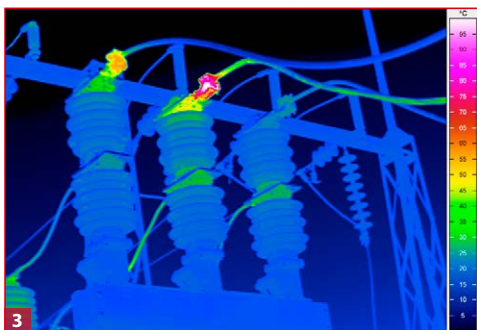
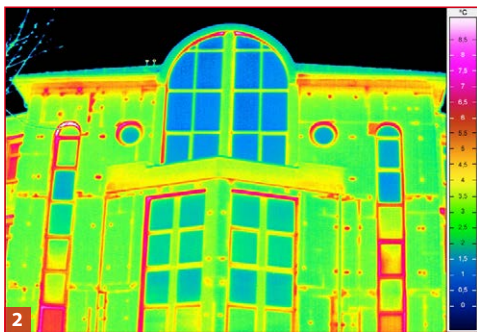


# VarioCAM® HDx

Convenient Operation of a variable Thermographic Camera with one Hand



- 1) VarioCAM® HDx
- 2) House facade
- 3) Inspection of high-voltage installations

## INFRA<sup>TEC</sup>.

Europe's leading specialist for infrared sensors and measurement technology

Microbolometer detector with (640 × 480) IR pixels

Integrated light-sensitive 8 MP digital camera

5.6" colour TFT display with (1,280 × 800) pixels

GigE Vision interface

Camera control and data acquisition via WLAN

Wide range of high-luminosity, interchangeable lenses

[www.InfraTec.eu](http://www.InfraTec.eu)



Made in Germany



Spectral range	(7.5 ... 14) $\mu\text{m}$
Detector	Uncooled microbolometer focal-plane array
Detector format (IR pixels)	(640 $\times$ 480)
Temperature measuring range	(-40 ... 600) $^{\circ}\text{C}$ , up to 1,700 $^{\circ}\text{C}^*$
Measurement accuracy	$\pm 2^{\circ}\text{C}$ or $\pm 2\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Up to 0.03 K*
Frame rate	Full-frame: 30 Hz (640 $\times$ 480), sub-frame: 60 Hz (384 $\times$ 288)
Window mode*	Yes
Storage media	SDHC Card, external control computer for camera control and data acquisition*
Image storage	Time-, trigger- and temperature controlled recording of 16 bit single frames or image sequences with timestamp, video streaming in MPEG format
Lens mount	Automatic objective detection
Focus	Motor-driven, automatic or manual, accurately adjustable, laser-supported autofocus*
EverSharp function*	Multifocal recording allows for maximum extend of sharp focus
Zoom*	Up to 32 $\times$ digital, stepless
Digital colour video camera	8 Megapixels, LED video light, vision mixer and cross-fade feature
Dynamic range	16 bit
Interfaces*	GigE Vision*, DVI-D (HDMI), C-Video, RS232, USB 2.0, WLAN*, Bluetooth*
Trigger*	2 $\times$ digital I/O, 2 $\times$ analogue I/O
Tripod adapter	1/4" photo thread
Power supply	Standard Lithium-Ion battery, energy save mode, AC adapter, (12 ... 24) V DC
Integrated microphone and speaker	Voice annotation feature, replay and audio dubbing
Laser range finder*	Semiconductor laser red, laser protection class 2, range up to 70 m
Integrated GPS sensor*	Image integrated storage of position data
Display	5.6" colour TFT display (1,280 $\times$ 800) pixel, 170 $^{\circ}$ rotatable and 280 $^{\circ}$ revolvable, daylight suited, incl. flip mirror feature
Colour viewfinder*	Tilttable colour viewfinder with diopter compensation
Single-handed operation	Intuitive operation with ergonomically arranged function keys and multifunctional joystick, programmable keys
Protection degree; Storage and operation temperature	IP54, IEC 60529; (-40 ... 70) $^{\circ}\text{C}$ , (-25 ... 55) $^{\circ}\text{C}$
Impact strength, vibration resistance in operation	25 G (IEC 68 - 2 - 29), 2 G (IEC 68 - 2 - 6)
Dimensions; weight	(210 $\times$ 125 $\times$ 155) mm; 1.6 kg (basic configuration with standard lens)
Automatic functions	Autofocus, permanent autofocus*, automatic distance indicator*, distance-dependent display of pixel size to avoid geometrically related measurement errors*, autoimage, autolevel, min./max. temperature alarm: visual/ acoustic, alarm triggered image storage
Measurement functions*	8 freely selectable, movable measurement fields/ -points, automatic hot/ cold spot display, globally and internally defined measurement fields, differential temperature measurement, temperature profile, histogram, differential image, isotherms display
Further functions*	Shutter-free operation, temperature alarm, image merging, synchronous display of thermal and visual image in real-time
Analysis and evaluation software*	IRBIS $^{\circ}$ 3, IRBIS $^{\circ}$ 3 plus, IRBIS $^{\circ}$ 3 professional, IRBIS $^{\circ}$ 3 view, IRBIS $^{\circ}$ 3 remote HD, IRBIS $^{\circ}$ 3 online, IRBIS $^{\circ}$ 3 process, IRBIS $^{\circ}$ 3 vision, IRBIS $^{\circ}$ 3 active, IRBIS $^{\circ}$ 3 mosaic, FORNAX 2, FORNAX 2 plus

\* Depending on model

The new **VarioCAM $^{\circ}$  HDx** is a handheld thermographic microbolometer camera with a wide standard temperature measuring range and an **uncooled detector with (640  $\times$  480) IR pixels**. It enables entry-level access to the range of professional and universal cameras **from 16,445 euros** (plus VAT). Its application range includes the precise control of technical installations, the professional analysis of building structures as well as the solution of fundamental research and development tasks. Thanks to its compact design and numerous automatic functions, the VarioCAM $^{\circ}$  HDx can be **operated conveniently with one hand**. The combination of Lithium-Ion batteries and low energy consumption ensures **long operating time**.

Lens	Focal lens (mm)	FOV ( $^{\circ}$ )
Wide-angle lens	10	(57.1 $\times$ 44.4)
Standard lens	20	(30.4 $\times$ 23.1)
Telephoto lens	40	(15.5 $\times$ 11.6)
Macro and microscopic lenses	Min. object distance (mm)	Pixel ( $\mu\text{m}$ )
Close-Up 0.2 $\times$ for lens: 40 mm/20 mm	137	60/121
Close-Up 0.5 $\times$ for lens: 40 mm/20 mm	47	24/49
Microscopic lens M=1.0 $\times$	50	17

**Additional infrared interchangeable lenses** are available on request.

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