INNOVATION BY DESIGN

For over 130 years, Toshiba has led the world in developing technology to improve the quality of life. This Made for Life™ commitment is reflected in our family of leading-edge imaging systems for MRI, CT, ultrasound, cath labs, X-ray and nuclear medicine. From creating our first X-ray tube in 1915 to introducing the most advanced 64 row CT system in 2003, Toshiba continues to build upon its legacy with technological innovation that improves patient care while providing lasting quality for a lifetime of value.

Toshiba — A History of Leadership

- 1875 - Founding of Toshiba
- 1915 - First X-ray Tube
- 1973 - First Real-time Ultrasound Scanner
- 1989 - First Helical CT Scanner
- 1990 - First Tissue Doppler Imaging System
- 1993 - First One-million-pixel CCD
- 1997 - First Open, Superconducting Magnet
- 2000 - First All-digital Multipurpose X-ray System
- 2003 - First 64-slice CT Scanner
- 2005 - First Compact Dual Plane Cath Lab with Flat Panel Detectors
- 2007 - First Dynamic Volume CT Scanner

INFINIX™ CF-i/SP
INFX-8000V
— Type S —
8” × 8” Flat Panel Detector
Exceptionally versatile floor-mounted imaging

The CF-i/SP brings revolutionary flexibility to floor-mounted X-ray systems. The unique design enables operators to move the C-arm around the exam table as needed to obtain the optimal angle for cardiac and general angiography. This imaging system features an 8-inch flat panel detector that delivers outstanding image quality.

Breakthrough single-plane system

CF-i/SP’s versatile five-axis positioning ensures access to anatomy of interest for diagnostic and interventional procedures. The system boosts throughput and system performance and raises imaging efficiency for the full range of vascular anatomy:

- Clinicians can obtain distortion-free images with uniform brightness for patients of all sizes with the flat panel detector.
- New generation filter made it possible the reduction of noise with high spatial resolution and less lag. The new filter enhances high-definition images of small devices and structures (Super Noise Reduction Filter: SNRF).
- Operators can quickly access all anatomy for imaging, the five-axis positioner provides fingertip-to-fingertip and head-to-toe coverage for cardiac imaging.
- Heads-up image display is available for all anatomy in all positions, thanks to the fifth axis.
- The compact design of the liquid-metal X-ray tube makes it easy to image complex angles.
- Quiet liquid-metal tube facilitates in-room communication.
- CF-i/SP delivers uninterrupted exam imaging while archiving in the background or processing other patients.
Outstanding imaging capability for cardiovascular procedures

CF-i/SP acquires outstanding images for cardiac angiography by utilizing Toshiba’s high-definition flat panel detector. To speed throughput, the system features real-time image processing. To help clinicians manage dose, the system images at a wide range of frame rates.

Flat panel detector

Toshiba’s high-definition cardiac flat panel delivers superior contrast and dynamic resolution. Fluoro images captured by the flat panel demonstrate a fine balance of low noise and easy visualization of small detail, in both dynamic and static mode. The flat panel accurately displays intricate blood vessels and small devices such as catheters and guide wires. Its large 8” x 8” field of view offers superior coverage for coronary imaging, and yields enhanced left ventricular assessment. The flat panel has a 1,024 x 1,024 pixel matrix with up to 30 fps imaging, making it ideal for fast motion studies.

New-generation image processing

Both fluoroscopic and radiographic image data undergo real-time image processing. A dynamic pattern recognition filter and a dynamic digital compensation filter work simultaneously to enhance high-definition images of small devices and structures.
Complete coverage ensures thorough, precise diagnosis

With CF-i/SP, no cardiac approach is out of reach. The system can image any region from the optimal angle. Its flexible design also lets operators and other clinical personnel access the patient readily and comfortably.

When a floor mount is the only option, this is the ideal solution

Facilities that can’t accommodate a ceiling-mounted system don’t need to compromise on image quality. Clinicians can place the versatile C-arm at any required angle.

Anatomical coverage without compromise

The five-axis design ensures effortless head-to-toe and fingertip-to-fingertip coverage. The patient can be approached from either side.

Optimized patient access

Whether the exam requires access to the right jugular vein or space to accommodate the anesthesiologist, the five-axis system easily meets the need.
To promote operator and patient comfort and speed exams, the CF-i/SP is designed to minimize acoustic noise. For imaging heavier patients, the X-ray tube features the highest anode heat capacity, which makes it suitable for longer exams and greater penetration.

**Liquid-metal bearing X-ray tube**

- For extended tube life and reduced operating costs, the liquid-metal bearing system provides anti-abrasion performance.
- To prevent tube overheating and ensure high throughput, the tube has a 3.0 MHU anode heat capacity.
- For fail-safe cardiac imaging, the tube’s unique triple-focus design (0.5 mm/0.5 mm/0.8 mm) provides small focal-spot redundancy.
- Clinicians, staff and patients can communicate easily and clearly, thanks to the system’s acoustically quiet operation.

