

Panomera® S8 Series

Topline

Multifocal Sensor System, 30 fps, H.264, H.265, day/night, UWDR, AI/VCA optional, resolution 125 px/m up to 163 m, box housing, models S8 178/22 DN, S8 115/30 DN, S8 87/45 DN, S8 43/90 DN



178 MP_e 163 m >125 px/m Recognition Distance	115 MP_e 124 m >125 px/m Recognition Distance	87 MP_e 81 m >125 px/m Recognition Distance	43 MP_e 55 m >125 px/m Recognition Distance	30 FPS	AutoCalib	AI / VCA	EdgeStorage	Mountera®	Privacy	Security
S8 178/22	S8 115/30	S8 87/45	S8 43/90							

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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 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, 124, 81 or 55 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 54 m depending on the model.

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.

AI support

The latest variants of the multifocal sensor system are equipped with encoder technology that enables Video Content Analysis supported by AI (Artificial Intelligence) functions based on neural networks in the camera. This provides a significantly more powerful object classification which finally allows an even more targeted evaluation of the recordings.

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.










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
- Horizontal field of view 22°, 30°, 45° or 90°
- Video compression H.264, H.265, MJPEG
- Ambient light sensor and removable IR cut filter
- Functions for data protection and data security (GDPR-compliant)
- Weather-proof (IP66) housing with integrated heater
- Housing coating tested for seawater resistance
- Fully compatible with the Mountera® Quick-Lock System

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Panomera® S8 178/22 DN Topline	
007824	 <p>Panomera® S8 178/22 DN Multifocal sensor system, 178 MPe, 30 fps, H.264, H.265, day/night, UWDR, AI/VCA optional, field of view horizontal 22°, resolution 125 px/m up to 163 m, box housing, 1000BASE-T Ethernet port for copper cabling</p>
Panomera® S8 115/30 DN Topline	
007825	 <p>Panomera® S8 115/30 DN Multifocal sensor system, 115 MPe, 30 fps, H.264, H.265, day/night, UWDR, AI/VCA optional, field of view horizontal 30°, resolution 125 px/m up to 124 m, box housing, 1000BASE-T Ethernet port for copper cabling</p>
Panomera® S8 87/45 DN Topline	
007826	 <p>Panomera® S8 87/45 DN Multifocal sensor system, 87 MPe, 30 fps, H.264, H.265, day/night, UWDR, AI/VCA optional, field of view horizontal 45°, resolution 125 px/m up to 81 m, box housing, 1000BASE-T Ethernet port for copper cabling</p>
Panomera® S8 43/90 DN Topline	
007827	 <p>Panomera® S8 43/90 DN Multifocal sensor system, 43 MPe, 30 fps, H.264, H.265, day/night, UWDR, AI/VCA optional, field of view horizontal 90°, resolution 125 px/m up to 55 m, box housing, 1000BASE-T Ethernet port for copper cabling</p>
Licenses	
007075	<p>DLC - AI/VCA for Panomera® S/W 8 Licence to use the Video Content Analysis (VCA) function with AI-supported object classification for a Panomera® S/W 8 system</p>
Accessories	
007054	 <p>Mountera® Box with PSU Mountera® Box with power supply unit, 48 V DC, 5.4 A, 260 W, IP66, white</p>
006978	 <p>Mountera® Box with SRS Edge Mountera® Box with SMAVIA Appliance for recording up to 16 video streams, license for the recording of a Dallmeier network camera or a Panomera® system included, licenses for access from 2 clients included, power supply unit 48 V DC, 5.4 A, 260 W included, IP66, white, without SSD memory module</p>
006979	 <p>Mountera® Wall Bracket Mountera® bracket for the installation of camera systems on walls or on a Mountera® Box, Quick-Lock System included, robust aluminium construction, internal cable routing, vandal-resistant, powder-coated, white</p>
006980	 <p>Mountera® Ceiling Bracket Mountera® bracket for installation of camera systems on ceilings, Quick-Lock System included, robust aluminium construction, internal cable routing, vandal-resistant, powder-coated, white</p>
Cable Set	
007428	 <p>Mountera® Cable Set C Preassembled cable set for the connection of a camera system to a Mountera® Box, 1x cable seal, 1x cable power supply/grounding, 1x cable network (copper RJ45), each with matching plug, UV-resistant and flexible, length 80 cm</p>

