

# Nio Gray 5.8MP (MDNG-6221)

5.8MP high-bright grayscale display



- **Designed for radiology and 2D/3D mammography**
- **High-bright, adjustable tint grayscale**
- **I-Guard and QAWeb Enterprise for always-on compliance**

Are you a radiologist specializing in reading breast cases in mainly grayscale modalities, such as 2D mammography and 3D tomosynthesis? If the answer is yes, then the Nio Gray 5.8MP is cut out just for you. It's fully up to date with capabilities and innovations for today's breast imaging, making this a modern display system that is efficient and easy for you to use. Furthermore, it's also perfectly suited for reading grayscale general radiology images in a comfortably high resolution.

### **Bigger image, more details**

Why 5.8MP? Well, in contrast to conventional 5.2MP display systems, you get 12% more pixels on your screen, which means that you can see more details at any given moment. Combine this with the tall 4:3 aspect ratio, which offers more room to view images in their entirety, and you get an ideal combo to start cutting back on additional panning and zooming.

### **Reliable reading**

The Nio Gray 5.8MP offers you more Just Noticeable Differences, thanks to its high brightness and contrast ratio. Our integrated stability, calibration and uniformity technologies make sure that image quality, light output and DICOM compliance remain consistent over the years.

### **Efficient workflow**

The Nio Gray 5.8MP is more than a grayscale monitor alone. It offers many ways to personalize settings to your liking, such as preferred tints of white or viewing angle. On top of that, it can help you improve your efficiency and speed, thanks to the set of Intuitive Workflow Tools included with our MXRT medical display controllers.

Did you know that SpotView, for example, makes it possible to make an area you choose twice as bright as it was originally? It's been proven to help radiologists



reduce their reading time by as much as 15.5%. You can also define user profiles, saving you and your colleagues time. These automatically adjust the display in situations where it is shared by multiple people.

### Long lifetime, clear view

The Nio Gray 5.8MP adheres to the latest medical standards for medical devices in Europe & MQSA in the United States. It's also easy to install our free and highly secured QAWeb Enterprise application, with which you can rely on intervention-free, remote quality assurance. The tool makes it easy for PACS managers to centrally manage their Barco displays' uptime and compliance – anytime, anywhere.

To summarize, your Nio Gray 5.8MP monitor is a functional, easy-to-use diagnostic display system, fully up to date with today's innovations in general grayscale radiology, as well as 2D and 3D mammography. It comes with a 5-year warranty on its all components.

- More detail on your screen, with 5.8MP resolution
- Designed to show breast images entirely, with 3:4 aspect ratio
- Increased contrast, with 1400:1 contrast ratio and 600 to 1000 cd/m<sup>2</sup> calibrated luminance
- Consistent brightness and grays, with Uniform Luminance Technology and SteadyGray
- Always stable DICOM images and auto QA, with I-Guard front sensor and optionally, QAWeb Enterprise
- Possibility to boost luminance, with I-Luminate and SpotView
- Optional settings and tools to adjust the monitor to your workflow, with Intuitive Workflow Tools

