

**FUJIFILM**  
Value from Innovation

**NEW**

# *FDR D-EVO II*

CsI digital x-ray detectors

Form meets function.

C35 | C43 | C24

# The endless pursuit of high image quality

Introducing D-EVO II Csl detectors, the future of digital x-ray...

Fujifilm's FDR D-EVO Csl detectors combine the inherent dose efficiency and image-sharpening of cesium with patented ISS technology to deliver exceptional images with DQE and MTF as much as 20% higher than traditional capture circuitry designs.



**C35** (14x17" model)



**C43** (17x17" model)



**C24** (24x30cm model)

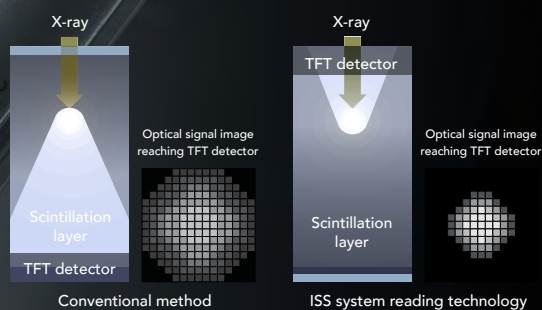
- **New Sleek Design** – smooth surfaces and tapered edges simplify positioning under the patient
- **Improved Durability and Weight** – 20-25% lighter than previous models and resists bending for up to 683 lbs. distributed and 352 lbs. point loads. The 14x17" model weighs just 5.7 lbs., making it one of the lightest and strongest on the market.
- **Sealed Design** – locks out moisture to safely prevent damage from accidental contact with fluids
- **Internal Memory** – stores up to 100 images, speeds acquisition for unregistered trauma patients and multi-view studies, and allows sharing on demand with any room or mobile x-ray system
- **Fujifilm Hydro AG, Antibacterial Layer** – kills 99.99% bacteria on outer surfaces
- **LED Indicators** – five selectable colors for panel identification
- **Digital Readout** – displays usage and image memory information



Fujifilm's exclusive technologies for achieving high resolution and low dose

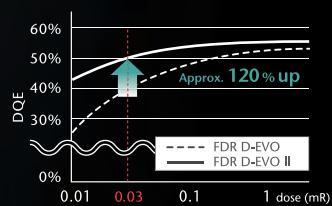
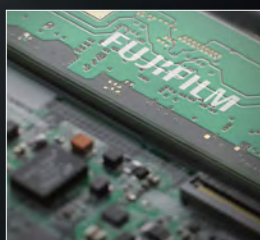
### 1. Patented ISS capture technology promotes high sensitivity

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.\*



### 2. Noise reduction circuitry improves sensitivity in high absorption regions

A unique, Fujifilm innovation 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.



With additional major increases in sensitivity in low-concentration regions (heart, mediastinum)

### 3. Refined image processing for exceptional images

FDR D-EVO II utilizes the latest Fujifilm digital image processing expertise

including Dynamic Visualization, which optimizes image display based on recognition of contrast levels throughout the entire exposure field. The resulting first-up images have outstanding detail and greater window and leveling capability in PACS.



\* 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.

Lightweight and durable with germ and water resistance, FDR D-EVO II provides versatility and peace of mind for your most demanding clinical needs.



### Extremely lightweight, just 5.7 lbs. (14x17" model)

FDR D-EVO II features a unique magnesium-alloy casing, designed for easy handling and positioning under the patient. The 14x17" model weighs just 5.7 lbs, making it 20% lighter than prior models and one of the lightest on the market at this time.

