Canon

DIGITAL RADIOGRAPHY

CXDI-Elite

Instructions for Use

CE 2797

UK
CA 0086

To customers

Important information on usage and management of the product

1. This product complies with local radio frequency regulations in the country or region where you purchased the product. Note that it cannot be used in any other areas. When using the product, follow the notes on radio frequency in this manual.
2. Only a radiologist or a doctor shall use the product.
3. The product shall be maintained in a safe and operable condition by maintenance personnel.
4. Note that the entire radiography system, including the product, is required to comply with IEC 60601-1. ME equipment connected to the product, such as X-ray generators, must comply with IEC 60601-1, and image-capture computers and displays used outside the patient environment must comply with IEC 62368-1, CISPR 32, and CISPR 35 or equivalent safety standards. For further details, consult your sales representatives or local Canon dealers.
5. Connection of a system that uses the product to a network could result risks to patients, operators, or third parties. A dedicated individual who is assigned responsibility for maintenance should assess these risks in advance. The responsible person should also assess the risks when changes to the network (including changes in the network configuration, addition or disconnection of items to the network, or update or upgrade of equipment connected to the network) occur after connection.
6. For U.S.A.
Rx only-Caution:
Federal law restricts this device to sale by or on the order of a licensed practitioner.

Note on installation

• Request your sales representative or local Canon dealer to install the product.

Notes on disposal of the product

- Disposal of this product in an unlawful manner may have a negative impact on human health and on the environment. Therefore, when disposing of this product, be absolutely certain to follow the procedure which conforms with the laws and regulations applicable to your area.

Only for European Union and EEA (Norway, Iceland and Liechtenstein)

This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU) and national legislation. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or supplier where you purchased the product.

The information above, including information on batteries, is on our website in the official languages of each EU country.
Please access https://global.canon/en/ifu/medcom/envfile/weee-battery-eu.pdf.

Only for the United Kingdom

This symbol indicates that this product is not to be disposed of with your household waste, according to the UK Waste Electrical and Electronic Equipment Regulations. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or supplier where you purchased the product.

The information above, including information on batteries, is on our website.
Please access https://global.canon/en/ifu/medcom/envfile/weee-battery-uk.pdf.

1 Safety information

1.1 Safety precautions

Follow these safeguards and properly use the equipment to prevent injury and damage to any equipment/data.

Operating/storage environment

- **Do not use or store the equipment near flammable chemicals such as alcohol, thinner, benzine, etc.**

  If chemicals are spilled or evaporate, it could result in fire or electric shock through contact with electric parts inside the equipment. Also, some disinfectants are flammable. Be sure to take care when using them.

- **Do not connect the equipment with anything other than specified.**

  Doing so could result in fire or electric shock.

- **Do not install or store the equipment in any of the locations listed below.**

  Doing so may result in failure or malfunction, equipment falling, or fire or injury.

  - Close to facilities where water is used
  - Where it will be exposed to direct sunlight
  - Close to the air outlet of an air-conditioner or ventilation equipment
  - Close to a heat source such as a heater
  - Where the power supply is unstable
  - On the floor
  - In a dusty environment
  - In a saline or sulfurous environment
  - Where temperature or humidity is high
  - Where there is freezing or condensation
  - In areas prone to vibration
  - On an incline or in an unstable area

- **Be sure that the patient is in continuous contact with the surface of the portable detector for less than 1 minute. Depending on the heat generated by the internal device, the temperature of the detector's surface may increase by up to 14°C. Avoid prolonged contact with the surface of the detector in order to decrease physical stress and the possibility of low-temperature burns due to contact with the patient's skin.**

- **When using the portable detector, if you observe an abnormal rise in temperature above the temperatures listed below, stop using it immediately and contact your sales representative or local Canon dealers.**

  The maximum temperature of the detector: 49°C*.

  * This is measured during Canon's maximum load test when the ambient temperature is set to 35°C.

Power supply and cables

- **Do not place heavy object such as medical equipment on cables and cords, or do not pull, bend, bundle, or step on them to prevent their sheath from being damaged, and do not alter them neither.**

  Doing so may damage the cords which could result in fire or electric shock.

