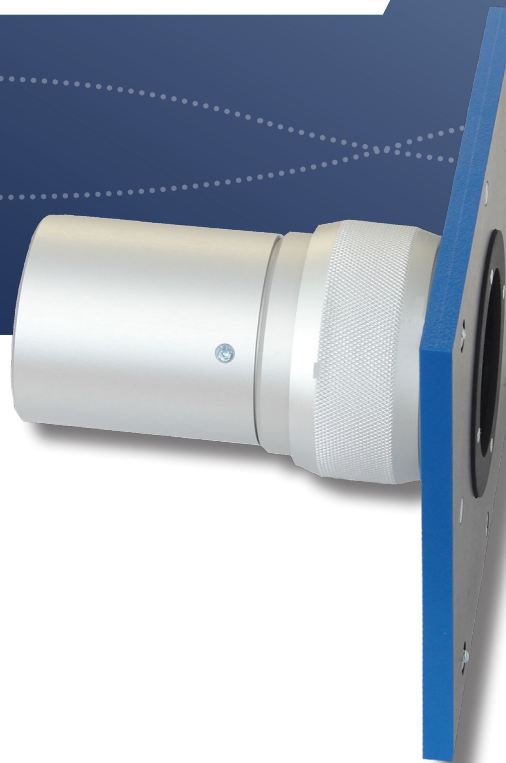


STREAK READOUT UNIT

SRU-BA

Universal Readout Camera



- Gigabit Ethernet interface
- AD conversion 12 bit
- Resolution 1392 x 1040 pixel
- For SC-10 systems

Streak Readout Unit SRU-BA

Optronis

Make time visible

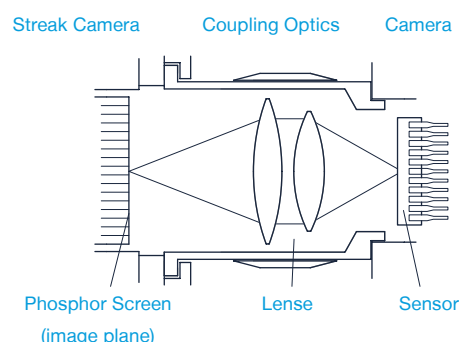
The SRU-BA is a high resolution lens coupled readout unit designed to be used with the OPTOSCOPE SC-10 streak cameras. The universal readout camera uses a sensitive 12 bit CCD sensor combined with a high efficiency coupling optics. The CCD camera provides variable integration time and moderate frame rate for convenient streak camera setup. A standard Gigabit Ethernet interface simplifies handling and allows to use notebook type PCs.

ACQUISITION MODES

Integration time of the CCD sensor can be adjusted to adapt for particular streak camera applications. Together with the OptoAnalyse acquisition software image accumulation allows to extend this time to further improve dynamic range beyond the camera performance. For perfect synchronisation with single-shot acquisition, the readout unit can be externally triggered.

COUPLING OPTICS

The camera is coupled to the streak camera phosphor screen by using high aperture coupling lenses. This allows sensitive image capture and data acquisition in photon counting mode. A manual focal adjustment is provided.



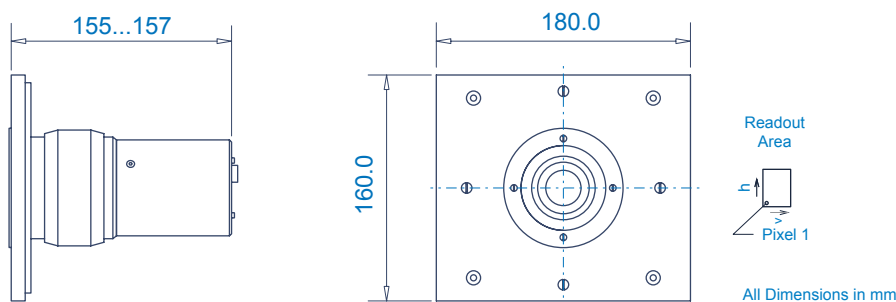
PHOTON COUNTING

CCD sensitivity allows to use the camera for photon counting applications. Tiny scintillations related to a single photon are detected with signal intensity above noise level. Scintillation positions are defined by calculating their center of gravity. Photon counting mode provides increased spatial and temporal system resolution. Additionally, the noise of the readout camera and partly the intensifier noise is removed.

SPECIFICATIONS

Resolution	1392 (h) × 1040 (v) Pixel
AD conversion	12 bit
Frame Rate (PC dependent)	17 fps
Readout noise (typ.)	8 e ⁻
Sensitivity (typ.)	20 photon/count (670 nm, coll. light)
Integration time	1 ms .. 4 s
Trigger operation	Continuous / External Trigger
Readout area (typ.)	20.0 mm (h) × 15 mm (v)
Pixel size (typ.)	14.4 μm × 14.4 μm (ref. phosphor)
Resolution (typ.)	25 μm (ref. phosphor)
Interface	Gigabit Ethernet
Trigger input	TTL level, positive edge, BNC
Power supply	100 V .. 240 V / 12 V by separate AC/DC converter
Temperature (operation)	0°C .. +35°C
Humidity	20% .. 80% rel. humidity, non condensing
Dimensions	180 mm × 160 mm × 150 mm
Weight (typ.)	1.6 kg
Delivery	PCI GigE interface board, power supply, trigger cable

TECHNICAL DRAWING



CONTACT INFORMATION

Optronis GmbH
Ludwigstraße 2
77694 Kehl
Germany

Phone: +49 7851 91 26 - 0
Fax: +49 7851 91 26 - 10
info@optronis.com
www.optronis.com