

# Panomera® S8 Series

# Ultraline

Multifocal Sensor System, 30 fps, H.264, Day/Night (ICR), UWDR, VCA optional, Box Housing, Models S8 190/30 DN, S8 184/45 DN, S8 78/75 DN



**190 MP<sub>e</sub>**  
**160 m**  
>125 px/m  
**Recognition Distance**

**184 MP<sub>e</sub>**  
**104 m**  
>125 px/m  
**Recognition Distance**

**78 MP<sub>e</sub>**  
**82 m**  
>125 px/m  
**Recognition Distance**

**30**  
FPS

**UWDR**

**Day-Night**

**AutoCalib**

**VCA**

**EdgeStorage**



S8 190/30 S8 184/45 S8 78/75

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® S8 Ultraline 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 160, 104 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 46 m depending on the model, observation (62 px/m) even up to a distance of 322 m. This corresponds to an immense object space of more than 26,000 sqm with consistent depth of field.

## Automatic calibration

The innovative lens sensor concept of the Panomera® S8 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® S8 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® S8 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 8 sensors
- Effective resolution 190, 184 or 78 megapixels (MPe)
- Horizontal field of view 30°, 45° or 75°
- Very good light sensitivity <0.05 lux
- 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 S8 190/30 DN, S8 184/45 DN, S8 78/75 DN


Variants Panomera® S8 190/30 DN Ultraline		
005055.440		<b>Panomera® S8 190/30 DN C</b> Multifocal sensor system, 190 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 30°, resolution 125 px/m up to 160 m, box housing, 1000BASE-T Ethernet port for copper cabling
005055.441		<b>Panomera® S8 190/30 DN Multimode</b> Multifocal sensor system, 190 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 30°, resolution 125 px/m up to 160 m, box housing, 1000BASE-SX optical port for fibre-optic cabling (850 nm, 550 m)
005055.442		<b>Panomera® S8 190/30 DN Singlemode</b> Multifocal sensor system, 190 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 30°, resolution 125 px/m up to 160 m, box housing, 1000BASE-LX/LH optical port for fibre-optic cabling (1310 nm, 10 km)

Variants Panomera® S8 184/45 DN Ultraline		
005055.443		<b>Panomera® S8 184/45 DN C</b> Multifocal sensor system, 184 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 45°, resolution 125 px/m up to 104 m, box housing, 1000BASE-T Ethernet port for copper cabling
005055.444		<b>Panomera® S8 184/45 DN Multimode</b> Multifocal sensor system, 184 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 45°, resolution 125 px/m up to 104 m, box housing, 1000BASE-SX optical port for fibre-optic cabling (850 nm, 550 m)
005055.445		<b>Panomera® S8 184/45 DN Singlemode</b> Multifocal sensor system, 184 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 45°, resolution 125 px/m up to 104 m, box housing, 1000BASE-LX/LH optical port for fibre-optic cabling (1310 nm, 10 km)

Variants Panomera® S8 78/75 DN Ultraline		
005055.464		<b>Panomera® S8 78/75 DN C</b> Multifocal sensor system, 78 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 75°, resolution 125 px/m up to 82 m, box housing, 1000BASE-T Ethernet port for copper cabling
005055.465		<b>Panomera® S8 78/75 DN Multimode</b> Multifocal sensor system, 78 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 75°, resolution 125 px/m up to 82 m, box housing, 1000BASE-SX optical port for fibre-optic cabling (850 nm, 550 m)
005055.466		<b>Panomera® S8 78/75 DN Singlemode</b> Multifocal sensor system, 78 MPe, 30 fps, H.264, day/night (ICR), UWDR, VCA optional, field of view horizontal 75°, resolution 125 px/m up to 82 m, box housing, 1000BASE-LX/LH optical port for fibre-optic cabling (1310 nm, 10 km)

Licenses		
007077	<b>DLC - VCA for Panomera® S/W 8</b>	Licence to use the Video Content Analysis (VCA) function for a Panomera® S/W 8 system

Licenses SMAVIA Recording Server		
004900	<b>DLC - 7 Additional Panomera® Sub-Channels</b>	License for the use of seven additional HD channels for the exclusive recording of Panomera® sub-channels

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

1) The Power Supply Unit 48V 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,  
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## 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 WSPFA 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")

Multifocal Sensor System, 30 fps, H.264, Day/Night (ICR), UWDR, VCA optional,  
Box Housing, Models S8 190/30 DN, S8 184/45 DN, S8 78/75 DN

