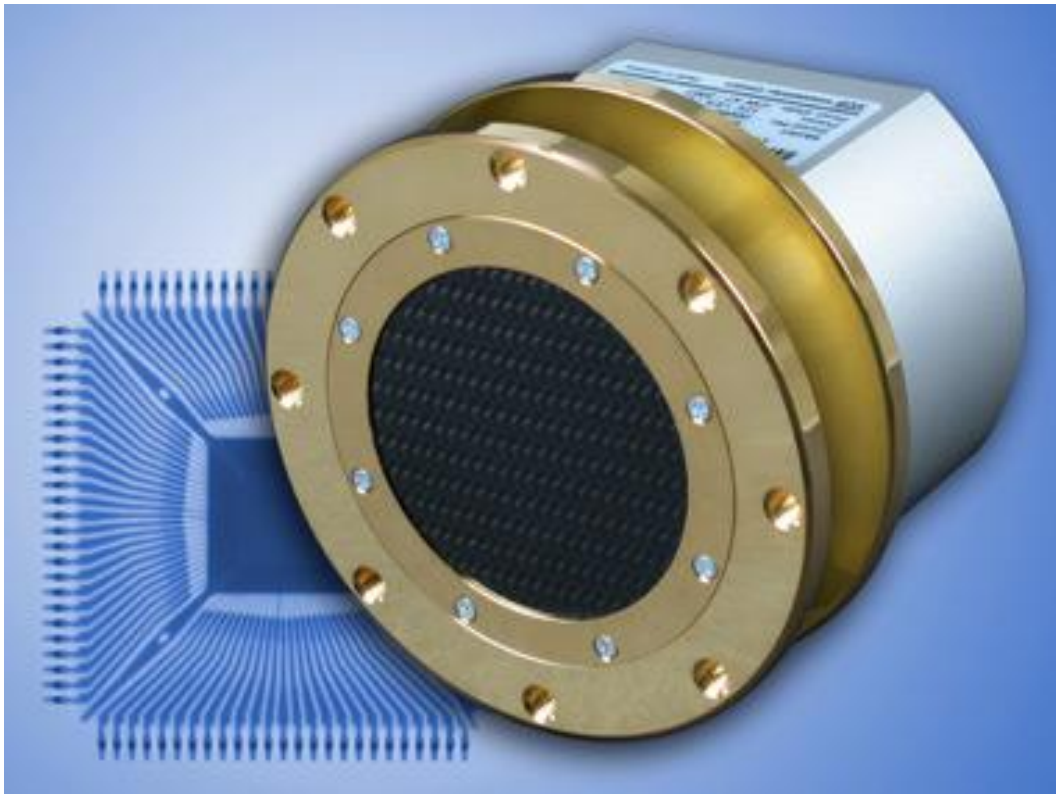


DXI-11000

Desktop X-Ray Imager for Extremely High Resolution



Features

- Fitted with Scint-X unique high-resolution structured scintillator
- 4024 (H) x 2680 (V) pixels, 3fps or
- 2012 (H) x 1340 (V) pixels, 6 fps (2 x 2 Binning)
- Resolution: > 25 lp/mm
- Energy range: 20... 150 keV
- X-Ray protection of the sensor by integrated fibre optics
- Detector area: 36 (H) x 24 (V) mm
- No distortion, no shading
- No mechanical shutter
- Option: Peltier cooled for longer exposure times

With the DXI-11000, Scint-X presents for the first time an X-Ray Desktop Imager (DXI) fitted with its unique structured scintillator technology, which provides extremely high resolution.

Image capture is done at 4024 (H) x 2680 (V) pixels with up to 3 fps or in 2 x 2 bin-mode at 2012 (H) x 1340 (V) pixels with up to 6 fps.

The DXI-11000 achieves a resolution of higher than 25 lp/mm at an active sensor area of 36 (H) x 24 (V) mm.

By means of the integrated fibre optics an X-Ray protection exists for the sensitive CCD-sensor. Therefore the DXI-11000 can be employed in an energy range of 20 – 150 keV. Contrary to X-Ray area detectors the life time under permanent operation is considerably higher due to the fibre optics.

