Canon

Digital Radiography Systems
OVERVIEW

CXDI-40G

CXDI-40C

CXDI-50G

CXDI-31

The World's Most Versatile Lineup of DR Systems

LANMIX

Better Imaging and Better Care Begin with Canon

For unmatched efficiency with digital image capture, take advantage of a Canon Digital Radiography (DR) system—in just seconds after x-ray exposure, an image appears on-screen, ready for confirmation. Canon also provides the most versatile lineup of DR systems available to meet your general radiographic needs. Canon portable systems, for example, bring the benefits of DR to a wider scope of situations than ever, including challenging applications such as trauma imaging and bedside exams. Each Canon DR system features our innovative Flat Panel Detector technology, trusted by leading healthcare facilities worldwide for its exceptional quality and durability. Helping you deliver better patient care today—Canon Digital Radiography.

Greater efficiency at every step, from image capture to network distribution of images.

Significant reductions in operating costs and increased patient throughput.

Image quality that is second to none, including what the best film-based systems have to offer.

Image acquisition times will differ according to capture conditions and the system used.

CANON DIGITAL RADIOGRAPHY

CXDI-40G

Ideal for a wide range of general radio-graphic applications

General Systems

CXDI-40C

A highly sensitive DR system

CXDI-50G

A portable DR system with a large imaging area

Portable Systems

CXDI-31

The lightest & most compact DR system of its kind

DR Image Viewer

A viewing system that fits your budget and grows with your needs

Viewing System

CXDI-40G

Ideal for a Wide Range of General Radiographic Applications

With an imaging area that's 17 x 17 inches (43 x 43 cm), the CXDI-40G lets you capture chest and abdominal images without ever having to rotate the sensor unit. That's one less step in an already streamlined procedure that eliminates film development, cassette replacement, and other process steps. The CXDI-40G produces a preview image in only three seconds after x-ray exposure, and is ready for the next image a few seconds later. In addition, it offers the benefit of easy installation. The CXDI-40G can be used with an upright stand, a universal stand, or a Bucky table. It can also be retrofitted with existing equipment.

- CXDI-40C: CsI (Cesium Iodide) scintillator, LANMIT 5 sensor
- CXDI-40G: GOS scintillator, LANMIT 3 sensor
- Imaging area: 17 x 17 inches (43 x 43 cm)
- Resolution: 7.2 million pixels (each pixel 160 microns)
- Image output: 4,096 grayscale (12-bit)
- Preview images in approx. 3 seconds after x-ray exposure
- DICOM 3.0 connectivity

CXDI-40C

A Highly Sensitive DR System

The CXDI-40C produces high-quality diagnostic images with minimal x-ray dosage. This makes it ideal for pediatric use as well as orthopedic exams. The key to its dose efficiency is the newly developed LANMIT 5 sensor, which is equipped with a Cesium Iodide scintillator for high sensitivity. The CXDI-40C shares the major features of other Canon DR systems, including the largest imaging area in the industry, high image resolution, and easy operation. It can be installed in as many ways—and just as easily—as the CXDI-40G.

Universal Stand

Bucky Table

Upright Stand

CXDI-50G

A Portable DR System with a Large Imaging Area

Only Canon offers a portable Digital Radiography system like the CXDI-50G. It is versatile enough for use with bedside exams; is light enough for the patient to hold if necessary; and features a large imaging area that's perfect for chest and abdominal x-rays. Simply put, it's the finest system available for challenging applications. The CXDI-50G can be used in a variety of applications with the ease of a conventional film cassette or CR imaging plate. It also provides all of the major advantages of any Canon DR system: immediate imaging, superior image quality, and network connectivity for convenient printing, archiving, or remote viewing.

