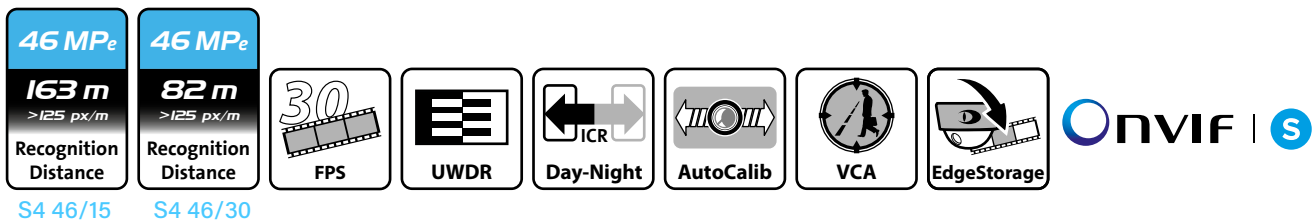


# Panomera® S4 Series

Topline

Multifocal Sensor System, 30 fps, H.264, Day/Night (ICR), UWDR, VCA optional, Box Housing, Models S4 46/15 DN, S4 46/30 DN



The patented Panomera® Multifocal Sensor System is a completely new camera technology particularly developed for the extensive video surveillance of large scale areas. Enormous expanses and areas are captured in a completely new resolution quality in real time. This results in significantly lower infrastructure requirements. Where previously several megapixel cameras would have been necessary, a single Panomera® Multifocal Sensor System is now sufficient.

## Panomera® effect

The sophisticated combination of the high-resolution sensors of Panomera® S4 Topline offers an excellent dynamic range of 130 dB UWDR effectively and results in an extreme Panomera® effect. It offers a resolution of more than 125 px/m up to a distance of 163 or 82 m, which enables the recognition of persons over the entire distance. The identification of persons (250 px/m) is supported up to a distance of 40 m depending on the model.

## Automatic calibration

The innovative lens sensor concept of the Panomera® S4 is based on motorized varifocal lenses that are optimally matched to the extremely high-resolution image sensors. The individual lens sensor units are automatically focused and calibrated over the network using the Panomera® AutoCalibration software. It is not necessary to focus and calibrate directly at the Panomera® installation site.

## Video Content Analysis

The optional Video Content Analysis (VCA) detects movements and objects in the uncompressed image and analyzes them in real-time (depending on the analysis resolution) with highly developed analysis functions such as Intrusion Detection or Line Crossing. The detected events can be used to trigger the recording of a SMAVIA recording system. Together with the detected objects and the corresponding metadata, they are stored in a database. This allows the targeted search and evaluation of the recordings by SMAVIA Viewing Client with the SmartFinder function.

## Permanent capturing

The multifocal sensor system captures and stores all areas of the object space in maximum detail resolution. It does not matter whether the operators in live mode concentrate on a certain area (multiple detail zoom) or whether interesting areas are displayed in detail on the basis of video content analysis (multiple auto tracking). The Panomera® recordings always contain the entire action and allow for the evaluation of each incident.

## Automatic switching

The individual sensors of the Panomera® S4 are equipped with an ambient light sensor and a removable IR cut filter and can automatically switch between day and night mode. In addition, different day and night presets can be defined and adjusted for the exposure settings.




## EdgeStorage




The sensors of the Panomera® S4 are equipped with a RAM memory that is used by the EdgeStorage function to store the video stream in case of a network failure (e.g. Spanning Tree, Bursts). When the network is restored, the SmartBackfill function ensures fast transmission to the SMAVIA recording system. This stores the video stream with high speed and then continues to record the live stream seamlessly.

