

XSTRIP

XSTRIP is an ultra high frame rate, integrating 1-D position sensitive system for x-rays. XSTRIP has accurate and highly flexible exposure timing, a large dynamic range and excellent linearity. The system is designed specifically for EXAFS data collection but will find application in a range of other areas.

Benefits

High speed
 High sensitivity

Features

Sustained Readout Rate	100,000 readouts per second continuous (of 1024 pixels)
Software	Comprehensive and versatile Windows® based interface
Hardware Interface	Flexible with triggers including: start, pause, wait, run then wait. Ethernet.
Sync capability	Phase lock with 2G and 3G synchrotrons Latency from trigger signal <20ns
Acquisition modes	Multi and single bunch
Pixel Pitch	1024 Diodes arranged in one dimensional array with 25µm pitch.
Sensor	Replaceable 500µm thick high resistivity Silicon head (other variants possible)
Energy Range of Use	5 – 15 KeV
Exposure time range	700ns - 1s
Frame storage at full frame rate	1700 individual frames Up to 10 ⁶ readouts can be combined into each frame to allow greater storage.
Integration Depth	10 pC/pixel/readout (~10K x-rays, 62Me ⁻)
Dark current performance	~100fA / pixel with integral -20°C cooler
Linearity	Measured integral non-linearity <0.1% over full range. Post corrected.
Signal to Noise Ratio	Less than photon statistical limit – experimental.

