

# Thermal Dome Bi-Spectral 4MPx (3.6 / 4.3 mm)

Art.-Nr. IPCA54581B

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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 50° viewing angle is suitable for detection (Is there a car?) at medium distance. The optical lens with 84° 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, nests of embers or 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

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- Thermal imaging camera (thermal camera) and optical camera in one system (dual sensor: thermal + optical image 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 smaller focal length (4.3 mm thermal, 3.6 mm optical) for precise detection of living beings and objects in a wider monitoring area (viewing angle: 50°/84° thermal/optical)
- 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 15 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 Dome Bi-Spectral 4MPx (3.6 / 4.3 mm)

Alarm input (NO/NC)	1
Alarm output	1
Alarming	Flash, Loudspeaker, Alarm Out, Email, FTP
Aperture at minimum illumination (colour)	F1.6
Audio	Integrated: Loudspeaker; Connectable: Microphone, Loudspeaker
Backlight compensation	WDR, BLC
Camera type	Dome
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, 1 x alarm in, 1 x alarm out, 1 x audio in, 1 x audio out, 1 x RS485
DC voltage supply	12 (+/-25 %) V

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## Technical data - Thermal Dome Bi-Spectral 4MPx (3.6 / 4.3 mm)

Day/night switching	ICR/Color/B/W
Digital zoom	Yes
Dimensions	(LxWxH) 139x139x128 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	4,3 mm
Focal length (thermal)	3,6 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	1,2 kg
Height	128 mm
Horizontal viewing angle	84 °
Horizontal viewing angle (thermal)	50 °
Housing material	Metal
ICR day/night function	Yes
IP protection class	66
IR LEDs	Yes
IR range (up to)	15 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	139 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)	0,4 m
Min. operating temperature	-40 °C
Minimum illumination (IR)	0 lx
Minimum illumination (colour)	0,01 lx
Motion detection	No

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## Technical data - Thermal Dome Bi-Spectral 4MPx (3.6 / 4.3 mm)

NETD	< 40 mK (25°C, F1.1)
Net weight	0,95 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
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	550 mA
Private zones	4
Range VCA (human / vehicle)	28 meters / 76 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)	58 meters / 12 meters
Temperature measuring range	-20 – 150 °C
Vertical viewing angle	43 °
Vertical viewing angle (thermal)	37 °
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
Video system	IP
White balance	AWB, manual, blocked, various macros
Width	139 mm