FUJIFILM MEDICAL SYSTEMS PRODUCT PROFILES
Changing the worldwide medical scene with a stream of innovative products.

FUJIFILM Corporation
http://www.fujifilm.com/products/medical/
Innovative technology from Fujifilm is changing the medical scene all over the world.

Having pioneered the world’s first digital x-ray system Fuji Computed Radiography (FCR) in 1983, Fujifilm has maintained its focus on building technological innovations and offers yet another new solution to the medical field, Fujifilm Digital Radiography Systems (FUJIFILM DR). Utilizing Focused Phosphor Technology, FUJIFILM DR realizes simultaneously both high image quality and reduced x-ray exposure, and our product lineup has broadened as represented by our VELOCITY Ug, VELOCITY Tp, VELOCITY Unity fp, and the AMULET which is specifically designed for mammography. Fujifilm’s superb technology and diversified product lineup has gained recognition from medical institutions of all practices and over 60,000*1 digital imaging systems have been sold worldwide.

Just as with our FDR products, we are also firmly committed to expanding the array of our other product lines. Take a look at our FCR product lineup: We have introduced the FDR Ga, Fujifilm’s first portable CR x-ray unit. Its flexible, compact design allows you to go just about everywhere within your facility to conduct exams and preview exposed images right on the spot all with speed and efficiency. And see the CAPSULA XL II which is evolving into a compact, multi-functional workstation compatible also for mammography exams.

As for our consoles, the FCRView has been released: Combining the capacity of an image viewer with operational and data administration capabilities, FCRView is the ultimate all-in-one viewer that gives you functionality from the start of initiating x-ray exposures to the end of archiving your data.

Then we have our DRYPIX series of dry imagers. Through technologies only available at Fujifilm, we provide the world’s fastest high quality images to any location at a medical institution.

And SYNAPSE, our image and information management system which has been implemented at over 2,000*2 medical institutions worldwide and alone proves its high evaluation for exceptional system stability and high image quality, can now be applied to cardiology and is constantly evolving.

Having gained its position as a leading company in medical imaging systems, Fujifilm is totally committed to bringing change to the medical field through its philosophy “Innovative Products through Continuous Progress.”

*1: As of 2008 1st half  
*2: As of 2009.1
Focused Phosphor Technology applies an even thicker Focused Phosphor Plate now with the phosphor particles in a columnar structure which allows the stimulation light to penetrate deep into the phosphor layer and extract the Photo Stimulated Luminance (PSL) that is generated, through the surface of the Focused Phosphor Plate. As a result, both x-ray exposure efficiency and image quality have been enhanced.

- Phosphor Technology
- Aluminium

FDR VELOCITY Ufp
The upright FDR best suited for chest exams and with functionality to lower the detector to a height of 47cm from the floor, enabling exposures also for lower extremities.

FDR VELOCITY Unity fp
The FDR for various x-ray exams either supine or upright. The x-ray tube and detector work in coalition, allowing exams of angular parts such as the knee, elbow, and skull.

Unparalleled image quality in digital radiology
FUJIFILM DIGITAL RADIOGRAPHY

FUJIFILM DR has adopted Focused Phosphor Technology in the imaging detector, attaining twice the DQE (Detective Quantum Efficiency) of non-FDR equipment systems and allowing reduced exposure dose but with higher image quality. And with Fujifilm’s proprietary Image Intelligence™ technology, the contrast and density of images are automatically adjusted to provide only the required information to the doctor’s hands.

The FDR Go offers you the capacity to make x-ray exposures and preview images quickly and accurately just about everywhere. Whether it’s at the bedside, in the operating room, or within the intensive care unit, FCR Go lessens the inconveniences often experienced in making the rounds. This system truly enhances work efficiency by responding to the diversifying needs of hospitals.

FCR Go gathers smiles everywhere - anytime, anyplace

FCR Go
The dual motor drive allows free and smooth steering, with speed adjustment capability, and gives superb mobility even in tight spaces. Designed to be silent, you can comfortably move the unit at night time. A touch sensor is situated on the front of the unit, stopping the machine automatically when an obstacle is touched.