- **Do not turn ON the power when condensation has formed on the equipment.**

  Doing so could result in fire or electric shock.

- **When using the portable detector's wiring cable or the PC Connection Cable, it becomes weakly magnetized. When exposing patients with cardiac pacemakers to X-rays, always make sure that the patients have no problems during exposure.**

  If a problem occurs, keep the equipment (wiring cable or PC Connection Cable) away from the patients and consult your doctor.

- **Always connect the three-core power cord plug to a grounded AC power outlet.**

- **To make it easy to disconnect the plug at any time, avoid putting any obstacles near the outlet.**

  Otherwise, it may not be possible to disconnect the plug in an emergency.

- **Because the equipment cable is long, take care that cables do not become tangled during use. Also, be careful not to get your feet caught in the cable.**

  Otherwise, it may cause a failure of the equipment or the injury of the user due to tripping over the cable.

- **Do not charge a deteriorated battery.**

  Using a battery that has exceeded its product life may lead to overheating, fire, or explosion.

- **Do not charge the battery when the equipment is covered with an object (such as a cloth).**

  Doing so may result in overheating or fire.

Handling

- **Do not place anything on top of the equipment.**

  The object may fall and cause an injury. Also, if metal objects such as needles or clips fall into the equipment, or if liquid is spilled, it could result in fire or electric shock.

- **Do not hit or drop the equipment. Handle the equipment carefully as it is precision equipment.**

  The equipment may be damaged if it receives a strong jolt, which could result in fire or electric shock if the equipment is used without being repaired.

- **Attach the battery pack to the portable detector carefully.**

- **Make sure that the battery pack is correctly attached to the portable detector.**

- **Have the patient take a fixed posture and do not let the patient touch parts unnecessarily.**

  If the patient touches connectors or switches of the portable detector, it could result in electric shock or malfunction of the equipment.

- **Always confirm that there is no problem with the CXDI system or the patient during use. If a problem occurs, take appropriate measures, such as shutting down the system.**

- **Do not spill liquid or chemicals onto the equipment or, in cases where the patient is injured, allow it to come in contact with blood or other body fluids.**

  Doing so may result in fire or electric shock.
  The portable detector is protected against dust and water, but take the following precautions nevertheless.

  - Do not submerge the detector in water for long periods of time.
  - If the detector gets wet, thoroughly wipe it with a soft, dry cloth.
  - If necessary, wrap the detector in a disposable cover to prevent the risk of infection.
  - Dust protection and water protection might be impaired if something hits against the detector, or if the detector is dropped or receives a strong jolt.
  - Securely lock the battery cover. Otherwise, the detector is not protected against dust or liquids.
  - Do not open or close the battery cover when the dust adheres to the detector or the detector gets wet.
  - Do not use the detector if water or dust gets into and stays inside the battery compartment.
  - The battery cover is a consumable item. If the battery cover is deformed or the packing is damaged or cracked, replace the battery cover with a new one. If a deteriorated battery cover continues to be used, ingress of dust or water into the detector may occur.
  - Junctions between the wiring cable and Multi Box, and between the PC Connection Cable and laptop computer, are not resistant to dust or water.

- **Turn OFF the power to each piece of equipment for safety when not being used.**

- **Do not place excessive weight on the portable detector.**
  Do not use the portable detector in a manner that will subject it to local loads of 100 kg or more.

  If the load exceeds the limit, the inner device may be damaged.

- **Do not touch the electrode terminals of the portable detector and the battery pack.**

- **Be sure to use the portable detector on a flat surface while using it in horizontal position.**

  If the detector is set on a diagonal and pressure is applied to it, the inner device may be damaged.

- **Be sure to securely hold the portable detector while using it in upright positions.**

  Otherwise, the detector may fall over, resulting in injury to the user or patient, or may flip over, resulting in damage to the inner device.

