Thermal Tube Bi-Spectral 4MPx (9.7 / 8 mm)

Art.-Nr. IPCA64581D

WATCHFUL AT NIGHT & IN FOG
All objects (including living creatures) emit invisible infrared heat radiation. The warmer the object, the stronger the radiation. The thermal camera records the radiation and generates a thermal image from it. Unaffected by influences that can interfere with an optical camera, e.g. darkness, fog or tree branches - for reliable images around the clock.

Perimeter protection: precise detection of the intruder
Thermal images provide decisive details under almost all light, weather and environmental conditions. This ensures that people and vehicles are reliably localised.

Highest alarm accuracy
The thermal imaging camera uses AI-supported VCA object recognition to distinguish people and vehicles from interfering factors. This minimises false movement alarms caused by leaves in the wind etc.

2-fold security: thermal and optical sensor
The thermal lens with 18° viewing angle is suitable for detection (is that a car?) up to 200 metres. The optical lens with a 39.5° viewing angle is used to recognise the objects localised in the thermal image (which car?).

Temperature measurement & early fire detection
The camera detects the smallest temperature fluctuations. It detects heat development, pockets of embers and warns of incipient fires (cf. fire alarms).

Recording takes place on a local microSD card, ABUS recorder or via video management software. The camera can be conveniently accessed via the ABUS Link Station app.

Technologies

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- Thermal imaging camera (thermal camera) and optical camera in one system (dual sensor: thermal + optical image sensor)
- Thermal resolution: 256 x 192 pixels for detecting the natural heat radiation emitted by all objects and living creatures and localising specific heat sources
- Optical resolution: 4 MPx (2,688 x 1,520 @ 25 fps) for reliable surveillance images and for identifying people and objects that have been localised in the thermal image, for example
- Incorruptible guard: thermal image supplements optical surveillance in perimeter protection (approach surveillance) when detecting intruders in total darkness and adverse conditions (e.g. forest, fog) – highly effective against camouflage attempts
- Security camera with longer focal length (9.7 mm thermal, 8 mm optical) for precise detection of people and objects at long distances: A person/car is detected at a distance of up to 80 m/200 m respectively
- Absolutely precise: The thermal image ensures very accurate object detection (person/vehicle) and reduces the number of motion alarms by accurately distinguishing between people/vehicles and interfering factors (branches, light, weather, etc.)
- Temperature measurement, early fire detection: The camera sees heat and reports dangerous temperatures, temperature rises and differences (e.g. hazardous goods warehouse, silo) as an optical fire alarm
- IR LEDs for clear optical images in the dark (up to 30 m range)
- High image compression (Dyn. GOP, H.265, H.264, MJPEG) for low storage space requirements
- MicroSD card slot for internal data storage; 12 V DC & PoE (802.3af)

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Alarm generation	Flash, Loudspeaker, Alarm Out, Email, FTP
Alarm input (NO/NC)	2
Alarm output	2
Aperture at minimum illumination (color)	F1.6
Article program	Professional
Audio	Integrated: Loudspeaker; Connectable: Microphone, Loudspeaker
Backlight compensation	WDR, BLC
Colour	white
Compatible with	ABUS NVR, ABUS Link Station App, ABUS CMS
Compatible with ABUS Link Station	Yes
Compatible with Comfion	No
Compatible with Secoris	No
Compatible with Secvest	No
Compatible with wAppLoxx	No
Compatible with wAppLoxx Pro	No

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Connections	1 x RJ45, 1 x DC, 2 x alarm in, 2 x alarm out, 1 x audio in, 1 x audio out, 1 x RS485
Construction type of device	Tube
Current consumption	700 mA
DC power supply	12 (+/-25 %) V
Day/night switching	ICR/Color/B/W
Depth	321 mm
Digital zoom	Yes
Dimensions	(LxWxH) 321x106x107 mm
Dynamic range (WDR)	120 dB
Electronic shutter	1/3 - 1/100000 s
Encryption	HTTPS, TLS 1.1/1.2
Export list number	6A003B4B
Focal length	8 mm
Focal length (thermal)	9,7 mm
Frame rate	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25 fps
Gross weight	1.5 kg
Height	107 mm
Horizontal viewing angle	39,5 °
Horizontal viewing angle (thermal)	18 °
Housing material	Metal
ICR day/night function	Yes
IR LEDs	Yes
IR range (up to)	30 m
Image optimization	WDR, BLC, 3D DNR
Image sensor	1/2.7" Progressive Scan CMOS
Image sensor (thermal)	Vanadium Oxid Uncooled Focal Plane Arrays
Language Manual	DE, UK, FR, NL, DK, IT
Language OSD	DE, UK, FR, NL, DK, IT
Length	321 mm
Lens	Fixed
Loudspeaker	Yes
Max. Air humidity	95 %
Max. Operating temperature	65 °C
Max. Resolution @ frame rate	2688 x 1520 @ 25 fps
Microphone	No
Min. focus distance (thermal)	3.5 m
Min. operating temperature	-40 °C
Minimum illumination (IR)	0 lx

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Minimum illumination (color)	0.01 lx
Motion detection	No
NETD	< 40 mK (25°C, F1.1)
Net weight	1.3 kg
Network bandwidth Video	256 kBit/s - 16 MBit/s
Network camera protocols	IPv4/v6, HTTP, HTTPS, FTP, SFTP, SMTP, UPnP, DNS, DynDNS, NTP, RTP, SRTP, RTSP, TCP, UDP, DHCP, ABUS Server, P2P, QoS, 802.1X, IGMP, Bonjour, PPPoE, SNMP
Network connection LAN	RJ45 10M/100M self-adaptive
Noise suppression	3D DNR
Number of IR LEDs	2
Number of streams	2
Number of users	32
Optical zoom	No
Other functions	Object classification person/vehicle
PSTI conformity given	Yes
PSTI conformity needed	Yes
Pixel distance	12
Pixels (effective)	2688(H) x 1520(V)
PoE Standard	IEEE 802.3af
Power consumption	8.5 W
Privacy zones	4
Product group	Camera
Protection class IP	67
Radio functions	Flashing light alarm, acoustic alarm, audio exception alarm, dynamic fire detection
Radio networked	No
Range VCA (human / vehicle)	80 meters / 200 meters
Resolution	4 MP
Resolution (Thermal)	256 x 192
Resolution modes	Stream 1: 2688 x 1520 @ 25 fps, Stream 2: 704 x 576 @ 25 fps
Resolution modes (Thermal)	Stream 1: 1280 x 720 @ 25 fps, Stream 2: 704 x 576 @ 25 fps
Spectral range	8 – 14
Storage capacity	32
Storage medium	microSD card (32 GB pre-installed, max. 256 GB)
Supported browsers	MS Edge, Mozilla Firefox, Google Chrome
Temperature Measuring range	-20 °C
Temperature measurement	21 measuring rules (10 measuring points, 10 measuring areas, 1 measuring line)
Temperature measurement accuracy	+-8 °C
Temperature measurement range (1 x 1 m / 0.2 x 0.2 m)	160 meters / 32 meters

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Vertical angle of view	22 °
Vertical viewing angle (thermal)	13,5 °
Video Content Analysis (VCA)	Thermal: 8 VCA rules (intrusion, tripwire, area entry, area exit), object classification person/vehicle
Video compression	Stream 1: H.264, H.265, Stream 2: H.264, H.265, MJPEG
WEEE group	09
White balance	AWB, manual, blocked, various macros
width	106 mm

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