



Providing a Total Solution for All Your Flat Panel Detector Needs

| Digital Radiography | Mammography | Fluoroscopy |
| Radiation Therapy | Software |

IMAGING THE FUTURE

iRay

iRay Technology is a leader in the development and manufacturing of flat panel X-ray detectors used in medical, dental, veterinary, security and industrial imaging applications.

Founded in 2011 iRay is headquartered in Shanghai-Xinjinqiao Hi-tech Zone, with production facilities in Shanghai-Zhangjiang and in Taicang, all in China.

iRay X-ray detectors are used in more than 40 nations, including the United States and many European countries, and iRay has become China's leading manufacturer of flat panel detectors. The total installed base of iRay products now exceeds 25,000 units.

iRay has a very broad technology portfolio, that spans from amorphous Silicon (a-Si) to IGZO (Oxide TFT), flexible substrates and CMOS devices.



European Sales Office

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Taicang Production Site

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Wireless Radiography



Mars 1417X



Mars 1417F



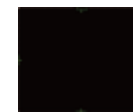
Mars 1717V



Mars 1417V



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Wireless Radiography



Mars 1417X

Mars 1417X is a best in class 14x17-inch wireless, cassette-sized flat panel detector for radiographic imaging. It features a 100 μm pixel pitch with direct deposition Csl. Cutting-edge technologies include a novel light-weight housing design with IP57 ingress protection, in-tray battery charging, and reliable, low power automatic exposure detection (AED). With its exceptional image quality the Mars 1417X is an excellent choice for high-end DR systems.

- Wireless cassette detector per ISO 4090, fits in bucky
- Full AED control, exposure at any time
- Best-in-class 100 μm pixel pitch with 16-bit ADC for more image details
- Large capacity battery design, with 8+ hours battery life
- Lightweight design with IP57 ingress protection
- Supports a fast workflow for a better user experience
- Direct deposition Csl, with excellent DQE at all frequencies

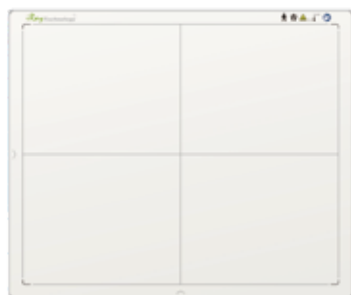


Mars 1417F

Mars 1417F is a new generation of high-performance 14x17 inch wireless static FPD, with more reliable AED function, more image details, and better battery endurance. Cutting-edge technologies, such as charge in tray, high-protection design, and lightweight structure, provide excellent solutions for high-end DR system.

- Full AED control
- 150 μm pixel pitch, with 16 bit ADC for more image details
- Longer battery life and smart workflow
- Lightweight design with IPX4 ingress protection
- Supports a fast workflow for a better user experience

Wireless Radiography



Mars 1717V / Mars 1417V

Mars 1717V / Mars 1417V is a smart 17×17 / 14×17-inch wireless, cassette-sized FPD for radiographic imaging. It features reliable AED, dependable wireless performance, and a long battery life. The Mars 1717V supports a fast work flow, and is the optimal choice for both retrofit and new DR system solutions.

- Wireless cassette detector per ISO 4090, fits in bucky
- Stable iSync+ Automatic Exposure Detection (AED)
- Long battery life and smart workflow
- Dual band (2.4 and 5 GHz) wireless support with easy sharing
- Direct deposition CsI for better image quality with lower dose



Mars 1012V

Mars 1012V is a best in class 10×12-inch wireless, cassette-sized FPD for radiographic imaging. It features a 125 µm pixel pitch with direct deposition CsI. Cutting-edge technologies include a novel light-weight housing design with IP57 ingress protection, in-tray battery charging, and reliable, low power AED. With its exceptional image quality the Mars 1012V is an excellent choice for high-end DR as well as neonatal applications.

