



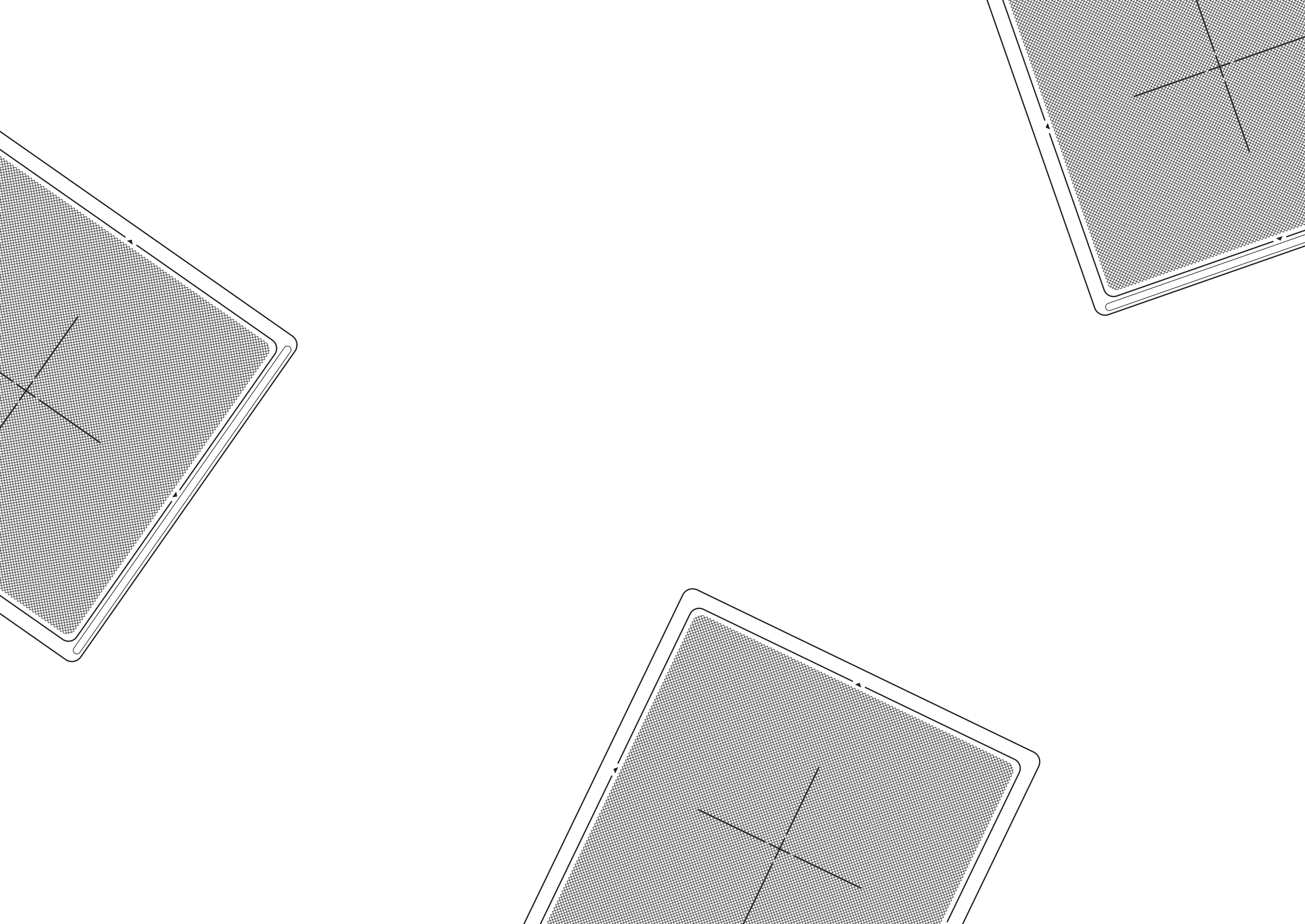
www.rayence.com

Flat Panel Detector
rayence

Global Digital X-ray Imaging Solution Provider

rayence

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vatech

A GLOBAL LEADING
HEALTHCARE GROUP

rayence _ Global Digital X-ray Imaging Solution Provider

rayence

Global Digital X-ray Imaging Solution Provider

One and only
manufacturer

Both TFT and
CMOS Detectors



From design and material
processing to system

End to End Total
Solution Provider