Mobility as you like it
Positioning as you need it

The telescopic arm adjusts easily to the precise, desired position. The arm also has extended horizontal and vertical travel letting you use longer exposure distances for high quality images. The x-ray tube also moves both horizontally and vertically, allowing desired positioning even when the arm is in a diagonal position.

Lightweight cassettes make you smile

The rugged, lightweight IP (Imaging Plate) cassettes, in a variety of sizes, aid to the precise positioning you need to deliver high performance in areas with limited space such as at the bedside. Various size IPs and cassettes fill a variety of studies.

IP (Imaging Plate)
IP cassette

- All products require regulatory approval of the importing country. For details on product availability, contact our local representative.
FCR has remained the leader in the field for more than 20 years. FCR is a premium digital X-ray solution, offering the broadest product line to suit the requirements of nearly every imaging application. FCR’s leadership position is driven by uncompromised image quality, continued investment in technology innovation, development of systems with the highest productivity, and system implementation through the most experienced group of Professional Service individuals in the industry. FCR is the best possible solution for transition to digital at both large and small facilities.

Ideally suited for chest imaging with advanced scanning and image processing capabilities; features include HD LINESCAN Technology.

FCR VELOCITY U
Equipped with state-of-the-art functions including an optional 50-micron reading kit for Mammography applications.*

FCR VELOCITY T
Proven FCR technology for supine examinations with advanced scanning and image processing capabilities; features include HD LINESCAN Technology.

FCR CAPSULA XLI
High-quality and compact FCR for a broad range of diagnostic imaging. Small enough to fit almost anywhere - footprint 0.22 m².

FCR CAPSULA X
The high-efficiency FCR reader offering quality imaging and all-round versatility for superior diagnostic capability.

FCR XG5000
High-resolution one-stacker FCR with 20 pixel/mm sampling pitch for digital mammography and pediatric imaging.

FCR PROFECT ONE**
Superior image quality with 20 pixel/mm sampling pitch mammography and pediatric imaging with four-cassette stacker.

FCR PROFECT CS**
Flagship upright CR system with unique Energy Subtraction processing option.

FCR XU-D1
FCR standard cassette with or without lead foil backside.

FCR special cassette for IP HR-VP reading.

FCR cassette for IP ST-BD. FCR cassette for dual-sided mammography reading.

FCR long view cassette for Scoliosis

FCR special cassette for Linac/Oncology

Fujifilm Computed Radiography (CR), the world’s first CR that has acquired PMA** approval from FDA*** for mammography.

Increases DQE (Detective Quantum Efficiency) by collecting the emissions from both sides of the IP with optimal, spatial frequency-dependent factors.

FSK Dual-Side Reading Technology

Imaging Plate and Cassette

All products require regulatory approval of the importing country. For details on product availability, contact our local representative.
Fujifilm
Mammography Solutions

AMULET FUSION DIGITAL MAMMOGRAPHY SYSTEM

Fujifilm’s revolutionary digital mammography system, AMULET, is equipped with a new type direct-conversion flat panel detector (FPD) that boasts the world’s smallest pixel size*1 of 50μm and also simultaneously realizes both high resolution and low noise images through a Fujifilm developed panel structure with a dual layer of amorphous selenium, and the world’s first*2 Direct Optical Switching Technology. Indications of masses and microcalcifications are clearly depicted with superb high resolution, and even workflow time has been shortened by approximately 15 seconds with the waiting intervals from one exposure shot to the next. And the woman-friendly ergonomic design of the system unit greatly reduces the stress and discomfiture experienced with mammography exams.

*1: Based on publicly available and disclosed information concerning amorphous selenium direct-convertible digital mammography as of October, 2008. (Fujifilm study)

Fujifilm's revolutionary digital mammography system, AMULET, is equipped with a new type direct-conversion flat panel detector (FPD) that boasts the world’s smallest pixel size*1 of 50μm and also simultaneously realizes both high resolution and low noise images through a Fujifilm developed panel structure with a dual layer of amorphous selenium, and the world’s first*2 Direct Optical Switching Technology. Indications of masses and microcalcifications are clearly depicted with superb high resolution, and even workflow time has been shortened by approximately 15 seconds with the waiting intervals from one exposure shot to the next. And the woman-friendly ergonomic design of the system unit greatly reduces the stress and discomfiture experienced with mammography exams.