- **Be sure to use only the dedicated battery pack for the portable detector.**

- **When performing exposure in Non Generator Connection Mode, images may not be acquired because the exposure conditions, such as X-ray exposure conditions or target body positioning, are not effective.**

- **If battery liquid leaks and comes into contact with your skin or clothes, immediately wash it off with tap water, etc.**

  The contact with the battery liquid may cause skin irritation.

- **While preparing for examinations, be sure to confirm that the entered information (patient name, ID number, date of birth, and sex) matches that of the patient.**

  If the information is incorrect, the resulting patient mix-up and a misdiagnosis may cause harm to the patient.

- **Be sure to use the [Emergency] button only for an emergency examination.**

  If not heeded, the resulting patient mix-up and a misdiagnosis may cause harm to the patient.

- **In Non Generator Connection imaging, avoid doing the following actions to the detector when [Ready] is displayed in the system status indicator.**

  Otherwise, the detector may acquire an image without exposure.

  – Giving a strong shock and vibration.
  – Using the detector in a location where static electricity is easily generated.
  – Using the detector in a location where electromagnetic wave noise is strong.

- **Instruct the patient not to move during the examination. If necessary, help the patient to maintain the proper posture.**

  If the patient moves during the examination, it may fail to obtain the appropriate images.

When a problem occurs

- **Should any of the following occur, immediately turn OFF the power to each piece of equipment, unplug the power cord from the AC outlet, and contact your sales representative or local Canon dealer:**
  – When there is smoke, an odd smell or abnormal sound
  – When liquid has been spilled into the equipment or a metal object has entered through an opening
  – When the equipment has been dropped and is damaged

Inspection, disinfection, and cleaning

- **Do not use flammable solvents to clean the surface of the equipment.**

  When the equipment is going to be cleaned, be sure to turn OFF the power to each piece of equipment, remove the battery pack, and unplug the power cord from the AC outlet. Never use benzine, thinner or any other flammable solvents. Otherwise, it could result in fire.

- **Clean the plug of the power cord periodically by unplugging it from the AC outlet and removing dust or dirt from the plug, its periphery and AC outlet with a dry cloth.**

  If the cord is kept plugged in for a long time in a dusty, humid or sooty place, dust around the plug will attract moisture, and this could cause insulation failure that could result in a fire.

- **After every examination, wipe the patient contact surfaces of the detector using a disinfectant such as disinfecting ethanol to prevent the risk of infection.**

  A blood infection or other causes may result in the onset of an infectious disease. For details on how to disinfect, consult a specialist.

- **Do not spray the detector directly with disinfectants or detergents.**

- **Always keep this product and other equipment clean and remove all dust and dirt.**

  Dust and dirt may cause malfunctions of the equipment included in the radiography system, such as this product and computers.

- **When cleaning the battery pack of the portable detector, wipe it with a cloth slightly damped with water or diluted neutral detergent.**

  The battery pack is not protected against liquids. When cleaning the battery pack, wipe it carefully so as not to spill the detergents onto the electrodes.

- **Dry the battery pack completely after cleaning, and attach it to the portable detector.**

- **When cleaning any other parts than the sensor side of the portable detector, wipe them carefully so as not to spill the detergents onto the battery pack attachment portion (electrodes).**

- **Use water or diluted neutral detergent to clean the surface of the detector and other equipment. Do not use paint thinner, benzine, or chlorinated solvents. Doing so may damage the surface of the detector or other equipment.**

- **Dry the detector completely after disinfecting or cleaning it.**

1.2   Notes on radio frequency

This product complies with local radio frequency regulations in the country or region where you purchased the product. Note that it cannot be used in any areas other than the country or region of its purchase.

In the frequency band used by this product, not only industrial, scientific and medical equipment such as microwave ovens but also premises radio stations (license required) and specified low-power radio stations (license not required) for mobile object identification such as used in factory manufacturing lines, etc., and amateur radio stations (license required) may be in operation. Use of this product may cause radio interference with the above equipment and radio stations, so be sure to understand the following precautions before use.

