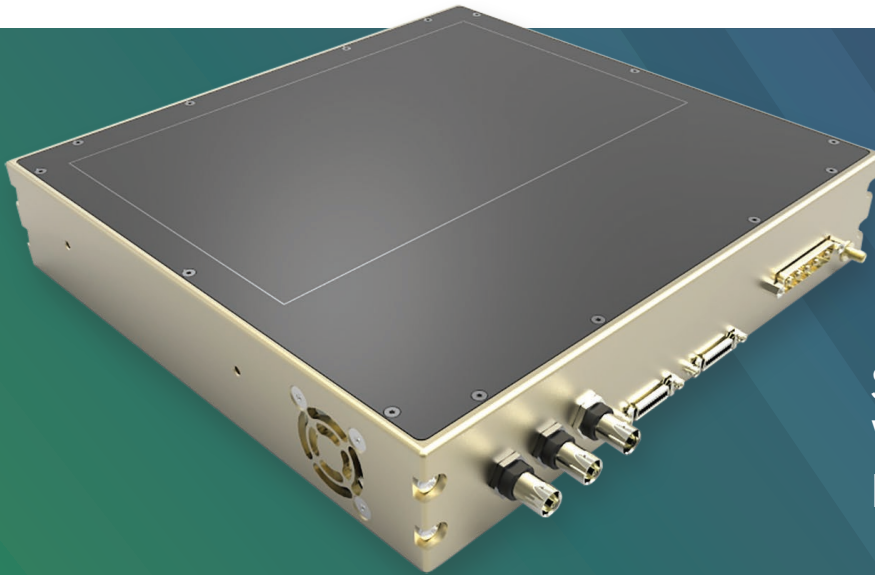


1207NDT, 1512NDT, 2315NDT and 2923NDT CMOS Industrial Flat Panel Detectors



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

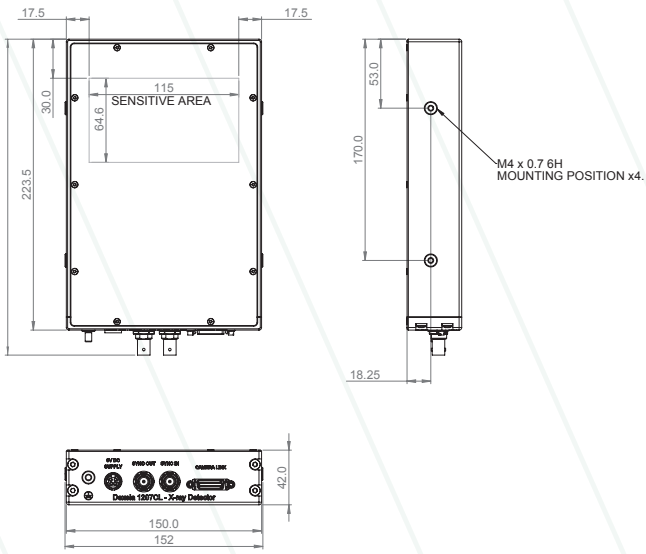
Technical Specifications

| | 1207NDT | | 1512NDT | | 2315NDT | | 2923NDT | |
|---|---|---------------------------|--|---------------------------|--------------------------------------|--|--------------------------------------|--|
| SENSOR | | | | | | | | |
| Pixel Size (µm) | 74.8 | | 74.8 | | 74.8 | | 74.8 | |
| Sensitive Area (mm ²) | 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 (kV) | 12 - 225 | | 12 - 225 | | 12 - 225 | | 12 - 225 | |
| MECHANICAL | | | | | | | | |
| Weight (kg) | 3.3 | | 3.3 | | 7.9 | | 9.8 | |
| Dimensions l × w × h (mm ³) | 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 | | 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 | |

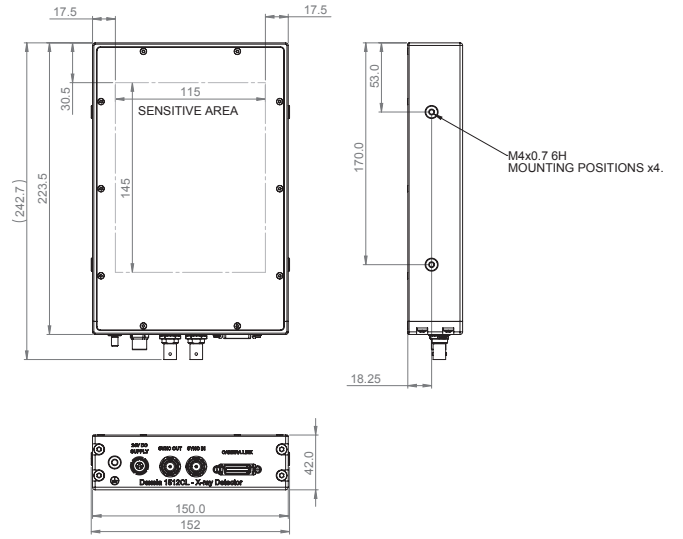
MECHANICAL CHARACTERISTICS

(Dimensions in mm)

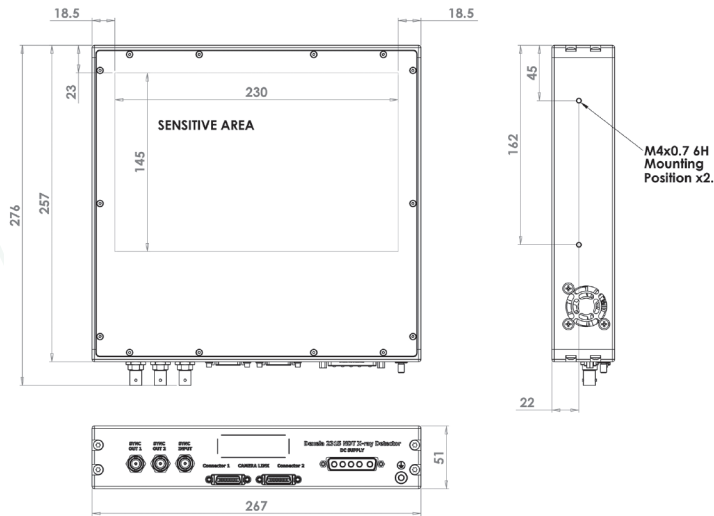
1207NDT



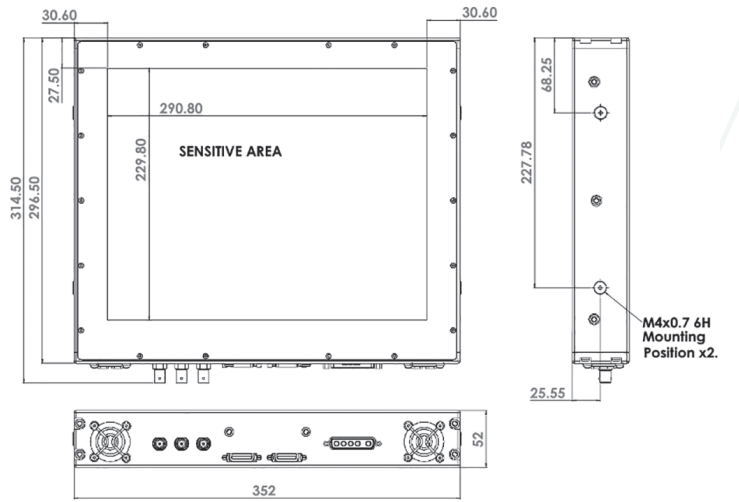
1512NDT



2315NDT



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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