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Milestone PRO MP-IP200E IP Streaming Encoder-Decoder Instruction Manual

Contents

Milestone PRO MP-IP200E IP Streaming Encoder-Decoder

Product Information

Product Name	MP-IP200E/ MP-IP200D
Product Type	1080p IP Streaming Encoder/Decoder
Features	Supports H.264, H.265 encoding and decoding. Adopt advanced universal coding technology. High-definition picture quality transmission over IP network. Support unicast and multicast switching. Large-scale application under 100M network. Support various audio and video scheduling controls. Rich interfaces, including RS232, IO, IR, network, etc. Dual power supply mode, standard DC interface and IEEE802.3at PoE.
Package List (MP-IP200E)	1x MP-IP200E Encoder (TX), 4x Rubber feet, 2x 3-pin Terminal Block, 1x User Manual
Package List (MP-IP200D)	1x MP-IP200D Decoder (RX), 4x Rubber feet, 3x 3-pin Terminal Block, 1x User Manual
Video Input (MP-IP200E)	HDMI In
Video Input Connector (MP-IP200E)	Type-A female HDMI
HDMI Input Resolution (MP-IP200E)	Up to 4K@60Hz 4:4:4
Video Output (MP-IP200E)	HDMI Out
Video Output Connector (MP-IP200E)	Type-A female HDMI
HDMI Output Resolution (MP-IP200E)	Up to 4K@60Hz 4:4:4
Control (MP-IP200E)	RS232, IR, LAN (PoE)
Control Connector (MP-IP200E)	3-pin terminal block, 3-pin terminal block, RJ45
Video Output (MP-IP200D)	HDMI Out
Video Output Connector (MP-IP200D)	Type-A female HDMI
HDMI Output Resolution (MP-IP200D)	Up to 1080p@60Hz 444
Audio Output (MP-IP200D)	Audio Out (L+R)
Audio Output Connector (MP-IP200D)	3-pin terminal block

Control (MP-IP200D)	RS232, IR, LAN (PoE)
Control Connector (MP-IP200D)	3-pin terminal block, 3-pin terminal block, RJ45
Video Encoding Standard	H.265
CAT-5E Cable Length	Up to 180 meters
External Power Supply	12V DC 1A; PoE supported.
Power Consumption	Encoder: 5W (Max); Decoder: 2W (Max)
Operation Temperature	-5 ~ +55
Storage Temperature	-25 ~ +70
Relative Humidity	10%-90%
Dimension (W*H*D)	150.0mm x 25.0mm x 100.0mm
Net Weight	Encoder: 355g, Decoder: 355g

Product Usage Instructions

MP-IP200E Encoder (TX)

- **HDMI IN:** Connects the HDMI video source device using a Type-A female HDMI port.
- **LOOP OUT:** Connects the HDMI display device using a Type-A female HDMI port.
- **RS232:** Supports point-to-point RS232 routing control using a 3-pin terminal block.

MP-IP200D Decoder (RX)

- **HDMI Out:** Connects the HDMI display device using a Type-A female HDMI port.
- **AUDIO OUT:** Provides audio output using a 3-pin terminal block.

Version: MP-IP200E/ MP-IP200D_2023V1.0

Product Introduction

The MP-IP200 is an IP Streaming Encoder/Decoder which use H.264 or H.265 standard to extend HDMI video, IR and RS232 control signals over IP network. It works with one control PC (Wake on LAN) and one switch whose transmission rate is 100Mbps or higher to control a variety of functions. The MP-IP200 features 1080p HDMI video switching, video live preview, audio de-embedding, IR&RS232 transmission, PoE, etc. The control software "DVSTool" merge all functions for user control the IP streaming system.

Features

- Supports H.264, H.265 encoding and decoding.
- Adopt advanced universal coding technology
- High-definition picture quality transmission over IP network.
- Support unicast and multicast switching
- Large-scale application under 100M network.