- Sensor unit: 0.9 inches thick, 11 lbs. (23 mm, 4.8 kg)
- GOS scintillator, LANMIT 4 sensor
- Imaging area: 14 x 17 inches (35 x 43 cm)
- Resolution: 5.9 million pixels (each pixel 160 microns)
- Image output: 4,096 grayscale (12-bit)
- Preview images in approx. 3 – 5 seconds after x-ray exposure
- DICOM 3.0 connectivity

CXDI-31

The Lightest & Most Compact DR System of Its Kind

A major breakthrough when it was first introduced, the CXDI-31 continues to provide unmatched flexibility for diverse applications. Many institutions have adopted the CXDI-31 as their preferred system for trauma, neonatal, and orthopedic imaging. Its compact size makes it easy to position, and simplifies lateral and axial imaging of skull, neck, shoulder, limbs, and extremities. Another key advantage is image quality. The CXDI-31 has the smallest picture elements of any Canon DR system, which ensures the level of refinement that's crucial to bone imaging. X-ray dosage can also be minimized.

- ● **Sensor unit: 0.8 inches thick, 6.2 lbs. (20 mm, 2.8 kg)**
- ● **GOS scintillator, LANMIT 2 sensor**
- ● **Imaging area: 9 x 11 inches (22.6 x 28.8 cm)**
- ● **Resolution: 6.5 million pixels (each pixel 100 microns)**
- ● **Image output: 4,096 grayscale (12-bit)**
- ● **Preview images in approx. 3 seconds after x-ray exposure**
- ● **DICOM 3.0 connectivity**

Discover the Workflow That Revolutionized Radiography

No film development. No imaging plates. Instead, Canon Digital Radiography delivers the most streamlined radiographic procedure available. Each Canon DR system captures images using an exclusive Flat Panel Detector. And all operations, from X-ray emission to image confirmation to final distribution, are controlled from a centralized location, the Canon Control Station.
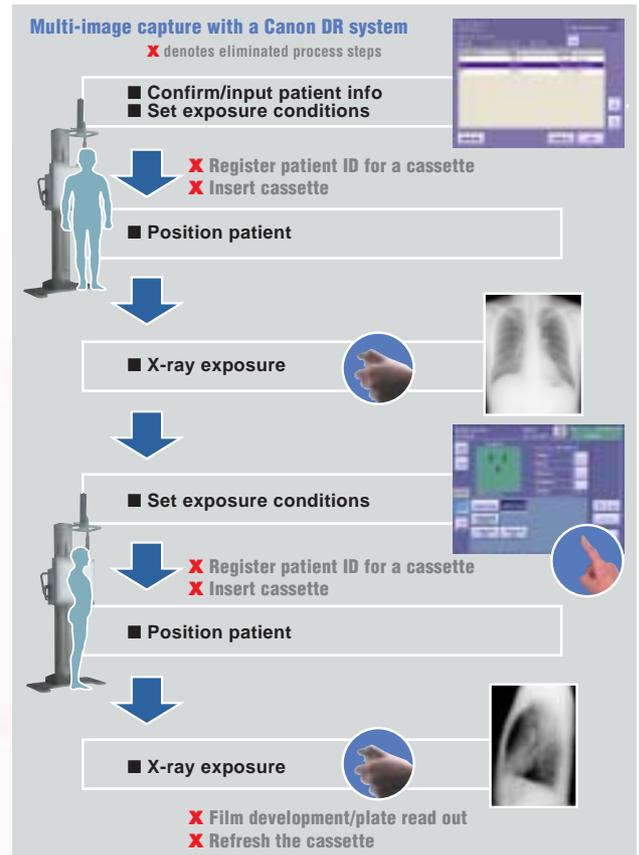
Canon DR systems have been designed to offer significant benefits at every stage of the process—and that leads to even more productivity gains when multiple exams are performed. All in all, the Canon Digital Radiography solution is in a league of its own.

LCD Operation Panel

Control PC

Multi-image capture with a Canon DR system
X denotes eliminated process steps

- ■ Confirm/input patient info
- ■ Set exposure conditions

- **X** Register patient ID for a cassette
- **X** Insert cassette

- ■ Position patient

- ■ X-ray exposure

- ■ Set exposure conditions

- **X** Register patient ID for a cassette
- **X** Insert cassette

- ■ Position patient

- ■ X-ray exposure

- **X** Film development/plate read out
- **X** Refresh the cassette

## Canon DR systems are faster than virtually any other system.

Image capture is immediate. In just seconds after x-ray exposure, a preview image appears on the LCD Operation Panel, which the technologist checks for factors such as body position and exposure. Once an image is confirmed, then final processing is quickly initiated and the image is sent to a network destination, such as a viewing station, PACS, or printer. For added convenience, the Canon Control Station provides temporary storage of over 700 images.

