

# Whale2121FDM

a-Si X-ray flat panel detector



## Key Features

- Large area imaging, no edge image distortion
- Acquisition frame rate of 30 fps
- Sensitivity comparable to image intensifiers
- Better dynamic range and image signal-to-noise ratio than image intensifier

**Whale2121FDM** is a 21 x 21 cm real-time, fixed amorphous silicon, digital X-ray flat panel detector. It features excellent sensitivity and high dynamic range modes. The Whale2121FDM structural design effectively reduces the bending radius of the detector outlet, shortening the wiring space for easy installation and integration of systems. Its embedded firmware image calibration minimizes the difficulty of software development and resource consumption for computer hardware configuration. Suitable for digital imaging of medical c-arm, image intensifier replacement, and upgrade.



# Technical Specifications

Technology	
Sensor	A-Si
Scintillator	CSI / GOS
Active Area	204 x 204 mm
Pixel Matrix	1024 x 1024
Pixel Pitch	200 $\mu$ m
AD Conversion	16 bits
Interface	
Data Interface	Gigabit Ethernet
Exposure Control	Pulse Sync In / Pulse Sync Out
Frame Speed	30 fps (1x1)
Operating System	Windows7 / Windows10 OS 32 bits or 64 bits
Technical Performance	
Resolution	2.5 lp/mm
Energy Range	40~160 KV
Lag	0.8% @ 1st frame
Dynamic Range	$\geq 86$ dB
Sensitivity	1100 lsb/uGy
SNR	50 dB @ (20000lsb)
MTF	55% @ (1 lp/mm) 32% @ (2 lp/mm) 13% @ (3 lp/mm)
DQE (2uGy)	73% @ (0 lp/mm) 48% @ (1 lp/mm) 28% @ (2 lp/mm)
Mechanical	
Dimension(H x W x D)	241 x 241 x 45 mm
Weight	3.6 Kg
Sensor Protection Material	Carbon Fiber
Housing Material	Aluminum Alloy
Environmental	
Temperature Range	10~35°C (operating) ; -10~50°C (storage)
Humidity	30~70% RH (non-condensing)
Vibration	IEC/EN 60721-3 class 2M3 (10~150 Hz, 0.5 g)
Shock	IEC/EN 60721-3 class 2M3 (11 ms, 2 g)
Dust and Water Resistant	IPX0
Power	
Supply	100~240 VAC
Frequency	50/60 Hz
Consumption	10 W

