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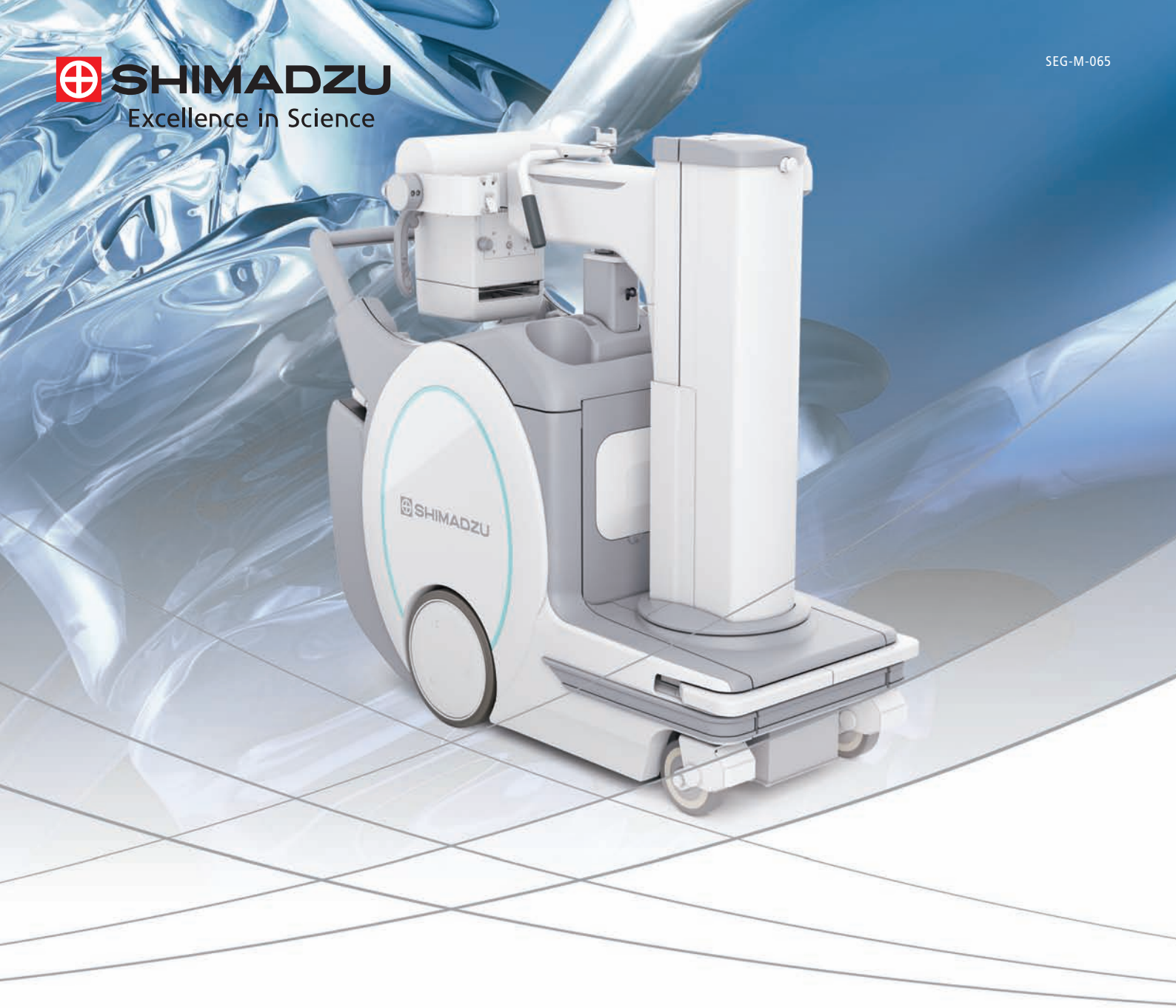
SEG-M-065



MobileDaRt Evolution MX8

Advanced digital mobile X-ray system with new, superior benefits

The new MobileDaRt Evolution MX8 has been enhanced in order to support users with innovations, further optimize workflows, and ease stress and strain for staff and patients. The clever system concept offers new features in mobility, functionality and digital imaging:

- the newly developed collapsible column ensures an improved forward view, supports even more comfortable driving and smart system positioning even in confined spaces, for example between beds
- the »All Free« and »Inch Mover« buttons allow free positioning of the X-ray tube in one step
- the fully integrated 19-inch (48 cm) touchscreen offers improved operability
- a higher focus height optimizes patient examinations in higher beds
- highly sensitive detectors allow flexible system configuration, adapted to individual clinical requirements
- a wireless hand switch with color-coded status indicator offers maximum flexibility and safety during exposure
- lockable detector storage bins, coded system access and sensitive safety bumper improve system security.