Direct digital image capture reduces procedural errors.

Because the Canon DR system's sensor unit does not have removable imaging plates, the technologist can keep better track of the patient and imaging conditions at all times—especially during times of peak demand. With a Canon DR system, there is no possibility of inadvertently using the wrong imaging plate with a patient.

Canon ensures the highest level of diagnostic image quality.

The Canon Amorphous Silicon (a-Si) Flat Panel Detector is the product of our industry-leading expertise in semiconductor, sensor manufacturing, and image processing technologies. Exceptionally clear images are the result of the sensor's high pre-sampling MTF (Modulation Transfer Function) and high NEQ (Noise Equivalent Quanta). An expansive 10^4 dynamic range enables capture of images that would otherwise appear over- or underexposed on film.
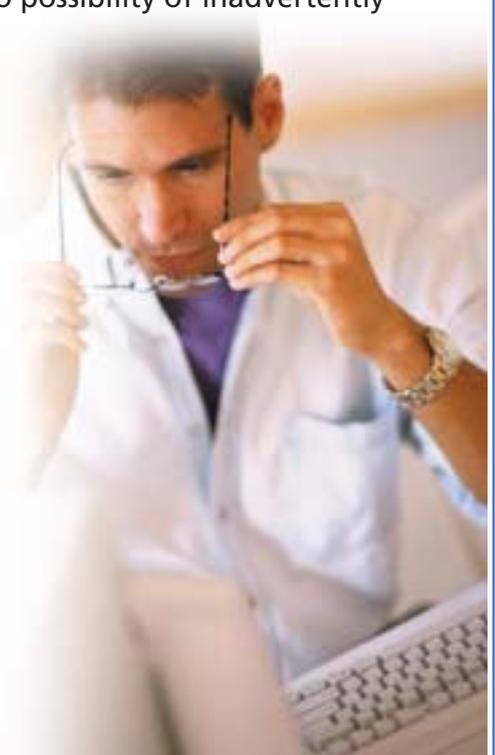
A Viewing System Perfect for DR

Designed for optimum use with Digital Radiography, the Canon DR Image Viewer offers the best way to examine images captured with your Canon DR system. It provides pixel-to-pixel display of high-resolution images, multiple image display for comparing studies, and the ability to send images to any industry standard PACS. Furthermore, the DR Image Viewer is an economical package that can be scaled upward as the growth of your enterprise demands. Its components are an LCD monitor, a PC and/or server, plus Canon's full-featured viewing software.

- Microsoft Windows compatible, thus easy to learn and operate
- Customizable worklists and extended study search functions
- Magnification, panning, and various other display tools
- Contrast and brightness adjustment, plus monitor gamma correction
- Diverse image measurement tools
- Maximized hanging protocols
- Multi-format printing functions
- System management and security features
- Option to install database, image archive, or multi-viewer stations

