



Product Website

## 2-megapixel medical monitor

Thanks to DICOM<sup>®</sup> tone curve, the MX217-HB displays radiological images true to the object. The calibrated brightness is 340 cd/m2. This makes it suitable for dental radiological reporting in room class 6 (treatment room). The monitor convinces with its clear and high-contrast image reproduction.

- 2-megapixel colour screen with 340 cd/m2 factory calibrated brightness and 500 cd/m2 maximum brightness
- Clear recognition of structures through high contrast and blur reduction
- Effortless quality assurance and built-in calibration sensor for semi-automated constancy testing
- Palette with 543 billion shades for precise colour reproduction with up to 10 bits
- Hybrid Gamma PXL function for pixel-precise display of greyscale and colour images with the required luminance characteristic curve
- Homogeneous display surface due to automatic control of luminance distribution (DUE)
- Prepared for calibration, acceptance and constancy testing according to DIN 6868-157 and QS-RL
- Ergonomic design with slim housing frame
- 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 the high 2 Megapixels (colour) resolution, a strong contrast ratio of 1800:1 and stable brightness of up to  $500 \text{ cd/m}^2$ , the monitor offers excellent image quality. Even the differences between the finest details are shown – regardless of your viewing angle. This is a great advantage if multiple physicians are looking at the screen.

# Observe monochrome and color images on a single monitor

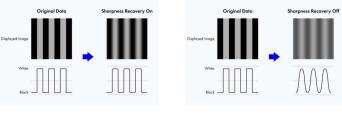
The hybrid gamma PXL functionality automatically differentiates between monochrome and colour images, pixel by pixel. This creates a hybrid display on which each pixel is displayed with the ideal tone value. In this way, a high level of precision and reliability is achieved.

The MX217-HB 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.

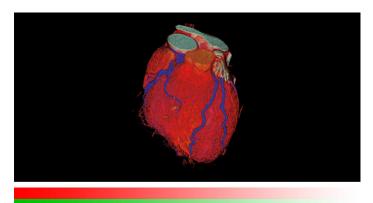


Sharpness recovery on

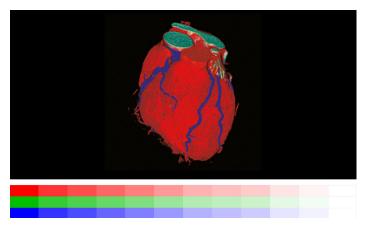
Sharpness recovery off

# 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



### 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.





Without DUE

## Consistent image quality thanks to integrated luminance sensor

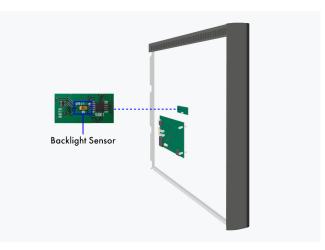
The precise calibration of white point and tone value characteristic curve is provided by an integrated luminance sensor. This measures the brightness and grayscales and calibrates the monitor autonomously according to the DICOM<sup>®</sup> standard. The sensor works automatically, without restricting the field of vision of the monitor. You can save the costs, time, and effort of maintenance and rely on a consistently balanced image quality.



Illustration exemplary

#### **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.



Back of the monitor

#### **FDA clearance**

The MX217-HB holds the FDA-510(k)- clearance for general radiography, but it does not support display of mammography images for diagnosis.

## Software and ease of use Features for greater comfort

#### 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 MX217-HB 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.



#### **RadiCS LE**

Brightness and DICOM<sup>®</sup> characteristic curve can be checked using the RadiCS LE software and automatically calibrated according to the factory default settings. The integrated sensor in the device takes care of this. The calibration of other tone value curves, such as CIE, is also possible with RadiCS LE.

## Improved comfort Efficiency in diagnostics

## Image rotation plus: Always in the right position

The MX217-HB can be operated in both portrait and landscape format. The 'Image Rotation Plus' function, included in the RadiCS LE software provided, rotates the displayed image automatically depending on the position of the monitor. (This function only works if supported by the graphics board.)

In addition, the flexible stand guarantees optimal ergonomics. You can tilt the monitor or lower it down to desk level.

