Clinical Review Monitors

RadiForce® MX-Series

Future Focused

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EIZO's complete spectrum of RadiForce medical monitor solutions delivers exceptionally accurate and stable image display at leading hospitals around the world.

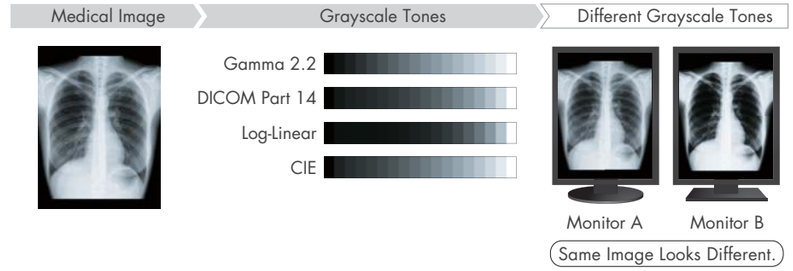
Our commitment to technological innovation includes making products that are as ergonomically, environmentally, and economically-friendly as possible.

With the shift to completely filmless systems for improved efficiencies in patient care, EIZO will continue to provide products of unsurpassed quality, consistency, and value that are truly future focused.

Selecting the Optimum Monitor for Clinical Review

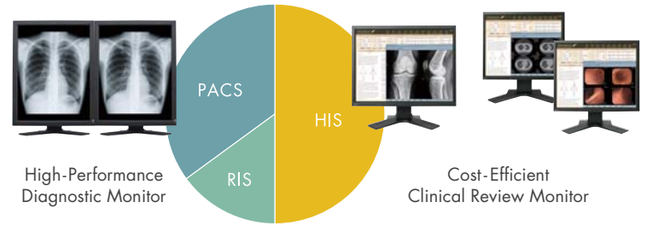
Display Differs Depending Upon Grayscale Tones

Standard monitors for general office use have grayscale tone characteristics which may vary even between the same models. In the medical field, monitors must display medical images accurately and consistently. Digital Imaging and Communications in Medicine (DICOM) Part 14 specifies a display function for grayscale which is now used as a standard to adjust the grayscale tone characteristics of monitors used in the medical field.



Cost-Efficiency Demanded Under Clinical Review Applications

Medical images can now be reviewed with clinical record applications. However, it is costly for hospitals to install high-performance, DICOM calibration compatible diagnostic monitors throughout the entire hospital, and a cost-efficient solution is demanded for clinical review application usage environment.



Calibration to the DICOM Part 14 Compliant and Superior Cost Performance Monitor is Optimum for Clinical Review

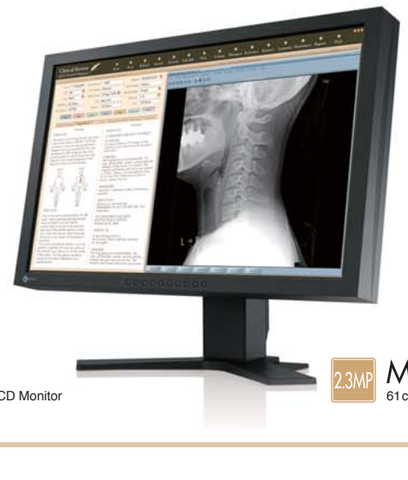
With the bundled RadiCS LE quality control software installed, a built-in backlight sensor periodically checks for brightness irregularities of RadiForce MX-Series monitors. Furthermore, simplified calibration compliant with the DICOM Part 14 standard can be periodically performed to correct the brightness and grayscale tones of the monitor. Superior cost performance will be achieved when installing a large number of monitors compliant to DICOM Part 14 in clinical review application usage environments.

RadiForce® MX-Series Clinical Review Monitors

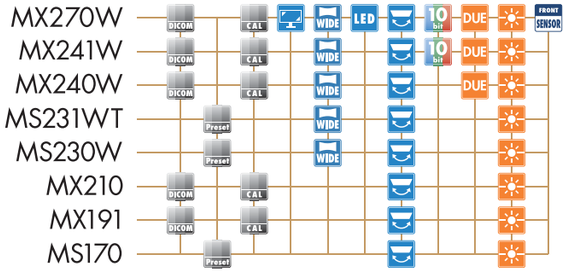
The RadiForce MX-Series of superior cost performance clinical review monitors deliver calibration that is compliant with DICOM Part 14. They are ideal for viewing patient charts with MRI and CT medical images in DICOM Part 14 standard. In addition, they are available in widescreen and square formats in various resolutions to meet the diverse needs of hospitals.