- Wireless cassette detector per ISO 4090, fits in bucky
- Full AED control, exposure at any time
- Best-in-class 125 µm pixel pitch with 16-bit ADC for more image details
- Extended battery life with sleep mode
- Lightweight design with IP57 ingress protection
- Supports a fast workflow for a better user experience
- Direct deposition CsI, with excellent DQE at all frequencies

Wireless Radiography



Luna 1417X

Luna 1417X is a new generation, high-performance 14×17-inch wireless FPD developed on a flexible substrate. It features a 100 µm pixel pitch with direct deposition CsI. The cutting-edge flexible panel technology, features a strong, yet lightweight design with IP57 ingress protection, in-tray battery charging, and reliable, low power AED. With its exceptional image quality the Luna 1417X is an excellent choice for high-end DR systems.

- Wireless cassette detector per ISO 4090, fits in bucky
- Full AED control, exposure at any time
- Best-in-class 100 µm pixel pitch with 16-bit ADC for more image details
- Large capacity battery design, with 8+ hours battery life
- Lightweight design with IP57 ingress protection
- Supports a fast workflow for a better user experience
- Flexible panel substrate for ultimate strength
- Direct deposition CsI, with excellent DQE at all frequencies



Luna 1012V

Luna 1012V is a new generation, high-performance 10×12-inch wireless FPD developed on a flexible substrate. It features a 125 µm pixel pitch with direct deposition CsI. The cutting-edge flexible panel technology, features a strong, yet lightweight design with IP57 ingress protection, in-tray battery charging, and reliable, low power AED. With its exceptional image quality the Luna 1012V is an excellent choice for high-end DR systems.

- Wireless cassette detector per ISO 4090, fits in bucky
- Full AED control, exposure at any time
- Best-in-class 125 µm pixel pitch with 16-bit ADC for more image details
- Extended battery life with sleep mode
- Lightweight design with IP57 ingress protection
- Supports a fast workflow for a better user experience
- Flexible panel substrate for ultimate strength
- Direct deposition CsI, with excellent DQE at all frequencies

Technical Specifications

	Mars 1417X	Mars 1417F	Mars 1717V	Mars 1417V	Mars 1012V	Luna 1417X	Luna 1012V
Detector Technology	Amorphous Silicon	Amorphous Silicon	Amorphous Silicon	Amorphous Silicon	Amorphous Silicon	Flexible	Flexible
Scintillator	CsI	CsI	CsI	CsI	CsI	CsI	CsI
Active Area (mm ²)	350 × 430	350 × 425	427 × 427	346 × 420	250 × 300	350 × 430	250 × 300
Pixel Matrix	3500 × 4300	2336 × 2836	3072 × 3072	2304 × 2800	2000 × 2400	3500 × 4300	2000 × 2400
Pixel Pitch (μm)	100	150	139	150	125	100	125
Spatial Resolution (lp/mm)	5	3.3	3.6	3.3	4	5	4
AD Conversion (bit)	16	16	16	16	16	16	16
Battery Autonomy (h)	8.5	3.5	5	5	6	8.5	6
WIFI	2.4G and 5G IEEE802.11 a/b/g/n/ac	2.4G and 5G IEEE802.11 a/b/g/n/ac	2.4G and 5G IEEE802.11 a/b/g/n/ac	2.4G and 5G IEEE802.11 a/b/g/n/ac	2.4G and 5G IEEE802.11 a/b/g/n/ac	2.4G and 5G IEEE802.11 a/b/g/n/ac	2.4G and 5G IEEE802.11 a/b/g/n/ac
Trigger Mode	AED / Software	AED / Software	AED / Software	AED / Software	AED / Software	AED / Software	AED / Software
Full Image Time (s)	Typ.3	Typ.7	Typ.5	Typ.5	Typ.3	Typ.3	Typ.3
Dimensions (mm)	384 × 460 × 15	460 × 460 × 15	460 × 460 × 15	384 × 460 × 15	285 × 340 × 15	384 × 460 × 15	285 × 340 × 15
Weight (kg)	2.5	3	4.6	3.3	2	2	2
Static Loading (kg)	300 Uniformly	150 Uniformly	150 Uniformly	150 Uniformly	150 Uniformly	300 Uniformly	150 Uniformly
Ingress Protection	IP57	IPX4	IPX1	IPX1	IP57	IP57	IP57
Operating Temperature (°C)	5 ~ 40	5 ~ 30	5 ~ 35	5 ~ 35	5 ~ 40	5 ~ 40	5 ~ 40
Storage & Transport Temperature with Package (°C)	-20 ~ 70	-20 ~ 50	-20 ~ 55	-20 ~ 55	-20 ~ 70	-20 ~ 70	-20 ~ 70
Operating Humidity (% RH) (Non-Condensing)	10 ~ 90	10 ~ 80	10 ~ 90	10 ~ 90	10 ~ 90	10 ~ 90	10 ~ 90
Storage & Transport Humidity with Package (% RH) (Non-Condensing)	5 ~ 95	10 ~ 90	5 ~ 95	5 ~ 95	5 ~ 95	5 ~ 95	5 ~ 95

