis.

## § 15 Applicable Law,

### Place of Jurisdiction

(1) These GTS and the entire legal relations between us and the Buyer are subject to the law of the Federal Republic of Germany. The provisions of the United Nations Convention on Contracts for the International Sale of Goods (CISG) shall not be applicable.

(2) Exclusive place of jurisdiction for all disputes arising between the Buyer and ourselves is at our head office. However, we are entitled to file actions at the Buyer's place of general jurisdiction or at any other place of statutory jurisdiction.

(3) The Buyer is noted that all personal data is only used within the scope and for the purpose of contract processing.