3.7MP **MX270W**
68 cm (27") Color LCD Monitor

2.3MP **MX241W**
61 cm (24.1") Color LCD Monitor



2.3MP **MX240W**
61 cm (24.1") Color LCD Monitor

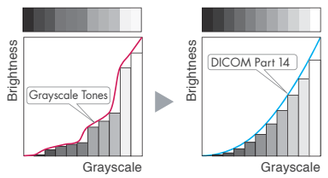


Features

High-Definition Images

Diagnostic Precision with DICOM Part 14 Factory Adjustment

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

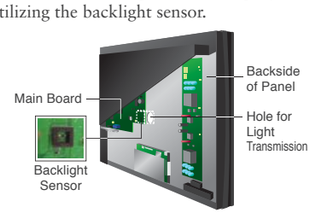


DICOM Preset Mode

MS-models feature a DICOM preset mode whose grayscale tone is preset on the production line for optimum reviewing of medical images.

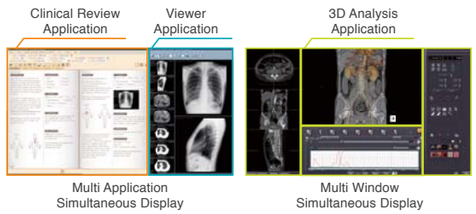
Consistency with DICOM Part 14 Simplified Calibration

With the bundled RadiCS LE quality control software, a simplified calibration compliant with the DICOM Part 14 standard can be performed to correct the brightness and grayscale tones of the monitor by utilizing the backlight sensor.



Large Screen Size and High-Resolution

Its 27-inch large screen size and a 2560 x 1440 high-resolution are ideal for displaying multiple imaging applications or windows to improve the work efficiency of physicians and radiologists.

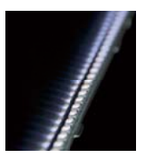


View More with Widescreen

The widescreen 16:10 or 16:9 aspect ratio provides significantly more horizontal space than the 4:3 or 5:4 aspect ratios of conventional square monitors. The screen is wide enough so that you can keep tool palettes open without covering the window you are working on.

Environmentally-Friendly LED Backlight

By utilizing an energy-efficient LED as a backlight, the monitor achieves a high-brightness. Power consumption is reduced by 42% (EIZO's internal measurement.) compared to the same size monitor with a conventional CCFL backlight. Since the LED backlight is mercury free, it will reduce any potential impact on the environment when it is disposed of.



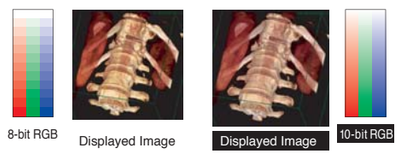
Wide Viewing Angles for Multiple People Use

Thanks to the wide viewing angles and high contrast ratio of the panel, images can be viewed simultaneously by several people with the highest quality reproduction and minimal color shift.

10-bit Color

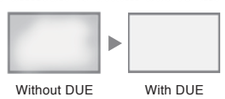
Each RGB color is supported with a 10-bit input compatibility that displays more than 1 billion colors, providing smooth color tones for 3D color rendering and image fusion.

10-bit color graphics board and 10-bit color viewer software needed for 10-bit color display.



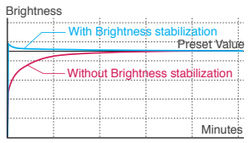
Brightness Uniformity for a Steadier Image Across the Screen

The Digital Uniformity Equalizer (DUE) function provides optimum backlight luminance uniformity which is difficult to attain due to the characteristics of LCD monitors, especially with larger screen size.



Quick Brightness Stabilization for Instant Viewing

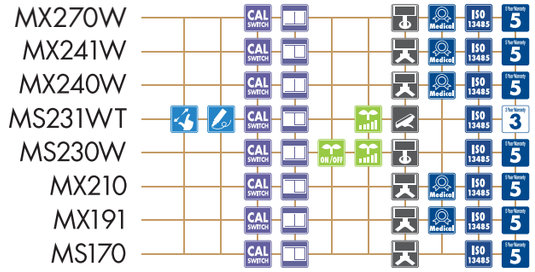
At startup or upon wakeup, the EIZO patented drift correction function quickly stabilizes the brightness level. In addition, a sensor measures the backlight brightness and compensates for brightness fluctuations caused by the ambient temperature and the passage of time.



