## MNA-240 decoder

4K IP-to-AV adapter for the OR and Hybrid OR



- AV-to-IP and IP-to-AV conversion
- Up to 4K resolution
- Medical-grade

The MNA-240 decoder converts RAW IP packets into DVI video signals and other signals such as audio and USB. End-to-end latency is amazingly short and is guaranteed not to exceed a single frame (< 15 ms). The video streams that are distributed over the Nexxis network can go up to a resolution of 4K.

- IP-to-AV conversion at the endpoint
- Seamless integration with Barco's 4K surgical displays
- Support for non-video traffic (e.g. keyboard, mouse and audio) via USB connectivity
- Easy integration via central API provided by the Nexxis OR Management Suite NMS
- Quad-view video composition
- Streaming of FHD and UHD video composition into the network
- 4K video output
- Quad-view composition with up to 4 FHD video streams
- Network stream-back of FHD video composition
- 4K Transcoding enabled by SW license
- WorkSpot functionality enabled by SW license
- Nexxis Plug&Play via NMS
- Provides advanced image processing capabilities such as de-interlacing, scaling, overlaying, color conversion



Product specifications	MNA-240 DECODER
General specifications	
Video conversion	Converts uncompressed IP-streams into Digital video signals
Processing	Up to 4096x2160@60Hz
Color depth	10 bits / color
Latency	End-to-end: genlocked subframe; not genlocked two frames
Security	Decryption of AES 128 encrypted video, data & control signals
Video Output	DisplayPort: 1 x DP 1.2 MST and SST, conversion to HDMI 2.0 via validated adapter cable DVI: 2 x DL-DVI
Network output	<ul> <li>Compositor streamback mode: 1x FHD and 1x UHD video composition</li> <li>Transcoding mode:</li> </ul>
	Transcode 2 FHD (up to 1920x1080@60) raw streams simultaneously to 2 FHD H.264 streams or 1 UHD/4K (up to 4096x2160@60) stream to a UHD/4K half framerate H.264 stream (up to 4096x2160@30). In addition to the video stream(s), the MNA-240 can also transcode 2 raw audio streams into 2 AAC 128kbps encoded audio streams.  Note: Network output cannot be used in combination with video output.
IP connectivity	2x 10GbE Fiber Optic Interface with SFP+ module
IP standards	Zeroconf, IPv4, IGMP, DHCP, RTP, RTCP, 802.1q, AES 128b, HTTP(s)
USB	1x micro-USB 2.0 + 3x USB 2.0 type-A
Audio	Line-in, line-out, headphones-out and mic-in (mono) 3.5mm connector
Nexxis integration	Transcoding supported from Nexxis 1.15 onwards. The MNA-240 decoder is compatible with MNA-1x0, MNA-240 and MNA-4x0 devices
PSU	External 12V Medical Approved PSU, 100-240VAC 60W, locking connector at DC side
Power consumption	< 37 W at an ambient temperature of 25 °C
Size	38 mm H x 170 mm W x 170 mm D   1.5° H x 6.7° W x 6.7° D (+/-2 mm / 0.1°)
Weight	1+0.01kg (2.20lbs)
Temperature	Operating: 0°C to 40°C (32°F to 104°F)
Humidity	Max 85%
Storage	Storage temperature: -20°C to 60°C (-4°F to 140°F) Storage Relative Humidity: 10% to 93% Altitude: minimum 500hPa
Sound level	Typical 32dBA at 20°C at 1m
Mounting	Optional VESA adapter plate or 1U rack mount for 2 devices
Certifications	<ul> <li>CB (IEC 60601-1) Informative report</li> <li>CB (IEC 60950-1)</li> <li>cRU, RU (cRUus)</li> <li>Demko</li> <li>CE medical device class I</li> <li>UKCA</li> <li>BIS Registration, IS 13252 (part 1)</li> <li>KC</li> <li>BSMI</li> <li>RCM</li> <li>EAC</li> </ul>
Standards	■ IEC 60601-1:2005 + Am1:2012 ■ IEC 60601-1-6:2010 + Am1:2013 ■ IEC 60601-1-2:2014 (ed4) ■ ANSI/AAMI ES 60601-1: A1:2012 + C1:2009/(R)2012 + A2:2010/(R)2012 ■ CAN/CSA-C22.2 No.60601-1:14 ■ EN 60601-1:2006 + A1:2013 + A12:2014 ■ EN 60601-1-6:2010 + A1:2015 ■ EN 60601-1-6:2010 + A1:2015 ■ EN 60601-1-2:2015 (ed4) ■ FCC class B ■ ICES-001 Level B  ITE Equipment: ■ IEC 60950-1:2005 + Am1:2009 + Am2:2013 ■ EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 ■ IS 13252

## Last updated: 18 Mar 2024

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