

FUJIFILM



FDR NEW *AcSelerate*

The new pinnacle in diagnostic imaging from Fujifilm.



<http://www.fujifilm.com/products/medical/>

Welcome to the X-ray room of the future!

A streamlined solution with dynamic speed and sharp images.

Ever since the release of the first digital radiology system (FCR101) in 1983, Fujifilm has maintained its position as the leader in digital radiography images through its impressive quality, corporate endeavors, and commitment to customer satisfaction.

Building upon our longstanding digital expertise and our superior diagnostic image processing technology we have accumulated over the years, Fujifilm has developed a new Flat Panel Detector (FPD), offering remarkably high X-ray conversion characteristics and this, in hand with an innovative X-ray unit of superb operability, gives us the AcSelerate. This new product is the latest edition to our Fujifilm Digital Radiography (FDR) product line.

The FDR AcSelerate was created for you, our customer, so that we at Fujifilm can continue to demonstrate our strong commitment to diagnostic imaging for years to come.



FDR
AcSelerate

Direct Conversion FPD – the revolutionary flat panel from Fujifilm



It provides sharper and clearer diagnostic images to the medical scene using the high conversion efficiency of its innovative amorphous selenium technology. It has also overcome past limitations associated with the durability and temperature control of traditional Direct Conversion systems, as it only needs an air-cooling system.

Fujifilm's experience and expertise combine for unprecedented images.

DIRECT
CONVERSION
FPD + IMAGE
INTELLIGENCE™

Image Intelligence™ – Over 25 years of expertise in medical imaging

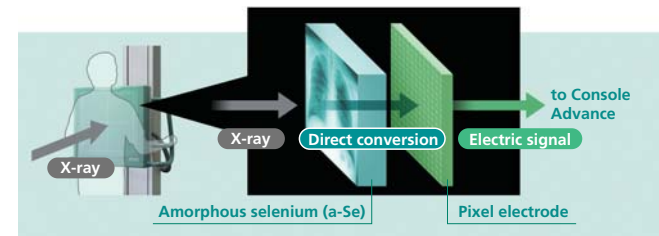


Image Intelligence™ from Fujifilm is an integration of various digital image-processing technologies to enhance the contrast and sharpness of the entire image without any risk of losing the image details. As such, Image Intelligence™ is the result of an ideal combination of Fujifilm's many years of experience in imaging and its ability to create superior hardware and software products.



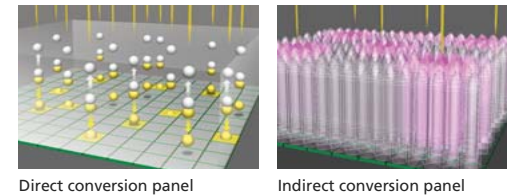
A new age with amorphous selenium (a-Se)

Our newly developed direct conversion FPD is at the heart of AcSelerate, providing high conversion efficiency (see right diagram). It allows more effective use of the X-ray energy and offers high quality images with enhanced MTF and DQE, but with reduced radiation dose. Lifespan and temperature control limitations, seen with traditional flat panels, have been greatly improved and our FPD offers superb durability whilst utilising a simple air-cooling system.

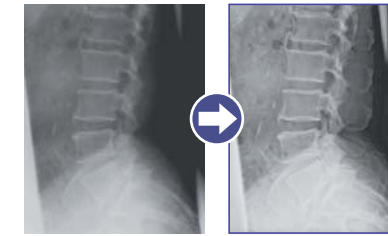


Direct conversion vs Indirect conversion

With indirect conversion, X-rays are initially recorded as optical data, but diffusion, noise and data loss occur due to the properties of light. However with Fujifilm's new direct conversion FPD, the X-rays are converted directly into electric signals and then read onto a pixel electrode for superior conversion efficiency and resolution.



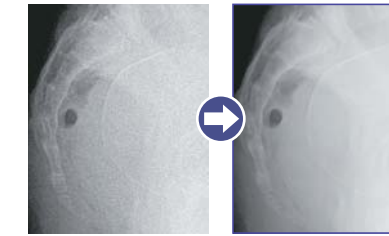
Software Technology



MFP* Multi-Frequency Processing

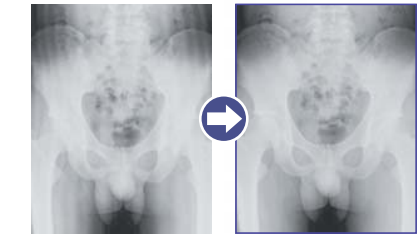
Enhanced images. All diagnostic scopes will be enhanced except for noise.

