FLEXAVISION FD package
eXceed edition
Remote Controlled R/F System
Full Digital System
FLEXAVISION is a full-digital R/F system equipped with an extensive range of functions. It was designed to respond easily and flexibly to a wide range of examination requirements, such as examinations of the gastrointestinal tract, chest, and abdomen, as well as specialized examinations required during urology and rehabilitation.

This new offering from Shimadzu incorporates the user-friendliness and flexibility needed for our world’s ageing societies.

Full Digital Solution for Flexibly Accommodating a Variety of Examination Needs

The product’s pictures on this brochure are for the CE-compliant type system. Non-CE type system has a slightly-different appearance in some components such as collimator.
Equipped with a high-definition 1-megapixel CCD camera, the 12-inch (30 cm) image intensifier provides a large field of view.

In fluoroscopy and radiography, real-time acquisition of high-definition, full-digital images allows immediate viewing on a monitor.

Digital serial radiography at up to 3 fps (7.5 fps: option) ensures precise image timing in regions such as the esophagus, where contrast medium flow is difficult to capture.

Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-R or CD-R can be used as the external storage medium, and data can be saved in DICOM format.

This system can also perform general radiography using large-field 35 x 43 cm cassettes.

The use of CR cassettes together with a digital CCD allows the full-digital observation of images.

Highest Image Quality in Its Class

High-definition, full-digital images from the 1-megapixel CCD camera allow monitoring in both radiography and fluoroscopy modes.

1024 x 1024-Matrix, 12-bit (4096-Gradation), Full-Digital Images

Equipped with a high-definition 1-megapixel CCD camera, the 12-inch (30 cm) image intensifier provides a large field of view.

In fluoroscopy and radiography, real-time acquisition of high-definition, full-digital images allows immediate viewing on a monitor.

New “Smart FIT” Fluoroscopy Image Processing Function Reduces Noise and Ghosting

New real-time digital filtering can efficiently reduce noise in low dose fluoroscopic images. High quality fluoroscopic images with the filtering can be viewed without any gisting.

Serial Radiography

High-Capacity Storage

Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-R or CD-R can be used as the external storage medium, and data can be saved in DICOM format.

Cassette tray

This system can also perform general radiography using large-field 35 x 43 cm cassettes.

The use of CR cassettes together with a digital CCD allows the full-digital observation of images.

New real-time digital filtering can efficiently reduce noise in low dose fluoroscopic images. High quality fluoroscopic images with the filtering can be viewed without any gisting.

Highest Image Quality in Its Class

High-definition, full-digital images from the 1-megapixel CCD camera allow monitoring in both radiography and fluoroscopy modes.

1024 x 1024-Matrix, 12-bit (4096-Gradation), Full-Digital Images

Equipped with a high-definition 1-megapixel CCD camera, the 12-inch (30 cm) image intensifier provides a large field of view.

In fluoroscopy and radiography, real-time acquisition of high-definition, full-digital images allows immediate viewing on a monitor.

New “Smart FIT” Fluoroscopy Image Processing Function Reduces Noise and Ghosting

New real-time digital filtering can efficiently reduce noise in low dose fluoroscopic images. High quality fluoroscopic images with the filtering can be viewed without any gisting.

Serial Radiography

Digital serial radiography at up to 3 fps (7.5 fps: option) ensures precise image timing in regions such as the esophagus, where contrast medium flow is difficult to capture.

High-Capacity Storage

Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-R or CD-R can be used as the external storage medium, and data can be saved in DICOM format.

Cassette tray

This system can also perform general radiography using large-field 35 x 43 cm cassettes.

The use of CR cassettes together with a digital CCD allows the full-digital observation of images.

New “Smart FIT” Fluoroscopy Image Processing Function Reduces Noise and Ghosting

New real-time digital filtering can efficiently reduce noise in low dose fluoroscopic images. High quality fluoroscopic images with the filtering can be viewed without any gisting.

Serial Radiography

Digital serial radiography at up to 3 fps (7.5 fps: option) ensures precise image timing in regions such as the esophagus, where contrast medium flow is difficult to capture.