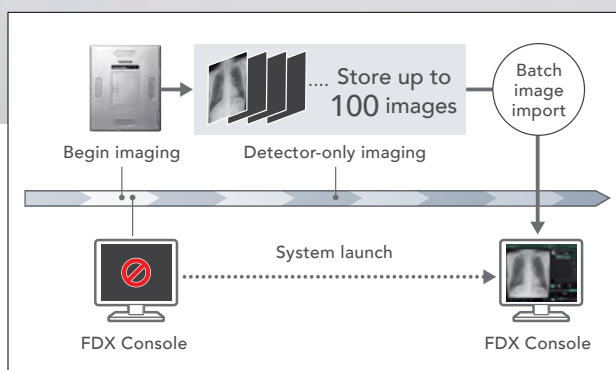
### One-handed battery replacement and immediate use after replacing the battery

The battery is easily replaced with new easy release latch and the detector is ready to image again within 30 seconds. This simplifies swapping the battery when it gets low and eliminates wait time of triggering recalibration traditionally associated with changing batteries.



### Expanded wireless detector communication

Supports 2.4 GHz and added 5 GHz (W52/53/56/58) spectrums. FCC suitable for outdoor use such as disaster response applications.



### Internal memory retains up to 100 images for trauma and remote sharing use

The detector's internal memory mode allows acquisition of images without a live connection to the workstation. This ability allows CR-like workflow with any analog mobile or room x-ray source. The memory mode also allows faster image acquisition for trauma use, prior to even registering the patient and uninterrupted exam completion if wireless signal to the workstation is hindered. Images remain until deleted, regardless of power loss to the detector. The 14x17" and 17x17" models store up to 100 images and the 24x30cm model stores up to 200 images.



### "SmartSwitch" Technology

Fujifilm's "SmartSwitch" technology enables automatic X-ray detection enabling FDR D-EVO II to acquire images without a wired connection between the X-ray generator and detector control unit. The detector automatically senses exposure to trigger the image capture, allowing the versatility of memory mode use and use with other x-ray rooms or mobiles on demand.



FDR D-EVO II combines high-level antibacterial and fluid protection with enhanced durability for the harshest medical environments.

### **FDR D-EVO II is the world's 1st DR detector with antibacterial coating**

D-EVO II's exclusive Hydro AG coating is 99.99% effective against the most common bacteria. Fujifilm's patent pending re-engineering of this protective layer boasts performance as much as 100\* times more effective than traditional silver ion coatings and 10,000\* times more effective than surfaces with no coating. The coating is engineered to kill and stop bacteria from reproducing on the outer surfaces and uniquely extend and regenerate its germ killing properties with moisture activation from wipe down and cleaning.

\* Based on residual bacteria counts.

### **IPX-6 fluid protection rating**

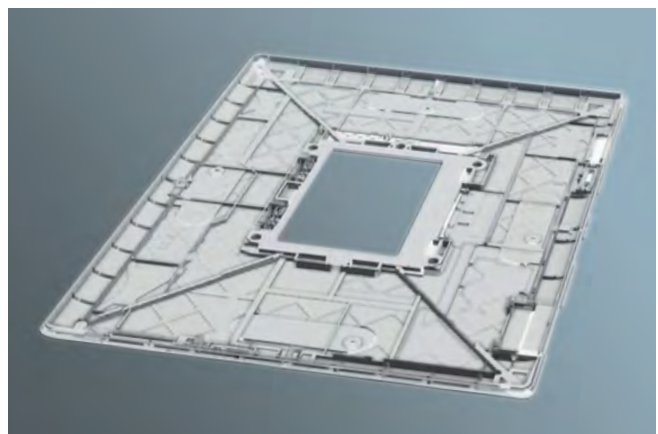
FDR D-EVO II's new sealed design including user swappable battery, prevents the infiltration of liquids into the detector.\* This certification does not substitute for the use of normal bagging precautions, it simply provides added peace of mind for unexpected fluid accidents and/or cleaning.

\* Wear and tear, variables in user handling, and other conditions, can deteriorate the effectiveness over time.



### **Magnesium-alloy frame increases durability**

Fujifilm's innovative magnesium-alloy frame makes possible D-EVO II's new slim profile, lighter weight and improved rigidity to withstand up to 683 lbs. distributed load and up to 352 lbs. point load capacity, resulting in the highest ratings in the industry at this time.



