

MDSC-2232

Full HD 32-inch surgical display



- For the best hand-eye coordination
- Allows for easy cleaning and disinfection
- Works with Nexxis for video-over-IP integration

Barco's MDSC-2232 is a 32" near-patient surgical display with Full HD resolution. Purpose-built for the operating room, emergency room, and pre-operative areas, it offers an easy-clean design, smart mechanics and the most detailed images in the procedure room today.

Perfect image reproduction

The display's high brightness, high contrast and full HD resolution provide surgeons with excellent depth perception and precise color and monochrome images. It presents images with unrivaled color and grayscale accuracy and with near-zero latency for perfect hand-eye coordination. Thanks to its high-bright LED backlight with light output stabilization, the surgical display also ensures a long lifetime and image consistency across displays.

Multi-source, multi-display imaging

With its broad input connectivity, the MDSC-2232 offers flexible multi-modality imaging (PiP & PaP) in new integrated operating rooms. The 32-inch display also offers integrated functionality (optional) for use with Barco's Nexxis for OR solution, ensuring smooth distribution of uncompressed video and data over the IP network without delay.

Easy to install

The MDSC-2232 comes with a smart cable management system that hides the cables for a clutter-free set-up. Its lightweight design allows easy mounting on surgical booms and spring arms. Available in two models, this surgical display also features a host of connectivity and remote control options.

Safe for medical use

Barco's MDSC-2232 allows for easy cleaning and disinfection thanks to its smooth surface and splash-proof housing (front protection level IPX5). The multi-coated glass is highly durable, scratch-resistant, and protects the LCD panel from physical damage. The fanless design avoids the spread of contaminants. What's more, the display offers a unique, automated failover feature so a backup signal is always available to ensure safe surgery.

PRODUCT SPECIFICATIONS**MDSC-2232**

Screen technology	TFT AM LCD / S-IPS technology / LED backlight
Active screen size (diagonal)	31.55" (801 mm)
Active screen size (H x V)	698 x 393 mm (27.48" x 15.47")
Aspect ratio	16:9
Resolution	2MP (1920 x 1080)
Pixel pitch	0.364 mm
Color imaging	Yes
Color support	16.7 million (8-bit)
Viewing angle	178°
Maximum luminance	Maximum: 450 cd/m ² Luminance (typical) Default @ 6500K: 360 cd/m ² stabilized (typical)
Contrast ratio	1300:1 (typical)
LCD transition time	Average total 25 msec (Rise time Tr + Decay time Tf; Tr = Gray to White, Tf = Gray to Black)
White point	Native: 10000K (typical) Calibrated: 5600K, 6500K, 7600K, 9300K
Dot clock	165 MHz (maximum)
Gamma	Native, 1.8, 2.0, 2.2, 2.4, DICOM
Backlight sensor	Backlight stabilization
Screen protection	Double side anti-reflective tempered glass
Keyboard	Capacitive 7-key touch keyboard
Video input signals	<p>MDSC-2232 DDI:</p> <ul style="list-style-type: none"> ■ DVI-I Single Link (Digital & Analog – HDMI video support with HDCP) ■ DVI-D ■ Component Video RGBS / YPbPr (4xBNC) ■ S-video (4-pin Mini DIN) ■ Composite video (1xBNC) ■ 3G-SDI (2xBNC) ■ DisplayPort (VESA std 1.1a) <p>MDSC-2232 MNA:</p> <ul style="list-style-type: none"> ■ DVI-I Single Link (Digital & Analog – HDMI video support with HDCP) ■ Component Video RGBS / YPbPr (4xBNC) ■ S-video (4-pin Mini DIN) ■ Composite video (1xBNC) ■ 3G-SDI (1xBNC) ■ DisplayPort (VESA std 1.1a) ■ Nexxis fiber optic input
Video output signals	<p>MDSC-2232 DDI:</p> <ul style="list-style-type: none"> ■ DVI-D (output selectable from DVI-1 in, DVI-2 in) ■ S-video (4-pin Mini DIN) ■ Composite video (1xBNC) ■ 3G-SDI (2xBNC) <p>MDSC-2232 MNA:</p> <ul style="list-style-type: none"> ■ DVI-D (output selectable from DVI in, Nexxis) ■ S-video (4-pin Mini DIN) ■ Composite video (1xBNC) ■ 3G-SDI (1xBNC)
Video formats	<p>VGA & DVI : Up to 1920x1200 at 60Hz (reduced blanking)</p> <ul style="list-style-type: none"> ■ Maximum Hor freq: 90kHz ■ Maximum pixel clock: 165MHz ■ Maximum Ver freq: 75Hz <p>Standard PAL and NTSC for S-Video, Composite and Component</p> <p>Component YPbPr/ RGBS: HDTV -up to 1080i & 1080p</p> <p>SDI Format Supported: 625/25 PAL, 525/29.97 NTSC, 1080i50, 1080i59.94, 1080i60, 720p50, 720p59.94, 720p60, 1080p50, 1080p59.94, 1080p60</p> <p>SDI Compliance: SMPTE 425M (Level A), SMPTE 424M, SMPTE 292M, SMPTE 259M-C, SMPTE 296M, ITU-R BT.601</p> <p>DisplayPort 1.1a: up to 1920 x 1200 60Hz</p>
Remote control	RS-232 (D-sub 9-pin)
Power requirements (nominal)	<p>External power supply: 100-240VAC, 50/60Hz, medical grade</p> <p>Display power input:</p> <ul style="list-style-type: none"> ■ MDSC-2232 DDI: +24 VDC ±10% / 2.2 A ■ MDSC-2232 MNA: +24 VDC ±10% / 3 A