High-Capacity Storage

Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-R or CD-R can be used as the external storage medium, and data can be saved in DICOM format.

Cassette tray

This system can also perform general radiography using large-field 35 x 43 cm cassettes.

The use of CR cassettes together with a digital CCD allows the full-digital observation of images.

Highest Image Quality in Its Class

High-definition, full-digital images from the 1-megapixel CCD camera allow monitoring in both radiography and fluoroscopy modes.

1024 x 1024-Matrix, 12-bit (4096-Gradation), Full-Digital Images

Equipped with a high-definition 1-megapixel CCD camera, the 12-inch (30 cm) image intensifier provides a large field of view.

In fluoroscopy and radiography, real-time acquisition of high-definition, full-digital images allows immediate viewing on a monitor.

New “Smart FIT” Fluoroscopy Image Processing Function Reduces Noise and Ghosting

New real-time digital filtering can efficiently reduce noise in low dose fluoroscopic images. High quality fluoroscopic images with the filtering can be viewed without any gisting.

Serial Radiography

Digital serial radiography at up to 3 fps (7.5 fps: option) ensures precise image timing in regions such as the esophagus, where contrast medium flow is difficult to capture.

High-Capacity Storage

Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-R or CD-R can be used as the external storage medium, and data can be saved in DICOM format.

Cassette tray

This system can also perform general radiography using large-field 35 x 43 cm cassettes.

The use of CR cassettes together with a digital CCD allows the full-digital observation of images.
Our imaging chain extension function allows you to easily secure the area required for a variety of examinations. For example, with VF examinations of patients in wheelchairs, this function eliminates the need to transfer the patient to the table and then raise the table to perform imaging, reducing the operator’s work and patient’s anxiety.

Tabletop and imaging chain operation switches are provided on the bedside to allow examinations and positioning while caring for the patient.

Using LED lights for the exposure field lamp in the collimation unit increased lamp brightness and longer life. The brighter illumination makes it easier to confirm the field of view at the location being examined.

180° rotation of the X-ray tube/collimator easily and effectively accommodates chest examinations using a bucky stand.

Previously available only in high-end systems, FLEXAVISION can be equipped with a table elevation function. In addition to allowing safe patient transfer onto the table from a wheelchair or stretcher, this function makes it easy for the operator to perform approaches during a wide variety of procedures, including digestive tract examinations, IVF, and urological examinations, and also helps to reduce both patient and operator stress. (Systems without this function are also available.)

The imaging unit can be moved using buttons provided on the collimation unit. The imaging unit can be aligned with the target examination area while caring for the patient.

Flexible Easy-to-Use System

Excellent Accessibility Supports a Wide Variety of Examinations

The FLEXAVISION includes a compact table that features fast movement speeds for quickly reconfiguring the table to support a wide variety of examinations and a large coverage area that ensures target examination areas are included within the field of view.

Bedside Positioning for Better Patient Care

The imaging unit can be moved using buttons provided on the collimation unit. The imaging unit can be aligned with the target examination area while caring for the patient.

Shimadzu’s Unique Imaging Chain Extension Function

Our imaging chain extension function allows you to easily secure the area required for a variety of examinations. For example, with VF examinations of patients in wheelchairs, this function eliminates the need to transfer the patient to the table and then raise the table to perform imaging, reducing the operator’s work and patient’s anxiety.

Table Elevation: a Unique function in its class

Previously available only in high-end systems, FLEXAVISION can be equipped with a table elevation function. In addition to allowing safe patient transfer onto the table from a wheelchair or stretcher, this function makes it easy for the operator to perform approaches during a wide variety of procedures, including digestive tract examinations, IVF, and urological examinations, and also helps to reduce both patient and operator stress. (Systems without this function are also available.)

Flexible Easy-to-Use System

Excellent Accessibility Supports a Wide Variety of Examinations

Tabletop and imaging chain operation switches are provided on the bedside to allow examinations and positioning while caring for the patient.