Because of the high resolution of the DXI-11000, less expensive X-Ray sources with larger spot size can be used for the same system resolution.

Owing to the interline transfer sensor no mechanical shutter is necessary. For this reason the DXI-11000 can also be employed at continuous X-Ray sources.

The detector achieves a dynamics of higher than 60 dB at a readout noise of less than 60 e.

For the 12bit digital data the following Interfaces are available: RS644, Camera-Link or Gigabit Ethernet.

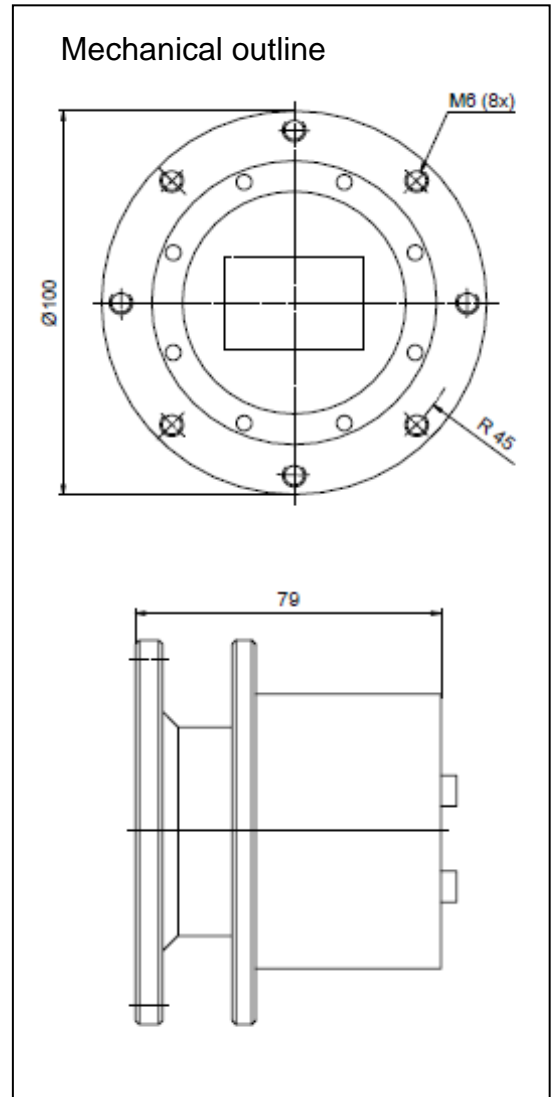
By means of the optional peltier cooling the sensor can be cooled to 5 °C, enabling longer exposure times.

Applications

- Intermediary experiments between synchrotron runs
- Live X-Ray video
- X-Ray microscopy
- Micro Tomography
- Printed Circuit Board Inspection
- Semiconductor Inspection
- Spot size inspection of x-ray tubes

Technical Data

- Resolution: 4024 (H) x 2680 (V) pixels or 2012 (H) x 1340 (V) pixels
- Image rate: 3 frames/sec. (4024 x 2680) or up to 6 frames/sec. (2012 x 1340)
- Resolution: 25 lp/mm
- Energy range: 20 – 150 keV
- Active area: 36.18 (H) x 24.12 (V) mm
- Pixel size: 9 µm x 9 µm
- Scintillator: High-resolution structured scintillator
- Interline transfer sensor (no mech. shutter required)
- Image on demand
- Effective dynamics: $\geq 1:1000$ (≥ 60 dB)
- Sensor saturation: $\geq 60,000$ e (Full resolution)
 $\geq 120,000$ e (Binning)
- Readout noise: < 60 e
- Anti-blooming circuit
- Exposure time up to approx. 2 sec. (non-cooled), longer than 10 sec. (cooled)
- Digital output: 12-bit, RS-644 (LVDS), CL, GigE
- Pixel clock: 40 MHz
- Video gain: 1 or 2 (+ 6 dB)
- Power supply: + 12 V (SELV), approx. 0.6 A, cooled max. 2.6 A
- Ambient air temperature: 0° to 40° C
- CE standard
- X-Ray detector: VDS-Vosskühler CCD-11000XR
- Made in Germany and Sweden



Modulation Transfer Function (MTF)

