NPTX4k

H.264/H.265 4K Encoder

User Manual

Version: V1.0.0

Important Safety Instructions

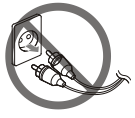
1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

6. Clean this apparatus only with dry cloth.

2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.

7. Unplug this apparatus during lightning storms or when unused for long periods of time.

3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



8. Protect the power cord from being walked on or pinched particularly at plugs.

4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Only use attachments / accessories specified by the manufacturer.

5. Do not place sources of naked flames, such as lighted candles, on the unit.

10. Refer all servicing to qualified service personnel.

Table of Contents

Introduction

This encoder integrates eight encoding units, which is designed to work with H.264/H.265 decoders and the NPCTL4k controller together to provide complete end-to-end streaming systems. They are ideal for applications of conference rooms, shopping malls, hotels, monitoring centers, schools, corporate training environments, etc.

Recommended Software Versions

The H.264/H.265 IP encoders and decoders work together to distribute and switch IP streams throughout the matrix system by using specific software versions of operation tools. We would recommend that you use the following versions to deploy network.

Device/Operation Tool	Software Versions
NPTX4k	V1.0.29 or above
NPRX4k	V1.0.23 or above
NPVW4k	V1.0.29 or above
NPMV4k	V1.0.27 or above
NPCTL4k	V1.3.17:TTV_1.0 or above

Features

- Integrates eight encoders, providing eight HDMI inputs, eight analog audio outputs and two Ethernet outputs.
- Streams HDMI signal over IP networks.
- Supports resolutions up to 3840 x 2160p@30Hz.
- Able to output two IP streams.
  - One large IP stream supports streaming resolution from 480p@60Hz to 3840 x 2160p@30Hz to view a video on the decoder side.
  - The other small one for preview supports streaming resolution

360 x 240@30Hz.

- Controlled by IP controller.
- Configurable encoding bit rate up to 20 Mbps.
- Supports Auto IP (zeroconf)—automatically generates a dynamic IP address at startup in the absence of a DHCP server.
- Supports communications protocols such as HTTP, HTTPS, SSH, TCP/IP, Telnet, UDP and IGMP.

Package Contents

- 1 x Encoder
- 1 x AC Power Cord with US pins
- 2 x 1U Rack Mounted Brackets
- 8 x Mounting Screws (M3*L7)

Specifications

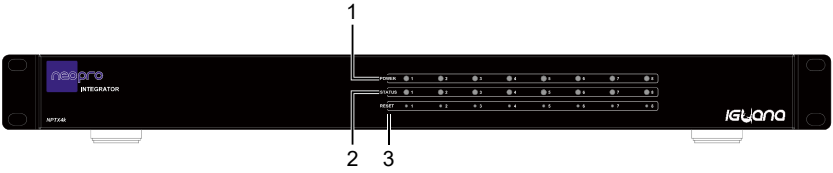
Video	
Input Video Port	8 x HDMI
Input Video Type	HDMI 1.4, HDCP 2.2
Input Resolution	640 x 480@60Hz, 480p@60Hz, 576p@50Hz, 800 x 600@60Hz, 1024 x 768@60Hz, 720p@50Hz, 720p@60Hz, 1280 x 800@60Hz, 1280 x 1024@60Hz, 1360 x 768@60Hz, 1366 x 768@60Hz, 1400 x 1050@60Hz, 1440 x 900@60Hz, 1680 x 1050@60Hz, 1080i@50Hz, 1080i@60Hz, 1080p@50Hz, 1080p@60Hz, 3840x2160p@24Hz, 3840x2160p@25Hz, 3840x2160p@30Hz
Input Video Signal	0.5~1.2 V p-p
Output Video Port	2 x LAN
Output Video Type	H.264/H.265, MJPEG
Output Resolution	• IP main stream: from 480p@60Hz to 3840 x 2160p @30Hz • Small IP stream: 360 x 240@30Hz
Encoding Data Rate	• Large IP stream: Max: 16Mbps (configurable) • Small IP stream: Max: 512Kbps (configurable)
End-to-End Time Latency	When works with the NPRX4k decoder: • Approx. 150 ms (Low latency mode, from TX to RX) • Approx. 300 ms (High quality mode, from TX to RX)
Video Impedance	100 Ω
Input DDC Signal	5 V p-p (TTL)
Audio	
Input Audio Port	8 x HDMI
Input Audio Format	PCM, Stereo,16-bit, 32/44.1/48KHz sample
Output Audio Port	2 x LAN; 8 x AUDIO OUT
Output Audio Format	PCM/AAC, Stereo
Control	
Control Method	IP Controller

