

1207, 1512, 2307, 2315 and 2923 CMOS Flat Panel Detectors



Superior Image Quality
Fast, Low Dose Imaging

OVERVIEW

The Varex Imaging Flat Panel X-ray Detectors (FPDs) are high speed, low noise X-ray detectors with excellent sensitivity. They employ state-of-the-art large-area CMOS (complementary metal-oxide semiconductor) image sensor technology and are supplied with a range of scintillator and interface options.

Varex Imaging Flat Panel X-ray Detectors have switchable pixel gain that makes them well suited to real-time imaging and CT as well as static imaging with high dynamic range.

FEATURES AND BENEFITS

- 74.8 μm pixel pitch
- 1536 x 864 px (1207), 1944 x 1536 px (1512), 3072 x 864 px (2307), 3072 x 1944 px (2315), 3888 x 3072 px (2923)
- 1 x 1, 2 x 2 and 4 x 4 pixel binning options
- High Sensitivity and High Dynamic Range
- Suitable for real-time imaging at up to 191 fps
- High DQE at low dose
- 14-bit digital output
- Various scintillator options available
- Input/output for X-ray generator synchronization
- Camera Link or GigE Vision data connection

APPLICATIONS¹

- Medical
- Dental
- Veterinary
- Life sciences

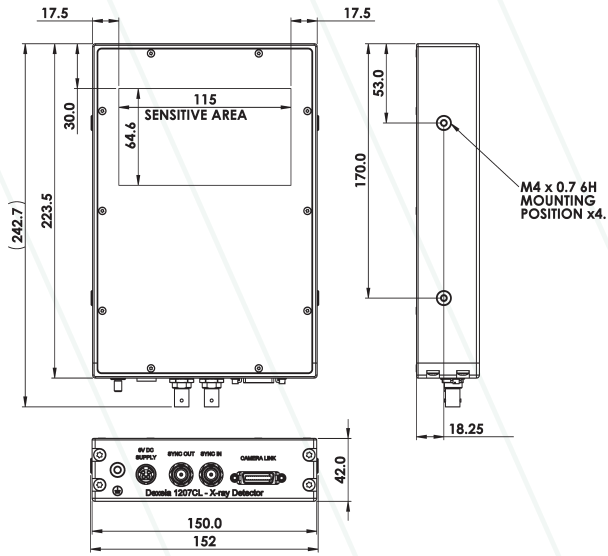
Technical Specifications

	1207	1512	2307	2315	2923			
SENSOR								
Pixel Size (µm)	74.8	74.8	74.8	74.8	74.8			
Sensitive Area (mm ²)	114.9 × 64.6	145.4 × 114.9	229.8 × 64.6	229.8 × 145.4	290.8 × 229.8			
Pixel Matrix (px)	1536 × 864	1944 × 1536	3072 × 864	3072 × 1944	3888 × 3072			
MAX FRAME RATE (fps)								
Pixel Binning	Camera Link	GigE Vision	Camera Link	GigE Vision	Camera Link	Camera Link	Camera Link	GigE Vision
1×1	60	32	26	14	60	26	26	3.6
2×2	156	127	70	56	156	70	70	NA
4×4	191	191	86	86	191	86	86	NA
IMAGE PERFORMANCE								
Dynamic Range (dB)								
High Dynamic Range Mode	typ. 71	typ. 71	typ. 71	typ. 71	typ. 71			
High Sensitivity Mode	typ. 68	typ. 68	typ. 68	typ. 68	typ. 68			
X-ray Energy Range (kV)	12 - 130	12 - 130	12 - 130	12 - 130	12 - 130			
MECHANICAL								
Weight (kg)	1.9	2.2	2.5	3.7	6.1 (CL)/6.3 (GigE)			
