

ARCHITECTURAL & ENGINEERING SPECIFICATIONS

H.264 ENCODERS

NMX-ENC-1100, Multi-Format Input (FG3201-01)

NMX-ENC-1105, Multi-Format + SDI Input (FG3201-02)

ENCODER REQUIREMENTS

MANAGEMENT INTERFACE

- Encoder shall have a management Interface Web Page: HTML5, tablet and phone compatible. Encoders not providing a HTML 5 Web Interface that's compatible with tablets and mobile devices shall not be accepted.

AUDIO

- Encoder shall support HDMI-embedded, 48 KHz LPCM stereo audio. Encoders not supporting HDMI-embedded audio, or supporting audio at lower sampling rates shall not be accepted.
- Encoder shall support pass thru analog audio utilizing a 3.5 mm mini-stereo connector. Encoders not providing an analog audio pass thru shall not be accepted.
- Encoder audio frequency response for multi-format input to video pass thru shall be 20 kHz +/- 0.1 dB. Encoders with a lower frequency response shall not be accepted.
- Encoder audio frequency response for analog input to analog output shall be 20 kHz +/- 0.1 dB. Encoders with a lower frequency response shall not be accepted.
- Encoder audio frequency response for analog input to HDMI output shall be 20 kHz +/- 0.1 dB. Encoders with a lower frequency response shall not be accepted.
- Encoder shall provide an audio level meter display to indicate the reception of audio signals. Encoders not providing a level meter display shall not be accepted.

VIDEO INPUTS

- Encoder shall support HDMI, DVI, RGB, S-Video, Composite, and Component (Y/Pb/Pr) video signals and utilize a DVI-I connector and adapter cables for video ingestion. Encoders not supporting ingestion of HDMI, DVI, RGB, S-Video, Composite, and Component (Y/Pb/Pr) video signals shall not be accepted.
- Encoder shall support a Pixel Clock of 120 MHz. Encoders not supporting a pixel clock of 120 MHz shall not be accepted.
- Encoder shall support input equalization and re-clocking (CDR). Encoders not supporting equalization clocking (CDR) shall not be accepted.
- Encoder shall support Component (Y/Pb/Pr) the following: video inputs resolutions: 720x480i@60, 720x576i@50, 720x567p@50, 720x480p@60, 1280x720p@50, 1280x720p@60, 1920x1080i@50, 1920x1080i@60, Encoders not supporting this set of resolutions shall not be accepted.

- Encoder shall support the following S-Video resolutions: 720x480i@60, and 720x576i@50. Encoders not supporting this set of resolutions shall not be accepted.
- Encoder shall support the following Composite video input resolutions: 720x480i@60, and 720x576i@50. Encoders not supporting this set of resolutions shall not be accepted.
- Encoder shall support the following RGBHV, RGBS, and RGSB video input resolutions: 720x480p@60, 800x600@60, 800x600@75, 1024x768@60, 1024x768@70, 1024x768@75, 1280x720@50, 1280x768@59, 1920x1080i@50. Encoders not supporting this set of resolutions shall not be accepted.
- Encoder shall support the following DVI video input resolutions: 720x480p@60, 800x600@60, 800x600@75, 1024x768@60, 1024x768@70, 1024x768@75, 1280x720@50, 1280x720@60, 1280x720p@60, 1280x768@59, 1920x1080i@50, 1920x1080i@60, 1920x1080p@24, 1920x1080p@25, and 1920x1080p@30. Encoders not supporting this set of resolutions shall not be accepted.
- Encoder shall support SD-SDI and HD-SDI, input video. Encoders not supporting the ingestion of SD-SDI and HD-SDI video signals shall not be accepted. **(FG3201-02 ONLY)**
- Encoder shall provide (1) SDI video pass thru port (BNC connector). Encoders not providing at least (1) SDI video pass thru port shall not be accepted. **(FG3201-02 ONLY)**
- Encoder shall provide (1) HDMI video pass thru port (HDMI Connector). Encoders not providing at least (1) HDMI video pass thru port shall not be accepted.

AUDIO ENCODING

- Encoder shall encode utilizing the AAC-LC ADTS codec. Encoders not supporting the AAC-LC ADTS codec shall not be accepted.
- Encoder shall support (2) audio channels. Encoders supporting only (1) audio channel shall not be accepted.
- Encoder shall support the following audio bit rates: 64, 96, 128, and 192 kbps. Encoders not supporting said bit rates shall not be accepted.
- Encoder audio frequency response at varying bit rates shall be:
64 kbps: 20 Hz to 11 kHz +/- 3 dB, 96 kbps: 20 Hz to 14 kHz +/- 3 dB,
- 128 kbps: 20 Hz to 17 kHz +/- 3 dB, and 192 kbps: 20 Hz to 20 kHz +/- 1 dB. Encoders not supporting said sampling rates shall not be accepted.