Tethered Radiography



Venu 1717X

Venu 1717X is a 17×17-inch, tethered cassette-sized FPD for radiographic imaging. It features a 139 μm pixel pitch with direct deposition CsI, and with a reliable AED enables a smart workflow. It is the optimal choice for a high-end DR system.

- Cassette detector per ISO 4090, fits in bucky
- 139 μm pixel pitch with 16 bit ADC for more image details
- Direct deposition CsI for better image quality with lower dose
- Stable iSync+ Automatic Exposure Detection (AED)
- Highly reliable, flexible tether
- Supports a fast and efficient workflow



Venu 1417X (in develop)

Venu 1417X is a best in class 14×17-inch, tethered cassette-sized FPD for radiographic imaging. It features a 100 μm pixel pitch with direct deposition CsI. Cutting-edge technologies include a novel light-weight housing design with IP57 ingress protection, in-tray battery charging, and reliable low power automatic exposure detection (AED). With its exceptional image quality the Venu 1417X is an excellent choice for high-end DR systems.

- Cassette detector per ISO 4090, fits in bucky
- 100 μm pixel pitch with 16-bit ADC for more image details
- Direct deposition CsI, with excellent DQE at all frequencies
- Stable iSync+ Automatic Exposure Detection (AED)
- Highly reliable, flexible tether
- Supports a fast and efficient workflow



Venu 1012V

Venu 1012V is a 10×12-inch, tethered cassette-sized FPD for radiographic imaging. It features a 125 μm pixel pitch with direct deposition CsI, and with a reliable AED enables a smart workflow. It is an excellent choice for various digital radiography applications, including podiatry and extremity imaging, as well as neonatal applications.

- Cassette detector per ISO 4090, fits in bucky
- 125 μm pixel pitch with 16 bit ADC for more image details
- Direct deposition CsI for better image quality with lower dose
- Stable iSync+ Automatic Exposure Detection (AED)
- Highly reliable, flexible tether
- Supports a fast and efficient workflow

Technical Specifications

	Venu 1717X	Venu 1417X (in develop)	Venu 1012V
Detector Technology	Amorphous Silicon	Amorphous Silicon	Amorphous Silicon
Scintillator	CsI	CsI	CsI
Active Area (mm ²)	427 × 427	350 × 430	250 × 300
Pixel Matrix	3072 × 3072	3500 × 4300	2000 × 2400
Pixel Pitch (μm)	139	100	125
Spatial Resolution (lp/mm)	3.6	5	4
AD Conversion (bit)	16	16	16
Data Interface	GigE	GigE	GigE
Trigger Mode	AED / Software / Prep	AED / Software	Inner
Preview Image Time (s)	3	1	3.5
Full Image Time (s)	5	3	7.5
Dimensions (mm)	460 × 460 × 15	384 × 460 × 15	285 × 340 × 15
Weight (kg)	4	2.5	2.5
Power Dissipation (W)	30	14	20
Operating Temperature (°C)	5 ~ 35	5 ~ 40	5 ~ 35
Storage & Transport Temperature with Package (°C)	-10 ~ 55	-20 ~ 70	-10 ~ 55
Operating Humidity (% RH) (Non-Condensing)	30 ~ 80	10 ~ 90	30 ~ 80
Storage & Transport Humidity with Package (% RH) (Non-Condensing)	10 ~ 90	5 ~ 95	10 ~ 90

Mammography



Mammo 1012J

Mammo 1012J is new generation, high-performance FPD developed with innovative IGZO sensor technology. This mammo cassette detector complies with ISO 4090 dimensions, and has an active area of 24×30 cm with a 85 μm pixel pitch. A tapered enclosure profile with a super slim 1.5 mm edge extends the field-of-view for improved chest wall coverage. The new IGZO sensor enables fast frame rate read-out, making it ideal for high-end full field digital mammography and digital tomosynthesis applications. The cassette size also makes it ideal for mammo digital retrofits.