- Before using this product, make sure that there are no premises radio stations and specified low-power radio stations for mobile object identification operating nearby.
- In the event that radio waves from this product cause harmful interference to premises radio stations for mobile object identification, immediately stop using the product and contact your sales representative or local Canon dealers.
- Also contact your sales representative or local Canon dealers if other problems occur, such as harmful radio interference from this product to specified low-power radio stations for mobile object identification or amateur radio stations.
- This product may be affected by radio interference from other devices that generate radio waves (microwave ovens, Bluetooth devices, digital cordless phones, etc.). Keep the product as far away from those devices as possible to avoid radio interference during use.
- This product is suitable for use in hospital (professional healthcare facility) environments, with the exception of environments near active HF SURGICAL EQUIPMENT or the RF shielded room of an ME SYSTEM for magnetic resonance imaging, where the intensity of ELECTROMAGNETIC DISTURBANCES is high.
- WARNING:
  Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- To maintain the optimum EMD performance, use only the designated cables.
- WARNING:
  Use of equipment, transducers and cables other than those specified or provided by Canon sales representative or local Canon dealer could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- WARNING:
  Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the detector, including cables specified by Canon sales representative or local Canon dealer. Otherwise, degradation of the performance of this equipment could result.

1.3   Notes for using the equipment

When using the equipment, take the following precautions. Otherwise, problems may occur and the equipment may not function correctly.

Before use

- Sudden heating of the room in cold areas will cause condensation to form on the equipment. In this case, wait until the condensation evaporates before performing an exposure. If the equipment is used while condensation is formed on it, problems may occur. When an air-conditioner is used, be sure to raise/lower the temperature gradually so that a difference in temperature in the room and in the equipment does not occur, to prevent condensation.

During use

- Confirm that [Ready] appears in the system status indicator of the CXDI Control Software and press the exposure switch.
- To reduce exposure to RF energy, keep hands and other body parts out of close contact with the wireless aperture on the detector.
- Do not use the detector near devices generating a strong magnetic field. Doing so may produce image noise or artifacts.
- Avoid unnecessary exposure for patients, especially for children. For details, be sure to read the precautions on radiation protection in the manual for the connected X-ray generator.
- When changing or adding exposure conditions in Non Generator Connection Mode, be sure that Non Generator Connection Mode is fully operational before an exposure is performed on a patient. Images may not be acquired or an artifact may appear depending on the exposure conditions (X-ray dose, irradiation time, irradiation field or target body positioning) even if an exposure is performed.
- Before exposure in Standalone Mode*, check operation in Non Generator Connection Mode.
- When performing exposure in Standalone Mode*, do not remove the battery pack while images are being saved. This may prevent images from being saved.
- After exposure in Standalone Mode*, always make a note of the counter number, patient name, date, time, imaged area, etc., which you will need when binding the study information to images on the CXDI control system.
- Images and raw data stored on the recording medium in the equipment may become unreadable due to operation errors, equipment failure, or other unexpected events, so be sure to always store data on an external recording device (medium) or record it to film.
- Regardless of the radiography supporting information provided by the Camera Assist, be sure to verify the information by yourself. The Camera Assist may not be able to properly provide the information for supporting radiography.

 * Only portable detectors can be used in Standalone Mode.

Disinfection and cleaning

- When disinfecting the patient contact surfaces of the detector, wipe them with a disinfecting cloth moderately dampened with a disinfectant such as disinfecting ethanol.
- When cleaning the detector, wipe it with a cloth slightly dampened with water or diluted neutral detergent.

Others

- Do not use this product in combination with other equipment such as defibrillators or large electric motors as these may cause power-supply noise or power supply voltage variations. Doing so may prevent normal operation of this product and other equipment.
- This product may malfunction due to electromagnetic waves caused by portable personal telephones, transceivers, radio-controlled toys, etc. Be sure to avoid having objects such as these, which affect this product, brought near the product.
- When the detector will not be used for some time, remove the battery pack. Otherwise, overdischarge may occur, leading to a shorter battery life.