*Optional software



FNC Flexible Noise Control

Provides a non-grainy image by mainly isolating and suppressing the noise for the signal.



GPR* Grid Pattern Removal

Removes the stationary grid patterns thus preventing Moiré from being generated resulting in easier diagnosis. (convenient for a cassette study) *Optional software

DIRECT CONVERSION FPD



IMAGE INTELLIGENCE™



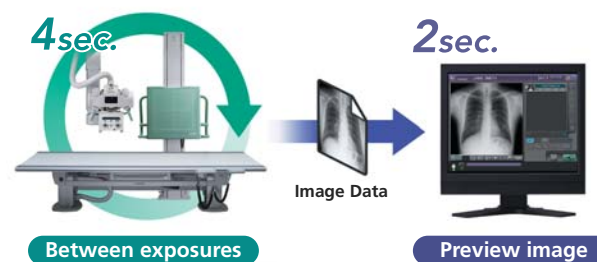
Enhanced diagnostic value with a wide dynamic range and high resolution

Our FPD provides 150 micron resolution with image quality unequalled by other systems. With its 16 bit dynamic range, even minimal X-ray absorption differences are clearly depicted within exams of target body parts such as the chest, and the bones and soft tissues in orthopedic exams.



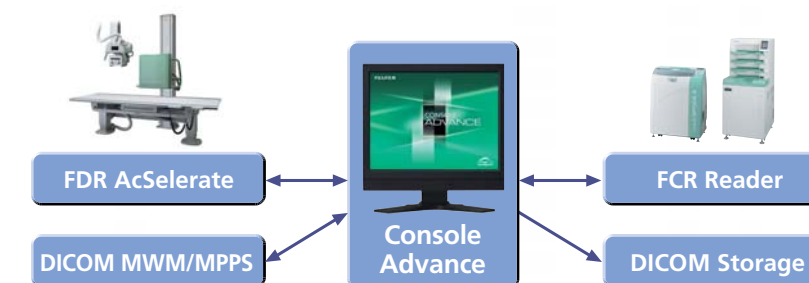
Fastest processing speed of its kind!

With AcSelerate things are quick in the X-ray room. The preview image is available on the Console Advance screen in only 2 seconds*, allowing quick review of the image. Additionally, cycle time between exposures is approximately 4 seconds*, allowing the technologist to work with speed and efficiency and making the process smoother for the patient. *chest exams



Console Advance – flexible for FDR and FCR

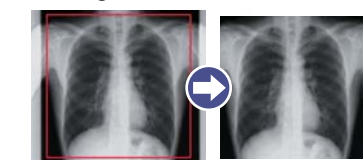
The Console Advance features the same functionality and intuitiveness as the CR Console, making it easy for existing FCR users to adopt the Console Advance and work efficiently. If both FDR and FCR systems are being used in the same department, images from both systems can be combined at the Console Advance, simplifying the workflow.



