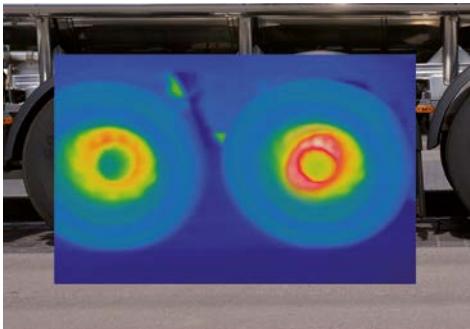
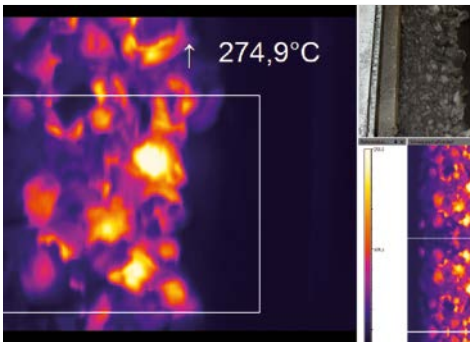
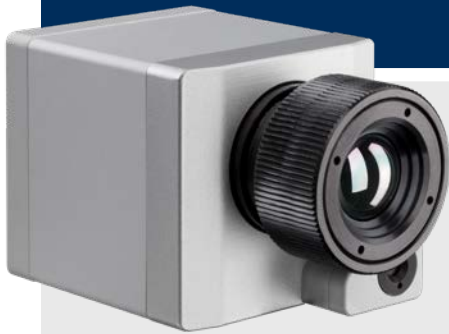


## Infrared camera with BI-SPECTRAL Technology

### Features:

- Time-synchronized visual image recording at up to 32 Hz (640 x 480 pixels)
- Real image camera is highly sensitive in low-light conditions
- Thermal images up to 128 Hz (160 x 120 pixels)
- Compact design 45 x 45 x 60 mm



For further information as well as the product configurator, please visit [www.optris.global/thermal-imager-optris-pi200-pi230](http://www.optris.global/thermal-imager-optris-pi200-pi230)

### Technical specifications

Optical resolution	160 x 120 pixels
Detector	FPA, uncooled (25 µm x 25 µm)
Spectral range	8 – 14 µm
Temperature range	-20 ... 100 °C, 0 ... 250 °C, (20) 150 ... 900 °C <sup>1)</sup> , optional temperature range: 200 ... 1500 °C <sup>2)</sup>
Frame rate	128 Hz <sup>2)</sup>
Optics (FOV)	6° x 5° FOV / f = 35.5 mm or 23° x 17° FOV / f = 10 mm (recommended for PI 230) or 41° x 31° FOV / f = 5.7 mm (recommended for PI 200) or 72° x 52° FOV / f = 3.3 mm
Thermal sensitivity (NETD)	40 mK with 23° x 17° FOV / F = 0.8 0.3 K with 6° x 5° FOV / F = 1.6 0.1 K with 41° x 31° FOV und 72° x 52° FOV / F = 1
Visual camera	Optical resolution 640 x 480 pixels / Frame rate 32 Hz <sup>3)</sup> Optics (FOV): 54° x 40° (PI 200), 30° x 23° (PI 230)
Accuracy	±2 °C or ±2 %, whichever is greater
PC interfaces	USB 2.0 / optional USB to GigE (PoE) interface
Standard process interface (PIF)	0–10 V input, digital input (max. 24 V), 0–10 V output
Industrial process interface (PIF)	2x 0–10 V input, digital input (max. 24 V), 3x 0–10 V output, 3x relays (0–30 V/ 400 mA), fail-safe relay
Cable length (USB)	1 m (standard), 5 m, 10 m, 20 m 5 m and 10 m also available as high temperature cable (180 or 250 °C)
Ambient temperature	0 ... 50 °C
Storage temperature	-40 ... 70 °C
Relative humidity	20–80 %, non condensing
Enclosure (size / protection)	45 x 45 x 60 - 76 mm (depending on lens + focus position) / IP 67 (NEMA 4)
Weight	215 g, incl. lens
Shock / Vibration <sup>4)</sup>	IEC 60068-2
Tripod mount	¼-20 UNC
Power supply	via USB
Scope of supply (standard)	• USB camera, 1 lense incl.      • USB cable (1 m)      • Table tripod • Standard PIF with cable (1 m), terminal block incl. • Software package optris® PIX Connect      • Aluminium case