Multiple display options are available to suit a variety of everyday needs.
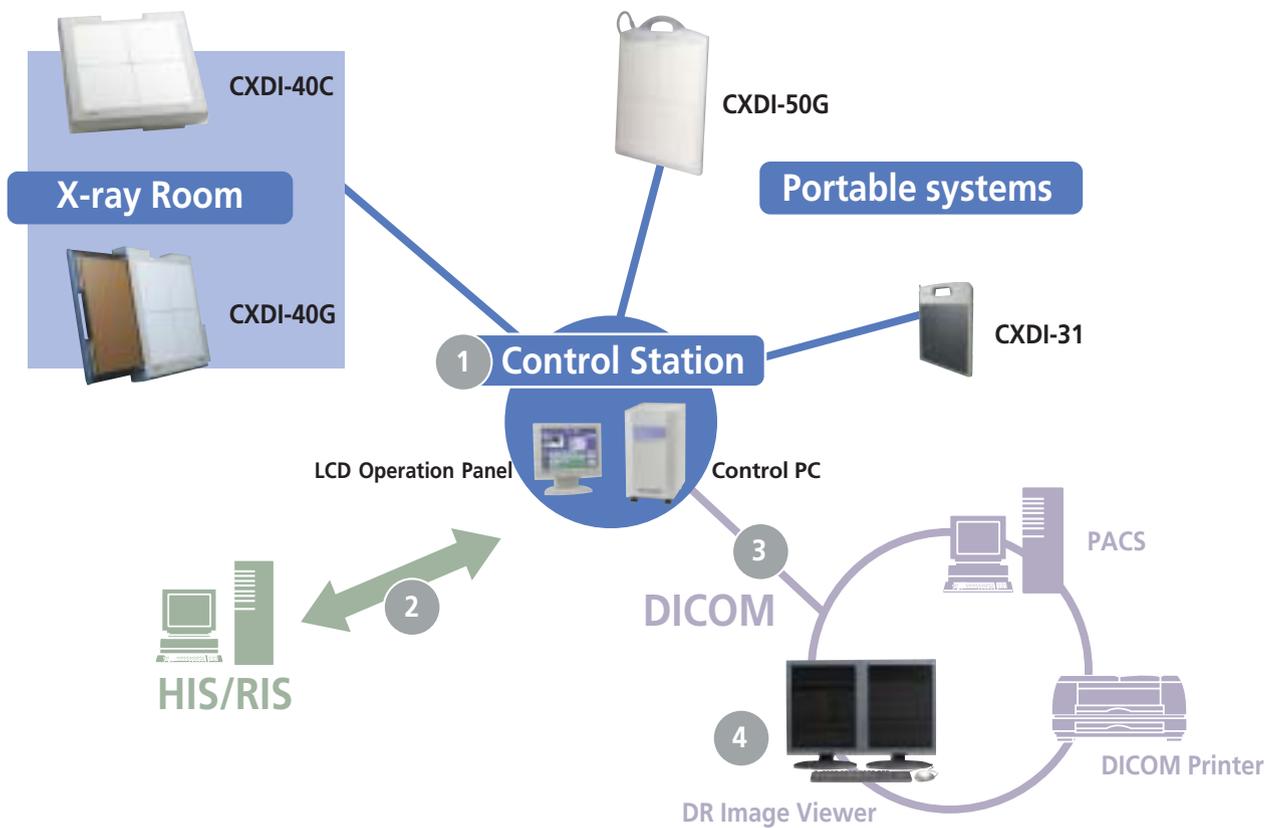

Standard Single LCD

Standard Dual LCD

High Resolution Dual LCD

System Configuration Example

CXDI-40C

CXDI-50G

X-ray Room

Portable systems

CXDI-40G

CXDI-31

1 **Control Station**

LCD Operation Panel   Control PC

PACS

3

DICOM

2

HIS/RIS

4

DR Image Viewer

DICOM Printer

1 More than one sensor unit can be connected to a single Control Station.
(For details, please contact a Canon sales representative.)

2 A typical procedure starts with a study order being sent from the HIS or RIS to the Control Station. Following the x-ray, exposure data is communicated from the Control Station to the RIS, while the x-ray image itself is sent to a PACS.

3 DICOM 3.0 compliant. X-ray images are sent to servers using Storage Service Class (SCU) and to printers using Print Management Service Class (SCU). Options are available for HIS/RIS communication and non-DICOM communication.

