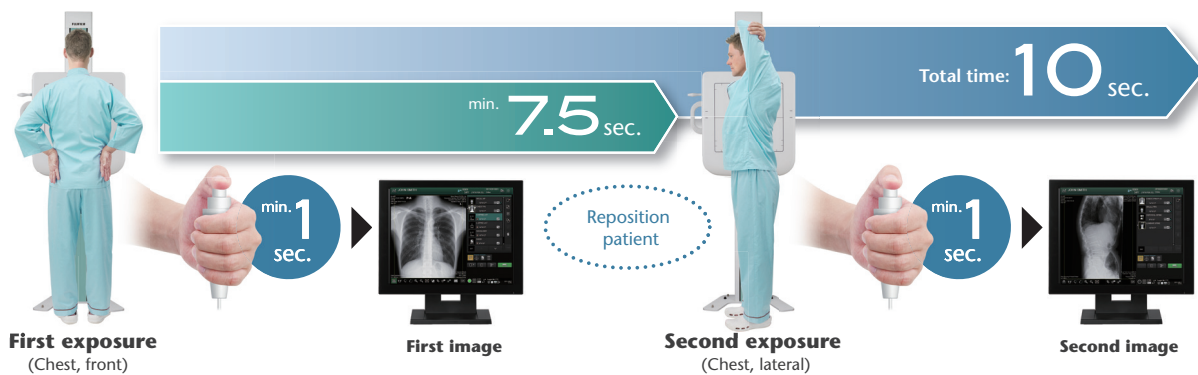# FUJIFILM
Value from Innovation

The essentials of Fujifilm's high sensitivity acquisition technologies and refined image processing.

NEW

FDR ES
14G | 17G | 14C | 17C

Enhance your workflow with Fujifilm's latest DR detector and image processing

Fast, easy integration with any x-ray room to transition to the speed, image quality and dose benefits of Fujifilm Digital Radiography.

min. **7.5** sec.

Total time: **10** sec.

min. **1** sec.

min. **1** sec.

Reposition patient

First exposure
(Chest, front)

First image

Second exposure
(Chest, lateral)

Second image

Protection and durability

Innovative design enhances ease of use and reliability in x-ray environments.

- Carbon fiber frame with rounded edges and smooth corners creates a durable design

- IPX3 rating provides an extra safeguard during use and cleaning

- Single-handed battery replacement is ready to image in 30 seconds

Single-handed battery

■ **CsI detectors**

■ **GOS detectors**

FDR ES 14C
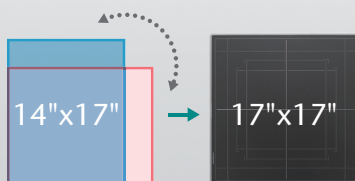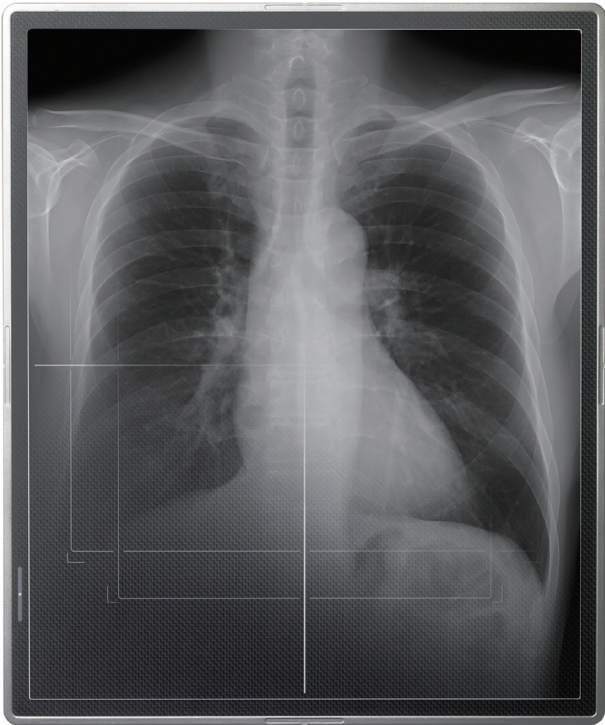[14"x17" FDR ES C35]