<sup>1)</sup> Accuracy effective starting at 150 °C

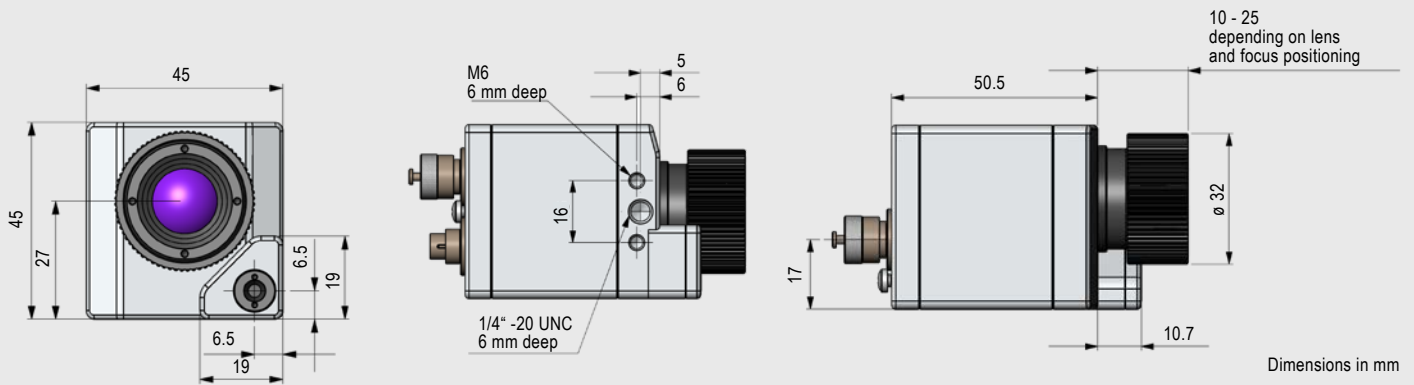
<sup>2)</sup> Not available für 72° lense

<sup>3)</sup> Options: 1) IR with 96 Hz at 160 x 120 px; VIS with 32 Hz at 640 x 480 px

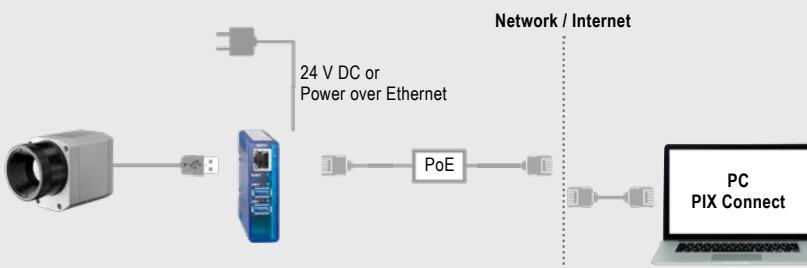
2) IR with 128 Hz at 160 x 120 px; VIS with 32 Hz at 596 x 447 px

<sup>4)</sup> For further details see operator's manual

## Dimensions



## Process integration

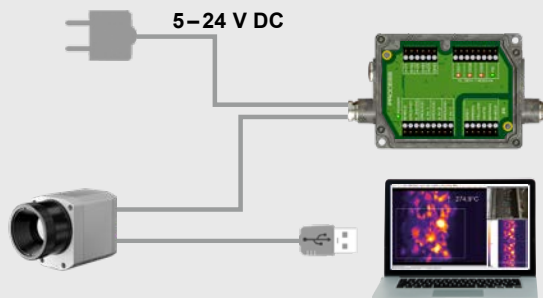


### optris® USB-Server Gigabit 2.0

- Network connection via Gigabit Ethernet
- Full TCP/IP support incl. routing and DNS
- Two independent USB ports
- Power via PoE or external voltage supply at 24 – 48 V DC
- Galvanic isolation 500 V<sub>RMS</sub>
- Remotely configurable via web based management

For further information please visit

[www.optris.global/usb-server-gigabit](http://www.optris.global/usb-server-gigabit)

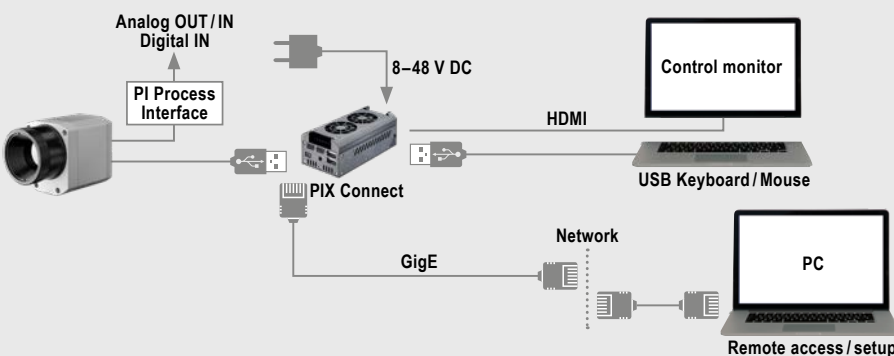


### optris® Industrial Prozess Interface

- Use of camera for process monitoring in industrial environments
- Continuous fail safe monitoring of imager, software and cable connections
- 3 analog/ alarm outputs, 2 analog inputs, 1 digital input, 3 alarm relays, 1 fail-safe relay

For further information please visit

[www.optris.global/thermal-imager-optris-pi160](http://www.optris.global/thermal-imager-optris-pi160)



### optris® PI NetBox

- Miniature PC as add-on to the PI series for stand-alone system
- Integrated hardware and software watchdog
- Connections: 2x USB 2.0, 1x USB 3.0, 1x Mini-USB 2.0, Micro-HDMI, Ethernet (Gigabit Ethernet), micro SDHC / SDXC card

For further information please visit

[www.optris.global/pi-netbox](http://www.optris.global/pi-netbox)