2   Introduction

Indications for use

This device provides digital image capture for conventional film/screen radiographic examinations.
This device is intended to capture, for display, radiographic images of human anatomy, and to replace radiographic film/screen systems in all general purpose diagnostic procedures.
This device is not intended for mammography applications.

3 Operating procedures

3.1 Preparations

System startup

1 Switch on the image-capture computer on which the control software is installed.

2 Confirm that the control software starts and the initial settings screen is displayed on the monitor.

Preparing to use the detector

When using a portable detector (CXDI-720C/820C/420C Wireless)

1 Attach a fully charged battery pack to the detector.

2 Press the POWER switch of the detector to turn it on.

3 Connect the detector to the image-capture computer.

When using a stationary detector (CXDI-420C Fixed)

1 Turn on the Multi Box.

3.2   Conducting examination

1 Enter the required items in the control software, such as the Patient ID and target body part.

2 After confirming that the ready indication is displayed on the monitor of the image-capture computer, press the exposure switch of the X-ray generator to irradiate the patient with X-rays.

3.3   Checking exposed images

1 When the exposed image is displayed on the monitor of the image-capture computer, confirm that the exposure conditions and target body part are correct, that there is no blurring due to patient movement, etc.

3.4   Data processing

1 Image processing such as LUT processing and frequency processing takes place using the image processing parameters set beforehand by the operator.

2 Metadata such as Patient ID information is assigned to the image data following image processing, and the image information is transferred to the specified device.

3.5   Ending use of the system

When using a portable detector (CXDI-720C/820C/420C Wireless)

1 Shut down the image-capture computer.

2 Press the POWER switch of the detector to turn it off.

When using a stationary detector (CXDI-420C Fixed)

1 **Shut down the image-capture computer.**

2 **Turn off the Multi Box.**

3.6 List of portable detector status indication

Standard Synchronization Mode

Detector state	Power LED[*1]	READY LED	Exposed image counter	Beep sound
Power OFF	Not illuminated	Not illuminated	Not illuminated	N/A
Power ON	Illuminated			
Linkage started	Illuminated	Slowly flashing (for up to 8 seconds in 4-sec. cycles)[*2]	Not illuminated	N/A
Linkage established		Illuminated (2 sec.)		
Switching to exposure ready status		Flashing		
Exposure ready status		Illuminated		
Detector selection status (Sleep)		Not illuminated		
Error	All flashing	Flashing	Flashing error code	N/A

*1 The indication of the Power LED lamps changes according to the remaining battery charge.
*2 Only after linkage from the detector

3.7 List of lights / flashes / notification beeps of the ready indicator

Standard Synchronization Mode

	Link (registration) completed	During exposure ready status	During exposure
		Start time	When the X-ray is exposed
LED lamp	The 2 LED lamps flash[*1].	The 2 LED lamps light up weakly.	
Notification sound	Three-tone beep[*2]	Single beep	N/A

*1 On/Off status changes three times every 0.5 seconds.
*2 Applies to portable detector only.

3.8 Image processing adjustment

To set the EIt value

EIt value can be set in the processing parameter edit screen of the CXDI Control Software. Enter a value in the EIt text box referring to the current EI value.

- EI (Exposure Index)
  EI is an approximative indicator of the dose that reaches the detector, as calculated per IEC 62494-1 standards from the captured images.

- EIt (Target Exposure Index)
  EIt is the target EI level.

- DI (Deviation Index)
  DI is a logarithmic index indicating the difference between the EI and EIt.

4   Troubleshooting

When you encounter problems described in this chapter or error messages in the CXDI Control Software while using this product, search the table in this chapter for the problem or error message and try the solutions.

If the problem persists, turn off the detector, consult your sales representative or local Canon dealer, and inform them of the details of the problem, error codes or error messages.

4.1   Symptom and remedy

Symptom	Cause/Error messages in the CXDI Control Software	Remedy
Power LED lamps on portable detector flash (1-second cycles) and exposure is not possible.	No battery power.	Replace the battery pack with a fully-charged one and retry an exposure.