MobileDaRt 3500 units

»Best in Class« in customer satisfaction survey

Mobile DR systems are important elements of modern imaging in clinical practice and help to optimize internal hospital processes and cost structures.

Since its introduction, the Shimadzu's MobileDaRt series has been highly appreciated by users in more than 60 countries worldwide due to its excellent overall concept. Until today, more than 3,500 systems of this series have been installed.

In a customer satisfaction survey by KLAS Research, a U.S. market research institute, MobileDaRt Evolution was awarded »Best in Class« in the digital mobile X-ray systems category three times in the past four years.

Intensive Care Unit: maximum performance even in limited spaces

Perinatal Centers: comfortable examination for little patients

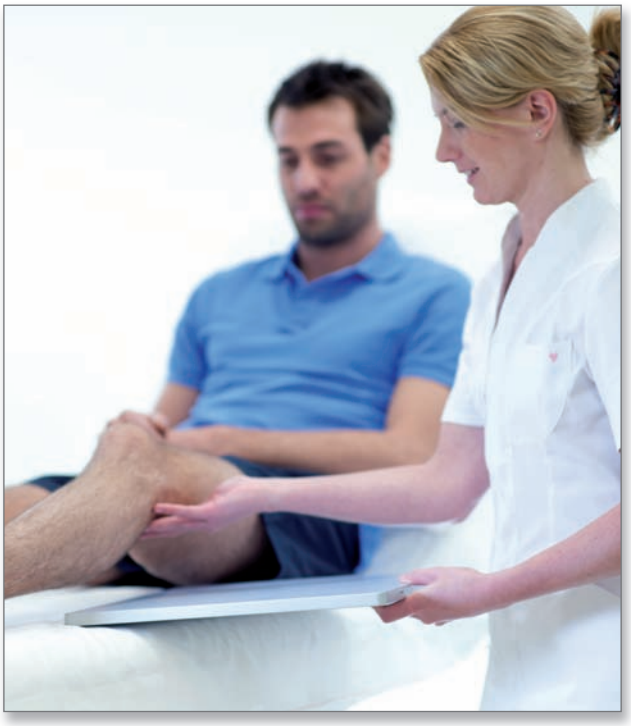
Top performance elevated to the next level – MobileDaRt Evolution MX8 expands the scope for digitization

State-of-the-art, new, agile – the digital X-ray system from Shimadzu displays viewing images just two seconds after exposure, offering powerful support for health-care applications.

The efficient system allows a high patient throughput and can be equipped with a selection of different wireless high-performance flat panel detectors. It effectively supports mobile imaging applications in

- intensive care units
- emergency rooms
- pediatrics and orthopedics
- neonatal intensive care units (perinatal centers), and
- disaster areas.

The newly developed collapsible column ensures an improved forward view, supports even more comfortable driving and smart system positioning in confined spaces and between beds. Together with its versatile user-oriented functions, the new MobileDaRt Evolution MX8 is the ideal partner for mobile X-ray imaging.



Orthopedics: maximum clinical flexibility

Emergency room: designed for fast operation

Operating room: meets requirements in surgical environments

Outstanding mobile system with simple operability and fast response

Driving via touch
Thanks to a twin-motor drive, the unit moves like an extension of your own hand just by slightly touching the handle. The agile system makes maneuvering easy even in confined spaces in patient rooms.

»All Free« buttons
Operating one of the 6 »All Free« buttons releases the electromagnetic lock of the collapsible column so that the radiation source can be very easily adjusted to the position required in only one step.

