

NEC MultiSync® MD Series

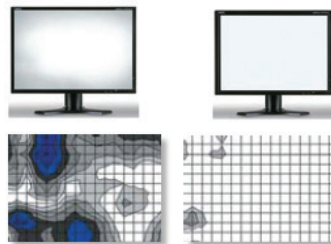
High-bright LCD displays ideal for color and grayscale medical imaging applications

Designed exclusively for the demanding needs of radiology, medical imaging, PACS and mammography, the NEC MultiSync MD Series embodies the precision, high performance and intelligence you'd expect from a world leader in display technology. The series includes 2-, 3- and 4-Megapixel (MP) color displays, and 3MP and 5MP grayscale displays.

Model	Size	Type
MD212MC & MD211C2 (LED)	21.3"	2MP Color
MD213MC & MD211C3 (LED)	21.3"	3MP Color
MD211G3	21.3"	3MP Grayscale
MD301C4	29.8"	4MP Color
MD215MG & MD211G5 (LED)	21.3"	5MP Grayscale



For consistent image quality the built-in front sensor constantly monitors and maintains brightness for optimal DICOM GSDF calibration and for non-assisted conformance, calibration and reporting functions, the sensor is capable of measuring monitor brightness, white-point and contrast response.



NEC MULTISYNC MD SERIES The clear choice in diagnostic displays.

Achieve complete color and brightness uniformity. By nature, LCD panels contain uniformity errors, which are visible as slightly brighter or darker areas on the screen. To combat this inherent trait, each MD Series display is individually characterized during production and digital uniformity correction is applied. This technology, called ColorComp, reduces the non-uniformity to virtually unnoticeable levels and applies a digital correction to each pixel on the screen to compensate for differences in color and luminance.

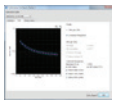
Highlights

- Each MD Series monitor is factory-calibrated to the DICOM grayscale display function for luminance and every model features an integrated front sensor or a backlight sensor
- Outstanding image quality for both color and grayscale images due to NEC's UA-SFT and SA-SFT liquid crystal technologies, which offers high brightness without compromising contrast or viewing
- Color displays that feature brightness and contrast performance rivaling grayscale displays
- Grayscale displays feature long life, high resolution and high brightness
- Digital Uniformity correction reduces differences in color/grayscale and luminance across the entire screen
- Most color models feature an integrated, tri-stimulus (three-color) sensor is more accurate and stable than standard luminance sensors
- More finely detailed and accurate display of even the most delicate shadings and color differences due to lookup tables (LUTs) as large as 15.5-bit
- LED-backlit models feature quick startup and a human presence sensor to save energy when not in use
- FDA 510(k) cleared for use in digital radiology applications (select models)

Specifications for MD212MC/MD213MC/MD211C2/MD211C3/MD211G3/MD301C4/MD215MG/MD211G5

