

# MNA-440 ENC SDI

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



- AV-to-IP conversion
- Up to 4K resolution
- Medical-grade
- Established 3rd generation technology

## Adapter for the operating room

The MNA-440 ENC SDI converts 2x 3GSDI or 1x 12GSDI or 1x QUAD SDI 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 SDI provides the full richness of the established Nexxis platform while:

- increasing future scalability
- improving ease of installation
- adding increased security performance
- reducing ecological footprint

**Product specifications****MNA-440 ENC SDI**

General specifications	
Video conversion	Converts Digital video signals to uncompressed IP streams
Processing	4096x2160@60Hz on a single 12G-SDI input,  or 4096x2160@60Hz on a quad3G-SDI input,  or 1920x1080@60Hz on each of the two 3G-SDI input channels
Color depth	YCbCr 422: 8-bit / 10-bit
3D technology	The following video formats are supported: <ul style="list-style-type: none"><li>■ 1920x1080p60Hz Line-interleaved</li><li>■ 1920x1080i60Hz Line-interleaved Level B (vpid 0x8C)</li><li>■ Dual-stream 1920x1080p60Hz (using first two-SDI input channels)</li><li>■ UHD/4K60 3D Line interleaved half height: 3840/4096x1080 per view</li></ul>
Latency	Subframe
Security	AES 128 encryption of all video, data & control signals
Video Input	3G/12G-SDI standard BNC connector on input channel 1  3G-SDI standard BNC connector on input channel 2, 3 and 4
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 USB Type A
Audio	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, MNA-240 and MNA-4x0 devices
PSU	External 12VDC Medical Approved PSU, 100-240VAC 50-60Hz 60W with lockable connector at DC side
Power consumption	Maximum: 20W  Typical: 13.6W
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")

Product specifications	MNA-440 ENC SDI
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	<ul style="list-style-type: none"> <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	<p>Medical Equipment:</p> <ul style="list-style-type: none"> <li>■ IEC 60601-1:2005 + Am1:2012</li> <li>■ IEC 60601-1-6:2010 + Am1:2013</li> <li>■ IEC 60601-1-2:2014 (ed4)</li> <li>■ ANSI/AAMI ES 60601-1: A1:2012 + C1:2009/(R)2012 + A2:2010/(R)2012</li> <li>■ CAN/CSA-C22.2 No.60601-1:14</li> <li>■ EN 60601-1:2006 + A1:2013 + A12:2014</li> <li>■ EN 60601-1-6:2010 + A1:2015</li> <li>■ EN 60601-1-2:2015 (ed4)</li> <li>■ FCC class B</li> <li>■ ICES-001 Level B</li> </ul> <p>ITE Equipment:</p> <ul style="list-style-type: none"> <li>■ IEC 60950-1:2005 + Am1:2009 + Am2:2013</li> <li>■ EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011</li> <li>■ IS 13252</li> </ul>

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