

Press Release

InfraTec GmbH Infrarotsensorik und Messtechnik

Dresden, 17/01/2023

When Every Moment Counts: High-speed Thermography in Full Resolution Measurement of fast processes combined with highest precision and future-proof flexibility

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 – this is what InfraTec's camera series ImageIR® stands for.

One model in the series is the ImageIR® 8300 hs, a high-speed infrared camera, which measures in the mid-infrared range. It combines an image format of (640 × 512) IR pixels with the exceptionally high frame rate of 1,105 Hz and thus sets high standards. The results are thermographic images of excellent quality, even of extremely fast moving objects or highly dynamic thermal processes. Thereby, exactly the moment that matters is captured with absolute precision, displayed with high resolution and precisely measured thermally.

The high-end thermography system from InfraTec is based on an innovative detector: T2SLS with HOT long-life technology, which allows high-speed thermography in full frame format and achieves an impressively high thermal resolution of 20 mK. 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. Via an industrial 10 GigE interface the radiometric image data are transferred with loss-free intelligent real-time compression to a standard notebook for storage, control and analysis – without having to use internal memory. The digital high-speed data acquisition is carried out with InfraTec's IRBIS® 3 thermography software 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. To adapt the camera sensitivity to the spectral properties of the target the ImageIR® 8300 hs can be equipped with a fast rotating filter wheel. Equipped with up to six spectral filters, the filter wheel allows sequential measurements of high image frequency in different spectral ranges.

Modular camera design for more flexibility

For the ImageIR® 8300 hs – as for all models of the ImageIR® series – a wide range of high-quality interchangeable full lenses optimised for the respective focal length and spectral application are available. 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. The ImageIR® 8300 hs is equipped with a lens, detector and interface module. Thus, 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: 3,499 characters (incl. spaces)

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About InfraTec

The InfraTec infrared sensor and measurement technology company was founded in 1991 and has its headquarters in Dresden, Germany. The privately held company employs more than 240 employees and has its own design, manufacturing and distribution capabilities.

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 e. g. for industry processes, non-destructive testing and fire detection and prevention.

The infrared sensor division produces custom-made components on more than 1.600 m² of clean room space – especially pyroelectrical infrared detectors – for clients worldwide. The product range includes analogue single and multi-channel detectors as well as digital multi-channel detectors (PyrIQ). The detectors are used, for example, in gas analysis, fire and flame sensors and spectroscopy.

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Image



INFRAtec.

Do Not Miss a Moment: High-speed Thermography in Full Resolution

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