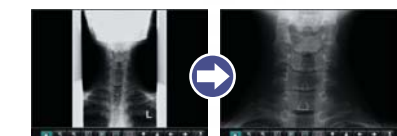
Auto-blackening



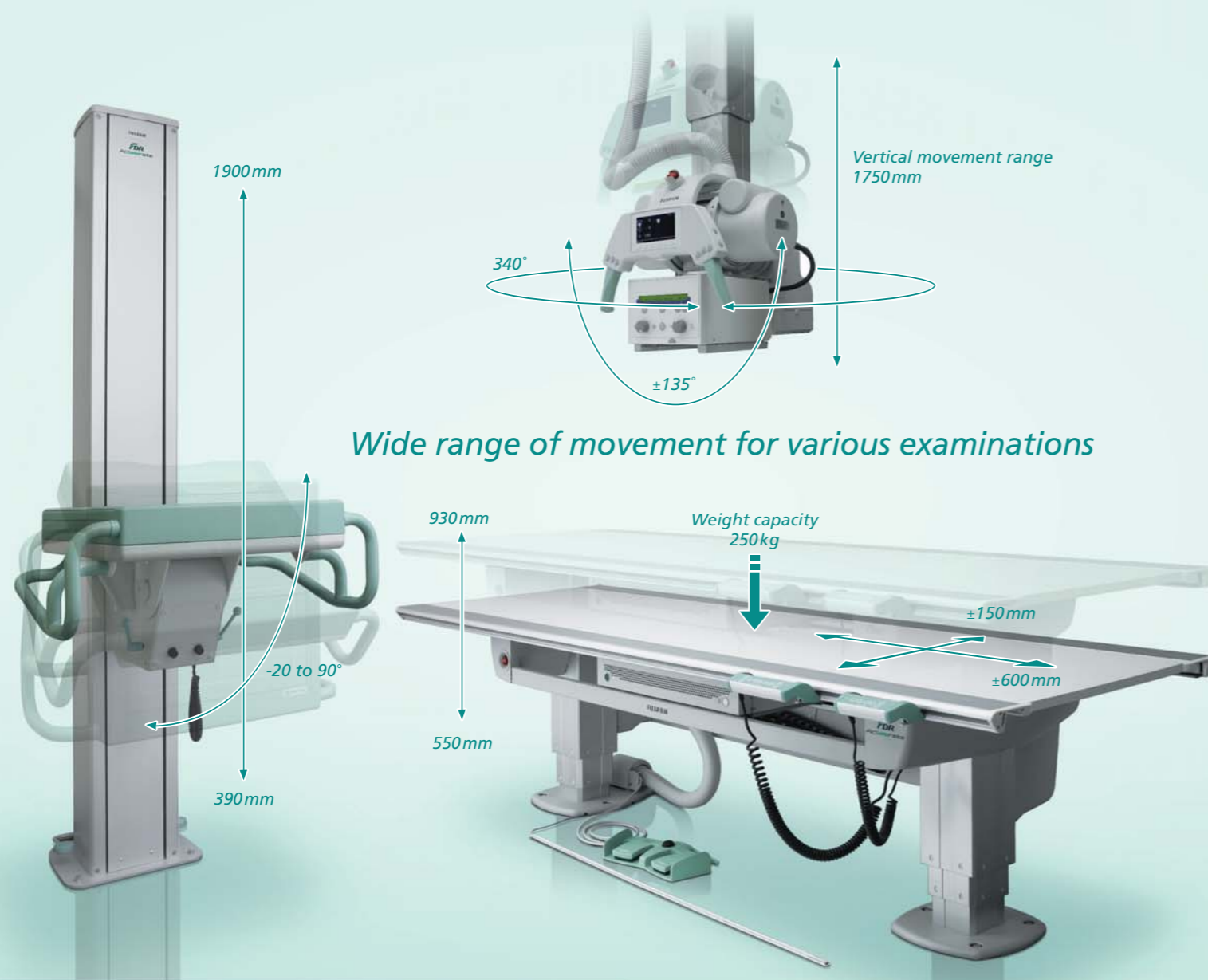
Trimming



Magnification



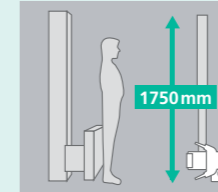
AcSelerate has been ergonomically designed, not only for the technologist, but also for the patient.



Wide range of movement for various examinations

Light-weight Ceiling Suspension System

The lightweight ceiling suspension system and tube head provide smooth movement to any position, to any angle and to any height within the examination room. The support features an extended range of vertical movement, 1750mm, which allows for easy examination of the lower extremities.



Tilting Upright X-ray Stand

The flat panel detector moves vertically from 390mm to the floor to a height of 1900mm. This movement allows fast and easy positioning for a variety of exposures, not only for the chest and abdomen, but from the cervical spine down to the lower extremities. In addition, with minus 20 degree to plus 90 degree angulation, skull and upper extremities can also be examined as with exposures of the elbow.



Flexible X-ray Table

The table size is 2400mm x 850mm with an adjustable height of 550mm to 930mm from the floor, and weight capacity is 250kg, making it extremely flexible for easy positioning and for accommodating all types and sizes of patients. The floating top table is equipped with three control methods depending upon operational need. Tomography is available as a standard feature.



Foot Control



Foot Control (Strip)



Hand Controller

80kW High Voltage Generator



Ease of use in connection with Console Advance

The 80kW generator makes it possible to perform a wide range of studies on patients of all sizes from babies to larger patients where penetration is a consideration. The generator also features an easy to view display of the exposure settings made from the Console Advance and allows quick start up and shut down of the system. Intuitive and flexible for any exam!

Optional accessories

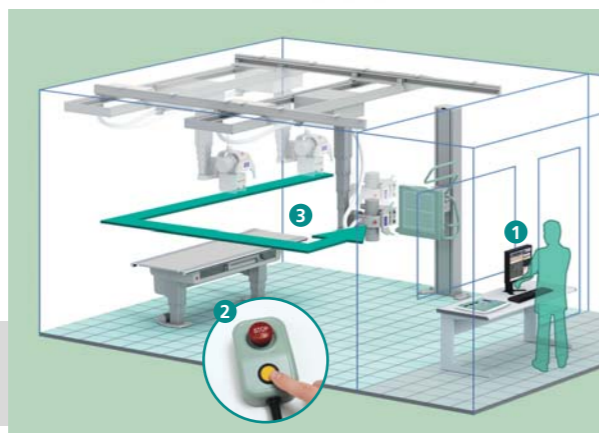


Increase efficiency with automated functionality

Auto-Positioning

By selecting the program from the exposure menu, on the Console Advance, the X-ray tube automatically moves to the required position using the 5-axis motorized tube support. Manual adjustments can always be applied, however, the simplicity and accuracy of AcSelerate make manual movements a thing of the past!

