

Product Description

The 3020DXV-I 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 20cm 194 μ m-pixel amorphous silicon FPD. The 3020DXV-I combines excellent noise performance and a high radiation tolerance to work in industrial imaging applications. Interfacing to the 3020DXV-I 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.

Technical Specifications

Receptor Type	Amorphous Silicon
Conversion Screen	DRZ+, Integral columnar CsI:TI
Pixel Area - Total	298mm (h) x 199mm (v) (11.7 x 7.8 in)
Pixel Matrix - Total	1,536 (h) x 1,024 (v)
Effective	1,516 (h) x 1,004 (v)
Pixel Pitch	194 μ m
Limiting Resolution	2.58 lp/mm @ 20 fps (1 x 1) 1.29 lp/mm @ 40 fps (2 x 2)
Quantum-limited Dose (2x2)	2.8 nGy /frame
(1x1)	7.9 nGy /frame
Energy Range	40 - 225 kVp
Fill Factor	68%
Lag	2.5 Nominal (first frame)
Scan Method	Progressive
Data Output	Gigabit Ethernet
A/D Conversion	16-bit
Radiation Tolerance	10 kGy (active area)
Dynamic Range	94 dB std modes 108 dB DGS modes

Image Acquisition Modes

Normal Fluoro	768 (h) x 512 (v) (2x2 binned) 40 fps continuous X-ray, 20 fps pulsed X-ray
Full Resolution	1,536 (h) x 1,024 (v) 20 fps continuous X-ray, 10 fps pulsed X-ray

Power Requirements

Input voltage range	21V - 33V (measured at the input of the imager)
Nominal Power Consumption ¹	15 W
Peak Power Consumption ¹ (initialization)	20 W

Mechanical

Weight	approx. 8.6 kg panel
Housing Material	Aluminum
Sensor Protection	Carbon fiber and aluminum
Mounting Provisions	Blind, threaded mounting holes on the back.