MODEL	MD212MC	MD213MC	MD211C2	MD211C3	MD211G3	MD301C4	MD215MG	MD211G5
DISPLAY								
Viewable Image Size	21.3"				29.8"		21.3"	21.3"
Color Type	Color				Grayscale		Color	Grayscale
MegaPixels	2MP	3MP	2MP	3MP	3MP	4MP	5MP	5MP
Native Resolution	1600 x 1200	2048 x 1536	1600 x 1200	2048 x 1536		2560 x 1600	2048 x 2560	2048 x 2560
Pixel Pitch	0.27mm	0.21mm	0.27mm	0.21mm		0.251mm	0.165mm	0.17mm
Pixels Per Inch	94 @ native resolution	120 @ native resolution	94 @ native resolution	120 @ native resolution		101 @ native resolution	154 @ native resolution	154 @ native resolution
Brightness (typical)	400 cd/m ² calibrated / 850 cd/m ² max.	400 cd/m ² calibrated / 800 cd/m ² max.	400 cd/m ² calibrated / 900 cd/m ² max.	400 cd/m ² calibrated / 800 cd/m ² max.	400 cd/m ² calibrated / 1450 cd/m ² max.	200 cd/m ² calibrated / 350 cd/m ² max.	500 cd/m ² calibrated / 1100 cd/m ² max.	500 cd/m ² calibrated / 1200 cd/m ² max.
Contrast Ratio (typical)	1050:1	750:1	1400:1		900:1	1000:1	850:1	1200:1
Viewing Angle	176° Vert., 176° Hor. (88U/88D/88L/88R) @ CR>10					178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR>10	170° Vert., 170° Hor. (85U/85D/85L/85R) @ CR>20	176° Vert., 176° Hor. (88U/88D/88L/88R) @ CR>50
Response Time	20ms	12ms	40ms		13ms	7ms	18ms	25ms
Lookup Table	12-bit		14-bit		15.5-bit	14-bit (3D)	11.9-bit	13.5-bit
Displayable Colors	16.7 million colors out of 68.5 billion color palette and 256 shades of gray out of 4096	16.8 million colors out of a 4.398 trillion color palette (8-bit) / 1.074 billion colors out of a 4.398 trillion color palette (10-bit) / 16,384 levels of grayscale		1024 shades of gray out of 48,961 (256 shades of gray out of 48,961 [DVI-D])	1.07 billion colors out of 4.3 trillion or 1024 shades of gray out of 4096 (10-bit DisplayPort input); 16.7 million colors out of 1.05 billion color palette or 256 shades of gray out of 4096 (DVI-D input)	256 levels of gray out of a palette of 3826	1024 levels of gray out of a palette of 12277	
Sensors	Tri-stimulus front				Front	Backlight	Front	NA
Synchronization Range								
Horizontal (Analog/Digital)	31.5-91.1 kHz	31.5-93.8/95.4 kHz	31.5-74.5/99.4 kHz	31.5-94.8/126.3 kHz	31.5-99.4/126.3 kHz	31.5-98.7 kHz (Digital only)	30-135 kHz	30-135 kHz
Vertical	50-85 Hz	30-85 Hz	50-85 Hz	30, 50-85 Hz	50-85 Hz/30 Hz	30-87 Hz	25-75 Hz	25-75 Hz
Input Signal								
Video	Analog RGB 0.7 Vp-p/75 Ohms				NA			
Sync	Separate Sync: TTL Level (Positive/Negative); Composite Sync: TTL Level (Positive/Negative); Composite Sync on Green: (0.3Vp-p negative 0.7Vp-p positive)				NA			
CONNECTIVITY								
Input Connectors	DVI-D, DVI-I, VGA 15-pin D-sub	DVI-D, DVI-I	DVI-D, DisplayPort			DisplayPort (2), DVI-D (2)	DVI-D	DisplayPort, DVI-D
POWER CONSUMPTION								
On (typical)	100W	105W	80W	85W	105W	155W	90W	80W
Power Savings Mode (typical)	2W		<2W		1.7W		10W	7W
PHYSICAL SPECIFICATIONS								
Dimensions (WxHxD)								
Net (with stand)	18.4 x 17.1-23 x 12 in. / 467.8 x 434.3-584.3 x 306mm	14.7 x 19.3-23.4 x 9.3 in. / 373.4 x 490.6-593.4 x 235.5mm		18.4 x 14.9-20.8 x 9 in. / 467.8 x 377.6-527.6 x 227.6mm	27.1 x 18.4-24.3 x 11.9 in. / 687.3 x 467.6-617.2 x 302.3mm	18.7 x 15.9-21.3 x 9 in. / 474.5 x 403.3-541.8 x 227.6mm	18.7 x 15.9-21.3 x 9 in. / 474.5 x 403.3-541.8 x 227.6mm	