- Mammo cassette detector per ISO 4090, fits in bucky
- Innovative IGZO image sensor provides high SNR with extended dynamic range
- 85 μm pixel pitch with 16-bit ADC
- 24×30 cm² imaging area
- Switchable gain settings for variable sensitivity
- Direct deposition CsI, with excellent DQE at all frequencies
- Tapered enclosure profile with a super slim 1.5 mm edge
- Full resolution imaging at 8 fps
- 10G Ethernet interface
- Specially designed for FFDM, Mag, Biopsy and DBT



Mammo 1012F

Mammo 1012F is an a-Si FPD featuring an 85μm pixel pitch. A tapered enclosure profile with a slim 1.85 mm edge extends the field-of-view for improved chest wall coverage. The Mammo 1012F is designed for both full field digital mammography and digital tomosynthesis applications.

- Specially designed for FFDM and DBT applications
- Superior image quality with lower dose
- 1.85mm super slim chest wall
- Excellent temperature / moisture tolerance
- Tomosynthesis capable

Technical Specifications

	Mammo 1012J	Mammo 1012F
Detector Technology	IGZO	Amorphous Silicon
Scintillator	CsI	CsI
Active Area (mm ²)	240 × 300	240 × 300
Pixel Matrix	2816 × 3528	2816 × 3528
Pixel Pitch (μm)	85	85
Spatial Resolution (lp/mm)	6	6
AD Conversion (bit)	16	14
Data Interface	10G Ethernet	GigE
Trigger Mode	Outer / Software	Outer / Software
Sensitivity (LSB/μGy)	> 20	5.5
Maximum Linear Dose (μGy)	> 2800	2800
Minimum Detectable Dose (μGy)	0.3	0.5
Dimensions (mm)	254 × 328 × 15	333 × 300 × 35
Power Supply	DC 24V	DC 24V
Weight (kg)	≤ 3	3.8
Power Dissipation (W)	≤ 20	24
Operating Temperature (°C)	10 ~ 40	10 ~ 40
Storage & Transport Temperature with Package (°C)	-10 ~ 55	-10 ~ 55
Operating Humidity (% RH) (Non-Condensing)	10 ~ 90	10 ~ 90
Storage & Transport Humidity with Package (% RH) (Non-Condensing)	10 ~ 95	10 ~ 95

Fluoroscopy



Jupi 1717X

Jupi 1717X is new generation FPD developed with innovative IGZO sensor technology for real-time imaging. The 17×17-inch provides excellent low-dose imaging at frame rates up to 90 fps. When integrated into a fluoroscopic X-ray system, it can be used in both general radiography, fluoroscopy and CBCT for gastrointestinal, urology, orthopedics, angiography, or 3D cone beam CT applications.

- Innovative IGZO image sensor provides low noise, high SNR with an extended dynamic range
- Extremely low clinical dose at high DQE
- Less than 2.5% first frame lag
- Switchable gain settings for variable sensitivity
- High frame rate capable at 30 fps in full resolution, 60 fps in 2×2, and 90 fps in 3×3
- Magnification modes with selectable field-of-view (15×15 cm², 23×23 cm²)



Mercu 1717V

Mercu 1717V is an a-Si FPD designed for real-time imaging. The 17×17-inch image sensor has direct deposition CsI, which provides excellent low-dose imaging at frame rates up to 30 fps. When integrated into a fluoroscopic X-ray system, it can be used in both general radiography, fluoroscopy and CBCT for gastrointestinal, urology, orthopedics or 3D cone beam CT applications.

