

X-Ray FLAT PANEL IMAGER

FDXA3543RPW

**Active Area: 35 (H) × 43 (V) cm
(14" × 17")**

FEATURING:

- Together with the wireless LAN communication* (IEEE 802.11n) feature, a lightweight, thin detector simplifies operation.
- The shape of the detector, which is identical to that of a conventional film cassette complying with ISO4090, enables digital radiography in the existing analog radiography configuration.
- The sensor with 125µm of pixel pitch and CsI (Cesium Iodide) used for the scintillator produces high-resolution (approx. 9.5 Mega pixels) digital images within the effective imaging area (350×426mm).

* At the time of installation, set a specific channel in the frequency band of 2.4GHz / 5GHz before using the LAN. Note that the available frequency band for this wireless LAN standard varies, depending on the local radio frequency regulations and system requirements.

INTENDED USE:

FDXA3543RPW is an X-Ray FLAT PANEL IMAGER for radiographic use.

This device can be used with an X-ray generator and an image processing unit.

It provides the digital image by detecting X-rays passing through a patient body and incident on its surface.

It does not provide the image for diagnosis, nor function or control the X-ray generator.

For medical diagnosis, it additionally requires image processing with an external image processing unit to visualize the digital image.

It is not intended to use for mammography or angiography application.

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COMPONENTS AND CHARACTERISTICS

Sensor Unit:

Rated power supply	9 to 12Vdc, 0.92A
	Wireless: Powered by the battery pack
	Wired: Powered by ACDC box
Dimensions and mass	Approx. 384×460×15 mm / Approx. 3.3kg (include battery pack)

Battery Pack: LB-1A

This dedicated battery pack is necessary for the FDXA3543RPW.

For details, refer to the User's Manual for the Battery Pack LB-1A

Type	Lithium ion battery
Rated voltage	11.1Vdc
Capacity	Typ. 2490mAh / Min. 2400mAh
Cycle life	Approx. 300 cycles (fully charged to fully discharged)
Dimensions and mass	Approx. 127×161×7mm / Approx. 250g

Battery Charger: BC-1A

This dedicated battery charger is necessary for the FDXA3543RPW.

For details, refer to the User's Manual for the Battery charger BC-1A

Input voltage	100 to 240Vac
Input frequency	50/60Hz
Rated input capacity	70 to 90VA
Standby power	less than or equal to 0.75W
Output	12.3Vdc, 1.2A (each channel)
Dimensions and mass	Approx. 105×230×110 mm / Approx. 780g

※This battery charger is designed for LB-1A.

Wiring Unit: WU-3A

This dedicated Wiring unit is necessary for the FDXA3543RPW.

For details, refer to the User's Manual for the Wiring unit WU-3A

ACDC Box

Input voltage	100 to 240Vac
Input frequency	50/60Hz
Output	12Vdc, 4A max
Dimensions and mass	240×170×68 mm / Approx. 1.5kg (Cable not included)

Sensor Cable

Cable length	7m
Cable Diameter	φ 7.3mm
Outline Dimensions (Connector shell)	69× 37.5×13mm

Status indicator

Outline Dimensions (Body)	68×153.9×39.4mm
Cable Diameter	φ 4.3±0.2mm
Cable length	10m
Weight	Approx. 0.4kg

Environmental:

Operating Conditions

Temperature +5 to +35 °C
Humidity 30 to 85 % (Non-Condensing)
Pressure 70 to 106 kPa

Storage Conditions

Temperature +5 to +40 °C
Humidity 30 to 85 % (Non-Condensing)
Pressure 70 to 106 kPa

Note: In an unpacking

Transporting conditions

Temperature -30 to 50 °C
Humidity 10 to 95 % (Non-Condensing)
Pressure 70 to 106 kPa

Note: In a packing at the time of the shipment

Note:

- (1) Storing a Battery Pack at high temperatures will accelerate its deterioration.
When storing a Battery Pack for a long time, be careful about storage temperature.
Recommendation temperature for long time storage: 5 to 40°C
- (2) The battery should be sufficiently acclimatized to the environment where it will be used
(5 to 35°C) before use.

MAIN CHARACTERISTICS

Image Format:

X-ray Conversion Layer	Scintillator: CsI (Cesium iodide)
Effective imaging area	350(H)×426(V)mm
Pixel Matrix	2800(H)×3408(V)
Pixel Pitch	125μm
Cycle Time	Within 9sec (In 1sec. mode with 300ms exposure time) Within 30sec (In 3sec.mode with 3sec exposure time)

Note: Cycle Time depends on the specifications of the image capture PC.