No.1 manufacturer
of intraoral sensor

Capacity and
Volume of Sales



rayence

Product Map

General Radiography



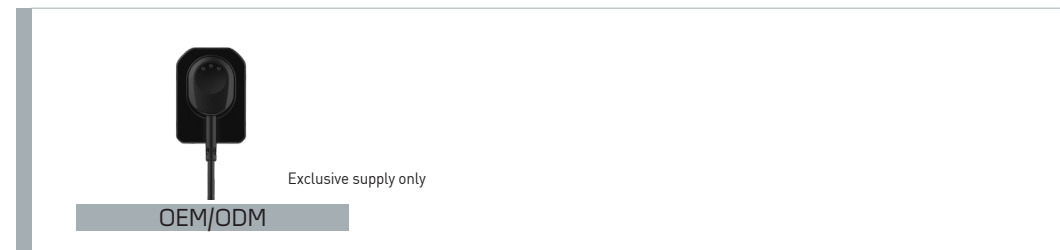
Surgical C-Arm



Mammography

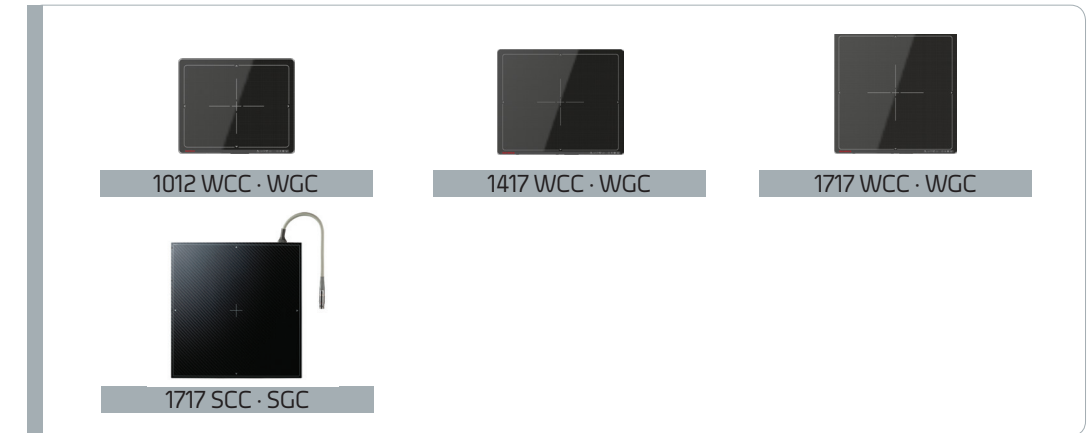


Intraoral



The manufacture reserves the right to change product images and Features without notice.

Veterinary



Industrial

CMOS

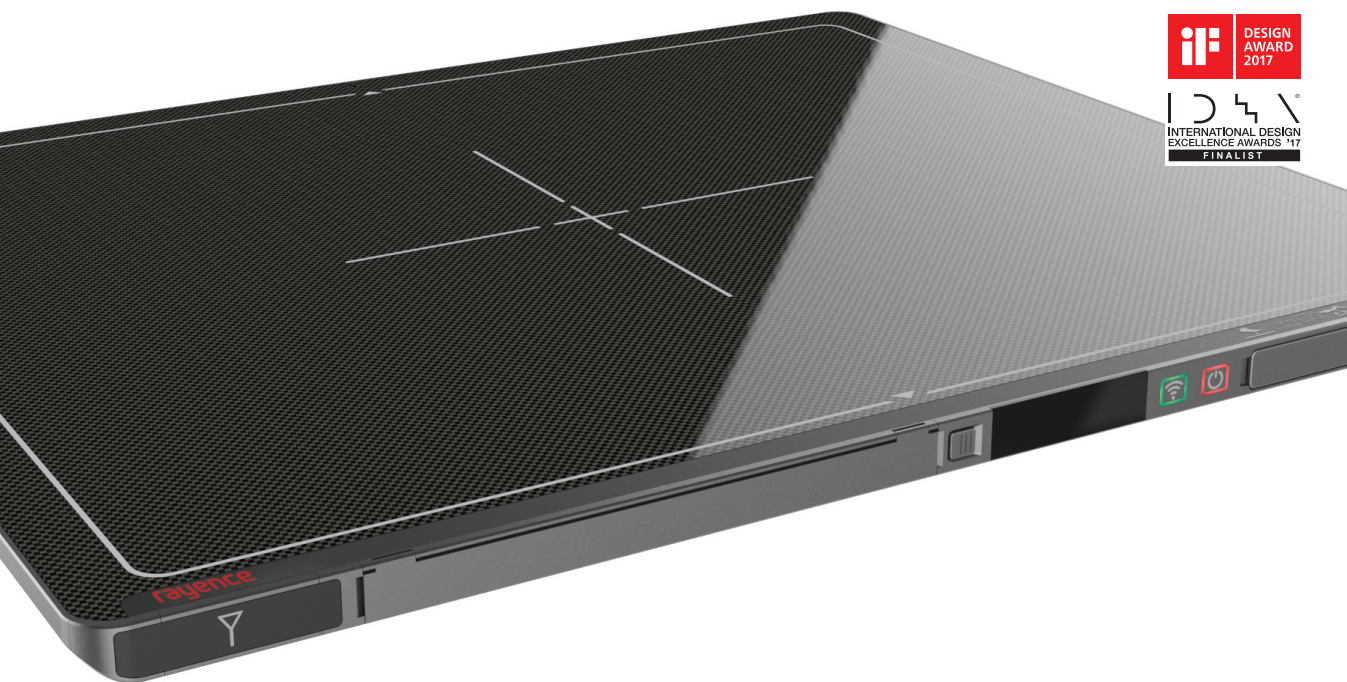


TFT



The manufacture reserves the right to change product images and Features without notice.

