2 MP Medical Dental Monitor

Modern modalities for tube, panoramic or CBCT images provide clear images. However, the reproduction quality of X-ray images in a dental radiology environment depends largely on the choice of the right screen. The DIN standard 6868-157 introduced minimum requirements for the use of radiological image display systems in dental diagnostics. Depending on the room class (RK), the DIN requires certain minimum brightness levels. Room classes 5 and 6 are decisive for diagnostic and treatment rooms in dental diagnostics. EIZO offers the optimal screen for this with the RadiForce MX243W-DT.

- ✓ 2 megapixel color LCD monitor with high and stable brightness
- ✓ Gray tone reproduction with DICOM tone value curve
- ✓ Palette with 543 billion color tones for precise color reproduction with up to 10 bits
- ✓ Calibration of white point and tonal value characteristics

- ✓ Automatic control of luminance distribution (Digital Uniformity Equalizer)
- ✓ Prepared for acceptance and constancy test according to DIN 6868-157 and QS-RL
- ✓ Demonstrably environmentally conscious and socially responsible production
- ✓ 5-year warranty for highest investment security

Image quality
Precise, high-contrast, bright and crisp screen

Excellent image quality for the finest details

Thanks to a high resolution of 2.3 Megapixels (colour), a high contrast ratio of 1350:1 and a factory-calibrated brightness of 330 cd/m^2, the monitor offers excellent picture quality. Even the finest details are reproduced clearly - regardless of the viewing angle from which the monitor is viewed. This makes the color monitor with its modern design and white housing ideal for dental diagnosis and treatment rooms (room classes 5 and 6). The MX243W-DT has a so-called wide gamut display. Thanks to the large color space, it is able to display highly saturated colors that are not visible on conventional color LCDs.

Observe monochrome and color images on a single monitor

The hybrid gamma PXL functionality automatically differentiates between monochrome and colour images, pi-

xel by pixel. This creates a hybrid display on which each pixel is displayed with the ideal tone value. In this way, a high level of precision and reliability is achieved.

The MX243W-DT displays sophisticated monochrome images just as reliably as color images from various modalities. In practice, this means a significant increase in efficiency, as images from different imaging procedures can be displayed on just one monitor.
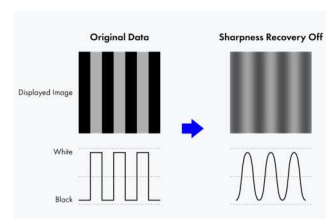

Blur reduction

LCD panels with a high brightness level tend to have more blurry image rendering thanks to over-framing than would be possible in comparison with an acquired exposure. Therefore, EIZO offers blur reduction anchored in monitor hardware. It retrieves details lost in the contours on the screen, meaning that the image is rendered as clearly as possible.
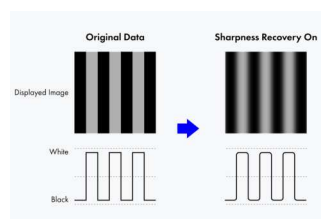

