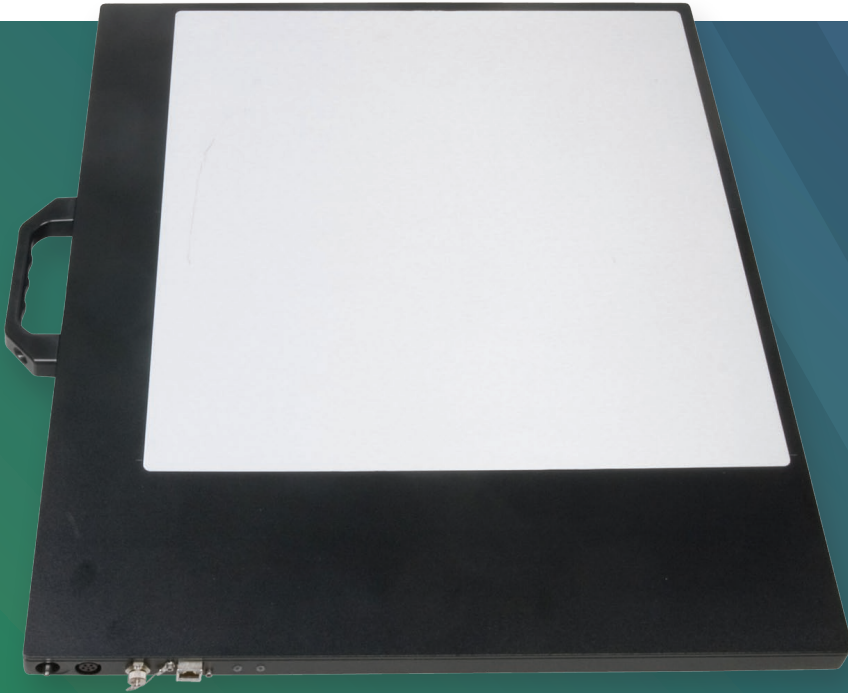


XRD 1622 AO, AP

Flat Panel Detectors



Superior Image Quality High Dynamic Range

The Varex Imaging XRD 1622 Flat Panel X-ray Detectors are the part of the Varex Imaging family of 16-inch (41cm) field of view amorphous silicon (a-Si) digital X-ray FPDs.

OVERVIEW

Two models of the Varex Imaging XRD 1622 digital Flat Panel X-ray Detectors (FPDs) are available: The Varex Imaging XRD 1622 AO provides over 74 dB of dynamic range and 1 frame per second (fps). The enhanced performance Varex Imaging XRD 1622 AP offers over 87 dB of dynamic range and frame rates up to 4 fps via multiple read-out modes. Both detectors support a broad range of energy levels from 20 kV - 15 MV and are available with several shielding and scintillator options.

Rapid system integration is accomplished via Gigabit Ethernet data communication, integrated trigger and X-ray synchronization circuitry, and a comprehensive software library for image acquisition and processing.

The wide energy range, variable frame rates and shielding options allow the Varex Imaging XRD 1622 to meet the component requirements of applications¹ such as industrial non destructive testing, radiation therapy for cancer treatment, as well as veterinary and life and physical science.

FEATURES AND BENEFITS

- Radiation-hardened for harsh environments
- 200 μ m pixel pitch
- Up to 65,536 gray levels
- X-ray energies from 20 kV - 15 MV
- Selectable gain settings
- Gigabit Ethernet interface

APPLICATIONS¹

- Radiography, Radiosurgery & Proton Therapy
- Industrial Non Destructive Testing & Evaluation
- Veterinary
- Life & Physical Science

Technical Specifications

SENSOR

Panel	Single substrate amorphous silicon active TFT/diode array
Scintillator	Direct deposition CsI:Tl or various Gd ₂ O ₂ S:Tb (GOS) fluorescent screens
Pixel Matrix	2048 × 2048 @ 200 μm pitch