- Support various audio and video scheduling controls
- Rich interfaces, including RS232, IO, IR, network, etc.
- Dual power supply mode, standard DC interface and IEEE802.3at PoE

Package List

MP-IP200E

- 1x MP-IP200E Encoder (TX)
- 4x Rubber feet
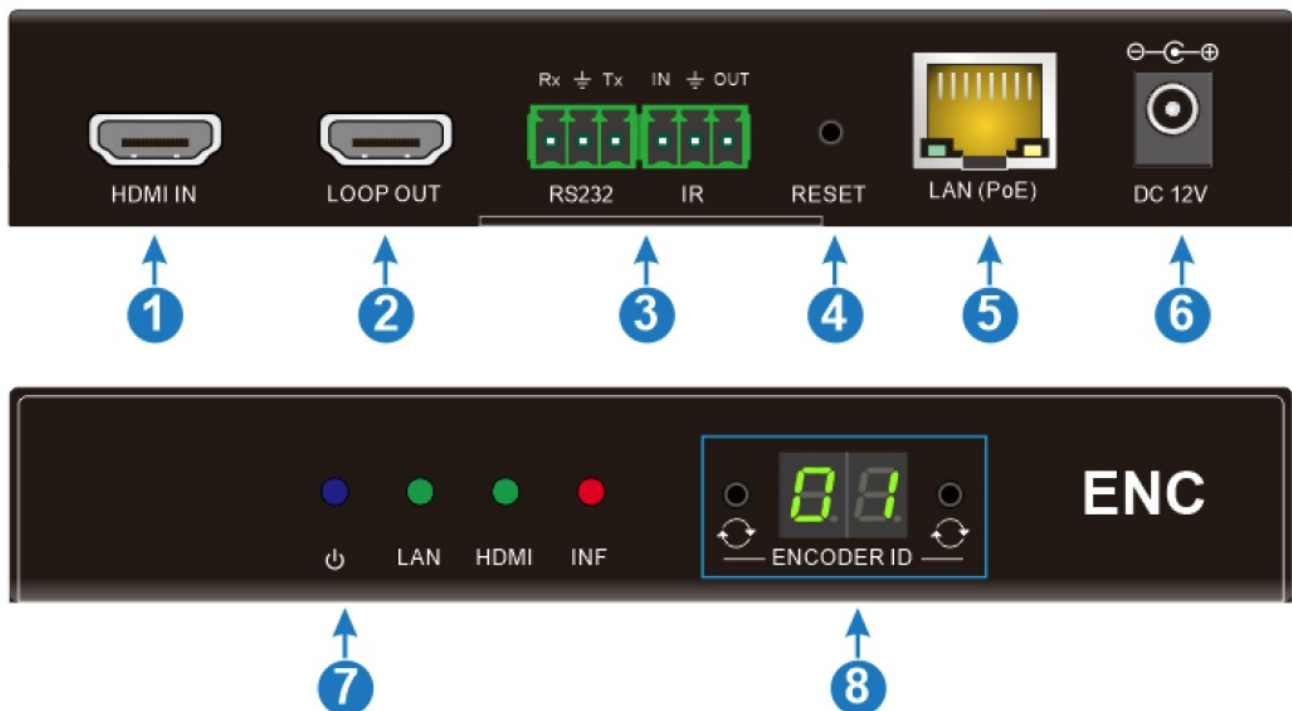- 2x 3-pin Terminal Block
- 1x User Manual

MP-IP200D

- 1x MP-IP200D Decoder (RX)
- 4x Rubber feet
- 3x 3-pin Terminal Block
- 1x User Manual

Specification

Panel Description

MP-IP200E Encoder

1. HDMI IN: Type-A female HDMI port to connect HDMI video source device.
2. LOOP OUT: Type-A female HDMI port to connect HDMI display device.
3. RS232: 3-pin terminal block for RS232 routing control. Supports point to point unicast.

IR: IO and IR infrared multiplexing interface. The IR port needs to be connected with an infrared receiver capable of deciphering the carrier.