4.2   Error codes on the exposed image counter of the portable detector

Error code	Cause/Error messages in the CXDI Control Software	Required actions
02	Internal error	Restart the detector. If the problem persists even after this, contact your sales representative or local Canon dealer.
03		
04		
12		
15		
16		
24		
25		
26		
33		

Error code	Cause/Error messages in the CXDI Control Software	Required actions
47	It is time to replace the detector's internal memory. Exposure is not possible.	The internal memory must be replaced. Contact your sales representative or local Canon dealer.
48	A problem has occurred with the detector's internal memory.	Contact your sales representative or local Canon dealer.
99	Insufficient space in the detector's internal memory is preventing exposure.	Transfer images to the CXDI control system.

5 Maintenance

Maintenance and inspection

If any problem is found during the following inspections and cannot be resolved, please contact your sales representative or local Canon dealer.

Daily inspection

Cable

(1) Ensure that the cables are not damaged and the cable jackets are not torn so as to expose the inside of the cables.

(2) Ensure that the power cord plugs are securely connected to both the equipment AC inlet and the AC outlet.

(3) Ensure that there are no breaks or short-circuits in all pins of the detector connector plugs.

(4) Ensure that there is no dust, dirt, or oil on the terminals of the wiring cable connector.

Detector

(1) Ensure that there are no loose or missing screws.

(2) Ensure that there are no break or no deformation on the exterior of the detector.

(3)* Ensure that there is no dust or foreign matter on the battery bay connector.

(4)* Ensure that there are no breaks or short-circuits in the battery bay connector.

(5)* Ensure that there is no dust, dirt, or oil on the terminals of the cable connector.

(6)* Ensure that the battery cover is not damaged or bent.

(7)* Ensure that there is nothing wrong with the rubber in the battery cover (foreign objects, tears, cracks, etc.).

* Applies to portable detector only.

After turning on the power

Be sure to start the CXDI Control Software before performing the following inspection.
(1) Perform test exposure.
Ensure that captured images are displayed normally on the monitor.

Monthly inspection

(1) Conduct a Performance Test.

(2) Regularly conduct a Self-diagnosis.

Yearly inspection

(1) Perform a Performance Test or Self-diagnosis using a phantom or resolution chart, etc.

(2) Check the EI value captured.

Irregular inspection

(1) Perform calibration in the following circumstances.
- When exposure conditions have changed significantly
- When images appear strange in some way
- When the installation environment has changed significantly

6   Specifications

6.1   Main specifications

Detector

Environmental requirements:

Operation

Temperature:	5°C to 35°C
Humidity:	30% to 80% RH (without condensation)
Atmospheric pressure:	613 to 1060 hPa

Storage (unpacked)

Temperature:	5°C to 40°C
Humidity:	30% to 85% RH (without condensation)
Atmospheric pressure:	613 to 1060 hPa

Transportation and storage (in packages at point of purchase)

Temperature:	–30°C to 50°C
Humidity:	10% to 95% RH (without condensation)
Atmospheric pressure:	613 to 1060 hPa

Applicable grid (Other devices):	34, 40*, 52*, 60* lp/cm (* recommended) (34 and 40 lp/cm have restrictions.)
Reducing scattered radiation:	Even when a grid is not attached to the detector, the reduction in contrast caused by scattered radiation can be improved by image processing. Adjust the power of scatter correction by selecting the Effect check box to enable this control on the Scatter Correction control screen of the CXDI Control Software.

Rated power supply

Portable type:	22 to 24 V DC, 1.1 A
Stationary type:	22 to 24 V DC, 0.6 A

Dimensions and mass

CXDI-720C Wireless:	Approx. 384 x 460 x 15.7 mm Approx. 2.5 kg (incl. battery pack)
CXDI-820C Wireless:	Approx. 307.5 x 384 x 15.7 mm Approx. 1.8 kg (incl. battery pack)
CXDI-420C Wireless:	Approx. 460 x 460 x 15.7 mm Approx. 3.0 kg (incl. battery pack)

CXDI-420C Fixed:

Approx. 460 x 460 x 15.3 mm (excl. cable holder)
Approx. 6.1 kg (without detector cable)
Approx. 6.8 kg (with 7.5 m detector cable)
Approx. 7.3 kg (with 15 m detector cable)