## Further features

- Multifocal sensor system with 4 sensors
- Effective resolution 46 megapixels (MPe)
- Horizontal field of view 15° or 30°
- Very good light sensitivity 0.01lux
- 3D Digital Noise Reduction (3D-DNR)
- Hiding of protected areas (Privacy Zone Masking)
- Weather-proof (IP66) housing with integrated heater
- Housing coating tested for seawater resistance
- Variants with copper or fiber optic connection


Multifocal Sensor System, 30 fps, H.264, Day/Night (ICR), UWDR, VCA optional, Box Housing, Models S4 46/15 DN, S4 46/30 DN

Variants Panorama® S4 46/15 DN Topline	
004907.413	 <p><b>Panorama® S4 46/15 DN C</b> Multifocal sensor system, 46 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 15°, resolution 125 px/m up to 163 m, box housing, 1000BASE-T Ethernet port for copper cabling</p>
004907.414	 <p><b>Panorama® S4 46/15 DN Multimode</b> Multifocal sensor system, 46 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 15°, resolution 125 px/m up to 163 m, box housing, 1000BASE-SX optical port for fibre-optic cabling (850 nm, 550 m)</p>
004907.415	 <p><b>Panorama® S4 46/15 DN Singlemode</b> Multifocal sensor system, 46 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 15°, resolution 125 px/m up to 163 m, box housing, 1000BASE-LX/LH optical port for fibre-optic cabling (1310 nm, 10 km)</p>

Variants Panorama® S4 46/30 DN Topline	
004907.416	 <p><b>Panorama® S4 46/30 DN C</b> Multifocal sensor system, 46 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 30°, resolution 125 px/m up to 82 m, box housing, 1000BASE-T Ethernet port for copper cabling</p>
004907.417	 <p><b>Panorama® S4 46/30 DN Multimode</b> Multifocal sensor system, 46 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 30°, resolution 125 px/m up to 82 m, box housing, 1000BASE-SX optical port for fibre-optic cabling (850 nm, 550 m)</p>
004907.418	 <p><b>Panorama® S4 46/30 DN Singlemode</b> Multifocal sensor system, 46 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 30°, resolution 125 px/m up to 30 m, box housing, 1000BASE-LX/LH optical port for fibre-optic cabling (1310 nm, 10 km)</p>

Licenses	
007078	<p><b>DLC - VCA for Panorama® S/W 4</b> Licence for the use of the Video Content Analysis (VCA) function for a Panorama® S/W 4 system</p>

Licenses SMAVIA Recording Server	
004898	<p><b>DLC - 3 Additional Panorama® Sub-Channels</b> License for the use of three additional HD channels for the exclusive recording of Panorama® sub-channels</p>

Accessories	
003965	 <p><b>Power Supply Unit 48 V DC, 5 A (for EN 50022 DIN-Rails)<sup>1)</sup></b> Power supply for Panorama®, 48 V DC, 5 A, suitable for DIN rails according to EN 50022</p>

1) The Power Supply Unit 48 V DC (003965) is suitable for parallel power supply of camera and heater. A 4-wire cable routing is recommended for the power supply.

Multifocal Sensor System, 30 fps, H.264, Day/Night (ICR), UWDR,  
VCA optional, Box Housing, Models S4 46/15 DN, S4 46/30 DN

## Panomera® S4 - S8 Wall Mount Set

005084



### WBOVA2 - Wall Mount Bracket

Wall mount bracket WBOVA2 with integrated joint,  
compatible with Panomera® S4 - S8



### WCPA - Support Plate Adapter

Reinforcing support plate WCPA  
for adapting the wall brackets WBMA and WBOVA2

## Panomera® S4 - S8 Corner Mount Set

005085



### WBOVA2 - Wall Mount Bracket

Wall mount bracket WBOVA2 with integrated joint,  
compatible with Panomera® S4 - S8



### WCWA - Corner Mount Adapter

Corner mount adapter WCWA for corner mounting

## Panomera® S4 - S8 Ceiling Mount Set

005086



### WFWCA - Ceiling Mount Bracket

Ceiling mount bracket WFWCA with integrated joint,  
compatible with Panomera® S4 - S8

## Panomera® S4 - S8 Pole Mount Set (65 - 110 mm)

005087



### WBOVA2 - Wall Mount Bracket

Wall mount bracket WBOVA2 with integrated joint,  
compatible with Panomera® S4 - S8