1012 WCC • WGC
1417 WCC • WGC
1717 WCC • WGC



by Clear ON™ Technology 1.0



Requires approximately 30% less dose than previous detectors

Better image quality with improved SNR



ISO 4090



ERGONOMIC DESIGN



WATER RESISTANT



LIGHT WEIGHT

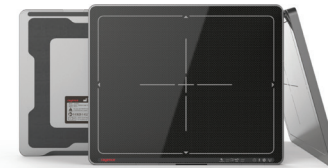


DURABILITY

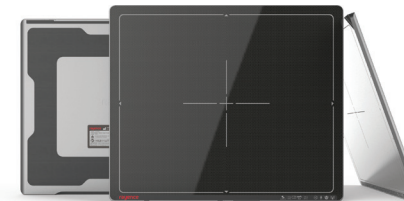


General Radiography

TFT Detector
rayence 1012 WCC • WGC



TFT Detector
rayence 1417 WCC • WGC



TFT Detector
rayence 1717 WCC • WGC



Performance

- Scintillator: CsI / GOS
- Pixel pitch: 127 / 140 μm
- Energy range: 40~150 kVp
- (*1012WCC · WGC is available only 127μm)

Features

- IP66 water resistant
- Pressure: Distributed 300 kg / Point 150 kg
- Thin (15 mm) and lightweight
- Image Storage: 200 Images
- 802.11ac Wi-Fi: high-speed image transmission
- OLED: Display the various status of detector (ex. battery charging & condition, wireless status and so on)

Accessory

- Battery Charger
- Rechargeable lithium ion battery



Option

- IrDA
- An interface device that allows a single detector to be shared in multiple rooms



EASY DRIVE



EASY SYNC

Easy Drive

Easy Sync

- Rayence's new algorithm
- Anti-scatter no grid
- Use a mobile device to view the taken image conveniently
- Image taking without order
- Advanced auto x-ray detection
- No error with auto-trigger

General Radiography

TFT Detector
rayence 1210 SGA



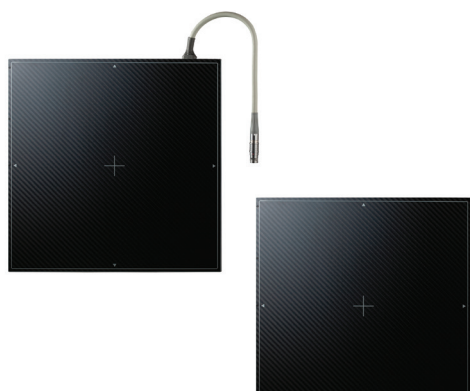
Performance

- Scintillator: GOS
- Pixel pitch: 127 μm
- Energy range: 40~150 kVp

Features

- Specialized in podiatry
- Advanced auto x-ray detection
- No error with auto-trigger

TFT Detector
rayence 1717 SCC • SGC



ISO
4090

ISO 4090



LARGE AREA



EASY SYNC

Performance

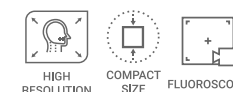
- Scintillator: CsI / GOS
- Pixel pitch: 127 / 140 μm
- Energy range: 40~150 kVp

Features

- Improved workflow
- 1.5 sec preview time
- Large format, affordable solution

Surgical C-Arm

CMOS Detector
rayence 0606 FCA



HIGH
RESOLUTION

COMPACT
SIZE

FLUOROSCOPY

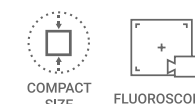
Performance

- Scintillator: CsI
- Pixel pitch: 99 μm
- Energy range: 40~150 kVp
- Frame rate: GigE • C-Link
30 fps (@1x1) / 96 fps (@2x2)

Features

- Fine pixel pitch
- High sensitivity
- Fast readout time properties

CMOS Detector
rayence 0909 FCA



COMPACT
SIZE

FLUOROSCOPY

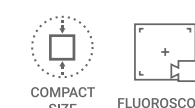
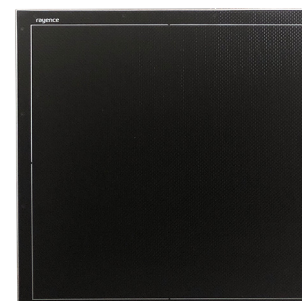
Performance

- Scintillator: CsI
- Pixel pitch: 180 μm
- Energy range : 40~150 kVp
- Frame rate: GigE • C-Link
33 fps (@1x1) / 75 fps (@2x2)

Features

- Lag free
- High sensitivity
- Fast readout time properties

TFT Detector
rayence 1212 FCA



COMPACT
SIZE

FLUOROSCOPY

Performance

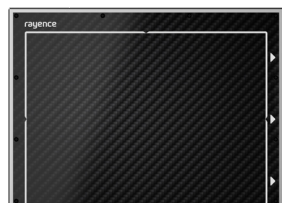
- Scintillator: CsI
- Pixel pitch: 194 μm
- Energy range: 40~150 kVp
- Frame rate: GigE
18 fps (@1x1) / 36 fps (@2x2)

Features

- Better image at lower dose
- Lower noise and fast readout time
- The next-generation technology IGZO TFT