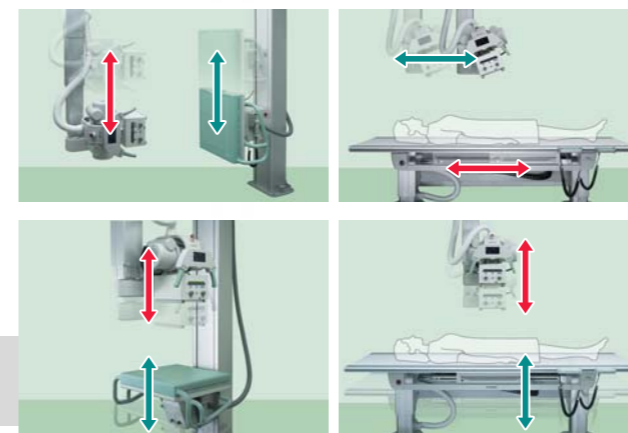
- 1 Select from exposure menu
- 2 Activate X-ray tube with remote controller
- 3 X-ray tube automatically positions



Auto-Tracking

When the patient is on the table, the FPD will auto-track the manual movement of the X-ray tube to allow examination of the intended body part. If the patient is at the upright detector, the X-ray tube will automatically track the vertical movements of the FPD.

- ↔ Manual operation
- ↔ Auto-Tracking



Auto-Collimation

The required collimation area, taking into account the SID (Source to Image Distance) is automatically adjusted to the body part selected from the exposure menu. Manual adjustments can be made easily if needed.

Auto-Filtering

Three sizes of copper filter automatically adjust to the designated body part selected on the exposure menu thus reducing unnecessary radiation, this filtration can also be used manually.

FDR AcSelerate Specifications

X-ray system

- **Line voltage connection:** 400V 3~(3N~), 480V 3~ ±10% (50Hz/60Hz)
- **Power consumption:** 110kVA

Ceiling Tube support

- **Fully motorized 5 axes ceiling tube support**
- **Vertical travel range:** 175cm
- **Minimum focus-ceiling distance:** 89cm
- **Tube rotation alpha/beta:** alpha: ±135degree beta: 340degree
- **Tomography application**
- **Automatic positioning**

Generator

- **High frequency generator**
- **Output:** 80kW
- **Exposure voltage:** 40 to 150kVp
- **mA range:** 10 to 1000mA
- **AEC (stand/table):** 3 fields ion-chamber
- **DAP (inside collimation):** option

X-Ray Tube

- **Focal spot:** 0.6/1.0mm
- **Anode heat storage capacity:** 600kHU (445kJ)
- **Anode heat dissipation rate:** max 125kHU/min
- **Capacity of the small/large focus:** 32 / 72kW
- **Target angle:** 12 degree
- **Total filtration:** ≥2.5mmAl

Collimator

- **Copper filter:** 0.1 mm, 0.2 mm, 0.3 mm
- **Rotation:** ±45 degree
- **Square collimation** Manual / Motorized

Table

- **Tabletop size:** 850 × 2400 mm
- **Table height:** 550 to 930 mm
- **Travel range:** transverse: ±150 mm longitudinal: ±600 mm
- **Detector travel range:** ≤ 630 mm
- **Max. table load:** 250 kg
- **Automatics synchronization function**
- **Accessories:** Hand control (table operation and collimation control)
 - Patient hand grips
 - Lateral cassette holder*
 - X,Y and Z foot control*
 - X and Y foot control strip type*
 - Compression belt*
 - Tabletop mattress*

Stand

- **Travel range (central beam - floor):** 390 to 1900 mm
- **Tilting angle:** -20 to 90 degree
- **Automatics synchronization function**
- **Accessories:** Hand control (collimation control)
 - Patient grips (stretch and side hand grip)
 - Cassette holder*

Detector

- **Direct conversion method Flat Panel Detector**
- **Dimensions:** 17" × 17" (43.2 × 43.2 cm) single panel:
- **Pixel size:** 150µm
- **Resolution:** 2880 × 2880
- **Density resolution:** 16bit
- **Panel cooling method:** Fan cooled system