The innovative selenium panel developed exclusively by Fujifilm

The 50μm flat panel offers exceptional performance and provides optimum image quality

- Direct Optical Switching Technology – New from Fujifilm
  The x-ray sensor employs a direct switching method and the panel is comprised of a dual layer of amorphous selenium. By extracting the image signal that is converted to an electric charge through the newly-developed Direct Optical Switching system rather than a conventional TFT switch, Fujifilm has reduced electronic noise and achieved a pixel pitch of 50μm.

- Fujifilm’s exclusive amorphous selenium (a-Se) panel
  Through use of our device development technology and vacuum deposition technology, we have produced highly pure amorphous selenium, offering a higher x-ray conversion rate. In addition, the shorter time required to erase the residual electric charge, through high-intensity light, made possible by the use of Direct Optical Switching Technology,shortens the imaging cycle and improves efficiency.

- Higher image quality achieved using our proven FCR imaging technology
  AMULET uses the mammography image processing technology from our proven FCR system. It provides high quality images that enhance visualization of the mammary tissue and offers greater detail of abnormal areas. Thus, AMULET certainly helps the diagnostic process with efficiency.

Fujifilm CR Digital Mammography Systems

Bringing high quality with economy and reliability

Using advanced technologies to assist early detection of breast cancer, Fujifilm’s easy-to-use digital systems, the FCR PROFECT CS and PROFECT ONE, expedite workflow with multi-room capability, background image processing and automatic image routing features. Touch-panel accessibility and intuitive software enable the CR Console to facilitate data confirmation and networking versatility. Linking the FCR reader via CR Console to the CAD Mammography Workstation greatly expands image reading capacity. Fujifilm’s Digital Mammography Systems benefit operator and patient alike by providing more information from a single acquisition, thereby ensuring a more accurate diagnosis.

Fujifilm’s Digital Mammography CAD is a valuable detection support system. Using proprietary algorithms, this CAD system helps detect indications of masses and microcalcifications on the breast image that may indicate cancer with the readily distinguishable CAD marks.

Fujifilm supports the Pink Ribbon campaign for early detection of breast cancer

Fujifilm Computed Radiography (CR), the world’s first CR that has acquired PMA*1 approval from FDA*2 for mammography.

*1: PMA (Premarket Approval)  *2: FDA (U.S. Food and Drug Administration)

Fujifilm Digital Mammography CAD is a valuable detection support system. Using proprietary algorithms, this CAD system helps detect indications of masses and microcalcifications on the breast image that may indicate cancer with the readily distinguishable CAD marks.

Fujifilm supports the Pink Ribbon campaign for early detection of breast cancer

Fujifilm Computed Radiography (CR), the world’s first CR that has acquired PMA*1 approval from FDA*2 for mammography.

*1: PMA (Premarket Approval)  *2: FDA (U.S. Food and Drug Administration)

Fujifilm Digital Mammography CAD is a valuable detection support system. Using proprietary algorithms, this CAD system helps detect indications of masses and microcalcifications on the breast image that may indicate cancer with the readily distinguishable CAD marks.

Fujifilm supports the Pink Ribbon campaign for early detection of breast cancer

Fujifilm Computed Radiography (CR), the world’s first CR that has acquired PMA*1 approval from FDA*2 for mammography.

*1: PMA (Premarket Approval)  *2: FDA (U.S. Food and Drug Administration)

Fujifilm Digital Mammography CAD is a valuable detection support system. Using proprietary algorithms, this CAD system helps detect indications of masses and microcalcifications on the breast image that may indicate cancer with the readily distinguishable CAD marks.

Fujifilm supports the Pink Ribbon campaign for early detection of breast cancer

Fujifilm Computed Radiography (CR), the world’s first CR that has acquired PMA*1 approval from FDA*2 for mammography.

*1: PMA (Premarket Approval)  *2: FDA (U.S. Food and Drug Administration)

Fujifilm Digital Mammography CAD is a valuable detection support system. Using proprietary algorithms, this CAD system helps detect indications of masses and microcalcifications on the breast image that may indicate cancer with the readily distinguishable CAD marks.