- Real-time imaging at 10 fps in full resolution, 20 fps in 2×2, and 30 fps in 3×3
- a-Si sensor with direct deposition CsI
- Distortion-free imaging with high SNR
- Switchable gain settings for variable sensitivity
- Designed for low-dose fluoroscopic imaging
- Excellent low-dose performance



Jupi 1212X

Jupi 1212X is new generation FPD developed with innovative IGZO sensor technology for real-time imaging. The 12×12-inch low noise IGZO image sensor has direct deposition CsI, which provides excellent low-dose imaging at frame rates up to 90 fps. When integrated into a fixed or mobile C-arm fluoroscopic X-ray system, it is the optimal choice for interventional procedures in cardiac, neuro and general angiography.

- Innovative IGZO image sensor provides low noise, high SNR with an extended dynamic range
- Extremely low clinical dose at high DQE
- Less than 2.5% first frame lag
- Switchable gain settings for variable sensitivity
- High frame rate capable at 45 fps in full resolution, and 90 fps in 2×2
- Magnification modes with selectable field-of-view (15×15 cm², 23×23 cm²)



Mercu 0909F

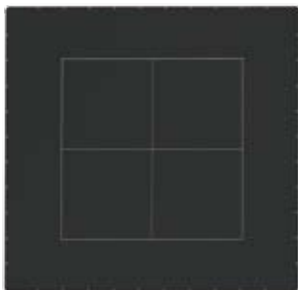
Mercu 0909F is an a-Si FPD designed for real-time imaging. The 9×9-inch image sensor has direct deposition CsI, which provides excellent low-dose imaging at frame rates up to 60 fps. When integrated into a fixed or mobile C-arm fluoroscopic X-ray system, it is ideal for cardiac, vascular or surgical applications.

- 30 fps in full resolution and 60 fps in 2×2
- a-Si sensor with direct deposition CsI
- Distortion-free imaging with high SNR
- Switchable gain settings for variable sensitivity
- 21×21 cm² imaging area with a 205 μm pixel pitch

Technical Specifications

	Mercur 0909F	Jupi 1212X	Mercur 1717V	Jupi 1717X
Detector Technology	Amorphous Silicon	IGZO	Amorphous Silicon	IGZO
Scintillator	CsI	CsI	CsI	CsI
Active Area (mm ²)	210 × 210	307 × 307	427 × 427	427 × 427
Pixel Matrix	1024 × 1024	2048 × 2048	3072 × 3072	3072 × 3072
Pixel Pitch (μm)	205	150	139	139
Spatial Resolution (lp/mm)	2.5	3.3	3.6	3.6
AD Conversion (bit)	16	16	16	16
Frame Rate (fps)	30 (1×1) 60 (2×2)	45 (1×1) 90 (2×2) 135 (3×3)	10 (1×1) 20 (2×2) 30 (3×3)	30 (1×1) 60 (2×2) 90 (3×3)
Data Interface	GigE	10G Ethernet	Optical Fiber	Optical Fiber
Dimensions (mm)	270 × 275 × 54	337 × 327 × 55	470 × 470 × 35	470 × 470 × 35
Weight (kg)	5.5	< 9	≤ 7.8	10
Power Dissipation (W)	15	< 20	25	≤ 30
Operating Temperature (°C)	10 ~ 35	10 ~ 35	10 ~ 35	10 ~ 35
Storage & Transport Temperature with Package (°C)	-10 ~ 55	-10 ~ 55	-10 ~ 50	-10 ~ 55
Operating Humidity (% RH) (Non-Condensing)	20 ~ 90	20 ~ 90	20 ~ 90	20 ~ 90
Storage & Transport Humidity with Package (% RH) (Non-Condensing)	10 ~ 90	10 ~ 90	10 ~ 95	10 ~ 90

Radiation Therapy



Mercu 1717A

The Mercu 1717A is a radiation hard FPD for real-time kV imaging. An a-Si sensor with direct deposition CsI provides excellent CNR for integration with radiotherapy or radiosurgery systems in IGRT applications.