Mammography

CMOS Detector rayence 1724 MCA



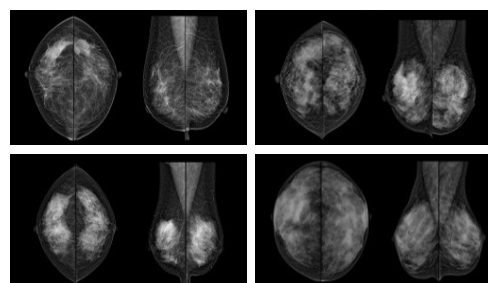
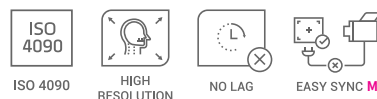
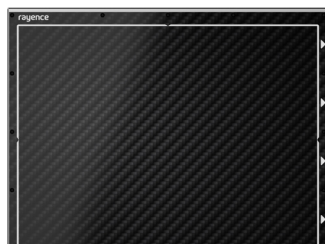
Performance

- Scintillator: CsI
- Pixel pitch: 70 μm
- Energy range: 10~40 kVp
- Frame rate: GigE • C-Link
4.5 fps (@1x1) / 14.7 fps (@2x2)

Features

- ISO 4090 compatible
- Low patient dose
- Wide dynamic range
- High resolution for Retrofit Mammo
- High DQE (Detective Quantum Efficiency)

CMOS Detector rayence 2430 MCA



▲ Digital Mammography Image

Performance

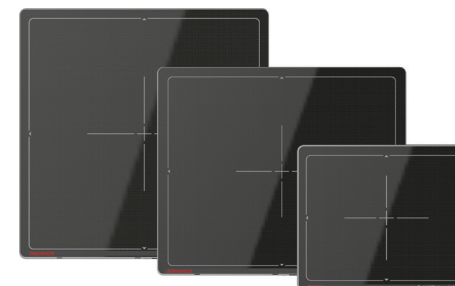
- Scintillator: CsI
- Pixel pitch: 70 μm
- Energy range: 10~40 kVp
- Frame rate: GigE • C-Link
3.7 fps (@1x1) / 12.9 fps (@2x2)

Features

- ISO 4090 compatible
- Low patient dose
- Wide dynamic range
- High resolution for Retrofit Mammo
- High DQE (Detective Quantum Efficiency)

Veterinary

TFT Detector rayence 1012 • 1417 • 1717 WCC • WGC



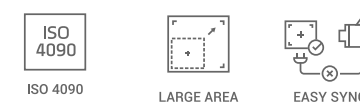
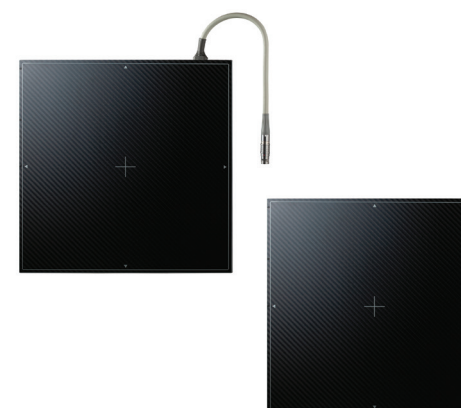
Performance

- Scintillator: CsI / GOS
- Pixel pitch: 127 / 140 μm
- Energy range: 40~150 kVp
(*1012WCC • WGC is available only 127 μm)

Features

- IP66 water resistant
- Pressure: Distributed 300 kg / Point 150 kg
- Thin (15 mm) and lightweight
- Image Storage: 200 Images
- 802.11ac Wi-Fi: high-speed image transmission
- OLED: Display the various status of detector
(ex. battery charging & condition, wireless status and so on)

TFT Detector rayence 1717 SCC • SGC



Performance

- Scintillator: CsI / GOS
- Fine pixel size: 127 / 140 μm
- Energy range: 40~150 kVp

Features

- Improved workflow
- 1.5 sec preview time
- Large format, affordable solution

Industrial / Cabinet

CMOS Detector
rayence 0505 A



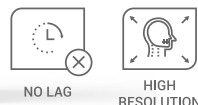
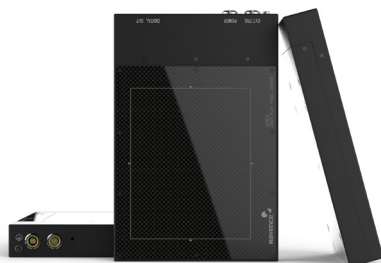
Performance

- Scintillator: CsI / GOS
- Pixel pitch: 49.5 μm
- Frame rate: GigE • C-Link
30 fps (@1x1) / 100 fps (@2x2)
- Energy range: 40~160 kVp
- A/D conversion: 14 bit
- Resolution: 10 lp/mm

Features

- High dynamic range
- Low dose with High resolution (49.5 μm)
- Fast readout without data loss

CMOS Detector
rayence 1215 A



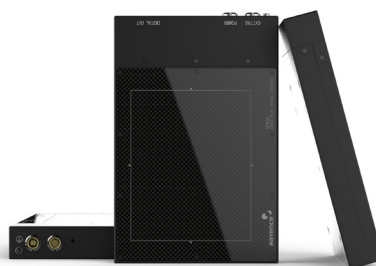
Performance

- Scintillator: CsI / GOS
- Pixel pitch: 49.5 μm
- Frame rate: GigE : 8 fps (@1x1) / 32 fps (@2x2)
C-Link : 10 fps (@1x1) / 37 fps (@2x2)
- Energy range: 40~225 kVp
- A/D conversion: 14 bit
- Resolution: 10 lp/mm