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Sensor System	
Number of sensors	8
Number of sensor pixels	51 MP
Light sensitivity	0,01lux
Dynamic range (UWDR)	130 dB (effective)

Resolution	Panomera® S8 178/22	Panomera® S8 115/30	Panomera® S8 87/45	Panomera® S8 43/90
Effective resolution (MPe) ¹⁾	178 MP	115 MP	87 MP	43 MP
Identification distance (≥250 px/m)	Up to 54 m	Up to 41 m	Up to 26 m	Up to 20 m
Recognition distance (≥125 px/m)	Up to 163 m	Up to 124 m	Up to 81 m	Up to 55 m
Observation distance (≥62 px/m)	Up to 329 m	Up to 250 m	Up to 165 m	Up to 110 m

Installation Height	Panomera® S8 178/22	Panomera® S8 115/30	Panomera® S8 87/45	Panomera® S8 43/90
Recommended	5 m	5 m	5 m	5 m
Permissible	4.5 - 9.5 m	4.5 - 10 m	4.5 - 9 m	4.5 - 10 m
Tilt toward the ground	15°	15°	15°	10°
Transition distance ²⁾	85 m	69 m	42 m	32 m

Field of View & Aspect Ratio	Panomera® S8 178/22	Panomera® S8 115/30	Panomera® S8 87/45	Panomera® S8 43/90
Horizontal field of view	22°	30°	45°	90°
Vertical field of view	62°	52°	60°	33°
Aspect ratio (H:V)	3:8	3:5	3:4	11:4

Format and Encoding	
Video compression	H.264, H.265, MJPEG
Frame rate	Up to 30fps at full resolution
Live streaming	Multicast or Unicast (for Viewing Client) Unicast (for recording)

Network and Recording	
Required network bandwidth (nominal, for recording)	48 Mbps ³⁾ 6 Mbps (with Panomera® Streaming Server)
Recommended network bandwidth	1,000 Mbps

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 ⁴⁾	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 with AI support) Face Detection (detection of faces) ⁵⁾

1) Effective resolution MPe: A conventional single sensor camera would have to be equipped with up to 178 megapixels image sensor in order to provide the same resolution across the entire object space as these Panomera® systems.

