

Press Release

InfraTec GmbH Infrarotsensorik und Messtechnik

Dresden, 09/09/2020

Do Not Miss a Moment: High-speed Thermography in Full Resolution with over 1,000 Hz

ImageIR® 8300 hs – Measurement of fast processes combined with highest precision and future-proof flexibility

InfraTec's camera series ImageIR® stands for infrared cameras with cooled focal-plane array photon detectors, which meet the highest demands on geometric, thermal and temporal resolution and at the same time offer excellent measurement accuracy.

The ImageIR® 8300 hs extends this series with a new generation of high-speed infrared cameras. Combining the image format of (640 × 512) IR pixels with the exceptionally high frame rate of 1,004 Hz sets new standards. It allows thermographic images of excellent quality, even of extremely fast moving objects or highly dynamic thermal processes. Thus, exactly the moment that matters is captured with absolute precision, displayed with high resolution and precisely measured thermally.

Due to the latest detector technology, this camera – sensitive in the mid-infrared – allows high-speed thermography in full frame format and achieves an impressively high thermal resolution of 20 mK. The radiometric image data are transferred with loss-free intelligent real-time compression - without having to use internal memory – directly via an industrial 10 GigE interface to a standard notebook for storage, control and analysis. The digital high-speed data acquisition is carried out with InfraTec's IRBIS® 3 thermography software family offering the user extensive possibilities for data analysis and documentation. The camera's wide temperature measurement range allows fast processes with large temperature gradients, such as those occurring in explosions, electrical discharges or laser machining processes, to be easily recorded. The new ImageIR® 8300 hs can be equipped with a fast rotating filter wheel to adapt the camera sensitivity to the spectral properties of the target. Equipped with up to six spectral filters, the filter wheel allows sequential measurements of high image frequency in different spectral ranges.

Use of the latest detector technology

The newly developed high-end thermography system from InfraTec is based on an innovative detector: T2SLS with HOT long-life technology. A complex semiconductor quantum structure forms the basis for this system, whose electro-optical properties are optimised exactly to the desired requirements. It offers an excellent signal-to-noise ratio starting at relatively high operating temperatures of about 130 K resulting in lower wear and tear on the cooling system. Thus, this thermographic camera requires significantly lower cooling capacity than conventional models, which typically operate at 77 K. This results in less stress on the integrated Stirling cooler, which in turn increases the lifetime of the camera compared to other cooled cameras. Another special feature of the ImageIR® 8300 hs is the relatively large area of the individual detector elements, which are arranged in a grid (pixel pitch) of 25 µm. The sensitivity of the detector is therefore particularly high, which means that short integration times and high frame rates can also be used for measurement objects with low temperatures.

Flexible usage of the camera due to modular design

As for all models of the ImageIR® series, the ImageIR® 8300 hs offers a wide range of high quality interchangeable full optics optimised for the respective focal length and spectral application. All standard full optics can be combined with an optional motorised focus unit, which can be precisely remote controlled using the camera software and allows fast motorised focusing. Thus, the ImageIR® 8300 hs fits seamlessly into the modular camera series ImageIR®. It is

Headquarters

InfraTec GmbH
Infrarotsensorik und Messtechnik
Gostritzer Straße 61 – 63
01217 Dresden / GERMANY

Phone +49 351 82876-610
Fax +49 351 82876-543
E-mail thermo@InfraTec.de
www.InfraTec.eu

USA office

InfraTec infrared LLC
5048 Tennyson Pkwy.
Plano TX 75024 / USA

Phone +1 844-226-3722 (toll free)
E-mail thermo@InfraTec-infrared.com
www.InfraTec-infrared.com

Press Release

InfraTec GmbH Infrarotsensorik und Messtechnik

equipped with a lens, detector and interface module. It can be individually configured to customer requirements and tailored to the most demanding applications in science and industry. Users also benefit from additional software and hardware functions that can be added at any time and are thus prepared for changing requirements in the future. Superior and simultaneously robust design, selected materials and a manufacturing process that meets the highest quality standards ensure the best reliability, long service life and thus an excellent protection of your investment.

Information: 4,293 characters (incl. spaces)

About InfraTec

The InfraTec infrared sensor and measuring technology company was founded in 1991 and has its headquarters in Dresden, Germany. The privately held company employs more than 200 employees and has its own design, manufacturing and distribution capabilities.

Infrared sensors, with electrically tunable filters based on MOEMS, count among the products of the infrared sensor division, next to spectrally single and multi channel infrared detectors. These detectors can be used in gas analysis, fire and flame detection and spectroscopy.

With its infrared measurement business unit, InfraTec is one of the leading suppliers of commercial thermal imaging technology. In addition to the high-end camera series ImageIR® and the VarioCAM® High Definition series, InfraTec offers turnkey thermographic automation solutions.

Contact

Company address:	InfraTec GmbH	Phone	+49 351 82876-610
	Infrarotsensorik und Messtechnik	Fax	+49 351 82876-543
	Gostritzer Str. 61 – 63	E-mail	thermo@InfraTec.de
	01217 Dresden	Internet	www.InfraTec.de

Headquarters

InfraTec GmbH
Infrarotsensorik und Messtechnik
Gostritzer Straße 61 – 63
01217 Dresden / GERMANY

Phone +49 351 82876-610
Fax +49 351 82876-543
E-mail thermo@InfraTec.de
www.InfraTec.eu

USA office

InfraTec infrared LLC
5048 Tennyson Pkwy.
Plano TX 75024 / USA

Phone +1 844-226-3722 (toll free)
E-mail thermo@InfraTec-infrared.com
www.InfraTec-infrared.com