Dimensions l × w × h (mm ³)	223.5 × 150 × 42	223.5 × 150 × 42	278.7 × 205 × 43	267 × 257 × 43	352 × 272.5 × 43			
COMMUNICATIONS								
Camera Link	Base 80 Mhz (1 cable)	Base 80 MHz (1 cable)	Medium 80 MHz (2 cables)	Medium 80 MHz (2 cables)	Full 80 MHz (2 cables)			
GigE Vision	1000BASE-T	1000BASE-T	NA	NA	1000BASE-T			
Control Channel	115 kBaud serial link Camera Link / GigE Vision	115 kBaud serial link Camera Link / GigE Vision	115 kBaud serial link Camera Link	115 kBaud serial link Camera Link	115 kBaud serial link Camera Link / GigE Vision			
Sync Ports	BNC	BNC	BNC	BNC	BNC(CL)/SMB(GigE)			
Sync In Port	3 - 15 V edge or level trigger	3 - 15 V edge or level trigger	3 - 15 V edge or level trigger	3 - 15 V edge or level trigger	3 - 15 V edge or level trigger			
Sync Out Port 1	TTL (0 - 5 V)	TTL (0 - 5 V)	TTL (0 - 3.3 V)	TTL (0 - 3.3 V)	TTL (0 - 3.3 V-CL/5 V-GigE)			
Sync Out Port 2	NA	NA	TTL (0 - 3.3 V)	TTL (0 - 3.3 V)	TTL (0 - 3.3 V-CL/5 V-GigE)			
Software	Support for 32 and 64 bit Windows OS							
POWER								
Dissipation	Camera Link/GigE 11 /13 W	Camera Link/GigE 9.6 /13 W	Camera Link/GigE 17 W	Camera Link/GigE 17 W	Camera Link/GigE 36 /37 W			
SCINTILLATOR OPTIONS								
	High Resolution microcolumnar CsI:Tl							
	High Efficiency microcolumnar CsI:Tl							
	Various Gd ₂ O ₂ S:Tb (GOS) fluorescent screens							
TEMPERATURE RANGE								
Operating Temperature	+10°C to +40°C	+10°C to +40°C	+10°C to +35°C	+10°C to +35°C	+10°C to +35°C			
Storage Temperature	+10°C to +50°C							
ACCESSORIES								
	Camera Link/GigE	Camera Link/GigE	Camera Link	Camera Link	Camera Link/GigE			
Power Supply	50 - 60 Hz 100 - 240 VAC	50 - 60 Hz 100 - 240 VAC	50 - 60 Hz 100 - 240 VAC	50 - 60 Hz 100 - 240 VAC	50 - 60 Hz 100 - 240 VAC			
Power Cable	3 m Lemo Low Voltage	3 m Lemo Low Voltage	3 m XLR to D-Sub	3 m XLR to D-Sub	3 m XLR to D-Sub 3 m Lemo Low Voltage			
Interface Card	EPIX EB1/ Intel I210-T1	EPIX EB1/ Intel I210-T1	EPIX E4	EPIX E4	EPIX E4/Intel I210-T1			

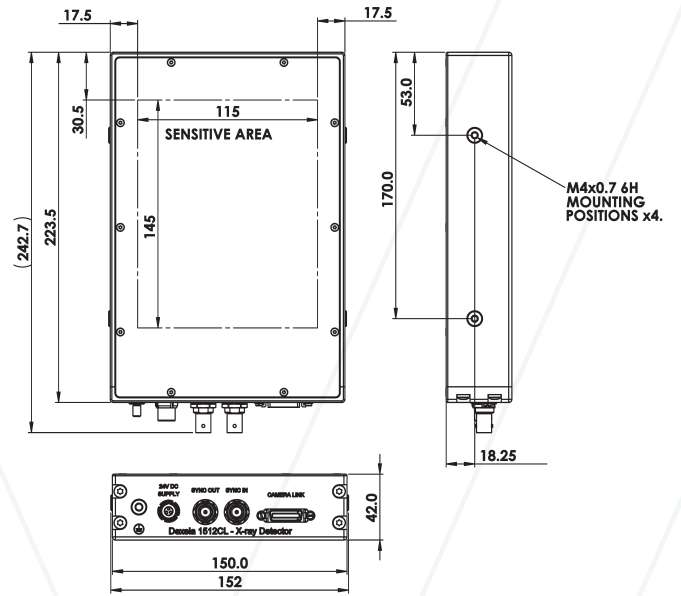
MECHANICAL CHARACTERISTICS

(Dimensions in mm)