ELECTRONICS

Amplifiers	16 × 128 channel custom low noise ASICs with 2 (AO) or 6 user selectable gain settings			
ADC	14 bit (AO), 16 bit (AP)			
Read-out Mode	Matrix	Pixel (μm ²)	fps	
Square	2048 × 2048	200 × 200	1	1
	1024 × 1024	400 × 400	n/a	4
Rectangular	2048 × 1024	200 × 400	n/a	2

MECHANICAL

Size	50.0 cm (w) × 56.0 cm (l) × 2.2 cm (h)
Weight	8.8 kg
Housing	Aluminum
Shielding	Integrates with shielding cassette for high energy applications (optional)

COMMUNICATIONS

Data I/F	Gigabit Ethernet Vision
X-ray I/F	Integrated X-ray trigger control
Software	Support for 32 and 64 bit Windows® OS

IMAGING PERFORMANCE

DQE	67% (0 cy/mm), 53% (1 cy/mm), 36% (2 cy/mm) for RQA5 with CsI
MTF	63% (1 cy/mm), 31% (2 cy/mm) with CsI
Lag	< 6% 1st frame
Dynamic Range	> 74 dB (AO), > 87 dB (AP)
Energy	20 kV - 15 MV

ENVIRONMENTAL

Temperature	10 - 40°C (operating), -10 - 50°C (storage)
Humidity	10 - 90%RH (non-condensing)
Ingress	IP-65 rated (total dust and low pressure water jets protection)
Vibration	IEC/EN 60068-2-6 (10-150 Hz, 0.5 g)
Shock	IEC/EN 60068-2-27 (11 ms, 2 g)

POWER

Supply	100 - 240 VAC, 50/60 Hz XRD-LPM Power Supply 40 W
Dissipation	32 W

REGULATORY

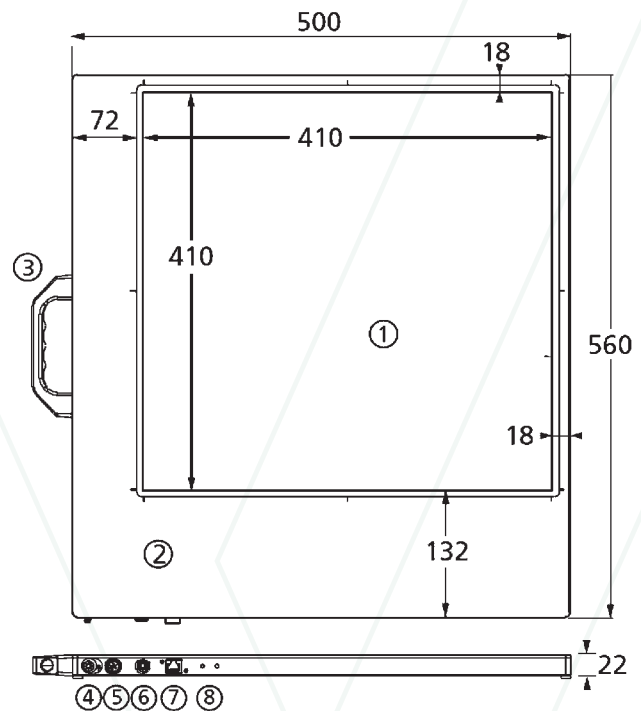
Standards	UL-60601-1, IEC/EN-60601-1, IEC/EN-60950-1
Regulations	CE, RoHS

¹ Unless otherwise specified, Varex Imaging Flat Panel X-ray Detectors are components intended to be integrated into products by X-ray system manufacturers. System manufacturers are responsible for qualifying and validating their products for their intended uses and meeting all applicable regulatory requirements.

Contents in this document are subject to change without notice.

MECHANICAL CHARACTERISTICS

(Dimensions in mm)



- ① Active sensor area
- ② Electronics area
- ③ Removable handle
- ④ Ground stud
- ⑤ Power connector
- ⑥ X-ray trigger connector
- ⑦ Ethernet connector (RJ45)
- ⑧ Diagnostic LEDs

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