## Ease of use through a well thought out design



### ① Improved insertion under the patient

Tapered outer edges allow easier insertion under patient and easier pick up from flat surfaces. Recessed grip areas allow secure grip for positioning and safer handling.

### ② Detector edge LEDs simplify centering and detector identification

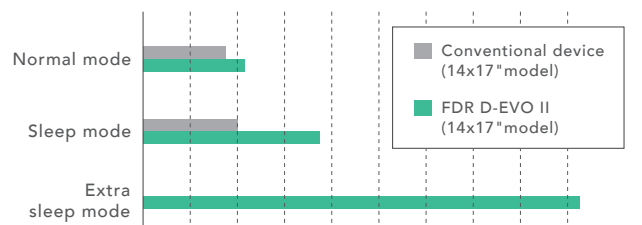
LEDs at the center of each of the four sides of the panel make it easy to confirm centering during patient positioning. LED colors are selectable from five colors (blue, pink, orange, lime-yellow, and purple) to personalize one detector from another for sharing or when using multiple detectors at a time. The LEDs also gently flash to indicate sleep modes at a glance.

### ③ Easy-to-see battery status LEDs

The back of the panel is equipped with a 3-bar LED battery status indicator to quickly confirm remaining power.

### ④ New sleep and deep sleep modes extend battery life for up to 36 hours standby time

Sleep mode provides up to 7.5 hours and deep sleep mode provides up to 36 hours of standby time (up to 48 hrs for 24x30cm model). In sleep mode, the detector edge side-center LEDs flash slowly to indicate sleep status at a glance. Wakes with mouse or button click at the detector.





**5 Memory storage digital readout**

The digital LED readout indicates images acquired with memory mode and total number of images stored. Images are retained even if detector power is interrupted. Stores up to 100 images, retaining on last in first out basis or manual memory management. The 14x17" and 17x17" models store up to 100 images and the 24x30cm model stores up to 200 images.

**6 Three sizes for preferred radiography positioning and optimal field of view**

Available in three detector sizes, 14x17", 17x17" and 24x30cm. Detectors can be selected according to the radiography field and positioning scenarios.

**7 Wireless or wired flexibility**

All models feature standard battery and wireless operation and can also be utilized with a detachable cord for power, trickle charge and communication. Corded use allows extended uninterrupted use such as in an upright or table or for locations where wireless is not desired.

**8 Detector docking stand for charging, panel registration and memory transfer**

The detector docking stand enables fast full charging in approximately 4 hours and fits all 3 size detectors.

**9 Spare battery charger and control unit**

The panel and accessories all share the same elegant, high-quality design. The spare battery charger holds 2 batteries for fast charging and the power supply unit enables wired interfacing to generator system, detector power and connectivity functions.

**10 Detector docking stand interfaces with the console to display panel status**

The docking stand simplifies technologist visibility of which detector is selected and its ready status with detector matching glowing LED areas.