General	
Operating Temperature	32°F ~ 113°F (0°C ~ 45°C) 10% ~ 90%, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C) 10% ~ 90%, non-condensing
ESD Protection	Human body model: • ±8kV (air-gap discharge)

General	
	• ±4kV (contact discharge)
Power Supply	AC 100~240V
Power Consumption	34.1W (Max)
Product Dimensions (W x H x D)	440mm x 43.5mm x 300mm / 17.3" x 1.7" x 11.8" (Brackets not included)
Net Weight	3.42kg / 7.52lbs
Rack Space Required	1U

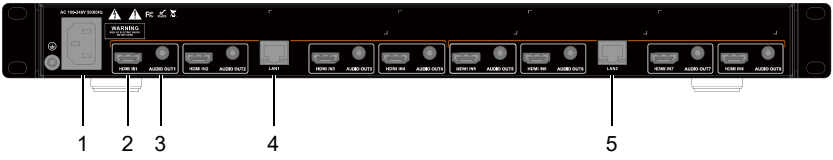
Panel Description

Front Panel



#	Name	Description
1	Power LED 1-8	• On: The corresponding unit is powered on. • Off: The corresponding unit is powered off.
2	Status LED 1-8	• On: The corresponding unit detects valid signal input. • Blinking: The corresponding unit detects no signal input. • Off: The corresponding unit is powered off. / The corresponding unit is booting.
3	Reset Button 1-8	Use a pointed stylus to press and hold the button for more than five seconds, then release this button, the corresponding unit will reboot and restore to its factory default.

Rear Panel



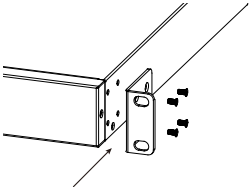
#	Name	Description
1	AC 100-240V 50/60Hz	Connect the power cord provided for 100-240V 50/60Hz AC power input.
2	HDMI In 1-8	Connect each port to an HDMI source device.
3	AUDIO OUT 1-8	Connect each port to an audio receiver for de-embedding HDMI audio output.
4	LAN1	Connect to a network switch for IP stream output and control of the encoders 1-4.
5	LAN2	Connect to a network switch for IP stream output and control of the encoders 5-8.

Installation

This device occupies 1U space and can be installed on a standard equipment rack.

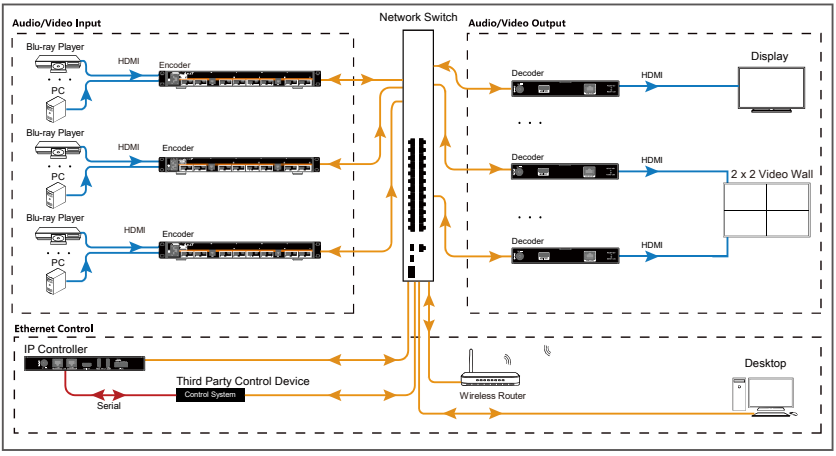
Steps to install the device on an equipment rack:

1. Attach the bracket to the enclosure using screws provided in the package. The bracket is screwed to the enclosure as shown.



2. Repeat step 1 for the other side of the device.
3. Mount and affix the device in the rack mount with screws (screws are not included in the package).

Applications



Note: Before installation, disconnect the power supplies from all the devices.

Device Control

This device can be controlled through the IP controller. For more information, see its user guide.

Contact Neopro Support

Got a question about our product, or need some help? We have a couple of options:

Contact Neopro at:

Phone Support: 754 222-8520

Email Support: support@neoprointegrator.com