### WSFPA - Pole Mount Adapter

Pole mount adapter WSFPA for pole diameters 65 - 110 mm (2.6 - 4.3")

## Panomera® S4 - S8 Pole Mount Set (210 - 225 mm)

005088



### WBOVA2 - Wall Mount Bracket

Wall mount bracket WBOVA2 with integrated joint,  
compatible with Panomera® S4 - S8



### WCPA - Support Plate Adapter

Reinforcing support plate WCPA  
for adapting the wall brackets WBMA and WBOVA2



### DBHWGC - Pole Mount Adapter

Pole mount adapter DBHWGC for pole diameters 210 - 225 mm (8.3 - 8.6")

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Sensor System	
Number of sensors	4
Number of sensor pixels	16 MP
Light sensitivity	0,01lux
Dynamic range (UWDR)	130 dB (effective)

Resolution	Panamera® S4 46/51	Panamera® S4 46/30
Effective resolution (MPE) <sup>2)</sup>	46 MP	46 MP
Identification distance (≥250 px/m)	Up to 40 m	Up to 19 m
Recognition distance (≥125 px/m)	Up to 163 m	Up to 82 m
Observation distance (≥62 px/m)	Up to 270 m	Up to 164 m

Field of View & Aspect Ratio	Panamera® S4 46/51	Panamera® S4 46/30
Horizontal field of view	15°	30°
Vertical field of view	24°	46°
Aspect ratio (H:V)	3:5	3:5

Format and Encoding	
Video compression	H.264
Frame rate	Up to 30 fps at full resolution
Live streaming	Multicast or Unicast (for Viewing Client) Unicast (for recording)

Network and Recording	
Required network bandwidth (nominal, for recording)	24 Mbps <sup>3)</sup> 6 Mbps (with Panamera® Streaming Server)
Recommended network bandwidth	1000 Mbps (Gigabit network)

Functions	
Day/Night switching	Ambient light sensing and removable IR cut filter (ICR)
Black-and-white mode	Automatic (at low light or in night mode)
Digital noise reduction	3D-DNR
Brightness control	Automatic (ALC)
Gain control	Automatic (AGC)
White balance	Automatic (AWB)
Privacy Zone Masking	Yes (up to 100% of the entire image)
Video Content Analysis <sup>4)</sup>	Intrusion Detection (detection of access to a defined area) Line Crossing (detection of a virtual line crossing) Tamper Detection (detection of manipulations on the camera) Object Classification (classification of objects) Face Detection (detection of faces) <sup>5)</sup>

Protocols	
Ethernet protocols	IPv4 (ARP, ICMP, IGMPv2/IGMPv3), UDP, TCP, LLDP, CDP (v1,v2), DSCP (QoS), DNS, DHCP, NTP, HTTP/HTTPS, RTSP/RTP/RTCP, SNMP (v1, v2c, v3)
Ethernet protocols in preparation	IPv6 (NDP, ICMPv6, MLDv1/MLDv2, SLAAC, RDNSS), UDPv6, TCPv6, DNSv6, DHCPv6, LDAP, IEEE 802.1X

2) Effective resolution MPE: A conventional single sensor camera would have to be equipped with up to 46 megapixels image sensor in order to provide the same resolution across the entire object space as these Panamera® systems.

3) This value is based on the encoding of each sensor with 6 Mbps and the use of the recording system as a proxy for the live view.

4) Depending on the load of the CPU.

5) The function detects the presence of a face (Face Detection). The analysis of visible features and the link to person data (Face Recognition) are not supported.