Ergonomic Features

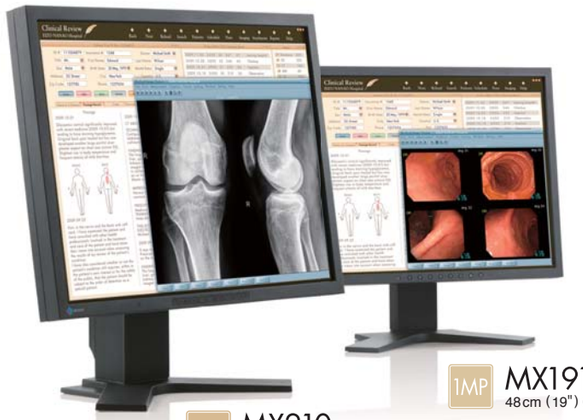
Easy Calibration with Integrated Front Sensor

Integrated Front Sensor, housed within the front bezel, is conveniently enabled and visible only when calibration compliant to the DICOM Part 14 standard is being performed. This dramatically reduces the time and effort needed for quality control.



2MP MS231WT
58 cm (23") Multitouch Color LCD Monitor

2MP MS230W
58 cm (23") Color LCD Monitor



2MP MX210
54 cm (21.3") Color LCD Monitor

1MP MX191
48 cm (19") Color LCD Monitor

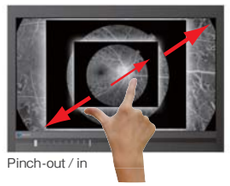
1MP MS170
43 cm (17") Color LCD Monitor

Features

Multitouch Interface

Both intuitive and enjoyable to work with, multitouch lets you tap, scroll, drag, pinch, spin, etc. with your fingers instead of a mouse and keyboard. The multitouch interface is supported by Windows 7 and works with the growing number of multitouch applications compatible with this OS.

Drag



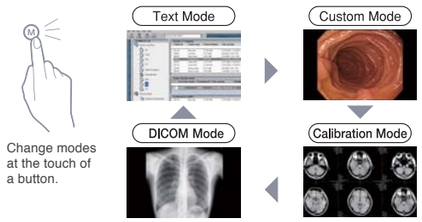
Pinch-out / in

Finger, Glove, or Pen Touch

Optical imaging touch panel technology accepts input from a bare or gloved hand as well as a touch pen.

Mode Selection for Optimum Viewing

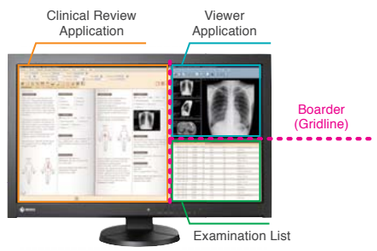
Selectable with the front panel buttons, the CAL Switch function allows for various imaging modes of different modalities such as CR, CT, and endoscope images.



[MX240W Usage Example]

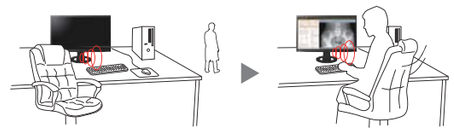
Handy Partitioning for Widescreen and Multi-Monitor Environments

EIZO ScreenSlicer is a desktop monitor software utility that allows an entire screen to be effectively used through partitioning. Multiple windows can be easily aligned and dropped into the partitioned areas in single- or multi-monitor environments for convenience.



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.



Switch to power save at user's absence

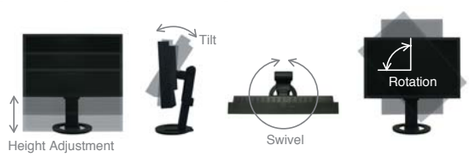
Screen activates at user's presence

Energy Efficiency Gauge

To encourage environmental consciousness while working, an on-screen gauge indicates energy consumption in correlation with the screen's brightness. When the gauge is fully illuminated, the monitor is operating at optimum energy efficiency.

Versatile Positioning for Improved Operability and Less Fatigue

EIZO's highly versatile stand offers tilt, swivel, portrait rotation, and a wide height adjustment range enabling you to use the monitor with improved operability and less fatigue.



High Quality Assurance

Customer Assurance with Medical Standards

EIZO monitors meet the strictest medical, safety, and EMC emission standards.

