

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

Art.-Nr. IPCA64581D

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## VIGILANT AT NIGHT & IN THE FOG

All objects (including living beings) 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 branches - for sound images around the clock.

**Perimeter protection: precise detection of the intruder**

Thermal imagery provides crucial details under almost all light, weather and environmental conditions. In this way, the location of people and vehicles are reliably pinpointed.

**Highest alarm accuracy**

The thermal imaging camera uses AI-assisted VCA object detection to distinguish people and vehicles from clutter. This minimises false motion alarms caused by leaves in the wind, etc.

**Twice the security: Thermal and optical sensor**

The thermal lens with 18° viewing angle is suitable for detection (Is there a car?) up to 200 m. The optical lens, with 39.5° viewing angle, is used to detect the objects located in the thermal image (Which car?).

**Temperature measurement & early fire detection**

The camera detects the slightest temperature fluctuations. It detects heat development, embers and warns of incipient fires (cf. fire detectors).

Recordings are saved on local microSD card, ABUS recorder or via video management software. The camera can be conveniently accessed via the ABUS Link Station app.

## Technologies

- Thermal imaging camera (thermal camera) and optical camera in one system (dual sensor: thermal + optical image)

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sensor)

- Resolution thermal: 256 x 192 pixels to detect the natural heat radiation emitted by all objects and living creatures and localise specific heat sources
- Resolution optical: 4 MPx (2,688 x 1,520 @ 25 fps) for accurate surveillance images and for identifying people and objects located in the thermal image, for example
- Stalwart guardian: Thermal imaging complements optical surveillance in perimeter protection (approach area surveillance) when detecting intruders in total darkness and adverse environments (e.g. forest, fog)
- 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
- Perfectly precise: Thermal imaging provides highly accurate object detection (human/vehicle) and reduces the number of motion alarms by accurately distinguishing between people/vehicles and disturbances (branches, light, weather, etc.)
- Temperature measurement, early fire detection: The camera sees heat and reports dangerous temperatures, temperature rises and temperature differences as an optical fire detector (fire alarm) (e.g. hazardous goods warehouse, silo)
- IR LEDs for clear optical image results in the dark (up to 30 m range)
- Strong 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)

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

Alarm input (NO/NC)	2
Alarm output	2
Alarming	Flash, Loudspeaker, Alarm Out, Email, FTP
Aperture at minimum illumination (colour)	F1.6
Audio	Integrated: Loudspeaker; Connectable: Microphone, Loudspeaker
Backlight compensation	WDR, BLC
Compatible with	ABUS NVR, ABUS Link Station App, ABUS CMS
Compatible with ABUS Link Station	Yes
Compatible with Secoris	No
Compatible with Secvest	No
Compatible with wAppLoxx	No
Compatible with wAppLoxx Pro	No
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
DC voltage supply	12 (+/-25 %) V
Day/night switching	ICR/Color/B/W
Design	Tube

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

Digital zoom	Yes
Dimensions	(LxWxH) 321x106x107 mm
Dynamic range (WDR)	120 dB
Electronic shutter	1/3 - 1/1000000 s
Encryption	HTTPS, TLS 1.1/1.2/1.3
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
Functions	Flashing light alarm, acoustic alarm, audio exception alarm, dynamic fire detection
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
IP protection class	67
IR LEDs	Yes
IR range (up to)	30 m
Image enhancement	WDR, BLC, 3D DNR
Image sensor	1/2.7" Progressive Scan CMOS
Image sensor (thermal)	Vanadium Oxid Uncooled Focal Plane Arrays
Installation type	Ceiling, Wall
LAN network access	RJ45 10M/100M self-adaptive
Language of instructions	DE, UK, FR, NL, DK, IT
Length	321 mm
Loudspeaker	Yes
Max. 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
Minimum illumination (colour)	0,01 lx
Motion detection	No
NETD	< 40 mK (25°C, F1.1)

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Security Tech Germany

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

Net weight	1,3 kg
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
Noise reduction	3D DNR
Number of IR LEDs	2
Number of streams	2
Number of users	32
OSD language	DE, UK, FR, NL, DK, IT
Optical zoom	No
Other functions	Object classification person/vehicle
Pixel pitch	12 µm
Pixels (effective)	2688(H) x 1520(V) pixel
PoE standard	IEEE 802.3af
Power consumption	700 mA
Private zones	4
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 µm
Storage medium	microSD card (32 GB pre-installed, max. 256 GB)
Supported browsers	MS Edge, Mozilla Firefox, Google Chrome
Technology	IP
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
Temperature measuring range	-20 – 150 °C
Vertical viewing angle	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
Video network bandwidth	256 kBit/s - 16 MBit/s
White balance	AWB, manual, blocked, various macros
Width	106 mm