

X-Scan M01B series

Modular linear detector arrays



X-Scan M01B series makes quick and accurate inspection of large-scale objects easy. The modular linear detector arrays are scalable to different inspection system lengths up to 4.1 meters with one controller and single Gigabit Ethernet interface. With network connected units even longer scanners can be built efficiently for high-energy applications.

The plug-and-play type series comes in 0.2 and 0.4 mm pixel pitches, and three module lengths of 410, 614 and 820 mm. The module housing includes built-in X-ray scatter shielding and a collimator for applications from 450 kVp to 9 MeV.

Benefiting from the next-generation digital platform and the GigE interface, M01B enables wide integration time range from 0.2ms to 128ms per line; further expandable up to 32 s/line with built-in line summing and averaging. Robust protocol over GigE enables also remote firmware updates, and various diagnostics functions. Superior low noise performance is achieved by digitizing the X-ray signal in the detector's front-end electronics.

Furthermore, the on-time recording of power, and pixel discontinuity, and bad pixel correction ease maintenance and extend the life-time of detector units.

APPLICATIONS

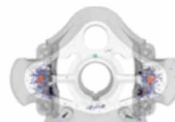
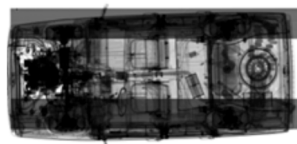
- Digital radiography (DR) and computed tomography (CT) imaging of large objects
- Inspection and quality control in automotive and aerospace industries
- Inspection of containers and parts in heavy industries

BENEFITS

- Modular design easily scalable up to 4.1 m detector arrays with one controller
- Seamless and precise images of large objects
- Industry leading image quality with high performance photodiode and ASIC designs
- Wide scanning speed range

KEY FEATURES

- Optimized for high-energy applications
- X-ray energy range: 450 kVp–9 MeV
- Active lengths per module: 410, 614 and 820 mm
- Pixel pitches: 0.2 and 0.4 mm
- 16-bit image data
- Built-in scatter shielding and collimator for high-energy
- Gigabit Ethernet interface for easy connection and remote firmware update
- Power on-time recording to track detector life time
- Pixel discontinuity and bad pixel correction
- Easy software design based on DT X-View2 software and development kit



GENERAL CHARACTERISTICS

PRODUCT	X-Scan M01B
X-ray tube voltage range	450 kVp-9 MeV
Active area length options per module	410 mm / 614 mm / 820mm
Pixel pitch (spacing)	0.2mm and 0.4 mm
Scintillator material	Segmented CdWO ₄
Scintillator thickness	10 mm
Pixel height (scintillator)	1.57 mm
Pixel width (scintillator)	0.1 mm / 0.2 mm
Maximum scanning speed	200 cm/s
Minimum integration time per line	0.2 ms
Maximum integration time per line	128 ms, 32 s with summing
A/D resolution	16 bits
Dynamic range at lowest sensitivity	> 16000:1
Sensitivity settings	8 levels, Charge range 0.75 to 10.5 pC/Line
Data digital interface	16 bits
Interface	Gigabit Ethernet with UDP protocol
Linearity	> 99 %
Operational voltage	+10.8 V DC... +26 V DC
Power consumption	40 W Max/module
Operational temperature	0 - 40°C
Operational humidity	30 - 80%
Storage temperature	-10 - +50°C
On-board calibration	Yes
Pixel discontinuity correction	Yes
Bad pixel correction	Yes
Pixel Binning	Yes, up to 4x (equalling to 1.6mm pitch)
Line averaging and summing	Yes, up to 256x
Power on time recording	Up to 100,000 hours recording
EMC compliance	Yes
RoHS compliance	Yes
IP classification	IP50

ENCLOSURES OF THE X-SCAN M01B SERIES

PRODUCT MODEL	Active Length	Length	Width	Height	Max Weight
X-Scan M01020410B	410 mm	435mm	240 mm	62 mm	15 kg
X-Scan M01020614B	614 mm	641 mm	240 mm	62 mm	20 kg
X-Scan M01020820B	820 mm	846 mm	240 mm	62 mm	25 kg
X-Scan M01040410B	410 mm	435 mm	240 mm	62 mm	15 kg
X-Scan M01040614B	614 mm	641 mm	240 mm	62 mm	20 kg
X-Scan M01040820B	820 mm	846 mm	240 mm	62 mm	25 kg

DETECTION TECHNOLOGY

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