Auftrag Cheetah-PR

Flexible sensor solution from Xenics for near infrared with very high speed: Cheetah shoots up to 1750 frames per second

Xenics, Europe's leading developer of innovative infrared image sensors, is extending its product line to include the all-digital, software-configurable and extremely fast camera Cheetah. The device is based on a thermoelectrically stabilized InGaAs sensor array with 640 x 512 pixels, which comes in a compact housing together with the control and communication electronics.

With its focal plane array in InGaAs technology (640 x 512 pixels), the new NIR digital camera Cheetah covers the standard wavelength range of 0.9 – 1.7 µm. Its pixel pitch is 20 µm with a pixel availability of over 98%, and it is fitted with a C-mount for standard lenses.

As the top model in the NIR camera series from Xenics, Cheetah has up to 16 Gbytes internal memory, allowing a recording time of almost 15 seconds. Non-uniformity correction (NUC) occurs in the hardware or software, with up to 8 NUC files being stored in the camera. With correlated dual sampling, extensive noise immunity is possible – naturally with a reduced frame rate.

The camera is available in three speed versions for 60, 400 and 1750 Hz frame rates and can be operated autonomously or via a PC. With all models, the digital output word is 14 bits wide and is transferred via Gigabit Ethernet. The camera is fitted with a snapshot electronic shutter, whose exposure time can be set from 1 µs to 3 ms (or 16 ms with the 60Hz version). For particularly flexible use, up to four subframes (minimum size 32 x 4) can be selected simultaneously and read out at a higher frequency of up to 200 kHz (with the 1750Hz version). This can be used, for example, in monitoring systems for keeping a large area in view and then, if objects of particular interest are spotted, switching to rapid tracking of these.

For this purpose, the camera is controlled with the graphical user interface X-Control via a Gigabit Ethernet interface, allowing you to select the exposure time, the position and size of the subframes as well as other camera parameters and calibration functions, such as two-point uniformity correction and bad-pixel replacement. In addition, the camera can store videos in standard formats as well as 8-bit and 14-bit images in common formats. Furthermore, line profiles and histograms and, if required, 3D images can also be computed.

Weighing in at approx. 5 kg, the Cheetah camera runs on a supplied power pack for 12 V/5 A, which weighs just 300 g. It is specified for an operating temperature range of –20˚C through +50˚C.

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, and 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 XP Pro and Windows Vista. 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 can be supplied on request.

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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