Battery Pack LB-4A

Type:	Lithium ion battery
Operation temperature range:	5°C to 35°C
Rated voltage:	11.1 V DC
Capacity:	Typ. 1660 mAh / Min. 1600 mAh
Cycle life:	Approx. 300 cycles (fully charged to fully discharged)
Dimensions and mass:	Approx. 93 x 162 x 7 mm (excl. projecting parts) Approx. 160 g

Image-capture computer

CPU:	4 or more Intel CPU cores
OS:	Microsoft Windows 10 (X64) 　　RAM:　Minimum 6 GB 　　HDD:　Minimum 50 GB free space Microsoft Windows 11 (X64) 　　RAM:　Minimum 16 GB 　　HDD:　Minimum 100 GB free space
Video card:	When using Intelligent NR function DirectX 10 compatible Min. 4,096 MB of VRAM Compute Capability 7.5 or above
Display:	Equipped with touch functionality XGA (1024 × 768) or above, SXGA (1280 × 1024) or above

Communication interfaces:

Card reader

Connection interface	USB
Readable cards	JIS X6301 1998 compliant
Readable encoding	JIS-II
Power supply	USB bus power

Barcode reader

Connection interface	USB
Compatible encodings	Code39, Code93, Code128, JAN/EAN-8, JAN/EAN-13, Industrial 2 of 5, Interleaved 2 of 5, Matrix 2 of 5, MSI, NW-7, UPC-A, UPC-E, RSS, EAN-128, Plessey, PDF417
Power supply	USB bus power

USB cable

Connector	micro-B connector
Communication standard	USB 2.0 compliant

Bluetooth® adapter

Communication standard	Bluetooth Low Energy compliant

Video signal

Angle of view	When making exposures at the minimum distance between the X-ray tube and the subject (excluding arms and legs), the angle of view must allow capture of the subject's head.
Resolution	Must be sufficient to maintain a vertical and horizontal resolution of 256 pixels or greater for each body part.
Image compression format	JPEG
Connection configuration	Ethernet
Image transfer protocol	Camera compatible with RTP or WV-HTTP (Canon proprietary)

Compatible Canon DIGITAL RADIOGRAPHY systems

The product is compatible with the following Canon DIGITAL RADIOGRAPHY systems:

- CXDI-Pro
- CXDI-702C Wireless, CXDI-402C Wireless
- CXDI-710C Wireless, CXDI-810C Wireless, CXDI-410C Wireless
- CXDI-701C Wireless, CXDI-701G Wireless, CXDI-801C Wireless, CXDI-801G Wireless, CXDI-401C Wireless, CXDI-401G Wireless
- CXDI-401C, CXDI-401G
- CXDI-401C COMPACT, CXDI-401G COMPACT
- CXDI-501C, CXDI-501G

Switching hub

Use a product that satisfies the following requirements:

- Supports 10/100/1000BASE-T Ethernet network interface.
- Equipped with Auto MDI/MDI-X functionality.

Access point

Use a product that satisfies the following requirements:

- Supports IEEE 802.11a/b/g/n/ac.
- Supports WPA2 or WPA3.
- Supports 10/100/1000BASE-T Ethernet network interface.

6.2   Characteristics

Spatial resolution properties

A typical MTF value at 2 cycle/mm, RQA5 is 0.45, with measurement error of less than ±10%.

DQE

A typical DQE value at 3.5 µGy in 0.5 lp/mm, RQA5 is 0.67, with measurement error of less than ±10%.

7   Regulatory information

7.1   Medical equipment classification

Type of protection against electrical shock	Internally powered equipment: Portable detector Class I Equipment, with Multi Box
Degree of protection against electrical shock	Type B Applied Parts : Detector (Portable type)

7.2   CE marking

This product complies with the following:

Regulation (EU) 2017/745
Directive 2011/65/EU
Directive 2014/53/EU
Directive 2014/30/EU
Directive 2014/35/EU

7.3   For European Union

Notification of serious incident

Any serious incident (defined in Article 2(65) of the Regulation (EU) 2017/745) that has occurred in relation to the product should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Electronic instructions for use

Instructions for use are available on the website for viewing and download by customers.
• https://global.canon/en/ifu/medcom/index.html

For details, please contact your sales representative or local Canon dealer.