4 Additional components: Server and/or Viewer PC (not pictured).

Specifications

	CXDI-40C System	CXDI-40G System	CXDI-50G System	CXDI-31 System
Purpose	General radiography		General radiography	
Method	Flat panel detector: scintillator & Amorphous Silicon (a-Si)		Flat panel detector: scintillator & Amorphous Silicon (a-Si)	
Detector	LANMIT 5	LANMIT 3	LANMIT 4	LANMIT 2
Scintillator	CSI (CsI:TI)	GOS (Gd_2O_2S:Tb)	GOS (Gd_2O_2S:Tb)	
Grid	Choice of 10:1, 12:1 (180 cm), 10:1, 8:1 (110 cm), etc., removable		Choice of 10:1 (180 cm), 6;1 (150 cm), 8:1, 4:1 (110 cm)	Choice of 4:1, 8:1, 10:1 (110 cm), removable
Application	Available with table, upright stand, universal stand or other stands			
Pixels	2,688 x 2,688 (7.2 M)		2,208 x 2,688 (5.9 M)	2,256 x 2,878 (6.5 M)
Image size (automatic sizing)	Up to 43 x 43 cm (17" x 17")		Up to 35 x 43 cm (14" x 17")	Up to 22.6 x 28.8 cm (9" x 11")
Pixel pitch	160 x 160 microns		160 x 160 microns	100 x 100 microns
A/D	14 bit		14 bit	
Grayscale	4,096 grayscale (12 bit)		4,096 grayscale (12 bit)	
Preview image access time*	Approx. 3 seconds after x-ray exposure		Approx. 3 – 5 seconds	Approx. 3 seconds
Total image processing*	Approx. 20 seconds after x-ray exposure		Approx. 20 seconds after x-ray exposure	
Interface	DICOM 3.0, Ethernet 10/100 Base T		DICOM 3.0, Ethernet 10/100 Base T	
Data output	DICOM 3.0, Print Management Service Class (SCU), Storage Service Class (SCU), JPEG transfer syntax available		DICOM 3.0, Print Management Service Class (SCU), Storage Service Class (SCU), JPEG transfer syntax available	
Storage	Temporary storage available in Control PC		Temporary storage available in Control PC	
Voltage	100V, 120V, 230/240V (50/60Hz)		100V, 120V, 230/240V (50/60Hz)	
Power consumption	300VA maximum		200VA maximum	300VA maximum
Operation environment	5 – 35˚C (41 – 95˚F), 30 – 75% RH (non-condensing)		5 – 35˚C (41 – 95˚F), 30 – 75% RH (non-condensing)	10 – 35˚C (50 – 95˚F), 30 – 75% RH (non-condensing)
Certification	FDA510(k), FC Class A, UL 2601-1, EN60601, CE0197		FDA510(k), FC Class A, UL 2601-1, EN60601, CE0197	
Dimensions Sensor Unit (W x L x H)	Upright Stand Type: 554 x 550 x 118.7 mm, 27 kg (w/o grid) (21.8" x 21.7" x 4.7", 59 lbs.) Table Type: 550 x 589 x 67.5 mm, 21 kg (w/o grid) (21.7" x 23.2" x 2.7", 47 lbs.) Universal Type: 554 x 550 x 101 mm, 21 kg (w/o grid) (21.8" x 21.7" x 4", 46 lbs.)		491 x 477 x 23 mm, 4.8 kg (19.3" x 18.8" x 0.9", 11 lbs.)	324 x 327 x 20 mm, 2.8 kg (12.8" x 12.9" x 0.8", 6.2 lbs.)
Operation/Preview Panel	399 x 394 x 150 mm, 6.6 kg (15.7" x 15.5" x 5.9", 15 lbs.)			
Control PC	300 x 502 x 593.5 mm, 27.0 kg (11.8" x 19.8" x 23.4", 60 lbs.)			

* Actual times may vary due to various factors.

Other options

Please contact an authorized Canon dealer.

HIS/RIS communication:
- DICOM Basic Modality Worklist Management Service Class (SCU)
- DICOM Modality Performed Procedure Step Service Class (SCU)
- Other non-DICOM communication

X-ray generator communication

LANMIX LANMIX is a new name that represents the total solution offered by Canon, through the combination of our LANMIT (Large Area New-MIS Sensor and TFT) detector and other x-ray imaging equipment and software. In the future, expect more great systems from Canon under this new name.

Specifications are subject to change without notice.
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