X-PANEL® 2301c FXM and 1501c FXM

DT

CMOS X-ray flat panel detectors

- **Best-in-class image quality**
- **Large active area yet fast scanning speed**
- **A specific scan-to-buffer mode**
- **Easy integration for 3-in-1 dental X-ray imaging systems**
- **Robust housing protecting electronics**

X-Panel 2301c FXM and **1501c FXM** are CMOS X-ray flat panel detectors designed for cephalometric and panoramic imaging. X-Panel 2301c FXM and 1501c FXM complement the X-Panel detector family targeted for the dental X-ray market. A combination of X-Panel 1501c CMOS detector for panoramic, X-Panel 2301c CMOS detector for cephalometric and X-Panel IGZO-TFT detector for CBCT imaging boosts all mainstream extraoral dental X-ray modalities. The all-in-one solution facilitates to design and maintain imaging systems that run cone beam computed tomography (CBCT), panoramic and cephalometric applications.

The low-dose X-Panel detectors have the largest active area yet fast scanning speed, which enhances patient experience and safety. X-Panel comes with a frame rate of up to 300 fps in full size and full resolution. The solution is powered by a 14-bit ADC providing fast, low-noise and high-resolution analog-to-digital conversion. X-Panel has a pixel size of 100 μm and is designed for an energy range of 40-125 kVp.

The X-Panel design pays special attention to robustness and usability. X-Panel has a durable housing that effectively shields the vulnerable parts of the sensor and read-out electronics. X-Panel has a Gigabit Ethernet interface and a software development kit available to support easy integration.

Key features

- Pixel matrix of 2332 x 72 / 1484 x 72
- Pixel pitch of 100μm
- Two gain modes: High gain and high dynamic range modes
- 14-bit ADC
- Supports both continuous and synchronous triggering modes
- Medical-grade, structured CsI scintillator
- GigE data interface
- Windows / Linux based software development kit (SDK) with demo GUI
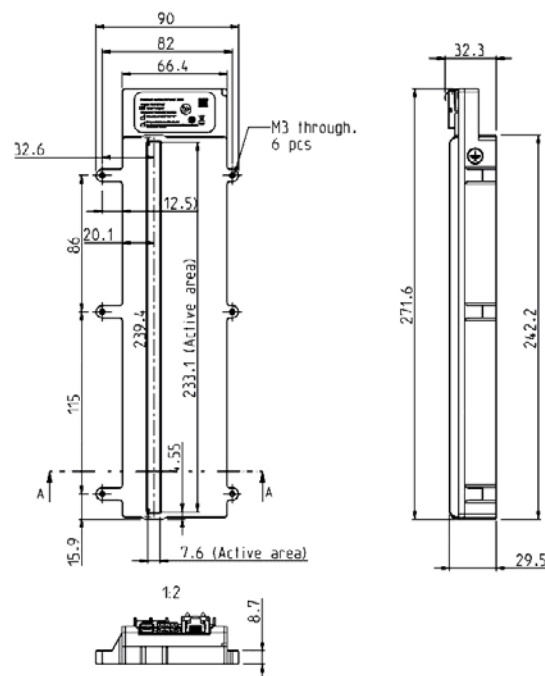
Applications

- Dental cephalometric and panoramic imaging

Key characteristics

Parameter	2301c FXM	1501c FXM
X-ray energy range	40–125 kVp	
Active area	233.2 mm x 7.2 mm	148.4 mm x 7.2 mm
Pixel pitch	100 µm	
Pixel matrix	2332 x 72	1484x72
Frame rate	Up to 330 fps	Up to 500 fps
ADC	14 bits	
Gain modes	2 (LFW/HFW)	
ROI mode	Single, programmable	
Binning	1 x 1, 2 x 2	
Trigger modes	Continuous / synchronous	
Scintillator type	Medical-grade structured CsI	
Data interface	1GBASE-T	
Saturation dose	LFW 2µGy HFW 16µGy	
Dynamic range	LFW 70dB HFW 73dB	
DQE(0), @RQA5	70%	
MTF	60%@1lp/mm 30%@2lp/mm	
Image lag	Negligible	

Mechanical dimensions (mm)

2301c FXM

1501c FXM