Net (without stand)	18.4 x 14.2 x 4.4 in. / 467.8 x 361.6 x 110.7mm	18.6 x 14.7 x 4.1 in. / 473 x 373.4 x 104.1mm		18.4 x 14.2 x 4.1 in. / 467.8 x 361.6 x 104mm	27.1 x 17.6 x 4.9 in. / 687.3 x 447 x 124.5mm	18.7 x 15.4 x 4.1 in. / 474.5 x 390 x 103.4mm	18.7 x 15.4 x 3.9 in. / 474.5 x 390 x 98.2mm	
Weight								
Net (with stand)	23.5 lbs. / 10.7 kg		26 lbs. / 11.8 kg		23.5 lbs. / 10.7 kg	41.5 lbs. / 18.8 kg	24.5 lbs. / 11.1 kg	26 lbs. / 11.8 kg
Net (without stand)	16.5 lbs. / 7.5 kg		17 lbs. / 7.8 kg		16.5 lbs. / 7.5 kg	27.6 lbs. / 12.5 kg	17.4 lbs. / 7.9 kg	19.0 lbs. / 8.6 kg
VESA Hole Configuration	100 x 100mm				100 x 100mm, 200 x 100mm		100 x 100mm	100 x 100mm
ENVIRONMENTAL CONDITIONS								
Operating Temperature	41-95°F / 5-35°C				41-104°F / 5-40°C		41-95°F / 5-35°C	
Operating Humidity	30 - 80%		20 - 80%		30 - 80%	20 - 80%	30 - 80%	
Operating Altitude	9842 ft. / 3000m		10,000 ft. / 3048m		9842 ft. / 3000m	10,000 ft. / 3048m	9842 ft. / 3000m	
Storage Temperature	14-140°F / -10-60°C				-4-140°F / -20-60°C			
Storage Humidity	10 - 85%							
Storage Altitude	40,000 ft. / 12,192m						32,808 ft. / 10,000m	
LIMITED WARRANTY	5 years, including Advanced Overnight Exchange*							
ADDITIONAL FEATURES	DICOM GSDF calibrated; Digital uniformity correction; USB hub (1 up/2 down MD215MG; 2 up/3 down MD301C4); Quick QA feature (MD211C2, MD211C3, MD211G3); GammaComp MD QA software; Analog/digital CableComp; Pivot; Tilt; Swivel; Height-adjustable stand							
SHIPS WITH	Power cord; DVI cable (Dual Link for several models); Setup sheet; CD-ROM (GammaCompMD QA software); DisplayPort cable (MD301C4 & MD211G5 only); USB cable (MD301C4, MD215MG & MD211G5 only)							
OPTIONAL ACCESSORIES	Nvidia Quadro 2000D dual PCIe video card (MDN-Q2000D); AMD V5800 dual DVI PCIe video card (MDA-V5800D); Matrox Xenia Pro triple-head video card (MDM-XENPRO); Color calibration sensor (MDSVSENSOR2)		Nvidia Quadro 2000D dual PCIe video card (MDN-Q2000D); AMD V5800 dual DVI PCIe video card (MDA-V5800D); Matrox Xenia Pro triple-head video card (MDM-XENPRO); Medical calibration sensor (MDSVSENSOR2)		Nvidia Quadro 2000D dual PCIe video card (MDN-Q2000D); AMD V5800 dual DVI PCIe video card (MDA-V5800D); Matrox Xenia Pro triple-head video card (MDM-XENPRO); Color calibration sensor (MDSVSENSOR2); Medical calibrator (MD-N2M5B); Hood (90HD30)		Nvidia dual-head video card (MDN-Q2000D); AMD dual-head video card (MDA-V5800D); Matrox Xenia Pro triple-head video card (MDM-XENPRO); Medical calibration sensor (MDSVSENSOR2)	
	AMD triple-head video card (MDA-W5000); NVIDIA triple-head video card (MDN-K2000); NVIDIA dual-head video card (MDN-Q2000D); AMD dual-head video card (MDA-V5800D); Matrox Xenia Pro triple-head video card (MDM-XENPRO); AMD triple-head video card (MDA-W5000); Matrox triple-head video card (MDM-XENPRO); Medical calibration sensor (MDSVSENSOR2); Medical calibration sensor (MDSVSENSOR3)							

* Backlight replacement limited to 44,000 hours of usage at 400 cd/m² or less at the native white point (MD212MC and MD213MC limited to 30,000 hours at 400 cd/m² or less, MD301C4 limited to 20,000 hours at 200 cd/m² or less)



GammaCompMD™ QA software, included with each display, ensures consistent image quality. The software provides a simple interface for conformance to the DICOM standard, while providing an easy-to-use QA environment for medical imaging. The optional GammaCompMD QA Server provides centralized control and management of multiple display systems across the healthcare facility.