FDR ES 17C
[17"x17" FDR ES C43]

FDR ES 14G
[14"x17" FDR ES G35]

FDR ES 17G
[17"x17" FDR ES G43]

17"x17" format eliminates unnecessary handling

The large exposure area of a 17"x17" detector accommodates portrait and landscape without rotating it in the Bucky, minimizing handling and simplifying positioning.
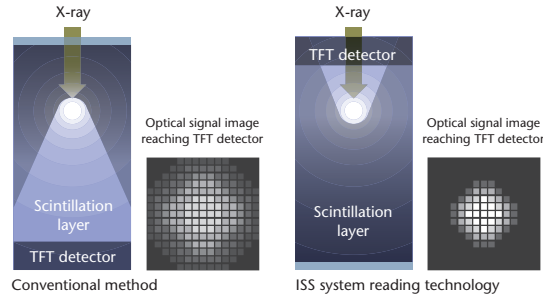
14"x17" → 17"x17"

Fujifilm's exclusive technology for high resolution and low dose

### ISS capture technology promotes high sensitivity

Equipped with Fujifilm's proprietary Irradiated Side Sampling (ISS) technology, which positions its capture electronics (TFTs) at the irradiation side, in contrast to traditional detectors. This design significantly suppresses scattering and attenuation of x-ray signals, improving efficiency to produce sharper images at lower doses compared to traditional designs.*

* Based on higher MTF and DQE demonstrated in "Effect of X-ray incident direction and scintillator layer design on image quality of indirect conversion flat-panel detector with GOS phosphor" by K. Sato, et al.

X-ray

Optical signal image reaching TFT detector

Scintillation layer

TFT detector

Conventional method

X-ray

TFT detector

Optical signal image reaching TFT detector

Scintillation layer

ISS system reading technology

Noise Reduction Circuitry improves detector sensitivity in high absorption regions

A unique, Fujifilm innovation in noise reduction circuitry maximizes signal strength to improve image quality in high absorption areas. This enhancement achieves 1.7 times the DQE of previous models, with as little as 0.03mr dose. Visibility of dense areas such as the heart and mediastinum are greatly improved.
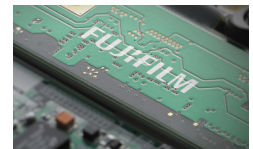
FDX Console refined image processing provides exceptional images

Simple, efficient workflow and image processing deliver high diagnostic value with minimal patient impact.
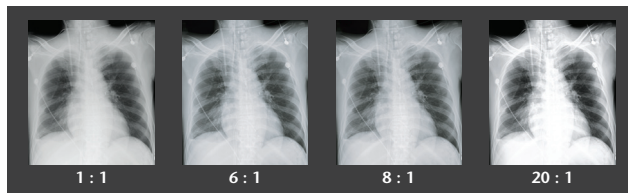
Virtual Grid
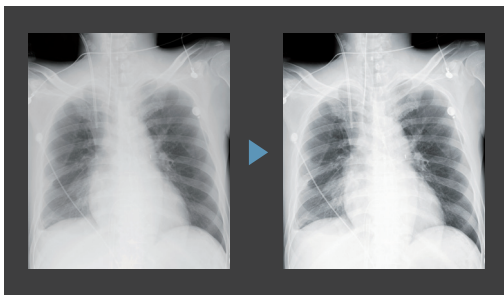
No Grid   Virtual Grid

Virtual Grid intelligent image processing corrects for the effects of scatter radiation while retaining high contrast and sharpness. It improves patient comfort, simplifies positioning, and allows for as much as 50% lower dose compared to grid exams.