Sharpness recovery on   **Sharpness recovery off**

One billion color tones thanks to 13 bit LUT

Color rendering is controlled by a 13 bit look-up table (LUT), up to 10 bits of which are available in the Display-Port connection. This produces a resolution with a maximum of 1 billion color tones. The rendering characteristic and fine structures required for diagnostics can therefore be precisely identified.
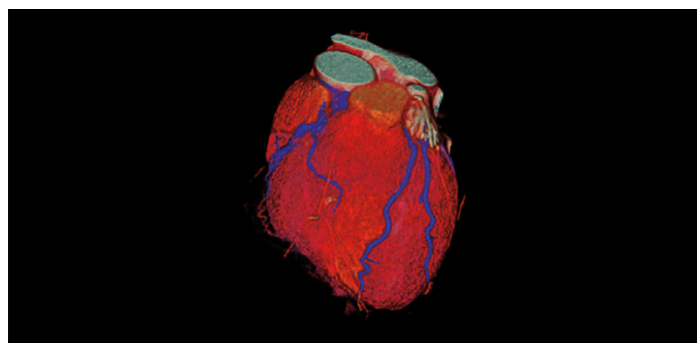
With 13 bit LUT
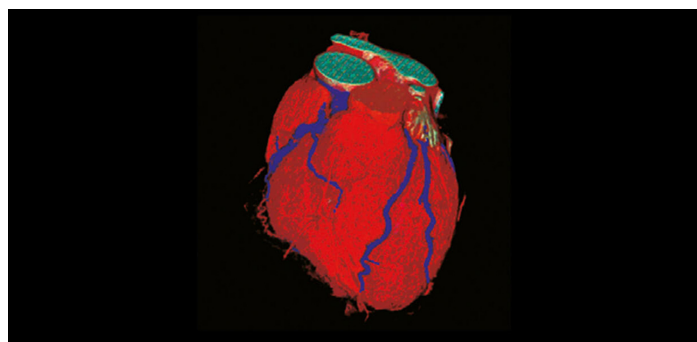
Without 13 bit LUT

Better viewing thanks to the widescreen format

Thanks to the aspect ratio of 16:10 or 16:9, you can see considerably more from a horizontal perspective than on conventional monitors, for example when performing clinical reviews on two adjacent images.

Uniform brightness and high color purity

The monitor shines thanks to its high color purity and uniform illumination. This is down to the Digital Uniformity Equalizer (DUE), which corrects imbalances automatically, pixel by pixel. Gray and color tones of radiological and other medical images are correctly rendered over the entire display. This is essential for precise image reproduction.


With DUE

Without DUE

Constant brightness during operation

A sensor for the backlight permanently determines the luminance of the monitor. The benefit: The defined and calibrated values are rendered exactly just seconds after the monitor is turned on and remain constant during the entire period of use. The sensor is invisibly integrated in the monitor.


Backlight Sensor
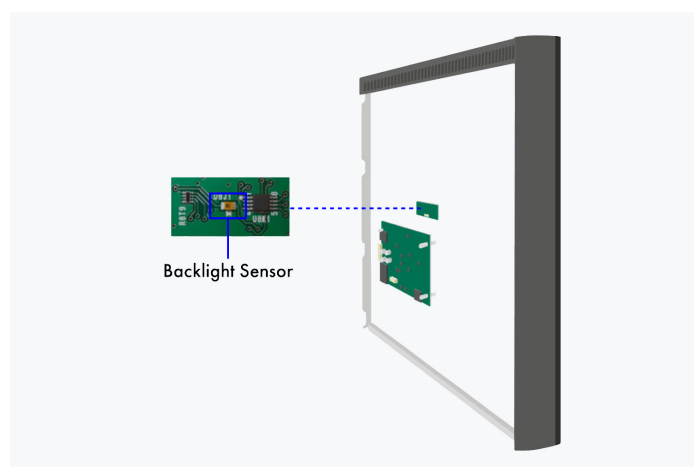
Back of the monitor

Software and ease of use
Features for greater comfort

Consistently secure image quality

The optional EIZO RadiCS software to secure image quality enables extensive maintenance and testing of monitors and includes calibration, acceptance and constancy testing, and the archiving of all areas. The basic version RadiCS LE is already included with RadiForce monitors.