ISO 13485 Certification

Acquiring ISO 13485 certification demonstrates EIZO's ability to consistently meet customer requirements for our products and services.

ISO 13485:2003

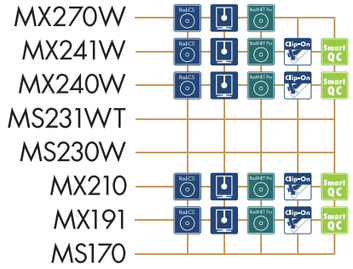
Warranty with Safety and Trust

EIZO and its authorized distributors offer a five-year or three-year limited warranty.

Brightness deterioration is not covered.

5 Year Warranty 5

3 Year Warranty 3



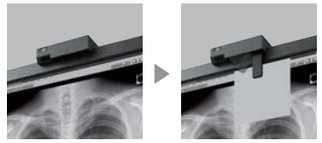
Quality Control Solutions

Monitor Quality Control Standards Compliance

Quality control tool RadiCS UX1 (sold separately) enables you to perform basic quality checks necessary for clinical review monitors.

Clip-On Swing Sensor for Easy Calibration

Easy calibration compliant with the DICOM Part 14 standard can be performed with the Clip-On Swing Sensor G2 (sold separately). Once attached to the top of the monitor, it can remain in place and is ready for use. This saves the time and trouble of attaching and removing it when performing QC tasks.

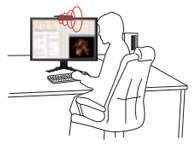


High-Performance Calibration with UX1 Sensor

By using the UX1 sensor (sold separately) with the quality control software RadiCS (sold separately) or bundled RadiCS LE, high-performance calibration compliant with the DICOM Part 14 standard can be performed.

Presence Sensor for Smart QC Tasks

The presence sensor on the front of the Clip-On Swing Sensor G2 determines whether to start QC tasks such as calibrations automatically at scheduled times. If the user is working, the QC task stays in stand-by mode, and when the user is away from the monitor the task is performed.

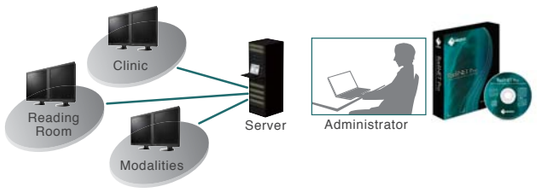


QC task in stand-by mode while seated

QC task performed while away

Centralized Management of All Monitors

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



Environmental Awareness

Harmonizing with Environment and Society

We are conscious of the importance of environmental preservation as a common issue for all humankind and pledge to do our utmost to protect the environment in all aspects of our corporate operations. We obtained ISO 14001 certification, and all our employees are committed to the effective use of natural resources and energy, and also to reducing CO emissions causing global warming.

Manufacturing Environmentally-Friendly Products

Based on our awareness that our products have an impact on the environment and our pledge to consider respect for the environment as an integral part of product quality, we have continued to lead the industry in our efforts to reduce the environmental impact of our products. In product development, we vigorously work to ensure that our products comply with domestic and international legal requirements and environmental standards of third-party organizations.

Accessory Compatibility

	Wall Mount Arm		Dual Height Adjustable Stand	Panel Protector	Monitor Cleaning Kit
	LA-030-W	LA-011-W	LS-HM1-D	PANEL PROTECTOR	ScreenCleaner
					
3.7MP MX270W	○	○	—	FP-2702W*	
2.3MP MX241W	○	○	—	FP-2400W	
2.3MP MX240W	○	○	—	FP-2400W	
2MP MS231WT	—	—	—	—	
2MP MS230W	○	○	—	FP-2301W	
2MP MX210	○	○	○	FP-2101	
1MP MX191	○	○	○	FP-702	
1MP MS170	—	—	○	FP-505	