Using LED lights for the exposure field lamp in the collimation unit increased lamp brightness and longer life. The brighter illumination makes it easier to confirm the field of view at the location being examined.
Your Clinical Partner For Accommodating varied Examinations

**Gastrointestinal Examinations**

**Easily Control Contrast Medium Flow in Upper Gastrointestinal Tract Examinations**
Supports radiographic esophageal examinations in the vertical position and Trendelenburg position up to -30°.

**Accurate Timing of Esophagus Radiography**
Digital serial radiography at 3 fps (up to 5 fps with option) allows precise timing of esophagus examination.

**Sub-divisional Digital Radiography**
2-frame and 4-frame Digital Radiography is efficient for screening.

**Large Field of View in Digital Radiography**
The 12 inch (30 cm) Image Intensifier provides a large examination area which is required in enema examinations.

**Orthopedic Examinations**

**View Kinetics with Fluoroscopy**
The status of joints and other areas can be viewed in real time using fluoroscopy. Furthermore, the status can be viewed with weight applied by tilting the table.

**Wide-Range Coverage**
Adding a auxiliary tabletop* enables radiography over a large range, from the ankles to the shoulder joints. (*Option)

**Optimum Images**
High-density resolution and multiple digital image-processing technologies produce optimum-quality images.

**Endoscopic Examination**

**Easy Access from Tableside**
The simple space-saving design of this system makes it easy to perform endoscopic procedures from the table-side. Distance from the bottom of the table to the observation field is 35 cm (using a 12-inch image intensifier), ensuring endoscope positions in fluoroscopic images are captured precisely.
The design, manufacture, and assembly of all parts used in our FLEXAVISION system, including both the X-ray tube and image intensifier as well as the RP table, DR, and X-ray generator, are performed in-house by Shimadzu. The system’s design reflects our consideration of how to match all related aspects, such as ease of use, reduced X-ray dose, and observation using high-quality images, with the actual examination environment.

Easy-to-Use Digital System

Our digital image processing unit system is based on highly reliable hardware. Simple operations allow processing of high-quality digital images at high speed. An easy-to-see graphical user interface (GUI) and mouse control provide an intuitive operating environment.

Parallel Processing Improves Work Efficiency

Even during fluoroscopy or radiography, images can be transferred to a viewer or laser imager. The ability to execute processes independently reduces the time spent waiting for completion of non-examination processes and improves overall work efficiency.

Automatic Image Transfer

This system supports automatic image transfer to DICOM viewers, servers and laser imagers. This function is achieved in the background, so it will improve the throughput.

Dose Management

FLEXAVISION not only provides high-definition images with the optimal image quality for each examination. It also effectively reduces the total exposure dose in pediatric, gynecological and other examinations where low dose exposures are required.

Low-Dose Pulsed Fluoroscopy Included as Standard Feature

Three pulse rates can be selected depending on examination requirements (3.75 fps, 7.5 fps, or 15 fps). That means high-quality images can be viewed while minimizing the radiation exposure to patients, even during interventional or other procedures that require fluoroscopy for long periods.

Lower Dose with a Removable Grid

The FLEXAVISION grid can be inserted or removed to suit the radiography application. The grid can easily be removed for pediatric, obstetrics and gynecological examinations when the radiation dose to the patient must be kept to a minimum.

Automatic BH Filters Switch to Suit the Examination

Three beam hardening (BH) filters are provided as standard to efficiently remove unnecessary soft X-rays that do not contribute to image quality. The optimal BH filter is automatically selected to suit the examination, so image quality is increased while exposure dose to the patient is reduced.

Exposure Dose Values in Real Time

Calculated dose values are displayed on the monitor in real time.*

In addition to using the display as a guideline for exposure levels during examinations, the dose values can also be managed as examination information via the network.

Polygonal Aperture Reduces Excessive Exposure

FLEXAVISION has a polygonal aperture feature. It reduces exposure levels by blocking the unnecessary X-rays at the four corners of the field of view.
Incorporating a high-capacity hard disk, FLEXAVISION can directly store up to 15,000 images providing you with peace of mind during examinations requiring large storage capacity.

When acquired images are stored in the hard disk, they are also displayed in real time on the monitor. This allows immediate confirmation of images that have been captured during medical examinations, improving examination efficiency.