Features

- High energy range
- Fast readout without data loss

CMOS Detector
rayence 1215 FCB•FGB



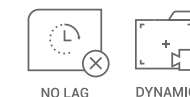
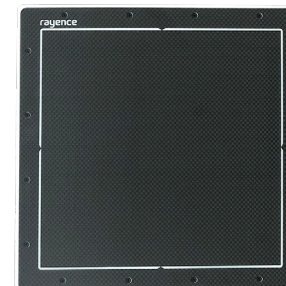
Performance

- Scintillator: CsI / GOS
- Pixel pitch: 49.5 μm
- Frame rate: GigE : 8 fps (@1x1) / 32 fps (@2x2)
C-Link : 10 fps (@1x1) / 37 fps (@2x2)
- Energy range: 40~160 kVp
- A/D conversion: 14 bit
- Resolution: 10 lp/mm

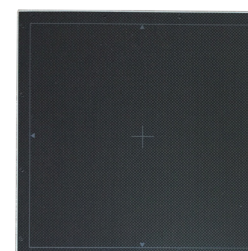
Features

- Various scintillator option available
- High sensitivity & High DQE at low dose

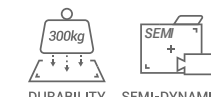
CMOS Detector
rayence 2020 FCA•FGA



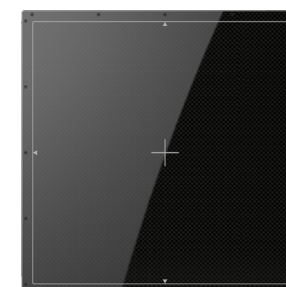
TFT Detector
rayence 1212 DCA•DGA (30 x 30 cm)



TFT Detector
rayence 0412 DGA



TFT Detector
rayence 1717 DGA (43 x 43 cm)



Performance

- Scintillator: CsI / GOS
- Pixel pitch: 180 μm
- Frame rate: GigE • C-Link
33 fps (@1x1) / 75 fps (@2x2)
- Energy range: 40~160 kVp
- A/D conversion: 16 bit
- Resolution: 2.7 lp/mm

Features

- High radiation tolerance
- High speed

Performance

- Scintillator: CsI / GOS
- Pixel pitch: 194 μm
- Frame rate: GigE
18 fps (@1x1) / 36 fps (@2x2)
- Energy range: 40~330 kVp
- A/D conversion: 14 / 16 bit
- Resolution: 2.5 lp/mm

Features

- The next-generation technology IGZO TFT
- High radiation tolerance

Performance

- Scintillator: GOS
- Pixel pitch: 127 μm
- Frame rate: GigE
6 fps (@1x1)
- Energy range: 40~330 kVp, Ir-192
- A/D conversion: 14 / 16 bit
- Resolution: 3.9 lp/mm

Features

- Optimized for pipe inspection

Performance

- Scintillator: GOS
- Pixel pitch: 127 μm
- Frame rate: GigE
1.5 fps (@1x1)
- Energy range: 40~150 kVp
- A/D conversion: 14 / 16 bit
- Resolution: 3.9 lp/mm

Features

- Affordable solution with essential features
- Large area

Industrial / Portable

TFT Detector
rayence 0412 WGB



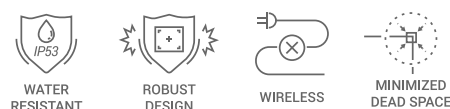
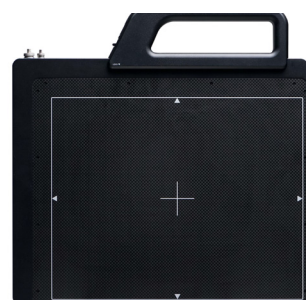
Performance

- Scintillator: GOS
- Pixel pitch: 127 μm
- Energy range: 40~330 kVp, Ir-192
- A/D conversion: 14 / 16 bit
- Resolution: 3.9 lp/mm

Features

- IP 65
- High energy range (40~330 kVp, Ir-192)
- Wireless products considering mobile environment
- Suitable for Pipe Inspection
- Removable handle

TFT Detector
rayence 1012 WGB



Performance

- Scintillator: CsI / GOS
- Pixel pitch: 127 μm
- Energy range: 40~330 kVp, Ir-192
- A/D conversion: 14 / 16 bit
- Resolution: 3.9 lp/mm

Features

- IP 53
- Light weight
- High energy range (40~330 Kvp, Ir-192)
- Wireless products considering mobile environment
- Minimized dead space

TFT Detector
rayence 1417 WGB



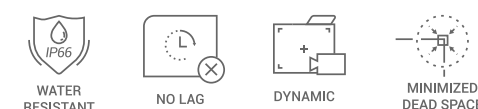
Performance

- Scintillator: CsI / GOS
- Pixel pitch: 127 μm
- Energy range: 40~330 kVp, Ir-192
- A/D conversion: 14 / 16 bit
- Resolution: 3.9 lp/mm

