Product Description

The PaxScan® 2121DXV is a real-time digital X-ray imaging device commonly referred to as a flat panel detector (FPD). The main system components are the 21 x 21 cm 205µm-pixel amorphous silicon FPD. Interfacing to the 2121DXV is a simple task through the standard Gigabit Ethernet port. The developer’s software package includes a “Virtual Command Processor” software interface that performs detector calibration, receptor set-up, image acquisition and image correction. 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 .......................... 209.9 mm (h) x 209.9 mm (v)
Pixel Matrix - Total ........................ 1,024 (h) x 1,024 (v)
  Effective ......................................... 1,004 (h) x 1,004 (v)
Pixel Pitch ........................................... 205 µm
Limiting Resolution .......................... 2.43 lp/mm (1 x 1)
  1.22 lp/mm (2 x 2)

Image Quality (RQA5) (typical)

MTF (1x1)
- 1.0 lp/mm ........................................ 55%
- 2.0 lp/mm ........................................ 22%
DQE (1x1, Quantum-limited)
- 0 lp/mm ........................................ 80%
- 1.0 lp/mm ........................................ 65%
- 2.0 lp/mm ........................................ 40%
Quantum Limited Dose ........................ 2 nGy/frame (2 x 2)
  6 nGy/frame (1 x 1)
Energy Range .................................... 40 - 150 kVp
Fill Factor ........................................... 77.4%
Lag .................................................. 2.5% Nominal (first frame)
Scan Method ...................................... Progressive
Data Output ....................................... GigE
A/D Conversion ................................... 16-bit
Cooling ............................................ Passive
Radiation Tolerance (active area) ........... 2000 Gy
Dynamic Range ............................... 94 dB std modes

Power Requirements

Input voltage range .............................. 21 V - 33 V
  (measured at the input of the imager)
Nominal Power Consumption¹ ................ 12 W
Peak Power Consumption¹ (initialization) ... 15 W

Mechanical

Weight .................................................. 3.2 kg
Housing Material ................................. Aluminum
Sensor Protection ............................. Carbon fiber and aluminum
Mounting Provisions .. Blind, threaded mounting holes on the back.

Image Acquisition Modes

- 2 x 2 Binned ....... 60 fps continuous X-ray, 30 fps pulsed Fluoro
- Full Resolution .... 30 fps continuous X-ray, 15 fps pulsed Fluoro

Environmental

Temperature Range - Operating ........... 15°C - 58°C
  (as reported by imager internal sensor)
Temperature Range - Storage .............. -20°C - 70°C
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 ES60601-1:2012
Canada ..................................... CAN/CSA C22.2 No. 60601-1:14
EU .............................................. IEC/EN 60601-1:2012

Note ¹ Power drop across supply cables is not included

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Drawing for reference only

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.