

# MNA-120 ENC ANA

AV-to-IP encoder for the digital operating room with VGA & CVBS or VGA & S-Video



Barco's MNA series comprises adapters to encode and decode video, data and other information (e.g. control signals) to and from IP streams. These medically certified adapters ensure overall connectivity and support for current and legacy video sources. Automated device detection eliminates the need for user interventions when setting up the operating room.

## Conversion to IP

The MNA encoders take in baseband video and non-video data and convert these to IP streams for transportation over a standard high-bandwidth IP network. The MNA decoders reconvert these raw IP packets to DVI video signals and other signals such as USB. End-to-end latency is amazingly short and is guaranteed not to exceed a single frame (< 15 ms).

## The medical-grade MNA adapters offer:

- AV-to-IP conversion at the imaging source
- Complete connectivity for current and legacy video sources in the operating room, cath lab or interventional suite
- Support for non-video traffic (e.g. keyboard, mouse and audio)
- Easy integration via central API provided by Barco's NMS 1.0 software
- Smooth setup and ease of use

**Product specifications****MNA-120 ENC ANA**

General specifications	
Video conversion	Converts to analog baseband video signals to uncompressed IP video streams
Security	AES 128 encrypted transmission of all video, data & control signals
Encoder system	VGA & CVBS or VGA & S-Video
IP connectivity	10GE Fiber Optic Interface with SFP+ connector module
IP standards	AVB, IP, IGMP, IGMP snooping, PIM, RTP, RTCP, 802.1q, AES 128b, HTTP(s)
USB	USB OTG type A/B USB Type A
Audio	Line-in, line-out and mic-in connector
Compliance	Supporting HIPAA compliant external 12V Medical Approved PSU
Power consumption	< 30W
Size	37 mm H x152 mm W x152 mm D
Net weight	Maximum 750 g
Noise Level	Typical 38dBA at 20°C at 1m
Operating temperature	Range +5°C to +35°C Temperature change < 1°C/min
Storage temperature	Range -20°C to +60°C Temperature change < 1°C/min
Humidity	Operational: 35°C / 85% RH non condensing Storage: RH + 40°C / 95% non condensing
Certifications	<ul style="list-style-type: none"><li>■ CB (IEC 60601-1)</li><li>■ CB (IEC 60950-1)</li><li>■ cUL, UL (cULus)</li><li>■ Demko</li><li>■ CE medical device class I</li><li>■ BIS Registration, IS 13252 (part 1)</li></ul>
Standards	Medical Equipment: <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> ITE Equipment: <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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