PaxScan® 4030CB

Flat Panel Detector

PaxScan® 4030CB Receptor and Command Processor 2.
(Fiber optic cable not shown)

Product Description

The PaxScan® 4030CB is specifically designed to meet the needs of Cone Beam X-ray imaging applications featuring multiple sensitivity ranges and extended dynamic range modes. The main system components are the 40 x 30cm 194µm-pixel amorphous silicon FPD and real-time image and Command Processor 2. Excellent low-dose performance is achieved by combining Varex Imaging's proprietary readout electronics with the high sensitivity of a custom Cesium Iodide scintillator. A Windows®XP™ based application program and a communications command (DLL) library has also been developed to assist OEM customers tasked with developing their own system interface. This imager is intended for incorporation into a complete X-ray system by a qualified equipment manufacturer.

Technical Specifications

Receptor Type	Amorphous Silicon
Conversion Screen	Integral columnar CsI:Tl
Pixel Area - Total	397 mm (h) x 298 mm (v) (15.6 x 11.7 in)
Pixel Matrix - Total	2,048 (h) x 1,536 (v)
Pixel Pitch	194 µm
Limiting Resolution	2.58 lp/mm @ 7.5 fps (1x1) 1.29 lp/mm @ 30 fps (2x2)
MTF (1.0 lp/mm) at 80 kVp, 1x1	>45%
DQE (0), RQA5	70% ±5%
Energy Range	40 - 150 kVp
Fill Factor	70%
Contrast Ratio	Large Area (120 mm):< 0.8% Small Area (10 mm): < 7%
Lag	<16% (first frame, 30 fps, 2x2 bin mode) <5% (first frame, 7.5 fps, 1x1 bin mode)
Scan Method	Progressive
Data Output	High-speed serial
A/D Conversion	14-bit
Spectral Response	400-700 nm; 550 nm peak
Signal Capacity	8 pC/pixel/frame
Gamma	1
Radiation Tolerance	1MRad (active area), 10 kRad (electronics)
Dynamic Range (saturation-to-noise)	
Dual/Dynamic Gain Modes	18,000 : 1
Full-Resolution Modes	3,000 : 1
Fluoro Modes	1,500 : 1
Dual/Dynamic Gain Modes, Effective resolution	>16-bit
Non-Uniformity	1% maximum
Inactive Lines	≤ 9 total rows and columns, minimum separation 16 lines
Inactive Pixels	No inactive visible pixels after interpolation
Maximum Entrance Dose/Frame Gain-1	4,000 µR
Cooling	Passive convection
Lead Barrier Cap	Optional

Mechanical

Weight	10.9 kg panel only 20.8 kg panel with lead primary barrier.
Housing Material	Aluminum
Sensor Protection	Carbon fiber plate 2.5 mm thick plus 0.25 mm thick aluminum plate.
Mounting Provisions	Blind, threaded mounting holes front and back.

Environmental

Temperature Limit	10 - 35°C case temperature
Relative Humidity	10 - 90% Non-Condensing
Atmospheric Pressure	70 kPa - 106 kPa
Shock Tolerance	20G (any direction no power applied)