Performance:

MTF (2Lp/mm, RQA5 (70kVp +21mmAl))	Min. 0.3
DQE (0.5lp/mm, 1mR, RQA5 (70kVp+21mmAl))	Typ. 0.58
Linearity (0.05~3.0mR)	0.95~1.05

Note: The linearity is defined by slope of log (dose) vs. log (pixel value) graph. Linearity in this section refers to this graph's straight line section, and the saturated section and offset section outside of this straight line are out of scope.

Attenuation equivalent of the detector front panel	Max. 0.46mmAl
Gray scale	65536 gradations (A/D: 16bit)

Ratings:

Maximum Entrance Dose (Linear Output Range)	3mR
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Functional specifications:

Operation mode

Software X ray synchronous mode:

By calling the API of control library depending on the operating state of the X-ray generator, the detector is synchronized. Available in Tethered mode and Wireless Mode

X-ray automatic detection mode:

The detector oneself detects X-ray exposure and starts an image accumulation. There is no need to connect with the X-ray generator.

Image accumulation period can be set to 1,000 or 3,000msec (default:1,000msec)

Note: 3,000msec is selectable only with a long time accumulation mode.

Interface:

Wireless	IEEE 802.11a/b/g/n 2.4GHz/5GHz
Tethered	IEEE 802.3u 100Base TX
Protocols	ARP, IP, ICMP, TCP, UDP
Default IP address	
Wireless	192.168.100.100
Tethered	192.168.100.101
Default subnet mask	255.255.255.0
Default gateway address	0.0.0.0

Image Acquisition Exposure period:

1sec. mode	Within 1sec
3sec. mode	Within 3sec

Note: Allowed exposure time includes the exposure delay time of X-ray generator.

Imaging preparation time:

1sec.mode from sleep state	Within 10sec
3sec.mode from sleep state	Within 31sec
From ready state	Within 1sec

Battery performance:

Durability

Software X-ray synchronous mode

Max. mode (continuous imaging of 9sec. cycle)	1200 images (Approx. 3hours)
Ave. mode (continuous imaging of 100sec. cycle)	140 images (Approx. 4hours)

X-ray automatic detection mode

Max. mode (continuous imaging of 15sec. cycle)	700 images (Approx. 3hours)
Ave. mode (continuous imaging of 100sec. cycle)	110 images (Approx. 3hours)

Save mode (sleep mode) 6.5hours

Note: Measured with a full-charged new battery.

Recharge

Battery charger	3hours ± 20%
Tethered recharging	6hours ± 20%

Note: The time it takes to fully charge the empty new battery.

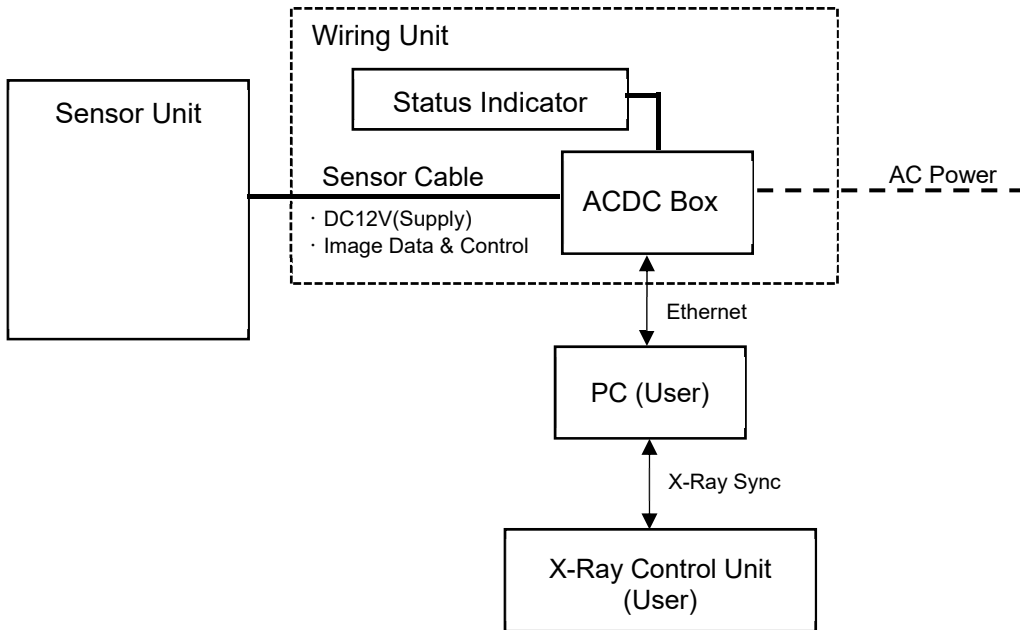
Auto power off:

Auto power off time	10min.
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Note: The external power supply is cut off when the communication with the image capture PC stopped during 10minutes.

Product Components and Interface:

(1) Wired communication



Note: Do not disconnect Ethernet connection while DC12V is operating and supplying to Sensor Unit.

(2) Wireless communication

Wireless connection is established between the internal wireless module of the detector and a laptop computer or a wireless access point.

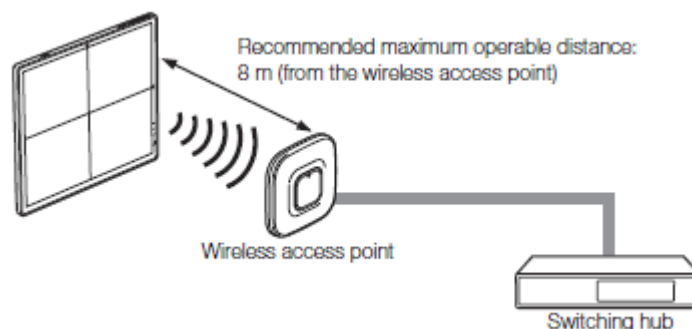
This product supports IEEE 802.11n (Frequency band: 2.4GHz / 5GHz). The available frequency band and channel vary depending on the system requirements and the radio frequency regulations in the country or region where you purchased the product.

Important

Note that the radio frequency channel configured for indoor use may not be usable in outdoor areas, depending on local radio frequency regulations.

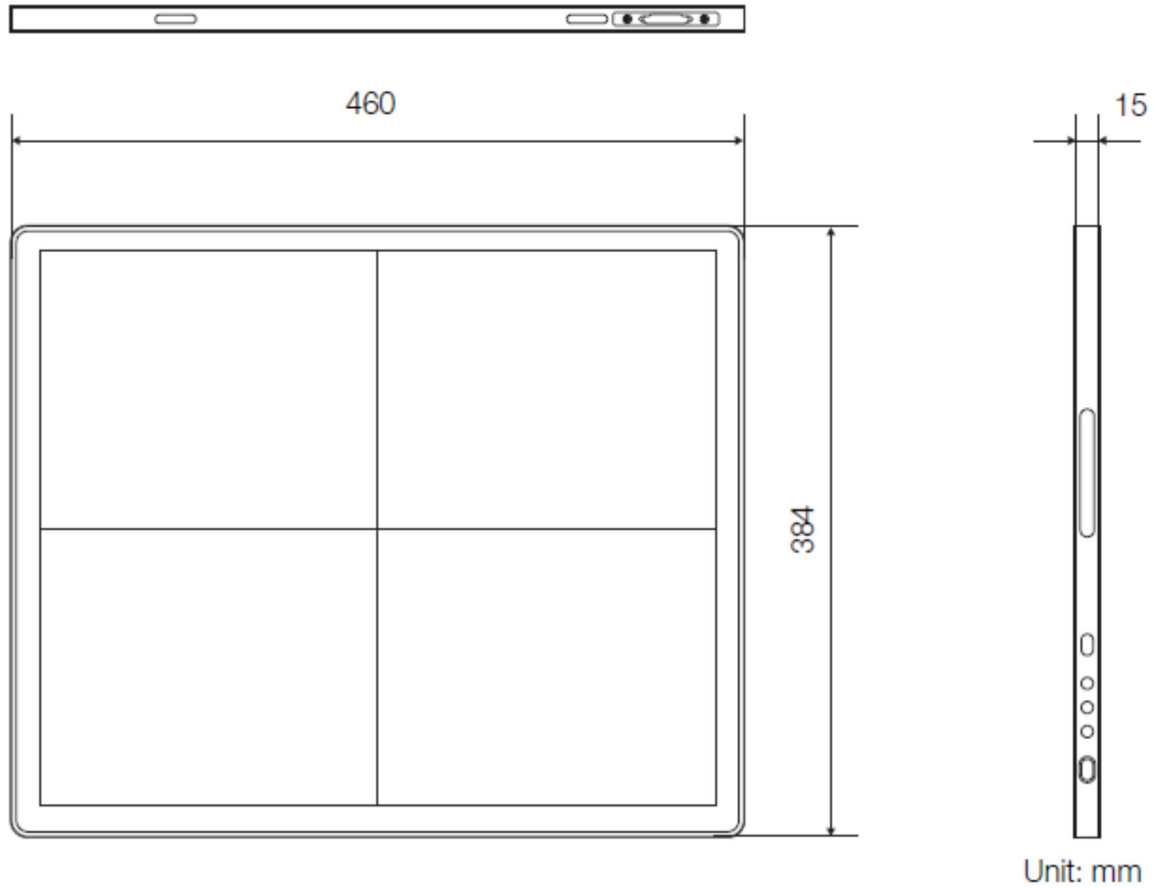
When configuring other WLAN equipment, do not use the same radio frequency (channel) that is selected for this product. Otherwise, an interference between the two pieces of equipment may occur and may result in a decline in transmission speed and other troubles.