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Network Connections (depending on the variant)	
Copper cabling	Cat.6 patch/network cable with RJ45 (8P8C) modular connector for 1000BASE-T (1000 Mbps)
Multimode fibre-optic cabling	LC-Duplex connector Multimode for 1000BASE-SX (850 nm, 550 m)
Singlemode fibre-optic cabling	LC-Duplex connector Singlemode for 1000BASE-LX/LH (1310 nm, 10 km)

Electrical Data	
Voltage supply	Camera: 48 V DC ±5% Heater: 48 V DC (24 V AC) ±5%
Power consumption	Camera: Max. 30 W Heater: Max. 60 W

Mechanical Data	
Dimensions (W × H × D)	Approx. 305 × 185 × 370 mm
Weight (with sun shield)	Approx. 12,5 kg
Material	Aluminium
Processing	Chromated
Finish	Powder coating, tested for seawater resistance according to DIN EN 60068-2
Color	Grey white (RAL 9002)
IP rating	IP66

Environmental Conditions	Panomera® S4 46/51	Panomera® S4 46/30
Recommended installation height	5 m	5 m
Permissible installation height	4.5 - 6 m	4.5 - 6 m
Tilt toward the ground	5°	5°
Transition distance <sup>6)</sup>	64 m	32 m
Installation sites	Indoor and outdoor	
Operating temperature	-40 °C to +50 °C (minimum start-up temperature: -30 °C) Heater On: < +10 °C Heater Off: > +10 °C	
Relative humidity	0% - 90% RH, non-condensing	

Miscellaneous	
Ambient light sensor	Integrated
Removable IR-cut filter	Integrated
Local memory	50 MB RAM memory per sensor
Configuration and live video	Via web browser (all major platforms), SMAVIA Recording Server Software and PService3 (with Panomera® AutoCalibration add-on)
Languages	German, English,
Programming interface	Open platform for integration into 3rd party systems using API and ActiveX <sup>7)</sup>
ONVIF compliance	Profile S

Approvals/Certifications	
Type	CE, FCC, RCM, DIN EN 50130-4 compliant

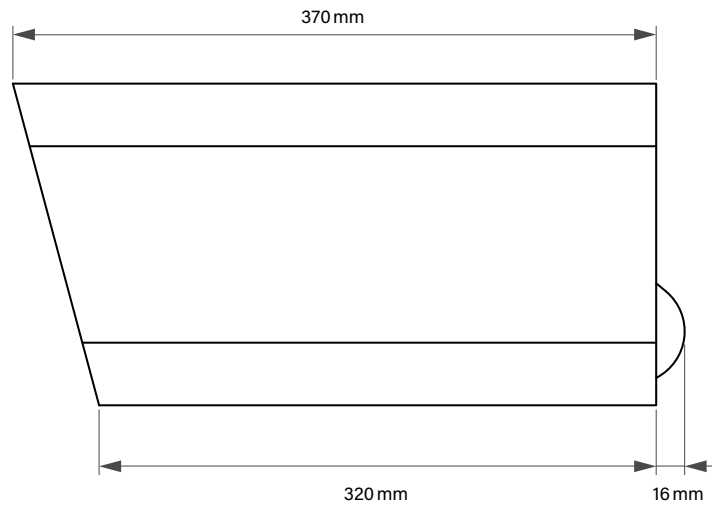
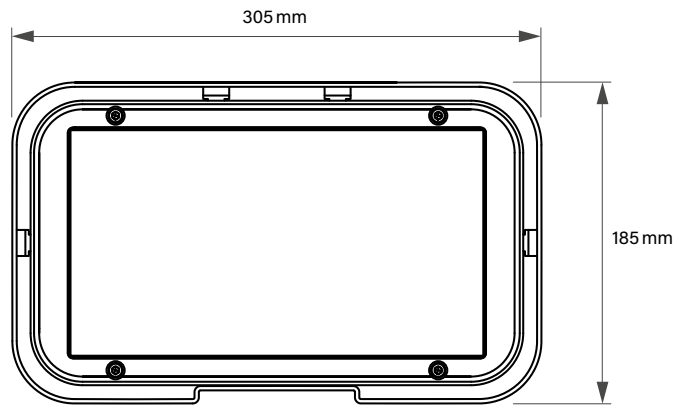
6) Transition distance: Orientation point on the floor as a setting aid for optimum camera inclination. See the document Installation Requirements.

7) ActiveX is a trademark or registered trademark of Microsoft Corporation headquartered in Redmond, Washington, USA

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