Features

- IP 53
- High energy range (40~330 Kvp, Ir-192)
- Wireless products considering mobile environment
- Minimized dead space

TFT Detector
rayence 1212 D



Performance

- Scintillator: CsI / GOS
- Pixel pitch: 194 μm
- Energy range: 40 kVp~15 MeV
- Frame rate: GigE
18 fps (@1x1) / 36 fps (@2x2)

Features

- IP 66
- The next-generation technology IGZO TFT
- Optimized for industrial environments
- Removable handle

Small Sensor for Dental, Vet and Industrial

CMOS Detector
rayence I/O Sensor for OEM/ODM



ERGONOMIC
DESIGN



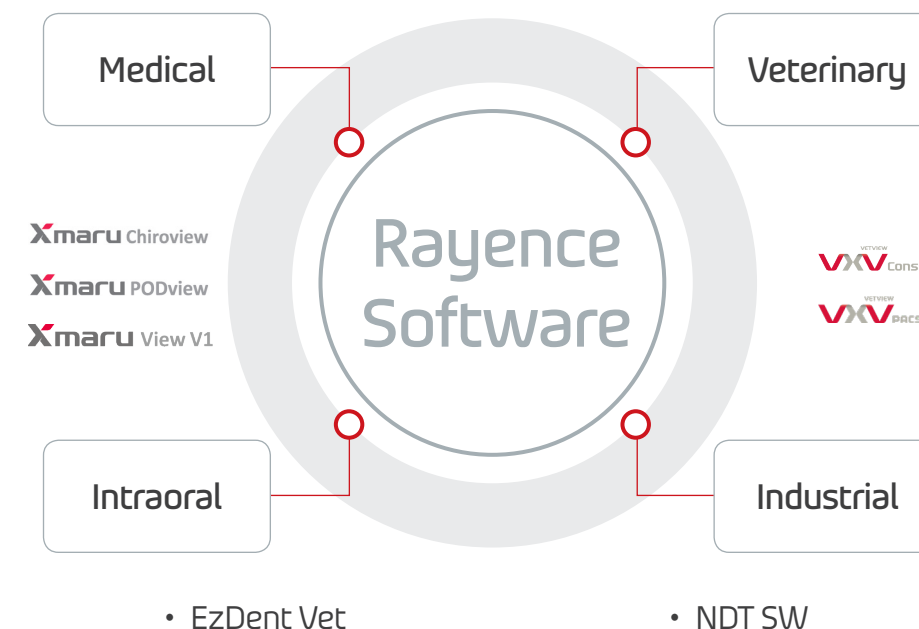
HIGH-QUALITY
IMAGE

Performance

For new dental, medical and Industrial applications, we can offer custom designs that leverage our key knowledge in sensors, scintillators, custom packaging and high volume manufacturing.

- Available ODM/OEM and parts supply

X-ray Imaging Solutions



Storage Viewer

Possible to view 'Acquired Image' in real time wirelessly with a mobile device

New Engine

'ClearOn' is effectively processing of image

Launching the Mobile Console

Developed software program with surface pro based Window OS

Segmentation App.

For medical, veterinary, Intraoral, NDT application

[Basic Functions]

- DICOM file management
- DICOM 3.0 compliant
- Transmits images to PACS server
- DICOM printing
- DICOM worklist
- CD burning with CD viewer
- Image magnification
- Displays studied images side-by-side
- Measuring the length and angles of the image
- Adding annotation text, graphics and electronic markers to an image
- Data backup & restore

X-ray Imaging Solutions for Users



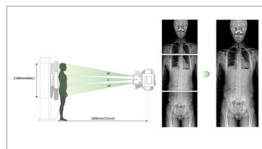
Intuitive GUI



Smart Guide

Console

- A simple tutorial that aids users in learning how to use measurement tools.
- Dedicated software for chiropractors.



Auto Stitching

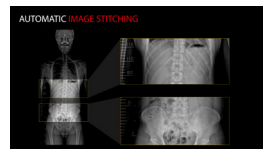
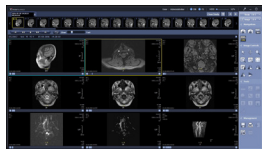
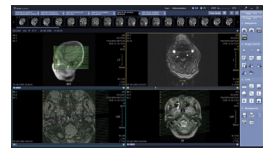


Image Processing



Scout Line View



Function 1.

Mini PACS

- Optimized for small and medium sized hospital.
- Works with a single server.
- A simple user interface makes images searches easier through PACS.



Function 2.



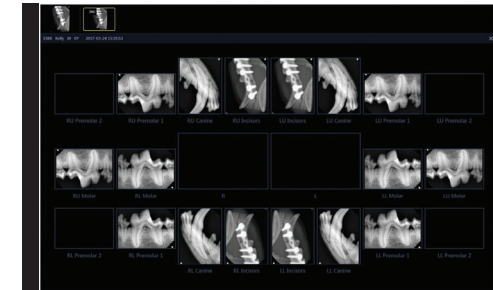
Function 3.