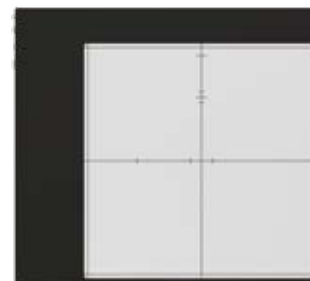
- Proven radiation-hard a-Si sensor design
- 43 × 43cm² imaging area
- 278 μm pixel pitch with 14-bit ADC
- High SNR with frame rates up to 4 fps
- Switchable gain settings for variable sensitivity
- Gigabit Ethernet interface
- Direct deposition CsI scintillator



Mercu 1616TE

The Mercu 1616TE is a radiation hard FPD for real-time high-energy imaging. With a wide energy range up to 15 MV and high dynamic range, it is suitable for Linac integration in radiotherapy or radiosurgery applications, or with proton therapy systems.

- Proven radiation-hard a-Si sensor design
- 41 × 41cm² imaging area
- 200 μm pixel pitch
- 16-bit ADC for high dynamic range
- Switchable gain settings for variable sensitivity
- Binning at 2 × 2 and 4 × 4
- Fast read-out up to 30 fps in 4 × 4 mode
- Gigabit Ethernet interface
- Trigger circuitry for synchronization with Linac
- X-ray energies up to 15 MV



Mercu 1616VE

The Mercu 1616VE is a radiation hard FPD for real-time kV imaging. An a-Si sensor with direct deposition CsI and 16 bit ADC provides high dynamic range and excellent CNR making it ideal for integration with radiotherapy or radiosurgery systems for CBCT and IGRT applications.

- Proven radiation-hard a-Si sensor design
- 41 × 41cm² imaging area
- 200 μm pixel pitch
- 16-bit ADC for high dynamic range
- Switchable gain settings for variable sensitivity
- Binning at 2 × 2 and 4 × 4
- Fast read-out up to 30 fps in 4 × 4 mode
- Gigabit Ethernet interface
- Direct deposition CsI scintillator

Technical Specifications

	Mercu 1717A	Mercu 1616TE	Mercu 1616VE
Detector Technology	Amorphous Silicon	Amorphous Silicon	Amorphous Silicon
Scintillator	CsI	PI200 / DRZ-Plus	CsI
Active Area (mm ²)	427 × 427	410 × 410	410 × 410
Pixel Matrix	1536 × 1536	2048 × 2048	2048 × 2048
Pixel Pitch (μm)	278	200	200
AD Conversion (bit)	14	16	16
Frame Rate (fps)	5	7.5 (1 × 1) 15 (2 × 2) 30 (4 × 4)	7.5 (1 × 1) 15 (2 × 2) 30 (4 × 4)
Data Interface	GigE	GigE	GigE
Dimensions (mm)	680 × 700 × 44	500 × 560 × 22	500 × 560 × 22
Weight (kg)	22	7.5	7.5
Power Dissipation (W)	30	25	25
Operating Temperature (°C)	10 ~ 35	10 ~ 35	10~35
Storage & Transport Temperature with Package (°C)	-10 ~ 55	-10 ~ 55	-10~55
Operating Humidity (% RH) (Non-Condensing)	10 ~ 70	20 ~ 90	20~90
Storage & Transport Humidity with Package (% RH) (Non-Condensing)	10 ~ 70	10 ~ 90	10~90

Software iRay DR

iRay DR software is an advanced digital image acquisition system solution which works with iRay wireless and tethered digital radiography detectors. It is designed to automate the image acquisition and provide advanced image processing features.

iRay DR software simplifies the clinical workflow, and provides diagnostic images for review by radiologists. iRay DR supports the following key features.



1/ FlyViewer Remote Diagnostic Viewer

The FlyViewer application can query images from a PACS server, and initiate remote diagnostic activities.



4/ Virtual Grid

iRay DR iGrid algorithm provides a virtual anti-scatter grid, by enhancing the contrast of the captured image.



2/ Advanced Post-processing

iRay DR Symphony algorithm performs advanced for-presentation image processing for enhancement, noise reduction and image sharpness to improve visualization of small details. Look-up-table algorithms are used to improve overall contrast and to display the full dynamic range of the captured image.



5/ Multi-language Support

iRay DR supports multiple languages, including Chinese, English, German, Spanish, Portuguese, Russian and French.



3/ Image Stitching

Advanced image stitching technologies combine multiple partially overlapping images into a single clinical image.