** Integrated Front Sensor unusable with panel protector.*

Specifications





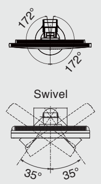



	3.7MP RadiForce MX270W	2.3MP RadiForce MX241W	2.3MP RadiForce MX240W	2MP RadiForce MS231WT	2MP RadiForce MS230W	2MP RadiForce MX210	1MP RadiForce MX191	1MP RadiForce MS170
Cabinet Color	Black	Black, Gray	Black	Black, Gray-Black Two-Tone	Black	Black, Gray	Black, Gray	Black, Gray
Panel Type	TFT Color LCD Panel (IPS)	TFT Color LCD Panel (IPS)	TFT Color LCD Panel (VA)	TFT Color LCD Panel (VA)	TFT Color LCD Panel (VA)	TFT Color LCD Panel (VA)	TFT Color LCD Panel (VA)	TFT Color LCD Panel (VA)
Panel Size	68 cm / 27" (684 mm diagonal)	61 cm / 24.1" (611 mm diagonal)	61 cm / 24.1" (611 mm diagonal)	58 cm / 23" (584 mm diagonal)	58 cm / 23" (584 mm diagonal)	54 cm / 21.3" (540 mm diagonal)	48 cm / 19" (481 mm diagonal)	43 cm / 17" (432 mm diagonal)
Display Size (H x V)	596.7 x 335.6 mm	518.4 x 324.0 mm	518.4 x 324.0 mm	509.7 x 286.7 mm	509.7 x 286.7 mm	432.0 x 324.0 mm	376.3 x 301.0 mm	337.9 x 270.3 mm
Pixel Pitch	0.233 x 0.233 mm	0.270 x 0.270 mm	0.270 x 0.270 mm	0.2655 x 0.2655 mm	0.2655 x 0.2655 mm	0.270 x 0.270 mm	0.294 x 0.294 mm	0.264 x 0.264 mm
Native Resolution	2560 x 1440 (16:9 aspect ratio)	1920 x 1200 (16:10 aspect ratio)	1920 x 1200 (16:10 aspect ratio)	1920 x 1080 (16:9 aspect ratio)	1920 x 1080 (16:9 aspect ratio)	1600 x 1200 (4:3 aspect ratio)	1280 x 1024 (5:4 aspect ratio)	1280 x 1024 (5:4 aspect ratio)
Display Colors	10-bit colors (DisplayPort): 1.07 billion (maximum) colors 8-bit colors: 16.77 million from a palette of 68 billion colors	10-bit colors (DisplayPort): 1.07 billion (maximum) colors 8-bit colors: 16.77 million from a palette of 68 billion colors	16.77 million from a palette of 1.06 billion colors	16.77 million from a palette of 1.06 billion colors	16.77 million from a palette of 1.06 billion colors	16.77 million from a palette of 1.06 billion colors	16.77 million from a palette of 8.50 billion colors	16.77 million from a palette of 1.06 billion colors
Viewing Angles (H, V)	178°, 178°	178°, 178°	178°, 178°	178°, 178°	178°, 178°	178°, 178°	178°, 178°	178°, 178°
Brightness (typical)	300 cd/m²	320 cd/m²	320 cd/m²	250 cd/m²	300 cd/m²	300 cd/m²	300 cd/m²	250 cd/m²
Contrast Ratio (typical)	1000:1	1000:1	850:1	3000:1	3000:1	1000:1	2000:1	1500:1
Touch Panel Type	–	–	–	Infrared Optical Imaging	–	–	–	–
Surface Hardness	–	–	–	5.5 Mohs	–	–	–	–
Compatible OS	–	–	–	Multi-touch: Windows 7 64-bit and 32-bit Single-touch: Windows Vista 64-bit and 32-bit	–	–	–	–
Communication Protocol	–	–	–	USB	–	–	–	–
Response Time (typical)	12 ms (On/Off), 8 ms (Midtone)	13 ms (On/Off), 5 ms (Midtone)	16 ms (On/Off), 6 ms (Midtone)	25 ms (On/Off), 7 ms (Midtone)	25 ms (On/Off), 7 ms (Midtone)	16 ms (On/Off), 8 ms (Midtone)	20 ms (On/Off), 8 ms (Midtone)	25 ms (On/Off)
Scanning Frequency (H, V)	31 - 89 kHz, 29.5 - 61 Hz (VGA Text: 69 - 71 Hz)	Digital: 31 - 76 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 24 - 76 kHz, 49 - 86 Hz (1600 x 1200: 76 Hz, 1920 x 1200: 61 Hz) Frame synchronous mode: 59 - 61 Hz	Digital: 31 - 76 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 24 - 94 kHz, 49 - 86 Hz (1600 x 1200: 76 Hz, 1920 x 1200: 61 Hz) Frame synchronous mode: 49 - 61 Hz	Digital: DVI 31 - 68 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz), HDMI 15 - 68 kHz, 49 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 31 - 81 kHz, 55 - 76 Hz Frame synchronous mode: 49 - 61 Hz	Digital: 31 - 68 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 31 - 81 kHz, 55 - 76 Hz	Digital: 31 - 76 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 24 - 80 kHz, 49 - 76 Hz (1600 x 1200: 61 Hz) Frame synchronous mode: 59 - 61 Hz	Digital: 31 - 64 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 24.8 - 80 kHz, 50 - 75 Hz	Digital: 31 - 64 kHz, 59 - 61 Hz (VGA Text: 69 - 71 Hz) Analog: 24.8 - 80 kHz, 50 - 75 Hz
Dot Clock	242 MHz	Digital: 162 MHz, Analog: 170 MHz	Digital: 162 MHz, Analog: 202.5 MHz	Digital: 148.5 MHz, Analog: 148.5 MHz	Digital: 148.5 MHz, Analog: 148.5 MHz	Digital: 162 MHz, Analog: 162 MHz	Digital: 108 MHz, Analog: 135 MHz	Digital: 108 MHz, Analog: 135 MHz
Input Terminals	DVI-D x 1, DisplayPort x 1	DVI-I x 2, DisplayPort x 1	DVI-I x 2	DVI-D x 1, HDMI x 1, D-Sub mini 15 pin x 1	DVI-D x 1, DisplayPort x 1, D-Sub mini 15 pin x 1	DVI-I x 1, D-Sub mini 15 pin x 1	DVI-D x 1, D-Sub mini 15 pin x 1	DVI-D x 1, D-Sub mini 15 pin x 1
Sync Formats	–	Separate, Composite	Separate, Composite	Separate	Separate	Separate, Composite	Separate	Separate