Incorporating a high-capacity hard disk, FLEXAVISION can directly store up to 15,000 images providing you with peace of mind during examinations requiring large storage capacity.

When acquired images are stored in the hard disk, they are also displayed in real time on the monitor. This allows immediate confirmation of images that have been captured during medical examinations, improving examination efficiency.

All image files can be written in JPEG or BMP format to shared folders.

Network compatibility ensures patient registrations, printing out examination results and information sent to a server smoothly.

Even if malware invades the system through a network connection or external media, for example, this software protects the system by preventing execution of any unauthorized software.

Supporting Hospital IT Network

With FLEXAVISION, image digitization streamlines tasks involving the observation, storage and query of images, while helping to increase work efficiency.

Diagnosis on Monitor

Real-Time Image Storage in High-Capacity HD

Media Storage

Exports Image Data in Multimedia Formats

Compatible with Various Networks Within Hospitals

Anti-Malware Software

**Film Workflow**

**Digital Data Workflow**

Note: *Isn’t Included in FLEXAVISION package.

Note: A separate network must be created if a CR/wireless FPD is used.
A Variety of Options for Supporting Examinations

**For Gastro-intestinal / General Radiographic studies**

- X-ray tube 180°swing unit
  180°rotation of X-ray tube/collimator unit easily and effectively accommodates chest examinations using a leader stand.

- X-ray tube swing-out unit
  Allows rotating X-ray tube 37°to perform chest radiography with a leader stand.

- Imaging chain extension unit

- Compression band

- Mattress

- Oblique projection unit *

- Table elevation function *

- Lateral cassette holder

- Rolling step
  Rolling step has the left-and-right rotational function. It helps an elderly person to rotate left and right smoothly and helps a workflow at mass examination.

- Leg supports
  One pair is mounted on the tabletop to support legs.

- Elbow Rest for Operator in urologic procedures

**For Urogenital / Endoscopic studies**

- Drain bag
  It is for receiving excrement during the examination of the urethra.

- Auxiliary tabletop
  The tabletop extension kit to mount at the head side. It is useful for flexible positioning in ERCP or lower extremities studies etc.

  Dimension : 650mm×500mm(W×L)

- Endoscope support

- Foot switch
  In examination room, it is possible to control radiography and fluoroscopy by foot.

  Left switch: for radiography
  Right switch: for fluoroscopy

- Table elevation function *

- Lateral cassette holder

**For Network connections**

- DIOCM MWM
- DICOM MPPS
- DIOCM RDSR
- Anti-Malware Software

---

**Other Options**

- 2nd -tube option with CH-200M
  Combination with CH-200M allows general radiographic techniques such as lateral and decubitus radiography to be performed on the RF table.

- 2nd -tube option with FH-series
  Combination with FH-series and a radiography stand enables the simple and safe performance of a range of procedures from chest and abdomen radiography to general radiography.

- Foot switch

- Local console
  Monitor cart
  Maximum allowable load UP kit *
  Direct phototimer
  Max. 7.5fps SERIAL acquisition
  Max. 7.5fps DSA acquisition

---

*Indicates options installed at the factory.

Note 1) Some options cannot be compatible with some system configurations. Please inquire for the details to our sales representative.

---

Compression band
Founded in 1875, Shimadzu Corporation, a leader in the development of advanced technologies, has a distinguished history of innovation built on the foundation of contributing to society through science and technology. We maintain a global network of sales, service, technical support and applications centers on six continents, and have established long-term relationships with a host of highly trained distributors located in over 100 countries. For information about Shimadzu, and to contact your local office, please visit our Web site at www.shimadzu.com

Shimadzu Corporation
Headquarters
7, Nishinokyo-Kusabara-cho, Nakagyo-ku, Kyoto 604-8511, Japan
http://www.shimadzu.com


Remarks:
• Every value in this catalogue is a standard value, and it may vary a little from the actual at each site.
• The appearances and specifications are subject to change for reasons of improvement without notice.
• Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
• Before operating this system, you should first thoroughly review the Instruction Manual.