Easy Drive



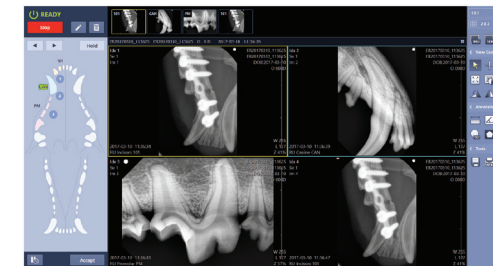
Software

Software rayence EzDent Vet

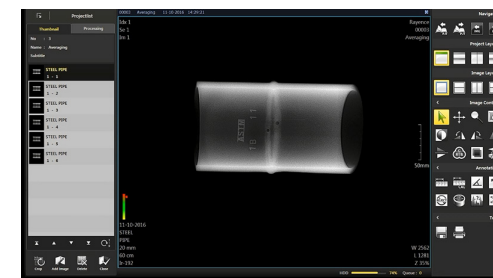


Features

- Veterinary images to help Dental Imaging that stores, analyze and diagnose veterinary images.
- Imports images from other digital sources.
- Full mouth X-ray screen

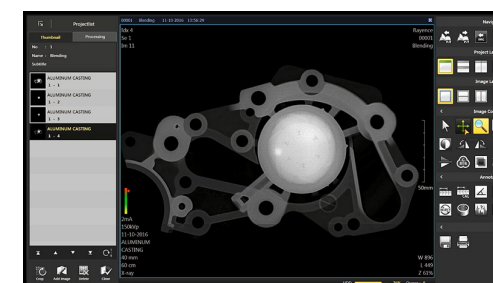


Industrial Software rayence NDT S/W



Features

- Averaging:
Image noise reduction
- Blending:
Confirming the difference between levels
- Line Profile:
Merging CR's standard as performance evaluation element with DR



General Radiography • Veterinary

Surgical C-Arm

Mammography

1012WCC•WGC	1417WCC•WGC	1717WCC•WGC	1717SCC•SGC	1210SGA
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0606FCA	0909FCA	1212FCA	1724MCA	2430MCA
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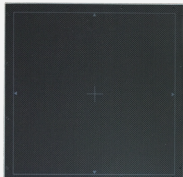
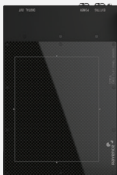
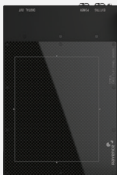
Sensor Type	TFT	TFT	TFT	TFT	TFT
Dimension	328x268x15 mm	460x384 x15 mm	460x460x15 mm	460x460x15.5 mm	402x364x32 mm
Active Area	292.6x227.6mm	127: 422.7x357.6 mm 140: 350.0x427.3 mm	127: 422.7x422.7 mm 140: 430.1x430.1 mm	127: 422.7x422.7 mm 140: 430.1x430.1 mm	325x260 mm
Weight	1.8 kg	3 kg	3.5 kg	4.0 kg	2.5 Kg
Scintillator	CsI / GOS	CsI / GOS	CsI / GOS	CsI / GOS	GOS
Pixel Pitch	127 μm	127 / 140 μm	127 / 140 μm	127 / 140 μm	127 μm
Active Pixel Matrix	2304x1792	127: 3328x2816 140: 2500x3052	127: 3328x3328 140: 3072x3072	127: 3328x3328 140: 3072x3072	2560x2048
Resolution	3.9 lp/mm	3.9 lp/mm 3.5 lp/mm	3.9 lp/mm 3.5 lp/mm	3.9 lp/mm 3.5 lp/mm	3.9 lp/mm
Energy Range	40~150 kVp	40~150 kVp	40~150 kVp	40~150 kVp	40~150 kVp
A/D Conversion	14/16 bit	14/16 bit	14/16 bit	14/16 bit	14/16 bit
Data Interface	GigE 802.11 a/g/n/ac	GigE 802.11 a/g/n/ac	GigE 802.11 a/g/n/ac	GigE	GigE
IP Grade	66	66	66	N/A	N/A
Battery Operating Time	Typ. 4.5	Typ. 4.5	Typ. 4.5	N/A	N/A
Image Acquisition (Preview)	≤ 2 sec	≤ 2 sec	≤ 2 sec	≤ 2 sec	≤ 2 sec

Sensor Type	CMOS	CMOS	TFT	CMOS	CMOS
Dimension	190x197x48 mm	245x245x55 mm	334x326x50 mm	267.5x194.5x14.2 mm	253.7x327.5x14.2 mm
Active Area	155.2x145.7 mm	201.6x201.6 mm	298x298 mm	166.9x231.8 mm	231x304 mm
Weight	2.5 kg	3.2 kg	2.7 kg	1.3 kg	TBD
Scintillator	CsI	CsI	CsI	CsI	CsI
Pixel Pitch	99 μm	180 μm	194 μm	70 μm	70 μm
Active Pixel Matrix	1568x1472	1120x1120	1536x1536	2384x3312	3312x4344
Resolution	5.0 lp/mm	2.7 lp/mm	2.5 lp/mm	7.1 lp/mm	7.1 lp/mm
Energy Range	40~150 kVp	40~150 kVp	40~150 kVp	10~40 kVp	10~40 kVp
A/D Conversion	14 bit	14/16 bit	14/16 bit	14 bit	14 bit
Data Interface	GigE / C-Link	GigE / C-Link	GigE	GigE	GigE
Frame Rate	(@GigE) 1x1: 30 fps 2x2: 86 fps (@C-Link) 1x1: 30fps 2x2: 94fps	1x1: 33 fps 2x2: 75 fps	1x1: 18 fps 2x2: 36 fps	1x1: 4.5 fps 2x2: 14.7 fps	1x1: 3.7 fps 2x2: 12.9 fps