Regulatory

U.S.	ANSI/AAMI ES60601-1:2005
Canada	CAN/CSA C22.2 No. 60601-1:08
EU	IEC/EN 60601-1:2005

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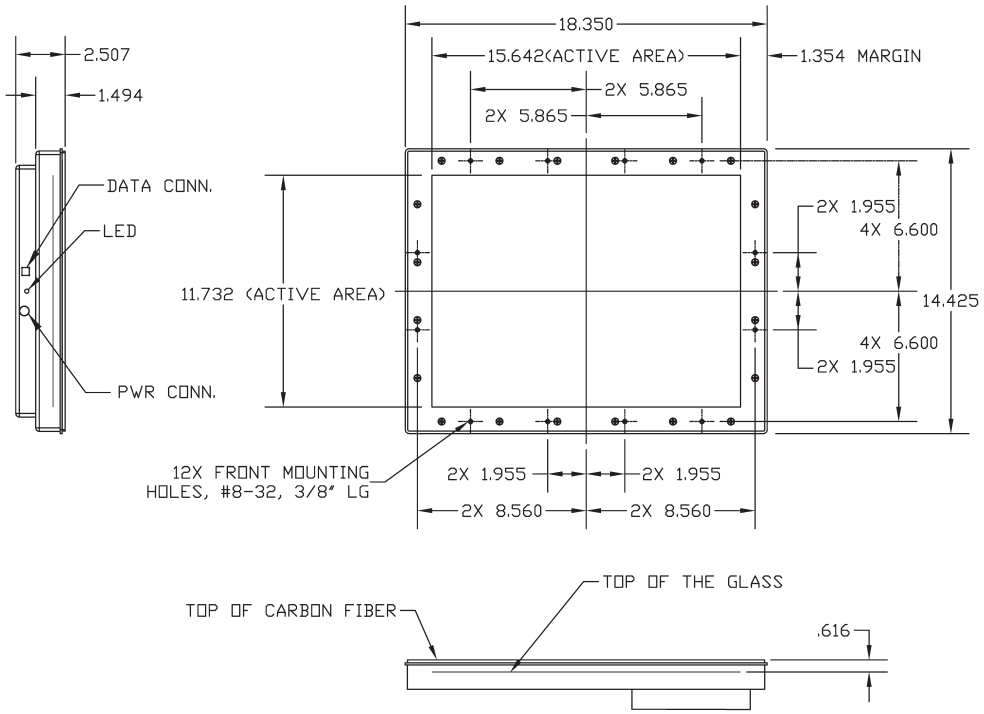
134766-000 Rev A 03/17

Front View

Drawings for reference only

Dimensions are in Inches



Rear View

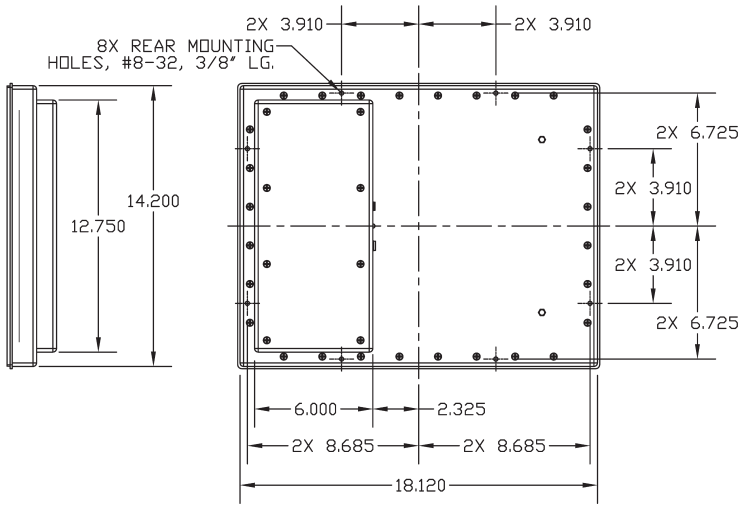


Image Acquisition Modes (Current)

High-Sense Fluoro:	1024 (h) x 768 (v) 30 fps Gain-4 0.5 pF
Normal Fluoro:	1024 (h) x 768 (v) 30 fps Gain-2 0.5 pF
High-Sense Full-Resolution:	2048 (h) x 1536 (v) 7.5 fps Gain-2 0.5 pF
Dual Gain High Range:	1024 (h) x 1536 (v) 15 fps Gain-1 0.5/4 pF
High-Dose Full-Resolution:	2048 (h) x 1536 (v) 7.5 fps Gain-2 4 pF

Image Acquisition Modes (Digital Board 2.0 with Dynamic-Gain readout required)

Dynamic Gain High Range:	1024 (h) x 768 (v) 30 fps Gain-1 0.5 pF

Additional Modes:
Consult Varex Imaging Corporation

Salt Lake City, UT 1-801-972-5000
Charleston, SC 1-843-767-3005
www.varexim aging.com

Manufactured by Varex Imaging Corporation

Specifications subject to change without notice.

Note: All Varex Imaging Amorphous Silicon Receptors are designed to be integrated into a complete X-ray system by a qualified system integrator. The system Integrator is responsible for obtaining FDA clearance for medical use.