MNA-440 ENC -H

4K AV-to-IP adapter for the OR and hybrid OR with HDMI™ technology

- **AV-to-IP conversion**

- **Up to 4K resolution**

- **Medical-grade**

- **Established 3rd generation technology**

Adapter for the operating room

The MNA-440 ENC -H with HDMI™ technology converts HDMI 2.0 video signals to Nexxis RAW IP packets. Other non-video signals such as audio and USB for keyboard/mouse are also supported. End-to-end video latency is amazingly low and is guaranteed not to exceed a single frame. The video streams that are distributed over the Nexxis network can go up to a resolution of 4K.

Capabilities

The MNA-440 adapters are part of Barco's Nexxis solution, which provides users with uncompromised networked visualization for the digital operating room. The compact Nexxis AV-to-IP adapters offer simplicity and flexibility while maintaining the highest possible performance standards and fitness for use in demanding medical environments.

As a third generation device, the MNA-440 ENC -H with HDMI™ technology provides the full richness of the established Nexxis platform while:

- increasing future scalability

- improving ease of installation

- adding increased security performance

- reducing ecological footprint

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Product specifications	MNA-440 ENC -H
General specifications	
Video conversion	Converts Digital video signals to uncompressed IP streams
Processing	4096x2160@60Hz on a single input channel Or 1920x1200@60 per input channel
Color depth	RGB 8-bit, YCbCr 4:4:4 8bit or YCbCr 4:2:2 10-bit
3D technology	The following video formats are supported: ■ 1920x1080@60Hz Line-interleaved ■ Dualstream 1920x1080@60Hz (using both input channels) ■ UHD/4K60 3D Line interleaved half height: 3840/4096x1080 per view ■ UHD/4K30 3D Dual Stream: UHD/4K resolution for every view at half framerate (30Hz), one HDMI™ input per view
Latency	Subframe
Security	AES 128 encryption of all video, data & control signals
Video Input	2x HDMI™ 2.0 lockable connector
Network output	1x 4K/UHD uncompressed IP stream & 1x downscaled FHD IP stream of native 4K/UHD source Or 2x HD uncompressed IP stream
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 type B & 1x USB Type A
Audio	Stereo line in and Headset/Stereo line out 15mm length compatible 3.5mm TRRS jack
GPIO	1x GPI + 1x camera trigger via 15mm length compatible 3.5mm TRRS jack
Nexxis integration	Fully integrated in the Nexxis solution, compatible with MNA-1x0 and MNA-240 devices
PSU	External 12VDC Medical Approved PSU, 100-240VAC 50-60Hz 60W with lockable connector at DC side
Power consumption	Maximum: 25W Typical: 15W
Size	35 mm H x 103 mm W x 131 mm D | 1.4" H x 4.1" W x 5.2" D (+/-2 mm / 0.1")
Weight	0.4 kg (0.88 lbs)
Temperature	5°C to 40°C (41°F to 104°F)
Humidity	Maximum 85%
Storage	Storage temperature: -20°C to 60°C (-4°F to 140°F) Storage Relative Humidity: 10% to 93%
Acoustic Noise	Typical 32dBA at 20°C at 1m
Mounting	Versatile mounting bracket included
Certifications	■ CB (IEC 60601-1) Informative report ■ CB (IEC 60950-1) ■ cRU, RU (cRUus) ■ Demko ■ CE medical device class I ■ UKCA ■ BIS Registration, IS 13252 (part 1) ■ KC ■ BSMI ■ RCM ■ EAC
Standards	Medical Equipment: ■ 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 60601-1-2:2015 (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: 08 Jul 2024

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