Fujifilm supports the Pink Ribbon campaign for early detection of breast cancer

Fujifilm Computed Radiography (CR), the world’s first CR that has acquired PMA*1 approval from FDA*2 for mammography.

*1: PMA (Premarket Approval)  *2: FDA (U.S. Food and Drug Administration)
DRYPIX support features

A variety of advanced features and technologies support the DRYPIX series, ensuring images of optimal quality as well as superb connectivity for ease of handling and usage.

Higher Resolution

What customers consider most important for a dry laser imager is its reliability based on stable and high printing quality where minute lesions can be clearly observed. The Fujifilm Dry Laser Imager applies extremely sharp laser beams with little blur that hardly affect the surrounding pixels, achieving high CTF*1 and the output of sharp images. Merely using short interval (high dpi*2) scanning is not sufficient to obtain an absolutely clear image. With the exclusive Fujifilm Dry Image Films, the laser beam is prevented from scattering in the film during the recording of an image, resulting in images with virtually no blur due to the unscattered beam. That is why Fujifilm Dry Laser Imagers exhibit outstanding resolution beyond the stated dpi.

Wide-ranging Connectivity

With a built-in high-speed DICOM print server, connection is fast and error-free, allowing direct intercommunication with any modality linked to the network. An integral part of our new DRYPIX Print Networking System, networking capabilities set new standards in convenience and versatility.

DRYPIX STATION

Optionally available DRYPIX STATION assures system reliability in multi-unit environments by automatically detecting printer failure and rerouting images to an active printer. DRYPIX STATION enhances network capability by integrating worklist information with input image data.

DRYPIX LINK

DRYPIX LINK connects to non-DICOM modalities, sending image data to DRYPIX through the DICOM network. Connecting with optional DRYPIX STATION enhances network capability by integrating worklist information with input image data.
Fujifilm’s SYNAPSE is a web-based medical imaging and information management system that integrates image and diagnostic information within a medical institution over a specified network. Operation has been made simple so that doctors, technologists, and hospital personnel can readily obtain required information anywhere and anytime. Images and past exam data from even separate modalities can also be displayed with high image quality and high-functionality, strongly supporting patient study needs.

Austin Radiological Association

Neal Rutledge, MD
Neuroradiologist
Chairman, IT Committee Austin Radiological Association

“Our SYNAPSE PACS in combination with our high speed WAN and SAN is enabling us to further expand our practice and fuel additional growth. It will help us provide a superior service to our customers and achieve a level of efficiency not possible with other PACS approaches.”

Doyle Rabe
CEO
Austin Radiological Association

Why Fujifilm?

Facility Facts
- 1.2 Million Annual Procedures
- 62 Radiologists
- 2,500 Referring Physicians
- 27 Image Acquisition Sites

PACS Facts
- Enterprise PACS
- Clustered PACS Database
- Clustered Multifunction Servers
- EMC Symmetrix® SAN
- 40 Dual Display Workstations
- 100s of Single Display Workstations
- 160 Imaging Modalities
- IDX RIS

Yale-New Haven Hospital

James Brink, MD
Chief of Diagnostic Radiology
Yale New Haven Hospital and Professor and Chairman of Radiology Yale University School of Medicine New Haven, CT

“The system has allowed us to create an enterprise-wide image distribution system. A case from 7 years ago can be requested, and it will be there right away...”

Mike Matthews
Administrator Clinical Information Systems
Yale-New Haven Hospital New Haven, CT

Why Fujifilm?

Facility Facts
- 300,000 imaging exams a year
- 644 beds
- 671 staff physicians
- 45 radiologists

PACS Facts
- 9 acquisition sites
- 60-70 diagnostic workstations
- 700 general viewing workstations
- 3,000-4,000 SYNAPSE® users
- 160 imaging modalities
- Fuji CR
- Eclipsys and Tektronix HIS
- GE RIS
- PowerScribe and Talk Technology

Imagine true image and information management integration specially created for cardiovascular studies. Suddenly, every department in your healthcare network, from the emergency room to non-invasive areas, is unified with one database. You get a truly seamless integration of every modality. You are free to review patient studies and create comprehensive, customizable reports from a single workstation. You even have the power of advanced clinical tools right at your fingertips. And since it is completely scalable, you can be certain that you are always working with the latest technologies while still retaining all your historical data. This is the way to work efficiently and cost-effectively and the way to deliver the best possible care to your patients with SYNAPSE Cardiovascular.