6/ Emergency Mode

iRay DR emergency mode allows the X-ray technician to initiate an exam, and complete the patient information at the conclusion of the study.



Technology

Amorphous Silicon (a-Si) Sensor

An amorphous silicon (a-Si) image sensor for X-ray imaging consists of a two-dimensional pixelated structure. Each pixel contains a switching thin-film transistor (TFT) and a light sensitive photodiode. Both these elements are fabricated with a-Si through a photolithography process onto a large area glass substrate.



Flexible Sensor

A flexible image sensor for X-ray imaging consists of a two-dimensional structure, in which both the TFTs and photodiodes are fabricated on a flexible substrate. This enables the development of thin, lightweight, bendable and extraordinarily rugged portable X-ray detectors.



CsI Scintillator

Many iRay detectors use cesium iodide doped with thallium (CsI:Tl) as a scintillator. The CsI:Tl is evaporated directly onto the sensor array, and is therefore in direct contact with the light sensing pixel elements. The needle like structure of directly deposited CsI acts as light fibers, hereby preventing lateral spread of light, and improving the Modulation Transfer Function (MTF).



IGZO Sensor

An Indium-Gallium-Zinc-Oxide (IGZO) image sensor for X-ray imaging consists of a two-dimensional structure, in which each pixel contains a switching thin-film transistor (TFT) fabricated with IGZO and a light sensitive photodiode fabricated with a-Si onto a large area glass substrate. The IGZO TFT has both higher on-current and lower off-current than traditional a-Si TFTs. This enables faster read-out for higher frame rates, smaller pixels for better resolution, lower noise for improved low dose DQE, and less leakage for higher dynamic range.



CMOS Sensor

Unlike a-Si sensors, which are fabricated on glass, Complementary Metal–Oxide–Semiconductor (CMOS) sensors are developed on silicon wafers. The much higher charge mobility of crystalline silicon (c-Si) versus a-Si results in image sensors that provide higher read-out speed and significantly lower electronic noise. This makes CMOS sensors particularly suitable for low dose fluoroscopic imaging as the low dose detective quantum efficiency (DQE) is better than with a-Si detectors. In addition the CMOS design enables the integration of both row scanning and read-out circuitry within the sensor.



Full Field Automatic Exposure Detection (AED)

Full field Automatic Exposure Detection (AED) uses the active area of the image sensor to detect X-rays. It will trigger the detector for image acquisition without having to electrically interface it with the X-ray generator. The iRay AED has immunity against interference sources to avoid false triggers, while the full field detection ensures high sensitivity without missed trigger events.



On-board Image Correction

iRay detectors are equipped with on-board image correction technology which include defective pixel and image uniformity corrections, and results in optimal image quality.



High Speed and Stable WiFi

iRay uses state-of-art wireless technology supporting high throughput communication, and optimized connectivity between the detector and any acquisition workstation or mobile device. WiFi communication is supported on both the 2.4 and 5 GHz bands. This enables truly portable detectors with ease of sharing between X-ray rooms.



Uninterruptible Power Supply (UPS)

iRay detectors can be supported by an Uninterruptible Power Supply (UPS). This can eliminate the need for power down during a battery exchange, or the risk of interrupting an X-ray exam in case of a power loss.





China

Shanghai Headquarter

iRay Technology Company Limited

Building 45, No.1000, Jinhai Road, Pudong

New Area, Shanghai , China 201206

Tel: +86-21-5072 0560

Fax: +86-21-5072 0561

Email: market@iraygroup.com

Taicang Facility

iRay Technology Taicang Limited

No. 33, Xinggang Road, Taicang Port Economic

and Techn. Devel. Zone, Taicang City, Jiangsu

Province, China 215400

Korea

iRay Korea Limited

1820, 18F, 5, Gasan digital 1-ro, Geumcheon-gu,

Seoul, Republic of Korea 08594

Tel: +82-2-6335-6333

Fax: +82-2-6335-6334

Email: market@iraykorea.com

Europe

iRay Europe GmbH

In den Dorfwiesen 14

71720 Oberstenfeld, Germany

Tel: +49-7062-977 8800

Fax: +49-7062-976 0571

Email: sales@irayeurope.com