**PRODUCT SPECIFICATIONS****NIO GRAY 5.8MP (MDNG-6221)**

Screen technology	LCD
Active screen size (diagonal)	541 mm (21.3")
Active screen size (H x V)	324 x 433 mm (12.77" x 17")
Aspect ratio (H:V)	3:4 for each display in portrait mode, 3:2 overall
Resolution	5.8 MP (2100 x 2800 pixels)
Pixel pitch	0.1545 mm
Gray imaging	Yes
Bit depth	10 bit
Viewing angle (H, V)	178°
Optical glass	MDNG-6221 option SPEF: Yes MDNG-6221 option SNEF: No
Uniformity correction	ULT
I-Luminate	Yes
SteadyGray	Yes
Ambient light presets	Yes, reading room selection
Ambient light sensor	MDNG-6221 option SPEF: Yes MDNG-6221 option SNEF: No
Front sensor	Yes
Maximum luminance	1300 cd/m <sup>2</sup>
DICOM calibrated luminance	Warrantied maximum: 1000 cd/m <sup>2</sup> Factory default: 600 cd/m <sup>2</sup>
Contrast ratio (panel typical)	1400:1
Response time ((Tr + Tf)/2) (typical)	12.5 ms
Housing color	RAL 9003 / RAL 9004
Video input signals	DVI-D Dual Link (2x) DisplayPort (2x)
USB ports	1x USB 2.0 upstream (endpoint) 2x USB 2.0 downstream
Power rating	24 VDC, 5 A; 5 VDC, 0.1 A
Power requirements	This device shall only be powered by the following medical approved power supplies:  Adapter Technology, type CMD160-P240 Ratings marked on the medical power supply: ■ Input rating: 100–240 VAC, 1.9–0.8 A, 50/60 Hz ■ Output rating: 24 VDC, 6.3 A; 5 VDC, 0.5 A  Efore (Roal Electronics), type RHPS390A Ratings marked on the medical power supply: ■ Input rating: 100–240 VAC, 3.0 A, 50/60 Hz ■ Output rating: 24 VDC, 8.33 A; 5 VDC, 0.1 A
Power consumption	60 W (nominal) < 0.5 W (standby)
Dimensions with stand (W x H x D)	Portrait: 378 x 528~628 x 235 mm Landscape: 491 x 472~572 x 235 mm
Dimensions w/o stand (W x H x D)	Portrait: 378 x 491 x 81 mm Landscape: 491 x 378 x 81 mm
Dimensions packaged (W x H x D)	500 x 280 x 670 mm

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Net weight with stand	MDNG-6221 option SPEF: 11.6 kg MDNG-6221 option SNEF: 10.2 kg
Net weight w/o stand	MDNG-6221 option SPEF: 6.6 kg MDNG-6221 option SNEF: 5.2 kg
Net weight packaged	MDNG-6221 option SPEF: 17.0 kg (without optional accessories) MDNG-6221 option SNEF: 15.7 kg (without optional accessories)
Tilt	-10° to +30°
Swivel	-45° to +45°
Pivot	90°
Height adjustment range	100 mm
Mounting standard	VESA (100 mm)
Screen protection	MDNG-6221 option SPEF: Protective, anti-reflective glass cover MDNG-6221 option SNEF: N/A
Recommended modalities	All digital images, including digital mammography and breast tomosynthesis
Certifications	CE1639 (Medical Device) FDA 510(k) K170476 CCC (China), KC (Korea), Inmetro (Brazil), BIS (India), EAC (Russia, Kazakhstan, Belarus, Armenia and Kyrgyzstan) pending  Safety specific: IEC 60950-1:2005 + A1:2009 EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013 IEC 62368-1:2018 EN IEC 62368-1:2020 IEC 60601-1:2005 + A1:2012 EN 60601-1:2006 + A1:2013 + A12:2014 ANSI/AAMI ES 60601-1:2005 + R1:2012 CAN/CSA C22.2 No. 60601-1:14  EMI specific: IEC 60601-1-2:2014 (ed4) EN 60601-1-2:2015 (ed4) FCC part 15 Class B ICES-001 Level B VCCI (Japan)  Environmental: China Energy Label, EU RoHS, China RoHS, REACH, Canada Health, WEEE, Packaging Directive
Supplied accessories	User guide Documentation disc System sheet Video cable (1 x DisplayPort) Mains cable(s) USB 2.0 cable External power supply
Optional accessories	Display controller
QA software	QAWeb
Warranty	5 years, including 40000 hrs backlight warranty
Operating temperature	0 °C to 40 °C (15 °C to 30 °C within specs)
Storage temperature	-20 °C to 60 °C
Operating humidity	8% to 80% (non-condensing)
Storage humidity	5% to 85% (non-condensing)
Operating pressure	70 kPa minimum
Storage pressure	50 to 106 kPa

**Last updated: 15 Nov 2022**Technical specifications are subject to change without prior notice. Please check [www.barco.com](http://www.barco.com) for the latest information.