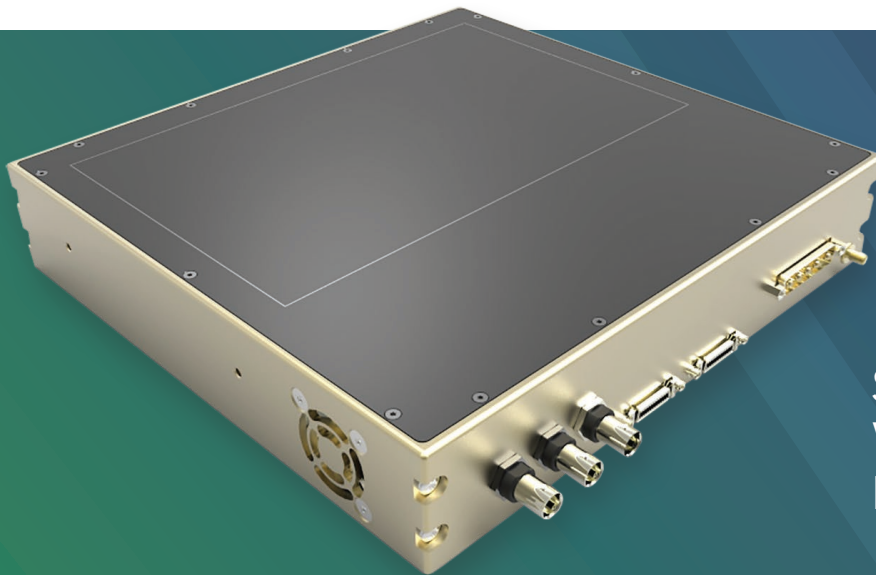


1207NDT, 1512NDT, 2315NDT and 2923NDT CMOS

Industrial Flat Panel Detectors



Superior Image Quality
With High Resolution for
Non-Destructive Testing

OVERVIEW

Varex Imaging CMOS 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 CMOS 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 (1207NDT), 1944 x 1536 px (1512NDT), 3072 x 1944 px (2315NDT), 3888 x 3072 px (2923NDT)
- High Sensitivity and High Dynamic Range modes
- Operation up to 225 kV
- Suitable for real-time imaging at up to 191 fps
- 1 x 1, 2 x 2 and 4 x 4 pixel binning options
- High DQE
- 14-bit digital output
- Various scintillator options available
- Input/output for X-ray generator synchronization
- Camera Link or GigE Vision data connection

APPLICATIONS¹

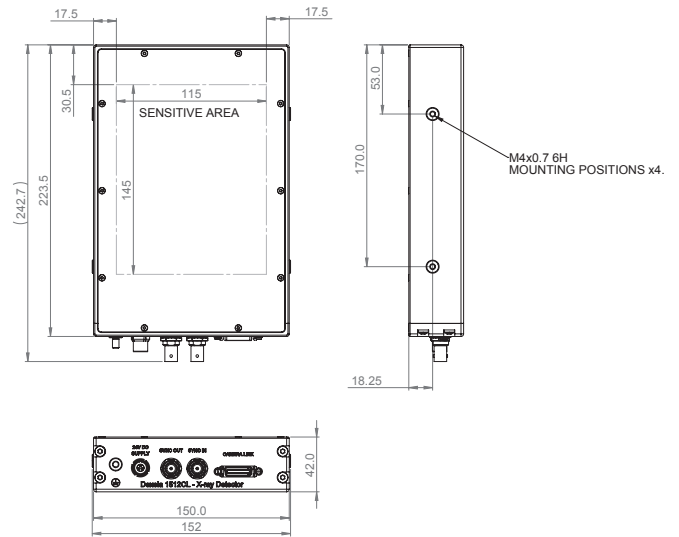
- Electronics inspection
- Casting inspection
- Weld and pipeline inspection
- Metrology
- 3D Cone Beam CT
- Materials science
- Quality control in automotive, aerospace and electronics manufacturing

