

# Mammo Tomosynthesis 5MP (MDMG-5221)

5 MegaPixel display system for digital breast imaging, including breast tomosynthesis



- For multi-frame mammography & breast tomosynthesis
- Eliminates motion blur
- With hot light button for extra brightness

## Optimized for digital breast tomosynthesis

Barco's Mammo Tomosynthesis 5MP has been developed to optimize reading and interpretation of digital breast tomosynthesis, a groundbreaking imaging modality that significantly improves accuracy of breast cancer detection. Its unique technologies for tomosynthesis visualization increase conspicuity of the smallest details, providing radiologists with a new degree of diagnostic confidence.

The Mammo Tomosynthesis 5MP is the first display system available for breast tomosynthesis. It is cleared by the US Food and Drug Administration (FDA) for use in standard and multi-frame digital mammography as well as breast tomosynthesis.

## Quick readings, exceptional results

The Mammo Tomosynthesis 5MP ensures instant delivery of images without motion blur, increasing correct diagnosis and swift workflow.

## Bright images, more details

Featuring twice the brightness of conventional systems and lasting twice as long, the Mammo Tomosynthesis 5MP offers unrivalled image precision and visibility of the most subtle details.

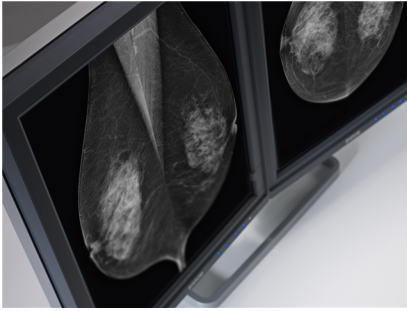
## Less noise, improved accuracy

Screen noise often hides subtle details. That's why the Mammo Tomosynthesis 5MP ensures pixel-perfect images without disturbing screen noise, offering clearer visibility of differences in tissue density.

## Guaranteed compliance, diagnostic confidence

Automated checks of contrast and luminance, in combination with an online calibration service, result in an optimal working environment and worry-free readings.

- RapidFrame™: RapidFrame technology counteracts motion blur when



- RapidFrame™: RapidFrame technology counteracts motion blur when scrolling through a stack of images due to a high pixel refresh rate.
- Per Pixel Uniformity™: PPU measures and adjusts the luminance of each pixel, making every pixel permanently DICOM compliant.
- SmoothGray™: SmoothGray generates ultra-precise representations of grayscale images and eliminates quantization artifacts, reducing the overall noise in the images.
- DuraLight Nova™: the DuraLight Nova backlight ensures a diagnostic luminance of 1,000 cd/m<sup>2</sup>. In addition, they last twice as long without increasing power consumption.
- I-Luminate™: a push on the 'hot light' I-Luminate button will temporarily boost display brightness, allowing inspection of subtle details or comparison of digital exams with film-based priors.
- I-Guard™: the integrated I-Guard sensor continually guards and adjusts the luminance output of the display, ensuring continuous compliance with the DICOM standard.
- QAWeb: the innovative MediCal QAWeb system is an easy-to-use, web-based tool for automated calibration and Quality Assurance.
- Adjustable dual-head stand: the dual-head stand allows users to angle the displays to fit their preferred position for optimum viewing.
- 5-year warranty: the Mammo Tomosynthesis 5MP is covered by a standard 5-year warranty.

**PRODUCT SPECIFICATIONS****MAMMO TOMOSYNTHESIS 5MP (MDMG-5221)**

Screen technology	IPS-TFT LCD
Active screen size (diagonal)	541 mm (21.3")
Active screen size (H x V)	338 x 422 mm (13.3 x 16.6")
Aspect ratio (H:V)	4:5
Resolution	5MP (2048 x 2560 pixels)
Pixel pitch	0.165 mm
Gray imaging	Yes
Bit depth	10 bit
Viewing angle (H, V)	178°
Uniformity Technology	Gray PPU
Ambient Light Compensation (ALC)	Yes, reading room selection
Ambient light sensor	Yes
Backlight Output Stabilization (BLOS)	Yes
Front sensor	Yes, I-Guard
Maximum luminance (panel typical)	2100 cd/m <sup>2</sup>
DICOM calibrated luminance	1000 cd/m <sup>2</sup>
Contrast ratio (panel typical)	950:1
Response time (Tr + Tf) (typical)	15 ms
Housing color	Gray
Video input signals	DVI-D Dual Link DisplayPort
USB ports	1x USB 2.0 upstream (endpoint) 3x USB 2.0 downstream
Power requirements	External power supply (100-240 Vac, 50-60 Hz)
Power consumption	57 W (nominal) < 0.7 W (standby)
OSD languages	English, German, French, Dutch, Spanish, Italian, Portuguese, Polish, Russian, Swedish, Chinese (simplified), Japanese, Korean, Arabic
Dimensions with stand (W x H x D)	Single Head: N/A Dual Head System: 784 x 561~661 x 265 mm
Dimensions w/o stand (W x H x D)	Single Head: 392 x 485 x 122 mm Dual Head System: N/A
Dimensions packaged (W x H x D)	Single Head: 692 x 550 x 266 mm Dual Head System: 950 x 585 x 710 mm
Net weight with stand	Single Head: N/A Dual Head System: 30.1 kg
Net weight w/o stand	Single Head: 10.5 kg Dual Head System: N/A
Net weight packaged	Single Head: 16.9 kg (without stand) Dual Head System: 50 kg (with stand)
Tilt	-5° to +25°
Swivel	-30° to +30°
Pivot	N/A
Height adjustment range	100 mm

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<b>Mounting standard</b>	VESA (100 mm)
<b>Screen protection</b>	Protective, anti-reflective glass cover
<b>Recommended modalities</b>	All digital images, including digital mammography
<b>Certifications</b>	<p>FDA 510(K) K161229 for General Radiology CE1639 (MDD 93/42/EEC; A1:2007/47/EC class IIb product) CCC (China), KC (Korea), Inmetro (Brazil), BIS (India)</p> <p>Safety specific: IEC 60950-1:2005 + A1:2009 EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013 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</p> <p>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)</p> <p>Environmental: China Energy Label, EU RoHS, China RoHS, REACH, Canada Health, WEEE, Packaging Directive</p>
<b>Supplied accessories</b>	<p>User guide Quick install sheet Documentation disc System disc Video cables (2x DisplayPort) Two sets of mains cables (UK, European (CEBEC/KEMA), USA (UL/CSA; adaptor plug NEMA 5-15P), Chinese (CCC)) Two USB 2.0 cables Two external power supplies Film clip Keyboard light</p>
<b>Optional accessories</b>	<p>Additional film clip (V622784) Additional keyboard light (B4100574) Graphics board</p>
<b>QA software</b>	MediCal QAWeb
<b>Warranty</b>	5 years, including 50000 hours backlight warranty
<b>Operating temperature</b>	0 °C to 35 °C (20 °C to 30 °C within specs)
<b>Storage temperature</b>	-20 °C to 60 °C
<b>Operating humidity</b>	8% to 80% (non-condensing)
<b>Storage humidity</b>	5% to 85% (non-condensing)
<b>Operating pressure</b>	70 kPa minimum
<b>Storage pressure</b>	50 to 106 kPa

Last updated: 09 Apr 2019

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