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Power consumption (nominal)	MDSC-2232 DDI: 48W typical MDSC-2232 MNA: 65W typical
OSD languages	English, French, German, Spanish, Italian
Dimensions display (W x H x D)	777 x 472 x 92 mm (30.6" x 18.6" x 3.5")
Dimensions packaged (W x H x D)	970 x 625 x 200 mm (38.19" x 24.60" x 7.87")
Net weight display	12.9 kg / 28.4 lbs (MDSC-2232) 13.3 kg / 29.3 lbs (MDSC-2232)
Net weight packaged	MDSC-2232 DDI: 19.0 kg (41.9 lbs) MDSC-2232 MNA: 19.4 kg (42.7 lbs)
Mounting standard	VESA (100 x 100 mm, 200 x 100 mm)
Recommended modalities	Endoscopy, Laparoscopy, PACS, PM, US, CT, MR
Certifications	<ul style="list-style-type: none">IEC 60601-1: 2012 Edition 3.1 (Medical electrical equipment – Part 1: General requirements for basic safety and essential performance)EN 60601-1: 2006 +A1:2013 (Medical electrical equipment* Part 1: General requirements basic safety and essential performance)ANSI/AAMI ES 60601-1: 2005/(R)2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012 - Med. El. Equip., Part 1: general req. for basic safety and essential performance.CAN/CSA-C22.2 No. 60601-1: 14 Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance (Harmonized with Ed. 3.1)Approvals/Marking: CE (Medical Device Class I), c-UL-us, DEMKO, PSE, KCC, CCC, Note: PSE is available on PSU, BIS (MDSC-2232 MNA only), INMETROElectromagnetic Compatibility: EMC Medical EMC Standards: IEC60601-1-2, EN55011/CISPR 11 Class B), FCC CFR47 part 15 & 18 Class BRoHS-3, REACH, WEEE compliantIP20 (IP45 monitor front side only)
Supplied accessories	Video cables (DVI DL 3m) Main cables (European , USA , Chinese) User Guide External power supply
Optional accessories	Display pedestal (P/N K9302060A) Power extension cable 10m Power extension cable 30m
Operating temperature	+10 ÷ +35 °C for performance, 0 ÷ +40 °C for safety
Storage temperature	-20 ÷ +60°C
Operating humidity	10 ÷ 90% (non-condensing)
Storage humidity	5 ÷ 90% (non-condensing)
Operating altitude	3000m max.
Storage altitude	12000m max.

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Technical specifications are subject to change without prior notice. Please check www.barco.com for the latest information.