Technical Specifications

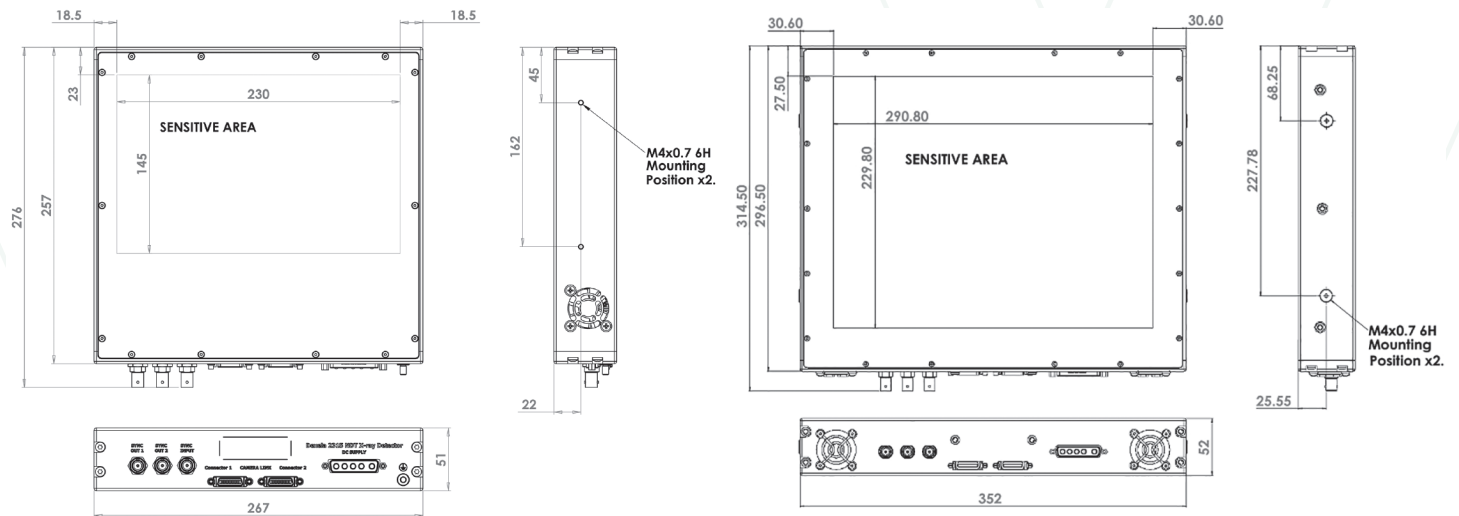
	1207NDT		1512NDT		2315NDT	2923NDT
SENSOR						
Pixel Size (μm)	74.8		74.8		74.8	74.8
Sensitive Area (mm²)	114.9 × 64.6		145.4 × 114.9		229.8 × 145.4	290.8 × 229.8
Pixel Matrix (px)	1536 × 864		1944 × 1536		3072 × 1944	3888 × 3072
MAX FRAME RATE (FPS)						
Pixel Binning	Camera Link	GigE Vision	Camera Link	GigE Vision	Camera Link	Camera Link
1×1	60	32	26	14	26	26
2×2	156	127	70	56	70	70
4×4	191	191	86	86	86	86
IMAGE PERFORMANCE						
Dynamic Range (dB)						
High Dynamic Range Mode	typ. 71		typ. 71		typ. 71	typ. 71
High Sensitivity Mode	typ. 68		typ. 68		typ. 68	typ. 68
X-ray Energy Range (keV)	12 - 225		12 - 225		12 - 225	12 - 225
MECHANICAL						
Weight (kg)	3.3		3.3		7.9	9.8
Dimensions l × w × h (mm³)	223.5 × 150 × 42		223.5 × 150 × 42		267 × 257 × 51	352 × 296.5 × 52
COMMUNICATIONS						
Camera Link	Base 80 Mhz (1 cable)		Base 80 MHz (1 cable)		Medium 80 MHz (2 cables)	Full 80 MHz (2 cables)
GigE Vision	1000BASE-T		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
Sync Ports	BNC		BNC		BNC	BNC
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
Sync Out Port	TTL (0 - 5.0 V)		TTL (0 - 5.0 V)		2 x TTL (0 - 3.3 V-CL)	2 x TTL (0 - 3.3 V-CL)
Software	Support for 32 and 64 bit Windows® OS					
POWER						
	Camera Link	GigE Vision	Camera Link	GigE Vision	Camera Link	Camera Link
Dissipation	11 W	13 W	9.6 W	13 W	19 W	36 W
SCINTILLATOR OPTIONS						
	High Resolution microcolumnar CsI					
	High Efficiency microcolumnar CsI					
	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
Storage Temperature	-10°C to +50°C		-10°C to +50°C		-10°C to +55°C	-10°C to +50°C
ACCESSORIES						
	Camera Link	GigE Vision	Camera Link	GigE Vision	Camera Link	Camera Link
Power Supply Type	PSU-3A	PSU-3A	PSU-3A	PSU-3A	Dexela 6V PSU	Dexela 6V PSU
Power Cable	3 m Lemo Low Voltage	3 m Lemo Low Voltage	3 m Lemo Low Voltage	3 m Lemo Low Voltage	3 m XLR to D-Sub	3 m XLR to D-Sub
Power Supply Input	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	50 - 60 Hz 100 - 240 VAC
Power Supply Output	24 V	24 V	24 V	24 V	6 V	6 V
Network Interface Card	EPIX EB1	Intel I210-T1	EPIX EB1	Intel I210-T1	EPIX E4 or E8	EPIX E4 or E8

(Dimensions in mm)

1512NDT



2923NDT





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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