Eizo Nanao Corporation supports pink ribbon campaign for early detection of breast cancer.

EIZO NANAO CORPORATION

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As the incidence of breast cancer rises, regular mammograms are recommended for early detection.

It is vital in the process of early breast cancer detection to find subtle masses and calcifications. Film imaging for mammography diagnosis has long been the primary methodology.

However, to meet the demand for a higher quality of images and reduction of reading time and cost, digitizing and networking of medical images in a filmless environment is spreading rapidly.

The transition from film to filmless mammography naturally requires a monitor to display extremely precise images equal to or better than film mammography.

In the mammography field today high-performance monitors featuring high resolutions and displaying high density images contribute to the process of early breast cancer detection.

Film to Filmless Mammography Diagnosis

“Information volume” of a digital mammography image should exceed 5 million pixels. When a lower resolution monitor displays this information volume, the image is either displayed partially at 1:1 pixel mapping or narrowed when displayed to fit the monitor resulting the loss in image quality and mosaic to appear. Therefore, monitor with high resolution of more than 5 megapixels are required to display the correct information volume of a digital mammography image.

High-Resolution to Suit Mammographic Image

High Contrast Ratio for Deep Black

For detection of subtle masses and calcifications, the monitor needs performance to accurately render the finer details. The high contrast ratio and higher levels of black performance brings out the subtle differences in similar shades of gray and sharper rendering of details when displaying monochrome images.

Quality Control for Stable Image

Monitor quality change slowly over time. Therefore, monitor quality control (QC) to detect the changes and to perform calibration compliant with DICOM Part 14 becomes essential to offer reliable long-term use with maintained high definition.
It is vital in the process of early breast cancer detection that monitors display accurate and consistent quality images. EIZO provides optimum diagnosis confidence with distinctive versions of the RadiForce 10 megapixel and 5 megapixel monitors for digital mammography imaging.

RadiForce Mammo-Series
Digital Mammography Monitors

High-Resolution

With a resolution of 3 megapixels or higher, the monitors meet the high level standards required for displaying digital mammography.

Image Sharpness with High Contrast Ratio

The high contrast ratio brings out the subtle differences in similar shades of gray and sharper rendering of details when displaying monochrome images such as the digital mammography, MRI, and ultrasound images.

Brightness Uniformity

The Digital Uniformity Equalizer (DUE) function provides optimum backlight luminance uniformity which is considered difficult to attain due to the characteristics of LCD monitors.

Quick Brightness Stabilization for Instant Viewing

At startup or upon wakeup, the EIZO patented drift correction function quickly stabilizes the brightness level. In addition, a sensor measures the backlight brightness and compensates for brightness fluctuations caused by the ambient temperature and the passage of time.

10-Bit Simultaneous Grayscale Display

10-bit (1,024 tones) simultaneous grayscale display extends grayscale fidelity to the boundaries of human visual perception abilities and helps radiologists discern the finest nuances within an image.

DICOM Part 14 Factory Adjustment

To ensure the most accurate and consistent shadings possible, EIZO carefully measures and sets every grayscale tone on the production line to produce a monitor compliant with DICOM Part 14.
Two Monitors in One

With its super-high-resolution widescreen, the RadiForce GX1030 is an optimal replacement for traditional dual head 5 megapixel monitor installations. It is ideally suited for displaying digital mammography or other large and finely detailed DICOM images.

Bezel-Less Configuration for Enhanced Operability

The consistent color point and bezel-less configuration of a single monitor serve to reduce eye fatigue for the radiologist while lowering the administrative and QA costs for the operator. With the unobstructed viewing space, applications can offer greater hanging protocol flexibility for richer comparisons between past and present images.

Easy Calibration with Integrated Front Sensor

An Integrated Front Sensor (IFS) housed within the front bezel measures brightness and grayscale tones and calibrates to the DICOM Part 14 standard. Without having to connect and disconnect, an IFS performs QC tasks and does not interfere with the viewing area.

IFS of GX1030 does not support calibration.

Environmentally-Friendly LED Backlight

By utilizing an energy-efficient LED as a backlight, the monitor achieves a high-brightness and low-power consumption at the same time. Unlike conventional CCFL backlights, LED backlights deteriorate more slowly and thus the monitor offers a longer service life. Since the LED backlight is mercury free, it will reduce any potential impact on the environment when it is disposed of.

Optimized Brightness and Grayscale Tone with Ambient Light Tracking

To ensure DICOM conformance in changing room light conditions, Ambient Light Tracking (ALT) function with embedded ambient light sensor keeps checking the room light conditions and automatically optimizes the monitor’s brightness and grayscale tone to DICOM Part 14.

Internal Test Pattern Generator for Expanded Image Quality

The internal Test Pattern generator can be used to visually inspect image quality without attaching external hardware or installing QC software on the mammography workstation. This can be useful during the initial installation or on systems that prohibit users from installing software packages.

Presence Sensor for Power Savings

The presence sensor feature unites convenience with savings by ensuring that the monitor conserves power when it is not in use. The presence sensor prompts the monitor to switch to power save mode when it detects the user is away from the monitor, and then resume normal operation when the user returns.

Brightness Stability Within Usage Time Guaranteed

EIZO’s confidence in its product quality extends to brightness stability which is also covered during the usage time specified in the warranty.

Customer Assurance with Medical Standards

Meets the strictest medical, safety and EMC emissions standards.

Warranty with Safety and Trust

EIZO and its authorized distributors offer a five-year limited warranty.
Quality Control of Digital Mammography Monitor

Monitor Quality Control Solutions

With filmless imaging spreading in the medical world, there is a growing interest in maintaining the quality of monitors displaying medical images. With the know-how and experience as a specialist in monitor manufacturing, we offer state-of-the-art solutions for the quality control of monitors which will lead to the improvement of the quality of medical care itself.

Centralized Management of All Monitors

Rad.NET Pro (sold separately) enables centralized management of calibration tasks, history data of multiple RadiCS clients via a network, and remote QC functions.

Graphics Boards

Xenon Pro MED-V880B

Bus Interface PCI Express x16 PCI Express x16

Compression 10 Minutes/7 Minutes/W 10 Minutes/7 Minutes/W

Display Brightness 1,000 cd/m² 1,000 cd/m²

Maximum Power Consumption 75 W 75 W

Power Management None None

Video Signals

Input Terminal DVI-D x 2 (two inputs are required) 480i (dual link mode), DisplayPort x 1

Digital Scanning Frequency 60 Hz 60 Hz

Resolution 1,920 x 1,200 1,920 x 1,200

Standard Rev. 2.0 Rev. 2.0

Power Monitor Power Requirements AC 120 V / 200 - 240 V / 50 Hz AC 120 V / 200 - 240 V / 50 Hz

Supplied Accessories AC power cord, dual link signal cable (DVI-D - DisplayPort), DisplayPort cable, USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user’s manual)

Warranty One Year One Year

Dimensions (W x H x D) 191 x 124 x 254 mm 191 x 124 x 254 mm

*Please contact the EIZO group company or distributor in your country for the latest information.