Industrial

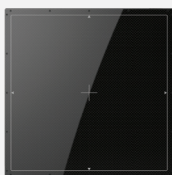
Industrial

0505A	1215A	1215FCB•FGB	2020FCA•FGA	1212DCA•DGA
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Sensor Type	CMOS	CMOS	CMOS	CMOS	TFT
Dimension	146x214x34 mm	240x160x33 mm	240x160x33 mm	245x245x55 mm	334x326x50 mm
Active Area	58x54 mm	116.4x145.7 mm	116.4x145.7 mm	201.6x201.6 mm	298x298 mm
Weight	1.9 kg	2.7 kg	2.7 kg	3.2 kg	5.0 kg
Scintillator	CsI / GOS	CsI / GOS	CsI / GOS	CsI / GOS	CsI / GOS
Pixel Pitch	49.5 μm	49.5 μm	49.5 μm	180 μm	194 μm
Active Pixel Matrix	1176x1104	2352x2944	2352x2944	1120x1120	1536x1536
Resolution	10.0 lp/mm	10.0 lp/mm	10.0 lp/mm	2.7 lp/mm	2.5 lp/mm
Energy Range	40~160 kVp	40~225 kVp	40~160 kVp	40~160 kVp	40~330 kVp
A/D Conversion	14 bit	14 bit	14 bit	14/16 bit	14/16 bit
Data Interface	GigE / C-Link	GigE / C-Link	GigE / C-Link	GigE / C-Link	GigE
IP Grade	N/A	N/A	N/A	N/A	N/A
Frame Rate	1x1: 30 fps 2x2: 100 fps	(@GigE) 1x1: 8 fps 2x2: 32 fps (@C-Link) 1x1: 10 fps 2x2: 37 fps	(@GigE) 1x1: 8 fps 2x2: 32 fps (@C-Link) 1x1: 10 fps 2x2: 37 fps	1x1: 33fps 2x2: 75fps	1x1: 18 fps 2x2: 36 fps
Battery Operating Time	N/A	N/A	N/A	N/A	N/A

1717DGA	0412DGA	0412WGB	1012WGB	1417WGB	1212D
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Sensor Type	TFT	TFT	TFT	TFT	TFT	TFT
Dimension	460x460x15.5 mm	400x160x30 mm	400x160x30 mm	320x385x18 mm	399x475x18 mm	452x454x30 mm
Active Area	422.7x422.7 mm	292.6x97.6 mm	292.6x97.6 mm	260x325 mm	358x423 mm	298x298 mm
Weight	4.0 kg	2.2 kg	2.2 kg	3.2 kg	5.0 kg	5.5 kg
Scintillator	GOS	GOS	GOS	GOS	GOS	CsI / GOS
Pixel Pitch	127 μm	127 μm	127 μm	127 μm	127 μm	194 μm
Active Pixel Matrix	3328x3328	2304x768	2304x768	2048x2560	2816x3328	1536x1536
Resolution	3.9 lp/mm	3.9 lp/mm	3.9 lp/mm	3.9 lp/mm	3.9 lp/mm	2.5 lp/mm
Energy Range	40~150 kVp	40~330 kVp, Ir-192	40~330 kVp, Ir-192	40~330 kVp, Ir-192	40~330 kVp, Ir-192	40 kVp~15MeV
A/D Conversion	14/16 bit	14/16 bit	14/16 bit	14/16 bit	14/16 bit	14/16 bit
Data Interface	GigE	GigE	GigE 802.11 a/b/g/n/ac	GigE 802.11 a/g/n	GigE 802.11 a/g/n	GigE
IP Grade	N/A	65 (Preliminary)	65	53	53	66
Frame Rate	1x1: 1.5 fps	1x1: 6 fps	N/A	N/A	N/A	1x1: 18 fps 2x2: 36 fps
Battery Operating Time	N/A	N/A	Typ. 5.5	Typ. 5	Typ. 4.5	N/A

Global Networks of Rayence

Rayence is the global leading manufacturer and the premier supplier of FPD (Flat Panel Detector) for digital X-ray imaging system.

Rayence is ready for the full line-up X-ray detector series both TFT and CMOS from small size to large size, in order to supply the customized solutions for medical, dental, veterinary and industrial.

"Rayence's expanding its business area deep into the World through the advanced technology and innovation"



2013

1717SCC-SGC and
1417PCA-PGA launching



2014

Large area and fluoroscopy
x-ray detector for C-arm
mobile system development



2015

127 /139 μ m new panel
of all TFT detector
line development



2016

CMOS detector '0505A and
1215A' for NDT launching



2017

Fluoroscopy TFT detector for
surgical and NDT development

New wireless detector
launching 140 μ m new
panel detector development

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