



**EIZO Introduces 2 MP Color LCD Monitor for Medical Imaging**  
*Each RadiForce® R22 unit individually adjusted at factory  
 for accurate color and grayscale display*



Matto, Japan, October 14, 2003 – Eizo Nanao Corporation (“EIZO”) today announced the release of the RadiForce R22, a 2 megapixel LCD monitor for CT (computed tomography), MRI (magnetic resonance imaging), and PET (positron emission tomography). Product innovations include DICOM image modes with both clear base and blue base settings and factory adjustment of gamma for accurate color and grayscale reproduction between units. The RadiForce R22 is now shipping and scheduled for worldwide availability in November 2003.

EIZO offers the RadiForce R22 as part of a complete imaging system consisting of a monitor and choice of graphics boards. To meet the need for color calibration, EIZO is developing a calibration kit scheduled for release in the spring of 2004. With this kit, radiologists will be able to calibrate to the DICOM Part 14 standard and set extremely precise gamma, brightness, and color temperature values. Calibration compatibility also makes the RadiForce R22 an ideal reference monitor for CR (computed radiography) and DR (digital radiography) images.

Each R22 unit is individually adjusted by EIZO in its factories in Japan to produce an accurate gamma curve. This guarantees uniform color reproduction between monitors, which is critical in a multi-panel environment. Furthermore, it ensures grayscale rendering without banding or color seepage, making the RadiForce R22 highly suitable for displaying grayscale images as well.

The ergonomic thin bezel design along all four sides reduces space requirements compared to conventional LCD monitors. In a dual display environment, it also means less eye movement is required between screens, thereby reducing eye fatigue. The stand has a height adjustment range of 82 mm and the panel tilts and swivels 40° and 70° respectively. Both landscape and portrait modes are supported. The power supply unit is built into the panel and the unit complies with VESA mounting standards.

The RadiForce R22 accepts both digital and analog signal input with its DVI-I and D-Sub input terminals. Its support for analog signal types includes separate sync, composite sync, and sync-on-green, ensuring compatibility with workstations and standards PCs.

**MED Series and VREngine Series Graphics Boards**

EIZO offers both MED Series and VREngine Series graphics boards for the RadiForce R22. The MED Series includes the MED2mp-AGP and the MED2mp-PCI. As their names suggest, they are differentiated by AGP (Accelerated Graphics Port) and PCI (Peripheral Component Interconnect) bus interfaces. For the VREngine Series, there is the VREngine/MD2W with a PCI bus interface. All boards contain twin DVI-I outputs, and support both portrait and landscape viewing without the need for additional software.



### ToneCurve Tuning Utility

An EIZO-developed ASIC (Application Specific Integrated Circuit) included in the RadiForce R22 produces a 10-bit (1,021 tone) palette for both grayscale and each color (RGB). With the bundled ToneCurve Tuning Utility<sup>1</sup>, radiologists can choose exactly which of the 256 tones from the 1,021 tone palette will be displayed on screen by inputting values in a table or manipulating control points on a graph (number of control points are user selectable – 3, 5, 9, 16, 24, 33 or 256). Results are displayed immediately with a preview function.

Once a range of display values and the gamma output have been set with the ToneCurve Tuning Utility, they can be saved to the control PC and shared with other RadiForce color 1MP and 2MP units through a USB connection. With several such units installed in the same facility, this guarantees consistency and avoids the need to adjust each one individually.

### Fine Contrast and DICOM Settings

Fine Contrast is a front button controlled function that offers six different modes – Custom, sRGB, Calibration, Text, DICOM-CL, and DICOM-BL. Fine Contrast allows the user to change the image settings at the touch of a button rather than go into the OSD menu and manipulate each setting individually. Each mode has default settings for image parameters such as brightness, color temperature, and gamma. The two DICOM modes are available for the first time with the RadiForce R22, and offer brightness and color temperature settings to match clear base and blue base film.

#### Fine Contrast Modes and Default Settings

Mode	Brightness	Color Temperature	Gamma	Usage
<b>Custom</b>	70%	Off	2.2	ToneCurve Tuning Utility Software
<b>sRGB</b>	100%	6500 (Fixed)	2.2 (Fixed)	Color matching with other sRGB compliant peripherals
<b>Calibration</b>	100%	Off	Fixed	Optional calibration kit
<b>Text</b>	40%	5000K	2.2	Text-based documents
<b>DICOM-CL</b>	150 cd/m <sup>2</sup>	75000K	DICOM Part 14	DICOM setting – clear base film
<b>DICOM-BL</b>	100 cd/m <sup>2</sup>	125000K	DICOM Part 14	DICOM setting – blue base film

### Additional Features

- Super IPS (In-Plane Switching) panel with 250 cd/m<sup>2</sup> brightness, 400:1 contrast, and 170° viewing angles.
- Color temperature setting from 6500 – 15000K.
- EIZO patented brightness stabilization function that quickly stabilizes the brightness level after startup or coming out of power save mode, and automatically compensates for brightness changes caused by surrounding temperature.
- ScreenManager Pro for LCD bundled utility software<sup>1</sup> allows handling of all OSD functions via the mouse or keyboard through a USB connection to the PC.
- Compliance with stringent medical, safety, and EMC emissions standards including TÜV/GM, the CE Medical Device Directive, and cTÜVus.
- EIZO's Eco Products 2002 label signifying adherence with several strict internal requirements such as the use of lead-free solder and chrome-free steel plates.



#### Accessories

- LS-HM1-D – Height adjustable stand that holds two monitors.
- RP-901 – A thin sheet with a transparency rate of more than 99% that fits over the screen surface to protect against dust and scratches.
- Screen Administrator – EIZO developed software that allows system administrators to perform setup and management tasks on Windows-based client PCs and select EIZO monitors<sup>2</sup> from a control PC.

#### About EIZO

Eizo Nanao Corporation is a leading global manufacturer of high-end visual display products with a wide range of LCD, CRT, and PDP monitors, and Windows-Based Terminals (thin clients). The image quality, long-term reliability, and innovative features of EIZO monitors make them the product of choice in many financial trading rooms, hospitals, back offices, and design studios throughout the world. EIZO is based in Japan and represented in over thirty countries by a network of exclusive distributors.

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<sup>1</sup>ToneCurve Tuning Utility and ScreenManager Pro for LCD can only be used with the Microsoft® Windows® 98SE, Me, 2000, and XP operating systems.

<sup>2</sup>Screen Administrator cannot be used with the monitors of any other manufacturer.

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