Do not cover the wireless module on the detector with your hands or place obstacles in the way of the wireless access point. Otherwise, the properties of wireless communication, such as the throughput and operable distance, may decrease.



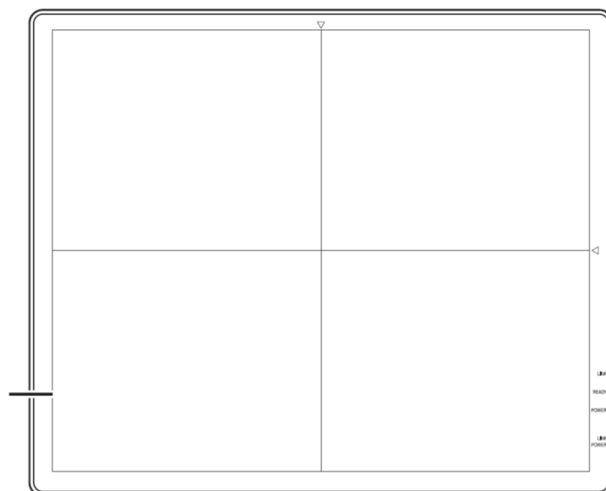
DIMENSIONAL OUTLINE

(Sensor Unit)

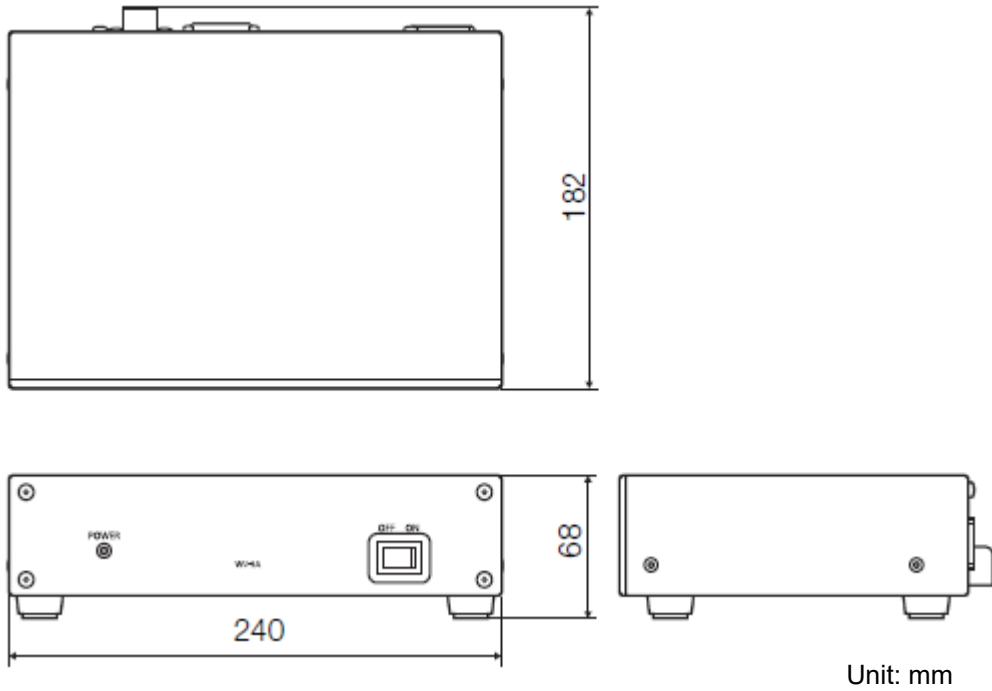


Unit: mm

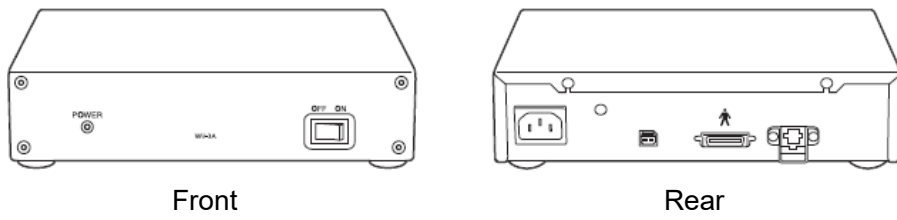
Effective imaging area border



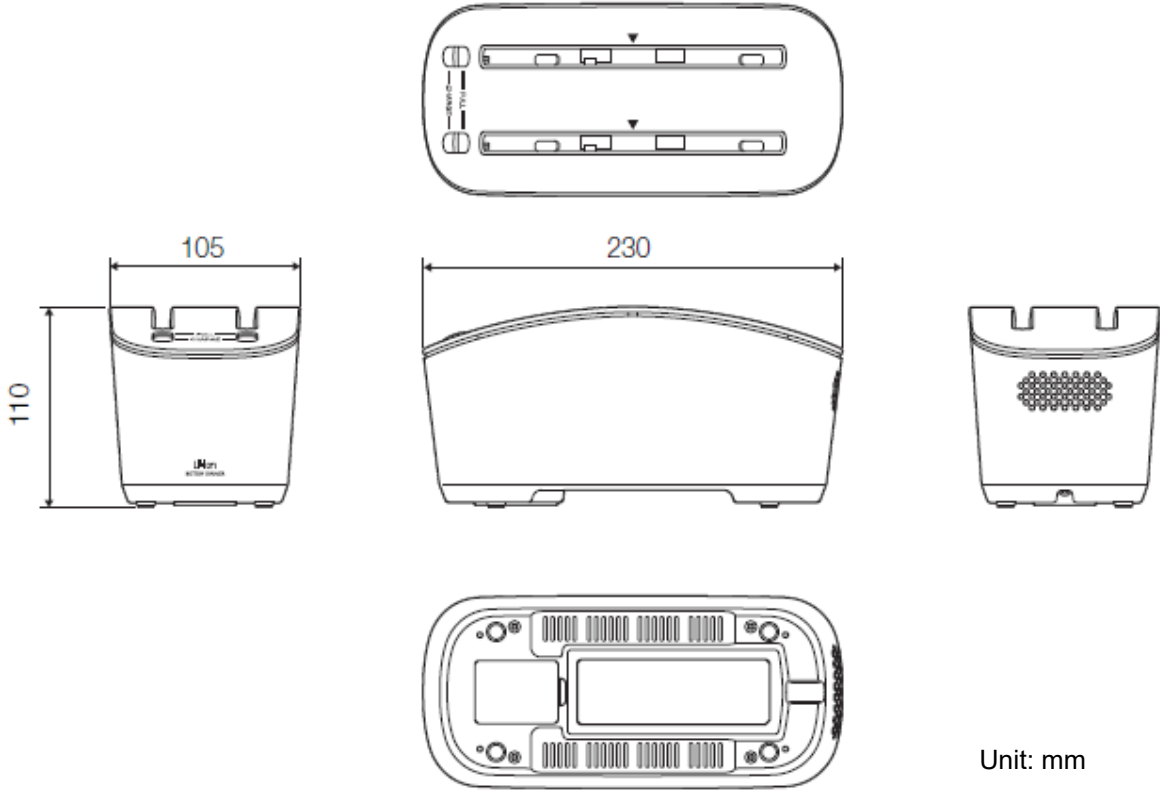
(ACDC Box)



(ACDC Box exterior)



(Battery charger)



Unit: mm

(Status Indicator)