Sensor System	
Number of sensors	8
Number of sensor pixels	96 MP
Light sensitivity	<0,05lux
Dynamic range (UWDR)	130 dB (effective)

Resolution	Panomera® S8 190/30	Panomera® S8 184/45	Panomera® S8 78/75
Effective resolution (MPe) <sup>3)</sup>	190 MP	184 MP	78 MP
Identification distance (≥250 px/m)	Up to 46 m	Up to 30 m	Up to 28 m
Recognition distance (≥125 px/m)	Up to 160 m (6,600 sqm)	Up to 104 m (4,300 sqm)	Up to 82 m (4,430 sqm)
Observation distance (≥62 px/m)	Up to 322 m (26,900 sqm)	Up to 210 m (17,500 sqm)	Up to 166 m (18,230 sqm)

Field of View & Aspect Ratio	Panomera® S8 190/30	Panomera® S8 184/45	Panomera® S8 78/75
Horizontal field of view	30°	45°	75°
Vertical field of view	52°	77°	30°
Aspect ratio (H:V)	3:5	3:5	5:2

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)	128 Mbps <sup>3)</sup> 6 Mbps (with Panomera® 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	Hiding/masking of up to 16 protected areas per sensor (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
Communication protocols	DaVid, DaVidS, ONVIF Profile S, SNMP (v1, v2c, v3)
Security	HTTPS encryption, SSL/TLS 1.2 (AES), network access control according to IEEE 802.1X

2) Effective resolution MPe: A conventional single sensor camera would have to be equipped with a 190, 184 or 78 megapixels image sensor in order to provide the same resolution across the entire object space as these Panomera® systems.

3) This value is based on the encoding of each sensor with 16 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. 80 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® S8 190/30	Panomera® S8 184/45	Panomera® S8 78/75
Recommended installation height	5 m	5 m	5 m
Permissible installation height	4.5 - 9 m	4.5 - 9 m	4.5 - 10 m
Tilt toward the ground	8°	12°	3°
Transition distance <sup>6)</sup>	72 m	47 m	44 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

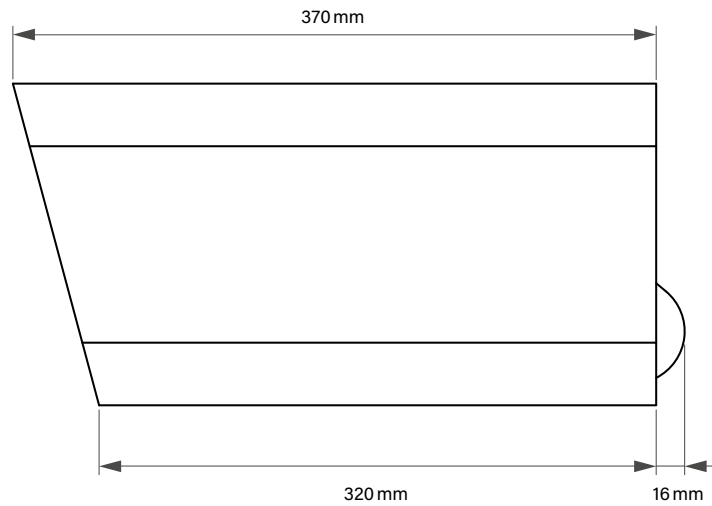
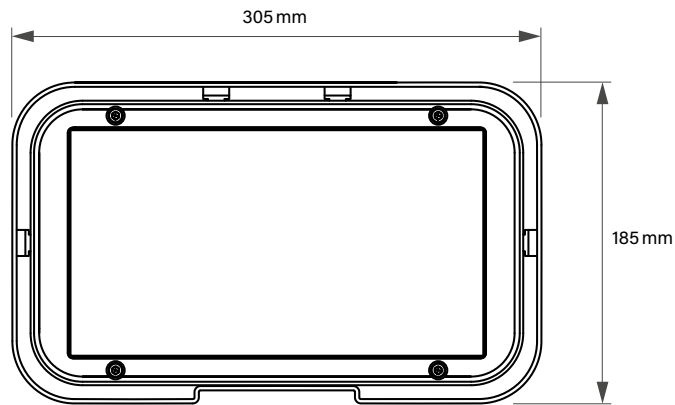
Approvals/Certifications	
Type	CE, FCC, RCM, DIN EN 50130-4 compliant

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

# Panamera® S8 Series

Ultraline

Multifocal Sensor System, 30 fps, H.264, Day/Night (ICR), UWDR, VCA optional,  
Box Housing, Models S8 190/30 DN, S8 184/45 DN, S8 78/75 DN



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