#### 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.

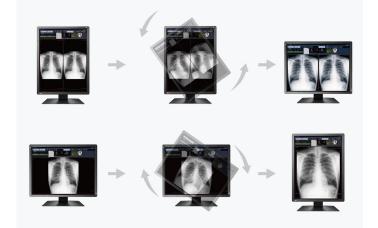


Daisy chain method

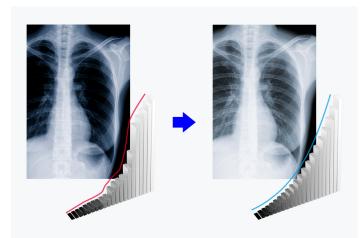
Conventional solution

# Display of $\text{DICOM}^\circ$ characteristic at the press of a button

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



Thanks to the Image Rotation Plus function, the displayed image rotates automatically into portrait or landscape format, depending on the position of the monitor.







#### 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 packaging

For the packaging of the MX217-HB, 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.



Left: conventional packaging / Right: environmentally friendly materials

#### Socially responsible production

The MX217-HB 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 and climate friendly**

Each MX217-HB 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 MX217-HB 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 MX217-HB, we took a minimalistic approach to our resources by using high-quality components and materials, as well as a careful production process.



#### Environmentally friendly use of materials

The MX217-HB 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.



## 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 MX217-HB 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

GENERAL	
ltem no.	MX217-HB
Case color	Black
Areas of application	Healthcare
Product line	RadiForce
Areas of application	Dentist, Dental treatment room, Orthopedics
EAN	4995047065005
SCREEN	
Screen size [in inches]	21
Screen size [in cm]	54
Format	3:4
Viewable image size (width x height) in mm]	324 x 432
Resolution in MP	2 Megapixels (colour)
deal and recommended resolution	1200 x 1600
Pixel pitch [in mm]	0,27 × 0,27
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]	500
Factory calibrated brightness [in cd/ m²].	340
Max. dark room contrast (typical)	1800:1
Backlight	LED
CONNECTIONS	
Signal inputs	DisplayPort, DVI-D
Signal outputs	1x DisplayPort (HDCP 1.2)
Daisy-chain capable	✓
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), ANSI /AAMI ES60601-1, CSA C22.2 Nr. 601-1, EN60601-1, IEC60601-1, RCM, FCC-B, CAN ICES-3 (B), VCCI-B, RoHS, WEEE, China RoHS, CCC

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FEATURES & OPERATION	
Preset color/greyscale modes	1x manual memory location, Text, sRGB, Paper, DICOM, additional memory spaces through calibration
DICOM tone curve	✓
Hardware calibration of brightness and light density characteristic curve	✓
Digital Uniformity Equalizer (homoge- neity correction)	✓
Hybrid Gamma PXL	✓
Blur reduction	✓
Sensors	Ambient Light Sensor, Integrated luminance sensor, Backlight Sensor
On-screen menu languages	de, en, fr, es, it, se
Adjustment options	DICOM tonal value, Brightness, Contrast, Color tem- perature/White point, Gamma, Color saturation, Reso- lution, Scaling, Skip color mode, OSD language, Signal input, Key lock, Blur reduction
Integrated power unit	✓
ELECTRICAL DATA	
Frequency	Digital: 31-100 kHz/59-61 Hz
Power consumption (typical) [in watts]	23
Maximum Power Consumption [in watts]	54 (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
DIMENSIONS & WEIGHT	
Dimensions (incl. stand) (width x height x depth) [in mm]	357 x 482-572 x 200
Weight (incl. stand) [in kg]	7.2
Dimension drawing (PDF)	Dimension drawing (PDF)
Rotatability of the stand [in °]	70
Tiltability forwards/backwards [in °]	5 / 30
Pivot between portrait / landscape	anti-clockwise
Hole spacing	100 x 100
SOFTWARE & ACCESSORIES	
Accompanying software and other accessories are available for down- load	RadiCS LE
Other box contents	USB cable (Type A - Type B), Signal cable DisplayPort - DisplayPort, Manual via download, Power cord
Accessories	RadiNET Pro, RadiCS (UX2-Kit), MED-XN43
Recommended graphics card	MED-XN43
WARRANTY	
Warranty periode	5 years