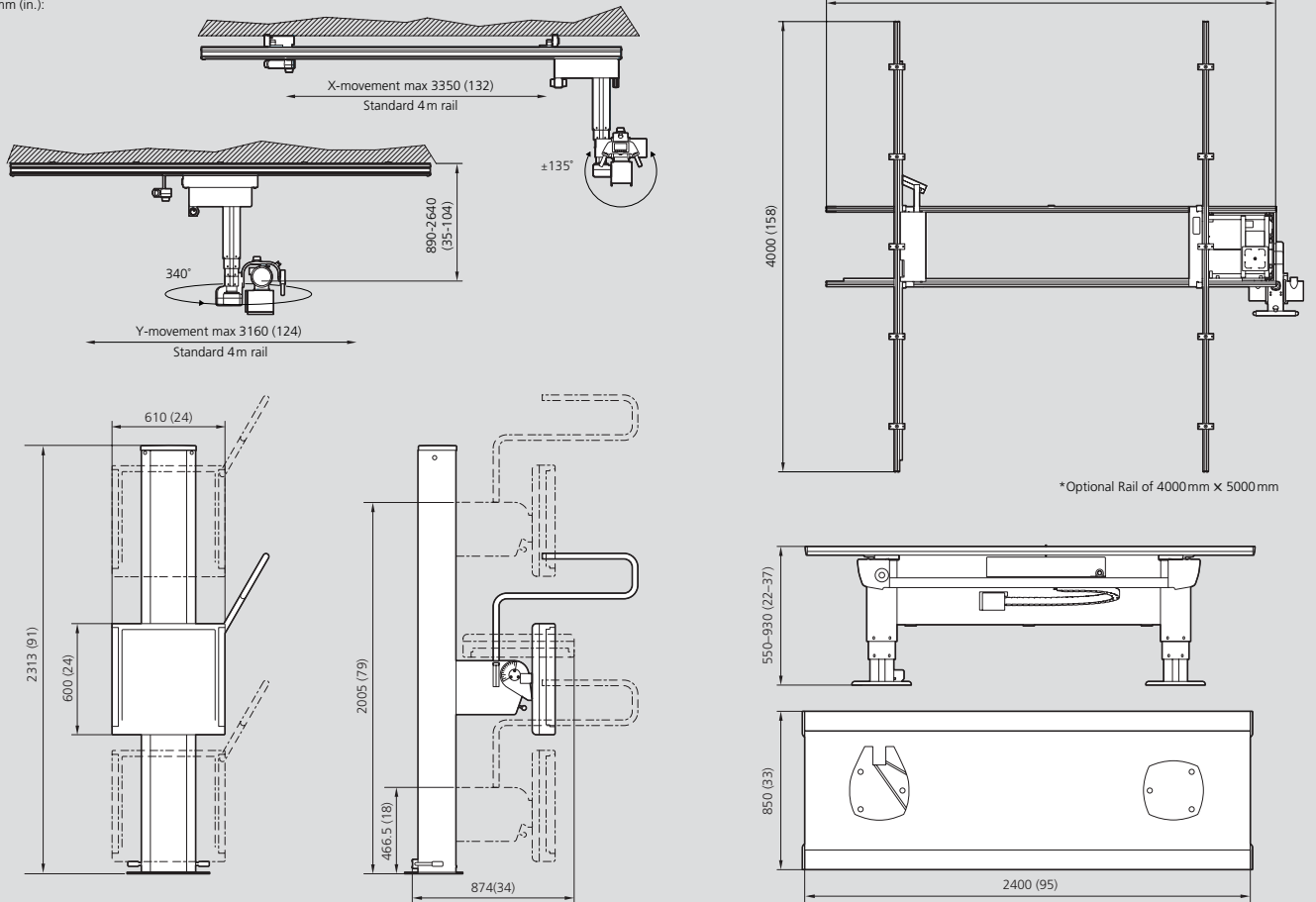
Console Advance

- **High performance PC**
- **Monitor:** 17" color TFT monitor (1280 × 1024 display matrix)
- **Image preview:** min. 2 sec or less
- **Completion of Image processing:** min. 4 sec or less
- **DICOM functions***
- **Image Intelligence™***

*option

Dimensions

Unit mm (in.):



FDR AcSelerate (Model: FDR200)



This equipment is a Class 2 laser product (IEC60825).

Specifications are subject to change without notice.
All brand names or trademarks are the property of their respective owners.
All products require the regulatory approval of the importing country.
For details on their availability, contact our local representative.

FUJIFILM

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