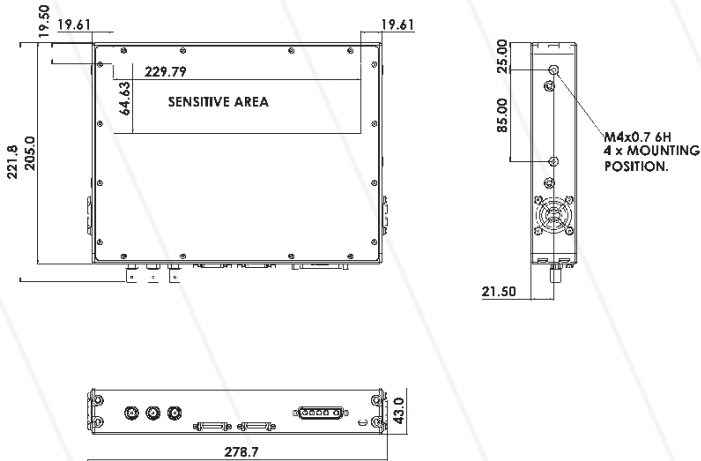
1207



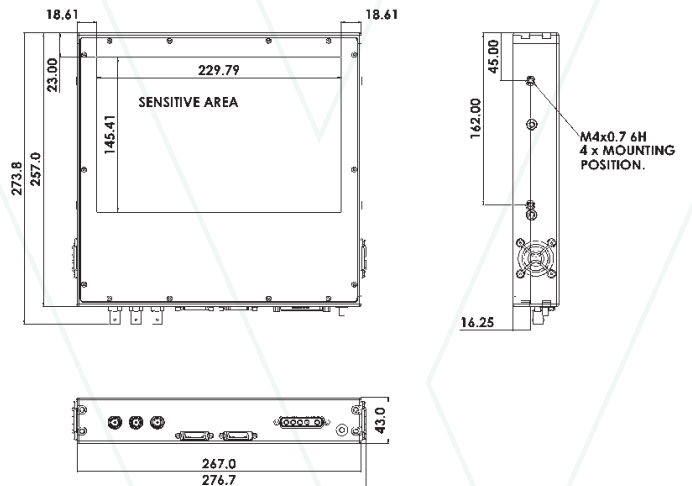
1512



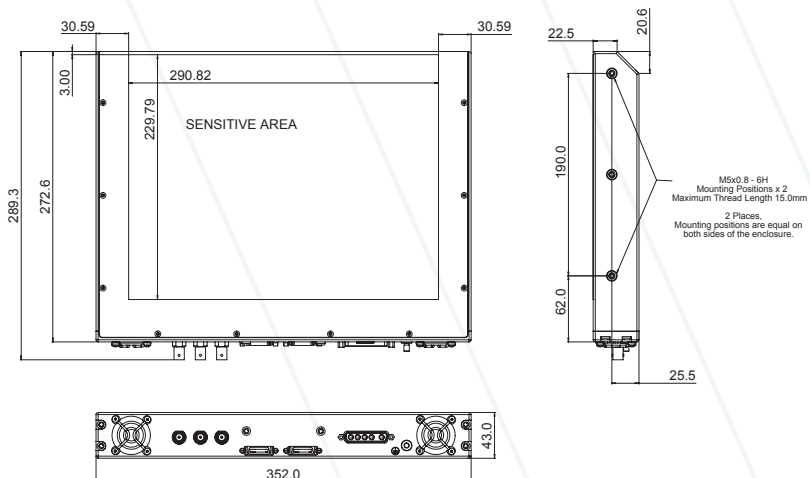
2307



2315



2923





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.

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Varex Imaging Corporation

USA

HEADQUARTERS

Salt Lake City, UT
P: +1-801-972-5000

Santa Clara, CA
P: +1-844-726-8228

For a complete listing of our global offices, visit www.vareximaging.com

Germany

Walluf
P: +49-6123-971-300

United Kingdom

London
P: +44-20-7148-3107

China

Wuxi
P: +86 510 8592-9201

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