- Learn more about RadiCS LE software (included in the delivery)
- Learn more about RadiCS software (optionally available)
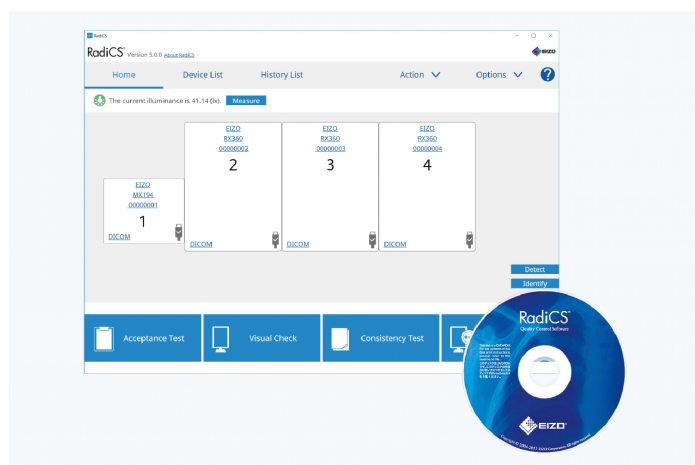
RadiCS LE

Brightness and DICOM® characteristic curve can be checked using the RadiCS LE software and automatically calibrated according to the factory default settings. The optionally available UX2 sensor is used for this purpose. The calibration of other tone value curves, such as CIE, is also possible with RadiCS LE.

The Work-and-Flow technology

With the increasing digitisation of modalities, radiologists are confronted with a growing amount of information on their screens. EIZO's unique work-and-flow technology, with new features designed to meet the needs of radiologists, effectively counters the complexity of data. The RadiForce MX243W-DT and RadiCS-LE software solution enable you to benefit from the Work-and-Flow functions.

More information about the Work-and-Flow functions

Point-and-Focus: all eyes on the analysis

The Point-and-Focus function allows you to select and focus on relevant image areas quickly using your mouse or keyboard. By adjusting the brightness and greyscale, the interesting parts of an image are highlighted by dimming the surrounding areas.

Improved comfort
## Efficiency in diagnostics

Extended durations of use thanks to automatic shut down

The monitor has an automatic shut down option for the backlight (backlight saver). This extends the duration of use. Similar to a screen saver, the LEDs turn off when the screen is not being used.

The backlight saver is part of the RadiCS software.

Ergonomic stand

Ergonomic and stable: the adjustable stand focuses on ergonomics. You can swivel and tilt the monitor stand until you find the most comfortable setting for your back, neck and sitting posture. It features continuous height adjustment and can be lowered almost to the base plate of the stand, enabling you to position the top image line ergonomically right below your eye level.
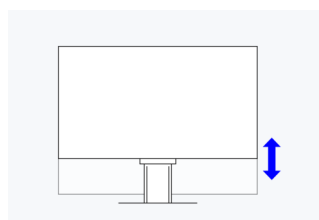
Height
90 mm
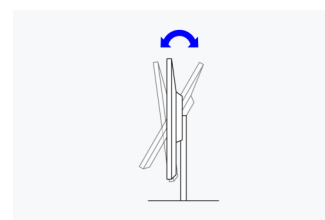
Tilt
Between 5° forwards and 30° backwards
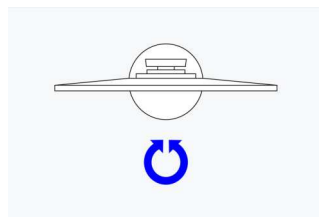
Swivel
70°

Rotation
anti-clockwise

Display of DICOM® characteristic at the press of a button

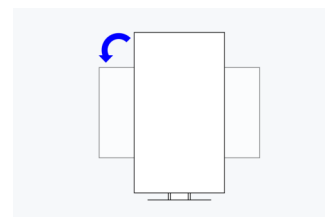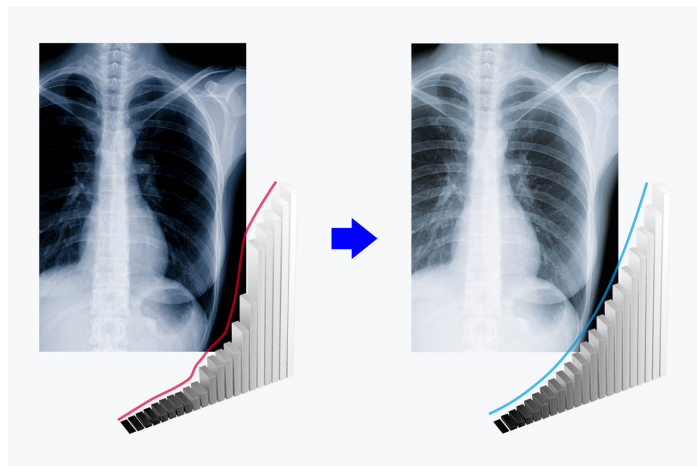EIZO measures and adjusts each tone of grey carefully so that the monitors comply with the DICOM® standard when delivered from the factory. The result is a particularly consistent gradation of grey tones, allowing for optimal radiological clinical reviews.