USB Ports / Standard	1 upstream, 2 downstream / Rev. 2.0	1 upstream, 2 downstream / Rev. 2.0	1 upstream, 2 downstream / Rev. 2.0	1 upstream for touch panel control / Rev. 2.0	–	1 upstream, 2 downstream / Rev. 2.0	1 upstream / Rev. 2.0	1 upstream / Rev. 2.0
Power Requirements	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz	AC 100 - 120 V, 200 - 240 V: 50 / 60 Hz
Maximum Power Consumption / Save Mode	82 W / Less than 1 W	95 W / Less than 0.9 W	100 W / Less than 2 W	45 W / Less than 1.3 W	45 W / Less than 1 W	70 W / Less than 2 W	43 W / Less than 0.8 W	33 W / Less than 0.6 W
Power Management	DVI DMPM, DisplayPort 1.1a	Digital: DVI DMPM, DisplayPort 1.1a, Analog: VESA DPM	Digital: DVI DMPM, Analog: VESA DPM	Digital: DVI DMPM, Analog: VESA DPM	Digital: DVI DMPM, DisplayPort 1.1a, Analog: VESA DPM	Digital: DVI DMPM, Analog: VESA DPM	Digital: DVI DMPM, Analog: VESA DPM	Digital: DVI DMPM, Analog: VESA DPM
Sensor	Backlight Sensor, Integrated Front Sensor	Backlight Sensor	Backlight Sensor	Backlight Sensor, Ambient Light Sensor	Backlight Sensor, Presence Sensor, Ambient Light Sensor	Backlight Sensor	Backlight Sensor	Backlight Sensor
OSD Languages	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese	English, German, French, Italian, Japanese, Spanish, Swedish	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese	English, German, French, Italian, Japanese, Simplified Chinese, Spanish, Swedish, Traditional Chinese
Net Weight (With Stand / Without Stand)	11.1 kg / 8.4 kg	10.1 kg / 7.1 kg	10.4 kg / 7.4 kg	7.7 kg / 6.9 kg	7.1 kg / 4.3 kg	9.7 kg / 6.7 kg	7.2 kg / 5.2 kg	5.9 kg / 3.9 kg
Hole Spacing	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm	VESA standard 100 x 100 mm
Certifications and Standards *Please contact the EIZO subsidiary or distributor in your country for the latest information.*	CE (Medical Device Directive), EN60601-1, UL60601-1, CSA C22.2 No. 601-1, IEC60601-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	CE (Medical Device Directive), EN60601-1, UL60601-1, CSA C22.2 No. 601-1, IEC60601-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	CE (Medical Device Directive), EN60601-1, UL60601-1, CSA C22.2 No. 601-1, IEC60601-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	J60950, EN60950-1, CE (Low Voltage Directive, EMC Directive), UL60950-1, CSA C22.2 No. 60950-1, IEC60950-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	J60950, ISO9241-307, prEN 50279, EN 60950-1, EK1-ITB2000, CE (Low Voltage Directive, EMC Directive), UL60950-1, CSA C22.2 No. 60950-1, IEC60950-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	CE (Medical Device Directive), EN60601-1, UL60601-1, CSA C22.2 No. 601-1, IEC60601-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	CE (Medical Device Directive), EN60601-1, UL60601-1, CSA C22.2 No. 601-1, IEC60601-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R	J60950, ISO13406-2, prEN 50279, EN60950-1, EK1-ITB2000, CE (Low Voltage Directive, EMC Directive), UL60950-1, CSA C22.2 No. 60950-1, IEC60950-1, VCCI-B, FCC-B, Canadian ICES-003-B, C-tick, RoHS, China RoHS, WEEE, CCC, GOST-R
FDA 510(k) Clearance	Pending (for General Radiography)	Yes (for General Radiography)	–	–	–	–	–	–
Supplied Accessories	AC power cord, signal cables (DVI-D ~ DVI-D, DisplayPort ~ DisplayPort), USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user's manual)	AC power cord, signal cables (DVI-D ~ DVI-D, DisplayPort ~ DisplayPort), USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user's manual)	AC power cord, signal cables (DVI-D ~ DVI-D, DVI-I ~ D-Sub mini 15 pin), USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user's manual), warranty card	AC power cord, signal cables (DVI-D ~ DVI-D, D-Sub mini 15 pin ~ D-Sub mini 15 pin), USB cable, audio cable, touch pen, Utility Disk (Touch panel driver, user's manual), cleaning cloth, 4 screws for mount option	AC power cord, signal cables (DVI-D ~ DVI-D, DisplayPort ~ DisplayPort), Utility Disk (user's manual)	AC power cord, signal cable (DVI-D ~ DVI-D), USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user's manual)	AC power cord, signal cable (DVI-D ~ DVI-D), USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user's manual)	AC power cord, signal cables (DVI-D ~ DVI-D, D-Sub mini 15 pin ~ D-Sub mini 15 pin), USB cable, Utility Disk (RadiCS LE, ScreenManager Pro for Medical, user's manual), warranty card
Warranty	Five Years	Five Years	Five Years	Three Years	Five Years	Five Years	Five Years	Five Years