VIDEO ENCODING

- Encoder shall encode utilizing the H.264 codec. Encoders not capable of H.264 encoding shall not be accepted.
- Encoder shall allow for the streaming rate to be controlled, and be set as either constant or variable. Encoders providing only fixed or variable streaming rates shall not be accepted.
- Encoder shall support selectable Group of Pictures (GOP) sizes of 15, 30, 60, 120, and 240. Encoders with no selectable GOP sizes, or not providing the same GOP size options shall not be accepted.
- Encoder shall support bit rates between 100 to 20,000 Kbps. Encoders not supporting bit rates between 100 to 20,000 Kbps shall not be accepted.

STREAMING

- Encoder shall support the UDP and RTP output formats. Encoders outputting only in the UDP or RTP format shall not be accepted.
- Encoder shall support the streaming of unicasts and multicasts. Encoders capable of only unicast or multicast shall not be accepted.

ETHERNET

- Encoder shall support the TCP, UDP, and IGMP network Protocols. Encoders not supporting said protocols shall not be accepted.
- Encoder shall provide a 4-port, built-in managed Ethernet switch supporting 10/100 Base-T Network Ports. Encoders that don't have built-in network switch with at least (4) Ethernet ports shall not be accepted.
- Encoder shall be configurable with a static or dynamic (DHCP) IP address. Encoders without said configuration options shall not be accepted.

CONTROL

- Encoder shall be capable of being controlled via an AMX Netlinx Master Controller as a native Netlinx Device. Encoders not capable of native Netlinx control shall not be accepted.

PRODUCT IDs

- The encoder shall be manufactured by AMX and shall be NMX-ENC-1100 (Multi-format input).
- The encoder shall be manufactured by AMX and shall be NMX-ENC-1105 (Multi-Format + SDI Input)

TECHNICAL SPECIFICATIONS

DIMENSIONS

- 1 5/8" x 8 3/4" x 5 1/8" (42.06 mm x 221.64 mm x 130.81 mm).

WEIGHT

- Weight (FG3201-01): 2.25 lbs (1.02 Kg).
- Weight (FG3201-02): 2.3 lbs (1.04 Kg)

REGULATORY COMPLIANCE

- FCC, CE EN 55022, CE EN 55024, CE EN 60950-1, IEC 60950-1, C-Tick, IC, cULus 60950-1, UL 60950-1, VCCI, RoHS, WEEE

INCLUDED ACCESSORIES

- PSR4.4, 13.5 VDC, 4.4 A Power Supply with 3.5 mm.
- Retained Phoenix Connector (FG423-46)

ACTIVE POWER REQUIREMENTS

- Power Connector (1) 2-pin, locking 2.5 mm Phoenix (male) connector.
- Power Consumption 13 W, (Max), 10 W (Typ)
- Operating Voltage 10 VDC to 18 VDC

ENVIRONMENTAL

- Temperature (Operating) 0° C to 40° C (32° F to 104° F).
- Temperature (Storage) -20° C to 70° C (-4° F to 158° F).
- Humidity (Operating) 5% to 85%, non-condensing

FRONT PANEL COMPONENTS

- (1) USB 2.0 Type A.
- Streaming Indicator.
- Video Input Detected Indicator.
- Power indicator.
- ID Button.

REAR PANEL COMPONENTS

- (1) USB 2.0 Type A.
- (4) RJ-45, 10/100 BASE-T.
- (1) 3-pin 3.5 mm mini-Phoenix (male) connector Keypad port (RS-232), used to control the encoder via a serial port.
- Indicator Relay (1) 4-pin 3.5 mm mini-Phoenix (male) connector with (2) single-pole, single-throw relays.
- (1) HDMI Type A Female HDMI
- (1) 3.5 mm Mini-Stereo Jack for audio pass thru.
- (1) 3.5 mm mini-stereo audio jack for analog audio input.
- (1) DVI-I (female) connector for multi-format, analog or digital video.
- (1) BNC (female) connector for SDI video input (**FG3201-02 ONLY**)
- (1) BNC (female) connector for SDI video pass thru (**FG3201-02 ONLY**).

About AMX

AMX hardware and software solutions simplify the implementation, maintenance, and use of technology to create effective environments. With the increasing number of technologies and operating platforms at work and home, AMX solves the complexity of managing this technology with reliable, consistent and scalable systems. Our award-winning products span control and automation, system-wide switching and audio/video signal distribution, digital signage and technology management. They are implemented worldwide in conference rooms, homes, classrooms, network operation / command centers, hotels, entertainment venues, broadcast facilities, and more. ©2014 AMX. All rights reserved.

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