

Auftrag XEVA-FPA-2.5-320 PR

NIR camera from Xenics with TE4-cooled HgCdTe area sensor offers excellent performance features up to 2.5 μm

Xenics, Europe's leading developer of innovative infrared image sensors, is extending the range of its NIR image capture systems: The all-digital, software-configurable camera XEVA-FPA-2.5-320 is based on a four-stage thermoelectrically cooled HgCdTe sensor array for the extended NIR range up to 2.5 μm with 320 x 256 pixels, which comes in a compact housing together with the control and communication electronics.

With its focal plane array in HgCdTe technology (320 x 256 pixels), the NIR digital camera XEVA-FPA-2.5-320 covers the extended infrared wavelength range of 0.85 – 2.5 μm . Its pixel pitch is 30 μm with a pixel availability of over 98%, and it is fitted with a C-mount for standard lenses as well as spectrometer fixation holes. The camera array is used with TE4 cooling down to 200 K. Thanks to a cooling time of under 300 seconds, the camera, which has an anti-condensing construction, is ready for operation relatively quickly.

The camera is available in two speed versions for 60 Hz and 100 Hz frame rates. The 14-bit digital output word is transferred via CameraLink. The camera is fitted with a snapshot shutter, which exposure time can be set to up to 20 ms.

For this purpose, the camera is controlled with the graphical user interface X-Control via a USB 2.0 interface, allowing you to select the exposure time, the position and size of subframes as well as other camera parameters and calibration functions, such as two-point uniformity correction and bad-pixel replacement.

The image data is transferred to a special CameraLink frame-grabber PCI card. This is supported by the easy-to-use graphical user interface X-Control, which allows you to control various displays of the image, histogram, line profile, and spot meter as well as conversion into graphic file formats and storage of video sequences in memory or on hard disk. Alternatively, the camera can be controlled via X-control with a standard NI-1428 CameraLink frame-grabber card.

Weighing in at approx. 1,8 kg, the XEVA- FPA-2.5-320 camera runs on a supplied compact power pack for 12 V/5 A, which weighs just 300 g. It is specified for an operating temperature range of -40°C through $+70^{\circ}\text{C}$, although optimum results tend to be produced at room temperature.

The camera can be used for a variety of applications, such as hyperspectral image capture and laser beam profiling, vision enhancement in automotive and airborne applications, semiconductor inspection, thermal imaging in the range of 200°C – 800°C , online process control.

The development of add-on software for specialist applications is extensively supported by Xenics: Thus the software driver from Xenics is fully compatible with Windows 2000 SP4 and Windows XP Pro SP2. A dynamic link library (DLL) is available for flexible program development.

In addition, a well-documented application programming interface (API) with sample code in C, Visual Basic and Delphi can be supplied on request. Simulation with Labview is supported by the device driver and executable sample programs. Finally, the camera's firmware can be upgraded during field operation, which considerably increases its flexibility of use.

About Xenics

Xenics is the leading developer of innovative infrared detection solutions for a wide range of applications. Xenics designs, manufactures and sells infrared detectors and cameras, both for linescan and imaging applications, covering the infrared wavelength ranges from 1 up to 14 micrometers. In addition, Xenics delivers custom products according to the agreed specification and planning.

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