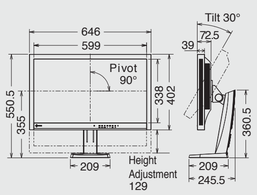
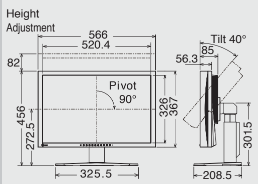
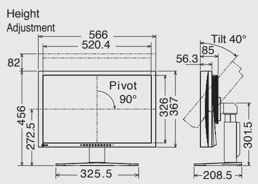
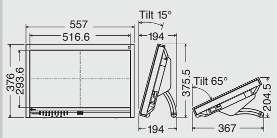
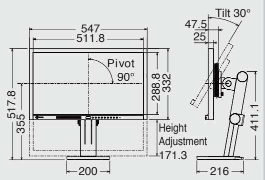
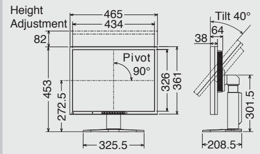
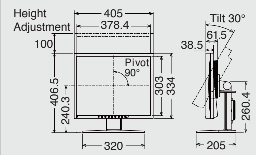
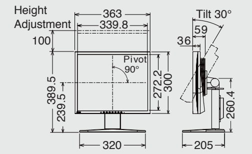
Dimensions (Unit: mm)

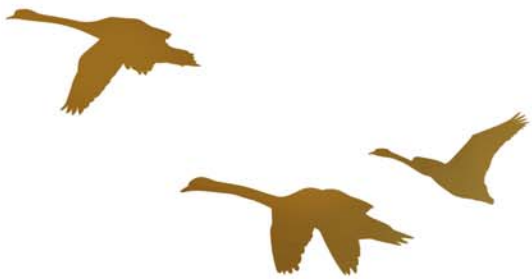
MX270W, MS230W :

Other :



·Swivel not supported with MS231WT



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