

***pixium*** 4800

# Digital Detector for Dynamic Imaging



**T**he Pixium 4800 is a digital flat-panel X-ray detector, ideally suited for dynamic cardiovascular applications.

- Large sensitivity range
- Uniform high resolution
- Distortion-free image
- Compact design
- Optimized temporal behavior
- Suited for DSA and High Speed Applications

**TRIXELL**  
Winning Technology



Pixium 4800

**T**he Pixium 4800 is a dynamic flat-panel X-ray detector. Its advanced design and compact layout covers both cardiac and vascular applications.

It uses the same technology platform as the Pixium 4600, the first digital detector in the Pixium family, combining an amorphous silicon flat panel with a cesium iodide scintillator (CsI/Tl). The result is a second generation detector providing advanced dynamic features for excellent image quality.

The Pixium 4800 brings unmatched digital imaging performance, with high contrast, spatial and temporal resolution and low X-ray dose. High Detectable Quantum Efficiency (DQE) enables very efficient fluoroscopy resulting in exceptional digital images. The detector is perfectly suited for Digital Subtraction Angiography (DSA) and/or high speed acquisition applications.

The Pixium 4800 detector complies with all applicable international standards: IEC 601-1; UL 2601-1; CAN CSA 22.2; FDA CFR 21.

### Image geometry and formats characteristics

Pixel pitch	184	µm	
X-ray sensitive array	24.8	cm	diagonal
Image size (overview, non-binned mode)	956 x 954	pixels	
Zoom modes	20.2 - 15.6	cm	diagonal

### Operating modes and performances

Frame rate in continuous and pulse mode (overview, non-binned):	30	Hz	max.
• X-window duration in pulse mode < 20 ms			
• Light duration before each frame: programmable			
2 zoom modes (non-binned)	60	Hz	max.
1 binned mode (2 x 2 pixels)	60	Hz	max.
1 high dose pulsed mode (overview, non-binned)	30	Hz	max.
• Up to 150 ms exposure time (at 6 Hz)			
A/D conversion dynamic range	14	bits	max.
X-ray generator voltage range	40-125	KV	typ.
Maximum linear dose	35	µGy/fr	
Electronic noise (quantum limited)	1.3	nGy/fr	typ.
Signal / Electronic noise @ 4.3 µGy/fr (1)	46	dB	typ.
Signal / Electronic noise @ 15 nGy/fr (1)	23	dB	typ.
MTF @ 1 lp/mm RQA5 (2)	65	%	typ.
MTF @ 2 lp/mm RQA5 (2)	32	%	typ.
DQE @ 0 lp/mm, 1 µGy/fr, RQA5 (2)	75	%	typ.
Residual signal (lag & memory effect) after 10 sec. exposure at 30 fr/sec.:			
@ 1 sec.	< 0.8	%	
@ 10 sec.	< 0.2	%	

### Electrical interfaces

Single DC input voltage	24	V
Electrical power	42	W

### Mechanical characteristics

Overall dimensions	245.8 x 245.8	mm
Thickness	98.6	mm
Weight	9.5	kg max.

(1) 1nG = 0.115 µR @ RQA5 (2) RQA5 = 70 kV, filtration = 2.5 + 21 mm aluminium

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