PaxScan® 3030DX
Flat Panel Detector

Product Description

The PaxScan® 3030DX is a real-time digital X-ray imaging device commonly referred to as a flat panel detector (FPD). The main system components are the 30 x 30cm 194µm-pixel amorphous silicon FPD and universal power supply. Excellent low-dose performance is achieved by combining Varex Imaging’s proprietary readout electronics with a custom Cesium Iodide scintillator. A Windows® 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 ................................. 298mm (h) x 298mm (v) (11.7 x 11.7 in)
Pixel Matrix -Total ................................. 1,536 (h) x 1,536 (v)
Effective ........................................... 1,516 (h) x 1,516 (v)
Pixel Pitch ........................................... 194 µm
Limiting Resolution ............................... 2.58 lp/mm @ 15 fps (1 x 1)
........................................... 1.29 lp/mm @ 30 fps (2 x 2)

Image Quality (RQA5) (typical)

MTF (1x1) ........................................
  1.0 lp/mm ........................................ 55%
  2.0 lp/mm ........................................ 25%
  2.58 lp/mm (Nyquist Frequency) ............. 16%
DQE (1x1, Quantum-limited) .................
  0 lp/mm ........................................ 77%
  1.0 lp/mm ........................................ 55%
  2.0 lp/mm ........................................ 30%
Quantum Limited Dose (2x2) ................. 3.5 nGy/frame
Energy Range ..................................... 40 - 150 kVp
Fill Factor ......................................... 68%
Lag ................................................... <5% (first frame)
Scan Method ........................................ Parallel
Data Output ........................................ Gigabit Ethernet
A/D Conversion ..................................... 16-bit
Radiation Tolerance .............................. 2000 Gy (active area)
Dynamic Range ................................... 94 dB std modes

Power Requirements

Input voltage range .................................. 21 V - 33 V
(measured at the input of the imager)
Nominal Power Consumption ................................... 20 W
Peak Power Consumption (initialization) ................. 25 W

Mechanical

Weight ................................................... approx. 5.6 kg panel with Tungsten - 9.05 kg
Housing Material ..................................... Aluminum
Sensor Protection .................................... Carbon fiber and aluminum
Mounting Provisions .............................. Blind, threaded mounting holes on the back.

Image Acquisition Modes

Normal Fluoro ..................................... 768 (h) x 768 (v) (2x2 binned)
Full Resolution .................................... 1,536 (h) x 1,536 (v)

Environmental

Temperature Limit ................................... 15 - 53°C
(as reported by imager internal sensor)
Relative Humidity (non-condensing) ................ 10% - 90%
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

Note 1 - Power drop across supply cables is not included

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