## Specifications

<b>Model</b>	FDR D-EVO II: C35 (14x17") / C43 (17x17") / C24 (24x30cm) Cassette size flat panel detector (FPD) with Fujifilm exclusive ISS (Irradiation Side Sampling) capture technology
<b>Scintillator</b>	CsI (Cesium Iodide)
<b>Image Preview/Cycle Times</b>	14x17", 17x17": Preview: < 2 sec, Cycle: 6-7.5 sec; 24x30cm: Preview: <2 sec, Cycle: <5 sec
<b>Reading Greyscale/Pixel Pitch</b>	16 bits per pixel, 150µm
<b>Image Area Size (pixels)</b>	2,836x2,336 / 2,836x2,832 / 1,536x1,920
<b>Image Area Size (inches)</b>	16.8x13.8" / 16.7x16.8" / 9.1x11.3"
<b>External Dimensions (WxDxH)</b>	18x15x0.6" / 18x18x0.6" / 13x10.6x0.6" (same as standard cassette sizes)
<b>Weight (incl. battery)</b>	5.7 lbs / 7.1 lbs / 3.3 lbs
<b>Detector Connectivity (FPD to Console)</b>	Wired use possible with SE detector cable & MP box Wireless: FPD to Console, in room typ. 33ft range, closed loop, image data only (no patient info). IEEE 802.11n, 2.4 & 5.2 GHz bands, W52/W53/W56/W58) WPA2-PSK encryption w/AES & MAC (unique IP) protocols secure connection, confirmation & completion of data, handshake pairing to registered FPDs only.
<b>Network Connection (Console to Hosp Network)</b>	LAN wired Ethernet: 10/100/100 Base-T, DHCP or Static or Wireless IEEE 802.11 (depending on Hosp network)
<b>Battery Performance (full) approx.</b>	User swappable Lithium ION 14x17", 17x17": Up to 4 hrs or ~400 images (200 continuous images). Standby: 4 hrs, Sleep: 7.5 hrs, Deep Sleep: 36 hrs 24x30cm: Up to 4 hrs or ~400 images (200 continuous images). Standby: 4 hrs, Sleep: 8 hrs, Deep Sleep: 48 hrs
<b>Charge Time (empty - full) approx.</b>	Battery Charger: 3 hrs, Docking Stand or FPD Cord: 4 hrs
<b>Quick Charge Time (empty) approx.</b>	After low battery alarm: 3 min. charge allows up to 30 images (battery charger or power supply or docking stand)
<b>Usable Grid Frequency</b>	40 lines/cm recommended; 40-44 lines/cm, 80 or more lines/cm useable VirtualGrid™ processing (option) simulates scatter clean up for images acquired without a grid
<b>Patient Load Resistance</b>	352 lbs point load; 683 lbs distributed; (protective cover required for standing exams)
<b>Antibacterial Coating</b>	Hydro AG™ is a Fujifilm proprietary Silver ION coating applied to outer surfaces. SIAA ISO22196, KOHKIN classification. (Does not substitute for infection control protocols, i.e. bagging and cleaning still required.)
<b>Water Resistance</b>	IPX-6, international protection classification. (Not a substitute for normal precautions such as bagging.) Resistance effectiveness can be impaired by wear and drops. FPD cable connector must be fully covered with adapter.
<b>Environmental Conditions (temp, humidity, atmos. press.)</b>	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 (w/pkg): 14-122°F, 10-90%RH (nc), 700-1,060 hpa
<b>Power Conditions</b>	All: single phase 50/60Hz Std 100-240VAC; 200VA or less FPD MP box: 100-240VAC (+/-10%), 200VA or less, Control Cabinet: 115/230VAC (auto), 460VA or less Battery Charger: 100-240VAC (+/-10%), 100VA or less
<b>Heat Output</b>	Heat Output: FPD: 316KJ/h, Control Cabinet: 324 KJ/h (standby)
<b>Power Consumption</b>	FPD & MP box: 88W (operating w/2 FPDs) Docking Stand: 29W (FPD & Stand charging) Control Cabinet: 110W (operating), 90W (standby) Battery Charger: 50W (operating), 5W (standby)
<b>Components Dimensions &amp; Weight w x d x h (inches) / wt (lbs.)</b>	MP box: 4.7x13.8x13.8" / 19.1 lbs Docking Stand: 22.8x3.7x7.9" / 12.9 lbs Battery Charger: 3.6x10.2x2.2" / 1.3 lbs
<b>Standard Configuration (retrofit to existing rooms)</b>	Includes Detector(s), Battery(s), FPD cable, MP box, Handswitch Interface & FDX Console technologist workstation
<b>Optional Configurations/ Accessories</b>	Additional FPDs, Workstations, Spare Batteries, Battery Charger (2-slot), FPD Docking Stand, Grid Caps, Advanced processing software. Portable FDR Flex kit, Retrofits, Integrated Rooms and Integrated Mobile Systems