Connections for two computers

DisplayPort and DVI-D input enable the connection of two image signals. You can therefore connect two computers simultaneously. You can switch between them automatically or manually, if desired.

DAISY CHAIN METHOD
Efficient multi-display solution

Thanks to the signal input and output, you can link several RadiForce monitors through their DisplayPort interface. This means that you can realise multi-monitor solutions with the greatest of ease – without labourious and excessive cabling.
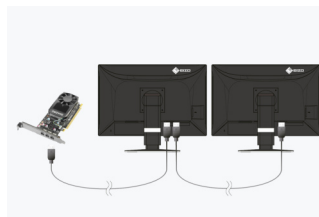
Daisy chain method
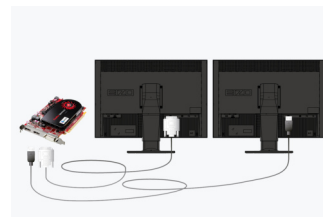
Conventional solution

RadiLight: Eye-friendly comfort light

EIZO offers a brand-new, easy-to-operate comfort light for radiologists who work in dark diagnosis rooms. The soft illuminance in the background of the screen reduces the strain on the eyes that frequently occurs due to constant light-dark changes between bright screens and objects in a dark environment.

Sustainability
Environmentally and socially conscious production

Environmentally friendly use of materials

The MX243W-DT consists of approximately 19% recycled plastic. This reduces the amount of plastic waste entering the environment, conserves resources and promotes the reuse of materials to preserve natural ecosystems.

Left: conventional packaging / Right: environmentally friendly materials

Socially responsible production

The MX243W-DT is produced in a socially responsible way. It is free of child labour and forced labour. Suppliers along the supply chain have been carefully selected and they have also committed themselves to produce in a socially responsible way. This applies in particular to conflict minerals. We present a detailed report about our social responsibility annually and voluntarily.

Environmentally friendly packaging

For the packaging of the MX243W-DT, EIZO uses a padding made of moulded pulp cellulose. The material is made from recycled cardboard and paper and has a much lower environmental impact when disposed of than traditional polystyrene or plastic. All cables are stored in a cardboard compartment instead of being individually packed in plastic bags.

Environmentally and climate friendly

Each MX243W-DT is manufactured in our own factory, which implements an environmental and energy management system in accordance with ISO 14001 und ISO 50001. This includes measures to reduce waste, wastewater and emissions, resource and energy consumption, as well as to encourage environmentally conscious behavior among employees. We publicly report on these measures on an annual basis.

Sustainable and durable

The MX243W-DT is designed to have a long service life and normally outlasts the warranty period by some distance. Replacement parts are available many years after production has ceased. The entire lifecycle takes into account the impact on the environment as the longevity of the product and the fact it can be repaired saves resources and protects the environment. When designing the MX243W-DT, we took a minimalistic approach to our resources by using high-quality components and materials, as well as a careful production process.

Warranty
Highest investment security

Five-year warranty

EIZO grants a five-year warranty. This is possible thanks to the highly developed production process based on a simple principle of success: sophisticated and innovative technology, made from high-end materials.

Graphics board recommendation
For precise diagnostics

EIZO Graphics card MED-XN43

The EIZO graphics card supports the properties, functions, and settings of the RadiForce MX243W-DT optimally. It enables precise diagnosis and can control several monitors simultaneously. EIZO offers technical support and warranty service for the graphics card.

