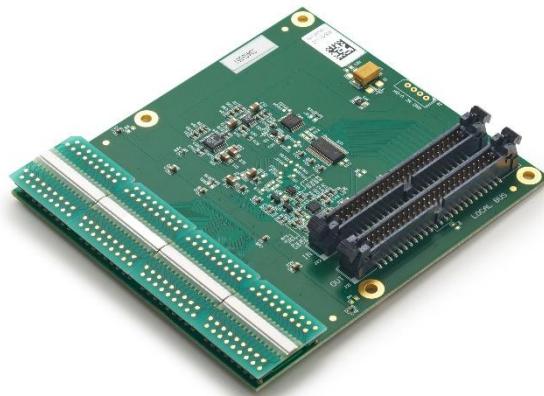




### SALES DATA SHEET

#### KEY FEATURES

- Modular design - Array lengths up to 4m
- Array lengths up to 4m
- 0.4-2.5mm - detector pitch
- Wide range of single energy scintillators
- Pluggable detector arrays
- Range of filter options
- Short integration time down to 50µs
- Low noise electronics with SNR up 38,000:1
- 31 steps of gain from 1.875 pC to 60 pC
- Continuous or externally triggered scan
- GIGE interface to workstation



#### APPLICATIONS

- Food – Foreign object detection
- Food – Separation for yield
- Waste – Rare earth metal separation
- Mining – Mineral sorting
- Wood – Foreign object detection/Quality control
- Steel – Thickness gauging
- Security – Medium dose vehicle scanning
- Security – Low dose body scanning

#### DESCRIPTION

XDAS single energy modular high speed and low noise arrays are built up of Sens-Tech XDAS DH (Detector Head) and SP (Signal Processing) boards to provide an array of any length. The gain for each DH board can be set separately and a huge number of other parameters are available to give the maximum imaging control.

The XDAS electronics will need to be housed to protect the electronics from the machine environment and with adequate screening to protect the electronics from radiation damage. A perfect Faraday cage is essential to keep interference out.

#### PRINCIPLES OF OPERATION

XRT X-ray signal is detected and measured using XDAS single energy scintillator and photodiode arrays and signal processing electronics. Pitch and chemistry is application specific to cover the energy range of 5 to 500KeV. **Please note:** Dual energy systems are also available.

Data acquisition time can be selected in the range 50µs to 50ms subject to the number of detector boards and the maximum read-out rate from the system of 48MB/s. Data is output in 16-bit format. The detector is linked to a client workstation via GIGE ethernet.

User settings to control integration times, gain and number of sub-samples can be set separately for each DH board. together with information on system configuration are transmitted over the selected interface and stored in non-volatile RAM so that at switch-on, the system is initiated in the last mode saved.



### SALES DATA SHEET

#### SPECIFICATION

INTEGRATION TIME	SUB SAMPLES
50µs to 50ms	1,2 OR 4
SNR	NON-LINEARITY
Up to 38,000:1	<0.1% over 10 pC
POWER SUPPLY	GAIN ADJUSTMENT
12V (9V to 30V), 100mV/p-p ripple	31 steps, 1.875 pC to 60 pC
A/D CONVERSION & OUTPUT	MAXIMUM READ-OUT RATE
16 BIT	48MB/s
DATA INTERFACE	DETECTOR PITCH
GIGE Ethernet / UDP protocol	0.4-2.5mm
DETECTOR ACTIVE LENGTH	SCINTILLATOR TYPES
50mm to 4m	CsI, CdWO4, GOS, ZnSe, Si, and others
OPERATING CASE TEMPERATURE	STORAGE TEMPERATURE
+5 to +60°C	-40 to +70°C
HUMIDITY (NON-CONDENSING) OPERATING	HUMIDITY (NON-CONDENSING) NON-OPERATING
30°C 93%	40°C 93%

#### EVALUATION SYSTEM AND SOFTWARE

- XDAS XAPI and SDK software is supplied to demonstrate capability and for integration to host machine.
- The software enables setting of important acquisition parameters such as gain, offset correction and integration time.
- Data can be logged to a csv file and displayed in graphical form.
- Imaging application DLLs are also available – contact Sens-Tech for details.