**Sturdy table design**

To accommodate a wide range of patients, the table supports a maximum patient weight of 480 pounds — one of the highest capacities in the industry. It can bear an additional 220 pounds of pressure for CPR.
Parallel and background processing

CF-i/SP employs parallel data processing to boost productivity. For example, during fluoroscopy and fluorography, operators can prepare for the next scheduled patient; process and print images from a previous (or current) study; and transfer or archive images to an associated network without disrupting Sequential Navigation throughout the procedure.

Unlimited clinical possibilities

Dramatically improve productivity with a virtually unlimited number of custom exams for any number of operators. This feature is unique to Toshiba.

Automation improves workflow

Digital automated technology enhances workflow at each phase of an interventional procedure, letting physicians complete procedures as quickly as possible.

Time-saving technologies boost productivity

CF-i/SP is equipped with Sequential Navigation. When a physician needs to quickly "navigate" through an exam, the system can duplicate preferred angles, projections and acquisition parameters with the touch of a button. Parameters can be changed as needed, without disrupting Sequential Navigation throughout the procedure.

CV-3D™ guidance designed for enhanced coronary analysis (option)

- When combined with distortion-free, flat panel images, sophisticated 3D algorithms deliver precise quantification
- The intuitive graphic display makes it easy to use and access software features for measurement and vessel analysis
- Advanced algorithms automatically eliminate foreshortening
- Bifurcation quantification includes both the side branch and main branch
- Software achieves 3D display and analysis from 2D angiograms

Prevision

Operators can easily enter and store patient registration information before a procedure. They can access the patient information database and retrieve previous studies from the archive for comparison with the current exam.
The **CF-i/SP** features the most comprehensive dose-reduction package available.

### X-ray beam filter

Toshiba’s beam filtration can dramatically reduce absorbed patient dose and radiation scatter. At tableside, clinicians can select the mode of choice to limit dose and optimize image quality.

### Digital-pulsed and low-rate-pulsed fluoroscopy

By merging digital-pulsed fluoroscopy with new-generation image-processing technology, Toshiba takes imaging to a new level. Fluoroscopy takes less time and more readily detects devices such as catheters and guide wires. And only Toshiba offers asynchronous frame rates. Available frame rates range from one to 30 fps, yielding high-quality images and the lowest necessary dose for a range of procedures.

### Variable dose mode

With the touch of a button, the operator can choose from four pre-programmed fluoroscopy modes. Different combinations of pulse rate, dose level, and image processing parameters optimize various study protocols.

### Virtual collimation

After fluoroscopy, virtual collimation uses software to simulate collimator positions. This lets operators adjust collimation without additional fluoroscopy, further reducing radiation dose.

### Electronic zoom

Electronic zoom digitally enlarges images in real time during fluoroscopy, without increasing dose. This eliminates the need to use smaller fields of view on the detector for magnification purposes, which would increase the dose required.

### Fluoroscopic acquisition

Operators can capture still and dynamic images for future reference during fluoroscopy. These archived images represent an alternative to fluorography and a major reduction in dose exposure.

F-STORE: Fluoroscopic images for up to the last 10 seconds can be recorded on the image disk after fluoroscopy is completed.

### Dose control

Radiation dose can be monitored in real time. The operator can observe dose levels on a digital display in the examination room.
Comprehensive DICOM Service Classes support efficient patient care

The CF-i/SP comes standard with the six major DICOM Service Classes, reducing exam time and increasing throughput. DICOM is optional with systems from some other manufacturers.

### Dynamic FPD capability

**Dose management**
The new system includes the ability to image at a wide choice of frame rates to help facilities manage dose delivery to staff and patients. The 20 fps fluoroscopy tableside option sets a new standard of dose management for cardiovascular imaging.

### Exceptional imaging

The digital processor features a powerful imaging computer that permits easy, convenient recording of fluorographic studies. The fluoro images present a fine balance of low noise and easy visualization of small detail, whether displayed in dynamic or static mode.

### A Typical System Layout

**DICOM CD-R/DVD-RAM:** Serve as long-term and portable storage media for valuable image data.

**Infinix-i:** Dynamic viewing and flexible network integration permits rapid export and retrieval of images. Open communications with HIS/RIS provides rapid transfer of patient information.

**PACS/network storage:** Provides online dynamic review of patient images. Storage and transfer of multi-modality images are handled at high speed.

**Presentations:** Clinical data can be exported as PC format files for use in presentations.

Some objects shown in this catalog are optional items. For complete details, please contact your local representative.