To the graphics card overview

Technical Data

GENERAL

Item no.	MX243W-DT
Case color	White
Areas of application	Healthcare
Product line	RadiForce
Areas of application	Dentist, Dental diagnostic room, Dental treatment room
EAN	4995047066705

SCREEN

Screen size [in inches]	24,1
Screen size [in cm]	61
Format	16:10
Viewable image size (width x height) [in mm]	518,4 x 324
Resolution in MP	2.3 Megapixels (colour)
Ideal and recommended resolution	1920 x 1200
Pixel pitch [in mm]	0,27 x 0,27
Supported resolutions	1920 x 1200, 1920 x 1080 (Full HD), 1680 x 1050, 1600 x 1200, 1280 x 1024, 1024 x 768, 800 x 600, 720 x 400, 640 x 480
Panel technology	IPS
Max. viewing angle horizontal	178
Max. viewing angle vertical	178
Number of colors or greyscale	1.07 billion colors (DisplayPort, 10 Bit), 16.7 million colors (DVI, 8 Bit), 16.7 million colors (DisplayPort, 8 Bit)
Color palette/look-up table	543 billion colour tones / 13 bit
Max. brightness (typical) [in cd/m²]	410
Factory calibrated brightness [in cd/m²].	330
Max. dark room contrast (typical)	1350:1
Max. refresh rate [in Hz]	60
Backlight	LED

CONNECTIONS

Signal inputs	DisplayPort (HDCP 1.3), DVI-D (HDCP 1.4)
USB specification	USB 2
USB upstream ports	1 x type B
USB downstream ports	2x type A
Graphic signal	DVI Single Link (TMDS), DisplayPort

CERTIFICATION & STANDARDS

Certification	CE (Medical Device), UKCA (Medical Device), RoHS, WEEE

Find your EIZO contact:
EIZO AG - Switzerland
Moosacherstrasse 6, Au
8820 Wädenswil ZH
Phone +41 44 782 24 40
www.eizo.ch

FEATURES & OPERATION

Preset color/greyscale modes	2x manual memory locations, Text, sRGB, DICOM
DICOM tone curve	✔
Hardware calibration of brightness and light density characteristic curve	✔
Digital Uniformity Equalizer (homogeneity correction)	✔
Sensors	Backlight Sensor
On-screen menu languages	de, en, fr, es, it, se
Adjustment options	DICOM tonal value, Brightness, Contrast, Color temperature/White point, Gamma, Color saturation, Resolution, Scaling, Monitor reset, OSD language, Signal input, Blur reduction
Integrated power unit	✔

ELECTRICAL DATA

Frequency	Digital: 31-76 kHz/59-61 Hz
Power consumption (typical) [in watts]	30
Maximum Power Consumption [in watts]	56 (at maximum brightness with all signal inputs and USB ports in use)
Max. Power consumption in stand-by mode [in watts]	0.6
Power consumption with power switch off [in watts]	0
Power supply	AC 100-240V, 50/60Hz
Power management	✔

DIMENSIONS & WEIGHT

Dimensions (incl. stand) (width x height x depth) [in mm]	552 x 431-521 x 200
Weight (incl. stand) [in kg]	7.8
Weight (without stand) [in kg]	4.9
Rotatability of the stand [in °]	70
Tiltability forwards/backwards [in °]	5 / 30
Pivot between portrait / landscape	anti-clockwise
Height adjustment range [in mm]	90
Hole spacing	100 x 100

SOFTWARE & ACCESSORIES

Accompanying software and other accessories are available for download	RadiCS LE
Other box contents	USB cable (Type A - Type B), Signal cable DisplayPort - DisplayPort, Manual via download, Power cord
Accessories	RadiCS (UX2-Kit), RadiLight, MED-XN43
Recommended graphics card	MED-XN43

WARRANTY

Warranty period	5 years