Why Fujifilm?

Facility Facts
- All products require regulatory approval of the importing country. For details on product availability, contact our local representative.
Fujifilm’s renowned high-contrast, high-resolution orthochromatic x-ray films provide optimum images for diagnosis.

**General Usage Film**

**AD System for Chests**

The Fujifilm AD System is an orthochromatic system that incorporates advanced technologies to provide high speed and sharpness with exceptionally low noise.

**Mammography Film Systems**

**AD Mamography System**

The Fujifilm AD Mamography System offers the latest film and screen technological advancements to ensure optimal image quality for mammographic applications. The system is designed to yield extremely high-contrast, D-max and sharpness with minimal noise.

**UM-MA HC Film**

UM-MA HC is a blue base single emulsion orthochromatic film for mammographic applications.

---

**GENERAL USAGE FILM**

<table>
<thead>
<tr>
<th>Film</th>
<th>Screen</th>
<th>SHR Fine</th>
<th>SHR Medium</th>
<th>SHR Medium Plus</th>
<th>SHR Regular</th>
<th>SHR Fast</th>
<th>SHR Ultra Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super HR-T</td>
<td>Relative Speed</td>
<td>120</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
</tr>
</tbody>
</table>

**MAMMOGRAPHY FILM RELATIVE SPEED**

<table>
<thead>
<tr>
<th>Film</th>
<th>Screen</th>
<th>AD Mammo Fine</th>
<th>AD Mammo Medium</th>
<th>UM Mammo Fine</th>
<th>UM Mammo Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-M</td>
<td>—</td>
<td>100</td>
<td>140</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>UM-MA HC</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>140</td>
<td>—</td>
</tr>
</tbody>
</table>

---

**SPECIFICATIONS**

**FUJIFILM DR**

<table>
<thead>
<tr>
<th>Expiration Date</th>
<th>FPF-2000</th>
<th>HFP-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing Capacity (mips)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Power Consumption (W)</td>
<td>650</td>
<td>850</td>
</tr>
<tr>
<td>Diameter (mm)</td>
<td>240</td>
<td>300</td>
</tr>
</tbody>
</table>

**FUJIFILM DR**

<table>
<thead>
<tr>
<th>Expiration Date</th>
<th>FPF-2000</th>
<th>HFP-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing Capacity (mips)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Power Consumption (W)</td>
<td>650</td>
<td>850</td>
</tr>
<tr>
<td>Diameter (mm)</td>
<td>240</td>
<td>300</td>
</tr>
</tbody>
</table>

**FCR**

<table>
<thead>
<tr>
<th>CAPSULA 15</th>
<th>CAPSULA 20</th>
<th>AD-300</th>
<th>PROFECT ONE</th>
<th>PROFECT CS</th>
<th>FUTURE U</th>
<th>VELOCITY Unity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure</td>
<td>43</td>
<td>43</td>
<td>103</td>
<td>103</td>
<td>240</td>
<td>140</td>
</tr>
<tr>
<td>Throughput (IPs/hour)</td>
<td>62</td>
<td>63</td>
<td>103</td>
<td>60</td>
<td>103</td>
<td>240</td>
</tr>
<tr>
<td>Power Consumption (W)</td>
<td>4280</td>
<td>4280</td>
<td>3520</td>
<td>4280</td>
<td>4280</td>
<td>4280</td>
</tr>
</tbody>
</table>

**CAPSULA 15**

| Exposure | 43 | 43 | 103 | 103 | 240 | 140 |
| Throughput (IPs/hour) | 62 | 63 | 103 | 60 | 103 | 240 |
| Power Consumption (W) | 4280 | 4280 | 3520 | 4280 | 4280 | 4280 |

---

**AD Mammography Systems**

**Super HR-T30/HR-U30**

**Super HR-T30** is a new high-contrast, high-resolution film for general radiography that provides consistently superb image quality. Super HR-U30 is a practical all-round film for general applications.

---

**Film/Screen Systems**

Capturing x-ray information precisely and sharply