1 : 1   6 : 1   8 : 1   20 : 1

Virtual Grid

You can choose the optimum grid ratio for your examination needs.

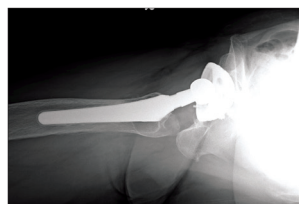It does not guarantee an equivalent effect to the actual grid.

Dynamic Visualization II

Advanced processing adjusts density and contrast display based on anatomic structure, hardware, and body thickness throughout the entire exposure field.

Dynamic Visualization II

Conventional processing

Dynamic Visualization II

FDR ES Specifications

Model Name Common Name	FDR ES G35 FDR ES 14G	FDR ES C35 FDR ES 14C	FDR ES G43 FDR ES 17G	FDR ES C43 FDR ES 17C	FDR ES C24 FDR ES 24C
Scintillator	GOS (Gadolinium Oxysulfide)	CsI (Cesium Iodide)	GOS (Gadolinium Oxysulfide)	CsI (Cesium Iodide)	CsI (Cesium Iodide)
Physical Specifications					
External Dimensions	18"x15"x0.6"		18"x18"x0.6"		13"x10.5"x0.6"
Weight (with battery)	6.4 lbs.		8. lbs.		3.5 lbs.
Load Resistance	264 lbs. point load, 600 lbs. distributed (protective cover required for standing exams)				
Water Resistance	IPX3				
Image Acquisition					
Exposure Size Inches Pixels	16.8"x13.8" 2,836x2,336		16.7"x16.8" 2,836x2,832		11.3"x9.1" 1,536x1,920
Preview / Cycle	2 sec. / 7.5 sec.		2 sec. / 9 sec.		2 sec. / 7.5 sec.
Max. Exposure Time	10 seconds				
Bit Depth, Pixel Pitch	16 bit, 150µm				
Grid Frequencies	40 lines/cm recommended; 40-44 lines/cm, 80 or more lines/cm useable Virtual Grid™ (option) simulates scatter clean-up for images acquired without a grid				
Connectivity					
Detector to FDX Console	Tethered or Wireless IEEE 802.11n in 2.4 & 5 GHz bands. Wireless in-room 33' (approx.) range, closed loop, image data only (no patient info). WPA2-PSK encryption with AES & MAC (unique IP) protocols secure connection, confirmation & completion of data, handshake pairing to registered FPDs only.				
FDX Console to Network	LAN wired Ethernet: 10/100/100 Base-T, DHCP or Static				
Battery (Lithium ION , user-swappable)					
Performance (approx.) Smart Switch Sleep Mode	1 hour, 50 minutes 7.5 hours				3 hours, 30 minutes 8 hours
Charge Time (approx.) Quick Charge (approx.)	Battery Charger: 3 hours / Power Box SE Cable: 4.5 hours / MP SE Cable: 4 hours After low battery alarm: 3 min. charge allows up to 30 images (battery charger or power supply)				
Environment and Power					
Temp., Humidity, Atmospheric Pressure	Operating: 59-86°F, 15-80%RH (non-condensing), 700-1,060 hpa Non-Operating: 41-95°F, 10-80%RH (nc), 700-1,060 hpa Storage (packed): 14-122°F, 10-90%RH (nc), 700-1,060 hpa				
Power Conditions	Single phase 50/60Hz Std 110VAC Power Box/MP Box: 100-240VAC (+/-10%), 200VA or less, FDX Console: 115/230VAC (auto), 460VA or less Battery Charger: 100-240VAC (+/-10%), 100VA or less				
Heat Output	Detector: 316KJ/h				
Power Consumption	FDX Console: 110W (operating), 90W (standby) MP Box and 2 Detectors: 88W Power Box and 1 Detector: 22W Battery Charger: 50W (operating), 5W (standby)				

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