7.4   EMD (Electromagnetic Disturbances)

This product is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

7.5   Details of markings on the equipment

Symbol	Description
⎓	Direct current
∼	Alternating current
🕴	Type B applied part
📖	Consult instructions for use
(((•)))	Non-ionized radiation
🏭	Manufacturer
⌂	Date of manufacture
SN	Serial number
⊠	This mark indicates that this equipment must be collected separately under the Directive on Waste Electrical and Electronic Equipment (WEEE) in the European Union.
MD	This mark indicates medical device which complies with the Regulation (EU) 2017/745.
UKRP	UK Responsible Person

8 System components

Component products are available either individually or as part of a set.

CXDI-Elite system

(Unit: pieces)

Detector

- Portable type

CXDI-720C Wireless

Sensor Unit: CXDI-720C Wireless...1
Battery pack: LB-4A..2

CXDI-820C Wireless

Sensor Unit: CXDI-820C Wireless...1
Battery pack: LB-4A..2

CXDI-420C Wireless

Sensor Unit: CXDI-420C Wireless...1
Battery pack: LB-4A..2

- Stationary type

CXDI-420C Fixed

Sensor Unit: CXDI-420C Fixed 1
(Detector cable provided)

CXDI Control Software

CXDI Control Software NE: CSW-120R 1

Ready indicator: RI-3A

Hook-and-loop fastener (fastener hooks, fastener loops)
(One pair is already applied to the product)................... 3 pairs

PC Connection Cable: CP-01

Wiring cable: WC-01

Multi Box: MB-02

Multi Box 1
Power cord 1
X-ray interface cable 1

X-ray Interface Unit: XB-1A

X-ray interface box 1
AC adapter... 1
Power cord 1
X-ray interface cable 1
Functional earth conductor 1

Battery Charger: BC-01

Battery charger... 1
AC adapter... 1
Power cord 1

Battery Charger: BC-1A

Battery charger... 1
Power cord 1

Status indicator: SI-01

Status indicator: SI-4A

Detector Stand: DS-01

Detector Stand 1
Foot plate 2

Optional function of software

Scatter Correction for CXDI Series[1]

Advanced Edge Enhancement[2]

Free Rotation for CXDI Series[3]

Intelligent NR[4]

Built-in AEC Assistance[5]

Camera Assist[6]

*1 Improve the reduction in contrast caused by scattered radiation.

*2 Enhance the display of catheters, bony parts, such foreign matter as gauze, etc., in a captured image.

*3 Images can be rotated one degree at a time.

*4 Perform noise reduction for images using AI (artificial intelligence).

*5 Enables operators to specify a pixel value and have a notification automatically sent to the X-ray generator when that value is reached. This function is not intended to provide AEC function by itself. Implementation to X-ray imaging system by its manufacturer is necessary for achievement of AEC function.

*6 Supports the positioning of radiography by judging consistency between positioning and protocols based on the videos taken of a patient.

9　Service information

Product lifetime

The estimated product lifetime may be up to seven years under appropriate regular inspection and maintenance.

Regular inspection and maintenance

In order to ensure the safety of patients, operating personnel and third parties, and to maintain the performance and reliability of the equipment, be sure to perform regular inspection at least once a year.

Replacement parts support

Performance parts (parts required to maintain the functioning of the product) of this product will be stocked for 8 years after discontinuance of production, to allow for repair.

Consumables

The following consumable can deteriorate because of its characteristics and structure. For purchase of consumables, contact your sales representative or local Canon dealer.

- Battery Pack LB-4A (Cycle life: Approx. 300 cycles)
- Battery cover (Replacement period: Approx. every 2 years)

Technical Description

For the technical description, see the user's manual of the product.