Numerous features directly on the collimator
With the »Inch Mover« buttons, the system can be positioned with millimeter precision and accurately aligned for exposure at the patient's bedside. The region of interest (ROI) can be shown with daylight brightness both from the front and from the back of the collimator using LED technology.

Large imaging area
The wide range of the telescopic arm (up to 1,200 mm horizontally and from 680 to 2,025 mm vertically) allows even the most critical imaging positions.

Convenience and safety functions

The collimator and the Shimadzu dual-focus rotating-anode tube are fixed during driving and secured through an electromagnetic locking system. This prevents collisions, and high travelling speeds can be achieved. Direct access to the telescopic arm allows smart positioning, also at the patient's bedside. The storage bins for the flat panel detectors can be locked electromechanically, preventing unauthorized removal.

Keyless access
Users can optionally release the system using individual passwords – without keys, allowing anatomical programs to be assigned individually. Additionally, the system is protected against unauthorized use or possible misuse.

Safety bumper system at the front
The safety function immediately stops the system to prevent damage from collisions.

Adjustable height for operator comfort
The drive handle can be raised in two different stages, making it easy for operators to move the system.

Developed for daily use
The system provides integrated storage bins for wipes, pens, adhesive labels etc. Additionally, a groove was added to accommodate the detector vertically, so it can be covered with a hygienic protective sleeve.

Integrated design for easy cleaning
The new 19-inch (48 cm) touchscreen is ideal for quickly reviewing images. The all-in-one console can be easily cleaned after use thanks to the fully integrated design.

Large storage capacity for images
The large storage capacity of 3,500 images provides convenient support to the operating staff when performing follow-up examinations. This gives the medical staff easy access to previous images for a quick comparison of parameters or image contents.

Wireless hand switch
In combination with the color-coded status display, the new optional hand switch provides maximum flexibility and safety during exposure.

A new definition of digital mobile radiography

Ultra-light wireless detectors
Due to their ultra-light and stable carbon fiber design, the new CXDI detector series has a considerably reduced weight; they are among the lightest detectors market-wide and provide noticeable relief for users.

Despite their low weight, the carbon fibre casing and framework are very robust and tested for the toughest requirements: outstanding quality and reliability you can expect from Canon.

CXDI-810C CXDI-710C CXDI-410C

Three robust detectors
New composites reduce the weight of each detector and also improve its stability and durability. The new detectors of the CXDI series withstand extreme stress, increasing their load-bearing capacity compared to previous models. Taking images of the feet under weight-bearing conditions using a free exposure technique is no problem – even with adipose patients.

Improved workflow using "Ready" function
When several detectors are used in one room, a specific detector can be selected either from the workstation or by simply operating the "Ready" switch directly on the detector or on the optional status display.

Low dose for patients
The CXDI detector technology is based on a sophisticated glass substrate with a pixel pitch of 125 µm. The cesium iodide (CsI) scintillator offers maximum sensitivity to achieve a low radiation dose for patients.

Image review within two seconds after exposure
Images are displayed within only two seconds – a particular benefit especially in time-sensitive situations in the emergency room.

The ER staff immediately sees the diagnostic images on the integrated reference monitor and can continue treatment without delay. In comparison to CR, DR cassettes allow a readout without repositioning, supporting a significantly higher patient throughput.

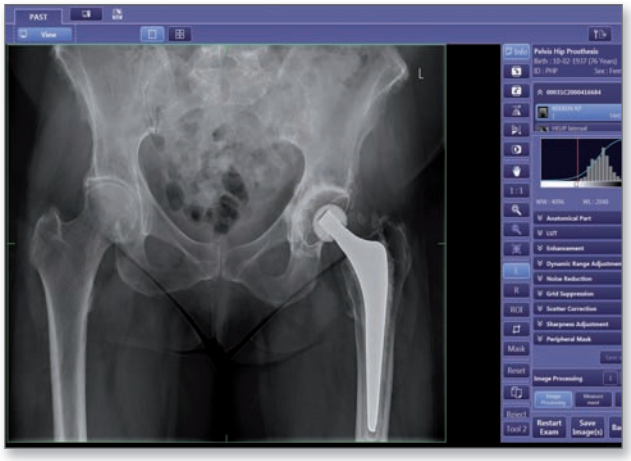
Waterproof according to IPX7
Contact with fluids is frequently inevitable for medical products, in particular in emergency and high-dependency care. The detectors of the CXDI series are protected against water and withstand even temporary immersion. The detectors are compliant with IPX7, meaning each detector is protected against damage for up to 30 minutes when immersed in water down to a depth of 1 m.