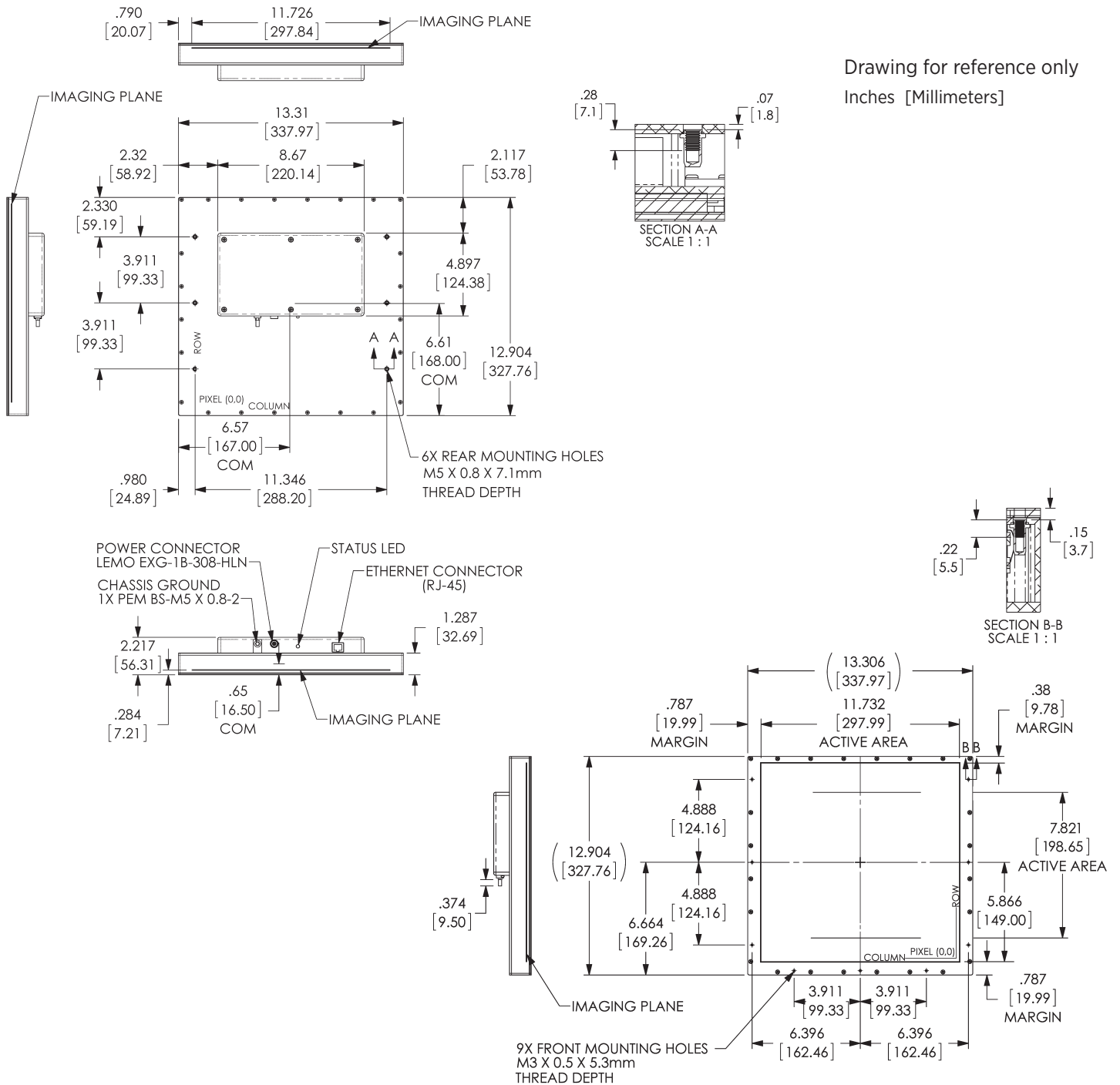
Environmental

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



Drawing for reference only
Inches [Millimeters]

Detector Characterization Charts in accordance with ASTM E2597-14 Standard Practice for the Manufacturing Characterization of Digital Detector Arrays

NOTE: SMTR, CS and Lag quality numbers all improve with higher frame rate.

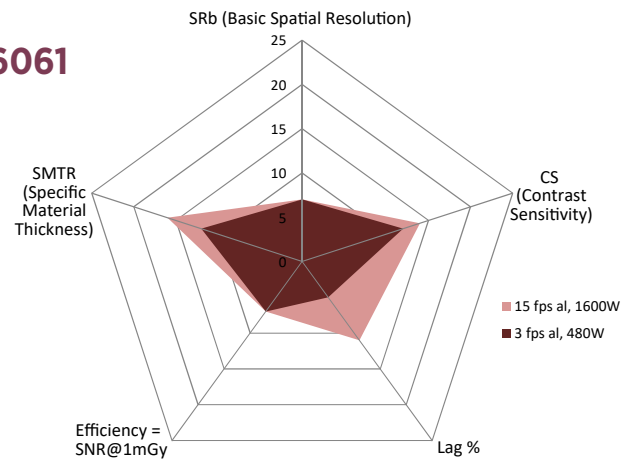
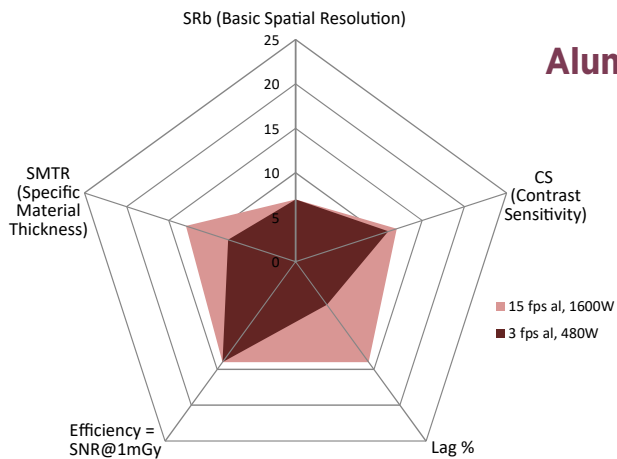
CsI

Full Resolution - 4pF Gain Setting

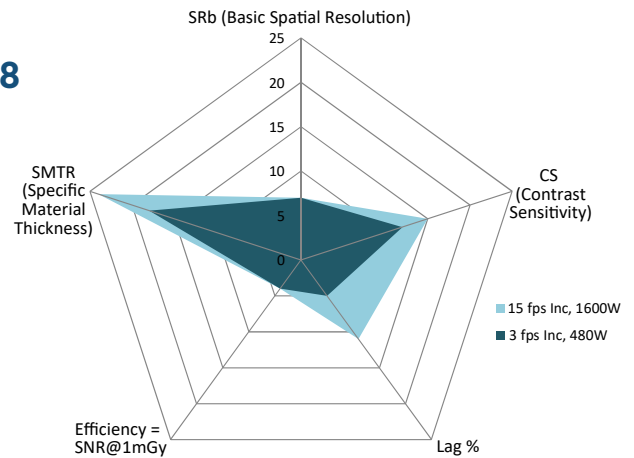
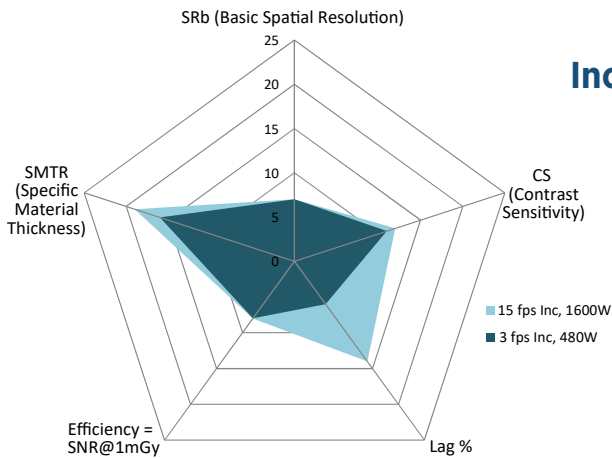
DRZ+

Full Resolution - 4pF Gain Setting

Aluminum 6061



Inconel 718



Titanium 6Al4V