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

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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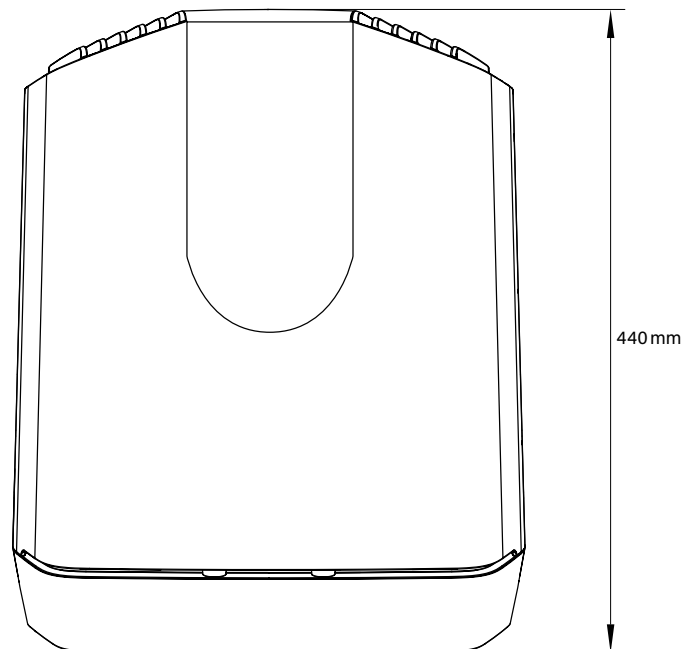
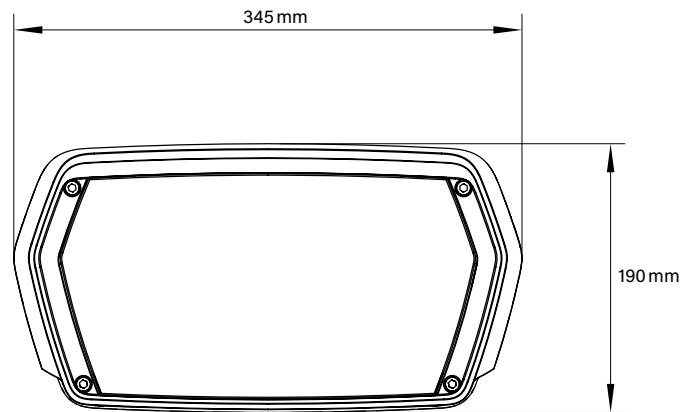
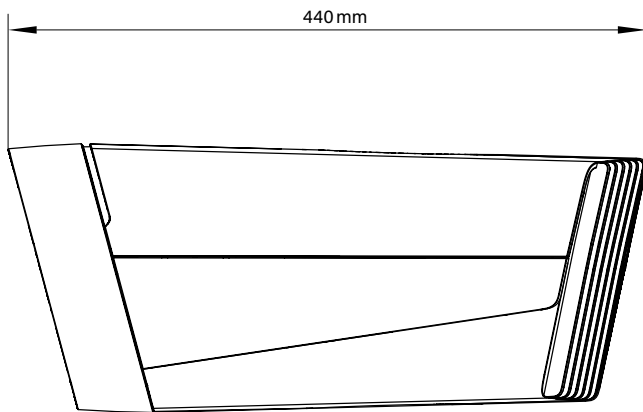
Protocols	
Ethernet protocols	IPv4 (ARP, ICMP, IGMPv2/IGMPv3), UDP, TCP, LLDP, CDP (v1,v2), DSCP (QoS), DNS, DHCP, NTP, HTTP/HTTPS ⁶⁾ , RTSP/RTP/RTCP, SNMP (v1, v2c, v3)
Ethernet protocols in preparation	IPv6 (NDP, ICMPv6, MLDv1/MLDv2, SLAAC, RDNSS), UDPv6, TCPv6, DNSv6, DHCPv6, LDAP
Communication protocols	DaVid, DaVidS, ONVIF Profile S, SNMP (v1, v2c, v3)
Security	HTTPS ⁶⁾ encryption, SSL/TLS ⁶⁾ 1.2 (AES), network access control according to IEEE 802.1X ⁶⁾
Connections	
Ethernet 1	Telegärtner STX V4 socket with STX RJ45 coupling Cat.6 for 1000BASE-T (1,000 Mbps)
Ethernet 2	Telegärtner STX V4 socket with STX RJ45 coupling Cat.6 for 1000BASE-T, PoE+ Out, 30 W, IEEE 802.at (100 Mbps, service port)
Power IN	HARTING connector (5-pole)
Electrical Data	
Voltage supply	Camera: 48 V DC ±5% Heater: 48 V DC ±5%
Power consumption	Camera: Max. 60 W Heater: Max. 60 W
Mechanical Data	
Dimensions (W × H × D)	Approx. 305 × 185 × 370 mm
Weight	Approx. 17 kg (37.5 lb)
Material	Aluminium
Processing	Chromated
Finish	Powder coating, tested for seawater resistance according to DIN EN 60068-2
Color	Signal white (RAL 9003 ⁷⁾), housing Signal black (RAL 9004 ⁷⁾), front frame
Adjustment	Stepless alignment on 3-axes, vertical up to ±15°, horizontal up to ±7°
IP rating	IP66
Environmental Conditions	
Installation sites	Indoor and outdoor
Operating temperature	-40 °C to +60 °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
ONVIF compliance	Profile S
GDPR compliance	Supported
Approvals/Certifications	
Type	CE, DIN EN 50130-4 compliant

6) This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org>) and cryptographic software written by Eric Young (ey@cryptsoft.com).
7) The color of the powder coating may differ slightly from the RAL color indicated. This is due to production and does not constitute a defect.

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