

# Whale3025FPI

## Fixed Type X Ray Detector



## Whale3025FPI X Ray Detector

Whale3025FPI production is a fixed type and low noise x ray flat panel detector based on amorphous silicon technology. A-Si technology based detector owns many advantages that are unavailable with other technology, Whale3025FPI production takes a high image quality and a large dynamic range, also Whale3025FPI possesses multi-gain stage, this function makes it possible that the detector can both be suitable for high sensitivity and large dynamic range requirements. Based on above characteristics, Whale3025FPI detector can be widely used in medical, industrial, veterinary, and research application area.

Key features for amorphous silicon technology:

- ◆ Large dose dynamic range
- ◆ Long life time

### Key Features

- Pixel Pitch: 140  $\mu\text{m}$
- Pixel Matrix: 1792 x 2048
- ADC: 16-bit
- Gain Stage: Multi-Gain
- Scintillator: CSI/GOS
- Water Proof: IPX0
- Interface: Optical Fiber  
High voltage generator  
Power
- Calibration: Software, Firmware
- Radiation Hardness:  $\geq 10000\text{Gy}$

### Application

- Medical
- Industry
- Veterinary
- Research

#### Technology

Sensor	a-Si
Scintillator	CSI/GOS
Active Area	250 x 286 mm
Pixel Matrix	1792x 2048
Pixel Pitch	140 $\mu\text{m}$
AD Conversion	16 bits

#### Interface

Communication Interface	Optical Fiber
Exposure Control	Pulse Sync In (Edge or Level) / Pulse Sync Out (Edge or Level)
Mode	Software Mode / HVG Sync Mode / FPD Sync Mode
Frame Speed	20fps
Operating System	Windows7 / Windows10 OS 32 bit or 64 bit

#### Technical Performance

Resolution	3.5 lp/mm
Energy Range	40~160 KV
Lag	$\leq 1\%$ 1st frame
Dynamic Range	86 dB
Sensitivity	540 lsb/uGy
SNR	48dB @(20000lsb)
MTF	70% @(1 lp/mm) 38% @(2 lp/mm) 21% @(3 lp/mm)
DQE (2uGy)	58% @(0 lp/mm) 41% @(1 lp/mm) 25% @(2 lp/mm)

#### Mechanical

Dimension(H x W x D)	322 x 285x 46.5 mm
Weight	2.5 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

#### Regulatory

CFDA (China)	
FDA (USA)	
CE (Europe)	

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