Sleek new detector design
The robust and ergonomic design of the new CXDI detectors improves handling with innovative features:

- more effective to grip and more comfortable to hold; the low weight of the detector as well as the ergonomic handgrips on all four detector sides greatly reduce the risk of dropping.
- easier and more pleasant to handle due to high-quality composite materials, low weight and well-balanced design.
- easier to position, even behind a patient; more comfortable for patients and users thanks to curved detector sides and rounded corners.

Integrated image memory
The detectors of the new CXDI series can also cope with unexpected situations; they are equipped with an integrated image memory for situations requiring a completely independent detector.

These robust detectors are not only entirely independent from the X-ray source you are working with but also work autonomously without external image memory. Up to 99 images can be stored temporarily and later transmitted to a stationary workstation as required.



CXDI control software NE
This imaging control and management software helps to optimize the workflow; it reduces the steps required to quickly complete each examination. The CXDI-NE software configuration options also allow a user-specific GUI adjustment with a look & feel design for all modalities in digital radiography.

DICOM
The support of DICOM Print, Store, Worklist, MPPS, and RDSR is a NE software standard function and ensures the easy integration into existing network structures.

Anatomical programs
The current control software incorporates new functionalities and optimizes the pre- and post-processing workflow. The anatomical programs can be easily selected via a graphical body mask or the list of body regions if the radiographic examinations are not directly defined from the RIS or HIS. Special pediatric exposure protocols can be stored individually based on the age or weight of the patients.

Scatter Correction Software
The comprehensive imaging software also includes the optional scatter correction software (virtual grid) to increase contrast for images taken without anti-scatter grid, for example for thorax images.

Standard features

- **»Inch Mover« buttons**
- **»All Free« buttons**
- **Collimator with LED irradiation field**
- **Automatic battery charging function**
- **Automatic power-saving feature**
- **Hand switch**
- **Color-coded status indicator**
- **Safety bumper and acoustic warning signal**
- **Power-assisted steering bar**
- **DICOM Print, Store, Worklist, MPPS, RDSR**
- **19-inch (48 cm) touchscreen**
- **Lockable detector storage bins**
- **Dose area product meter (DAP)**
- **Calculated area dose display**

Useful options

- **Scatter Correction Software**
- **Click-on grid**
- **Handle unit for FPD**
- **Keyless password lock**
- **Wireless hand switch**
- **Wireless LAN**
- **Barcode reader**

Cutting-edge technical specifications	
Flat panel detector	CXDI-410C
Imaging area	42.6 x 41.5 cm
Resolution	3,408 x 3,320 pixels (11.3 megapixels)
Weight	2.8 kg (incl. battery)
Flat panel detector	CXDI-710C
Imaging area	35 x 42.6 cm
Resolution	2,800 x 3,408 pixels (9.5 megapixels)
Weight	2.3 kg (incl. battery)
Flat panel detector	CXDI-810C
Imaging area	35 x 27.4 cm
Resolution	2,800 x 2,192 pixels (6.1 megapixels)
Weight	1.8 kg (incl. battery)
Scintillator	CsI
Pixel pitch	125 µm
Water resistance rating	IPX7 (immersion to a depth of 1 m for 30 min.)
Patient weight across the entire surface	310 kg
Maximum power	32 kW
Maximum tube current	400 mA
Minimum exposure time	1 ms
Focus	dual (0.7 mm / 1.3 mm)
FPD connectivity	1 – 3
Anatomical programs	up to 442
Image confirmation (preview)	2 sec.
Image storage	3,500 system, 99 detector
Telescopic arm length	638 – 1,203 mm
Column rotation range	+/- 270°
Movement	power-assisted driving
Weight	440 kg (incl. DR unit)
Dimensions (footprint)	1,285 mm (l) x 560 mm (w)

Subject to update

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