4. RESET: Restore factory settings.

5. LAN (PoE): RJ45 port to connect directly to the decoder or a network switch using a CAT-5E cable.

6. DC 12V: DC port for AC power adapter connection.

7. Power LED: Illuminates blue when power on.

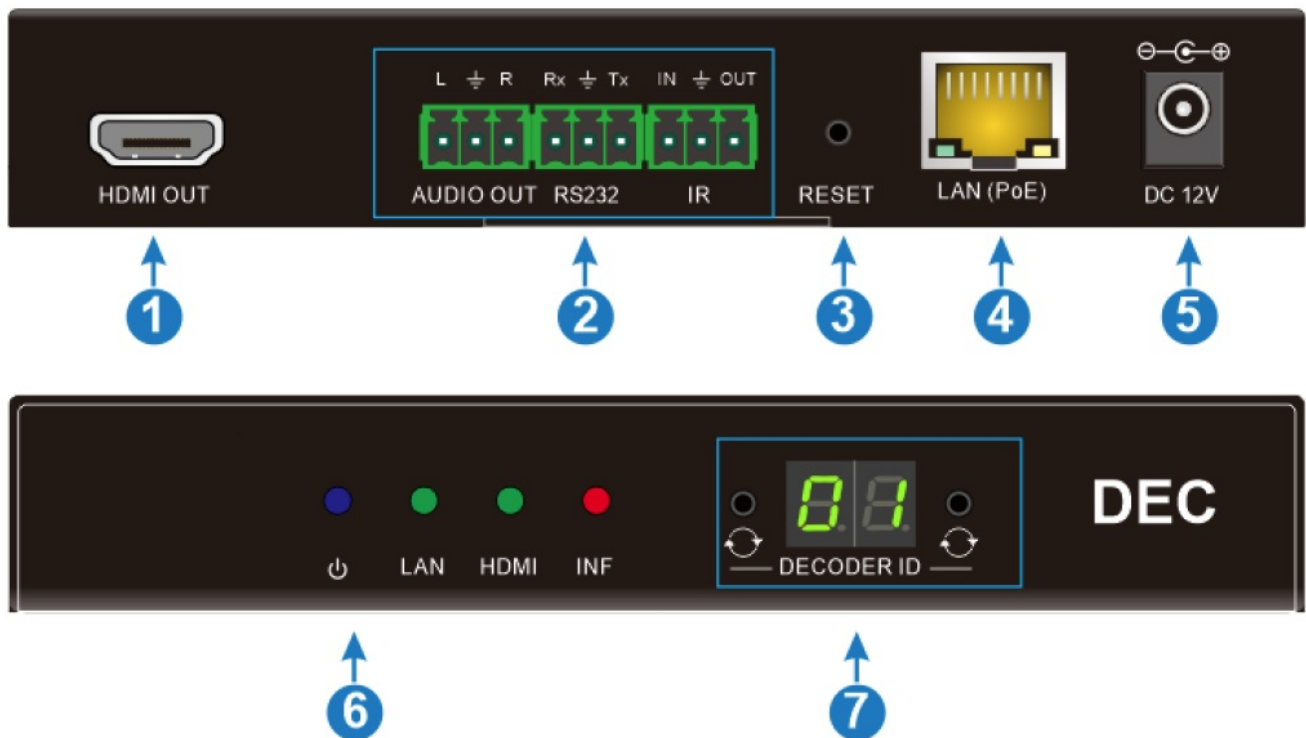   LAN LED: Illuminates green when the network is normal.

   HDMI LED: Illuminates green when HDMI IN connected normally.

   INF LED: Illuminates red when there is important information.

8. Button: Used to set Encoder ID to make it unique IP.

   Digital Tube: Display Encoder device ID.

MP-IP200D Decoder

1. HDMI Out: Type-A female HDMI port to connect HDMI display device.

2. AUDIO OUT: 3-pin terminal block for audio out

   RS232: 3-pin terminal block for RS232 routing control. Supports point to point unicast.

   IR: IO and IR infrared multiplexing interface. The IR port needs to be connected with an infrared receiver capable of deciphering the carrier.

3. Reset: Restore factory settings.

4. LAN(PoE): RJ45 port to connect directly to the decoder or a network switch using a CAT-5E cable.

5. DC12V: DC port for AC power adapter connection.

6. Power LED: Illuminates blue when power on.

   LAN LED: Illuminates green when the network is normal.

   HDMI LED: Illuminates green when HDMI IN connected normally.

   INF LED: Illuminates red when there is important information.

7. Button: Used to set Encoder ID to make it unique IP.

   Digital Tube: Display Encoder device ID.

System Connection

Connection Type
There are three types of possible applications:

Extender (Point-to-Point)
In a point-to-point configuration, there is no need for a switch. Distribute full, compressed data up to 1080p@60Hz resolution and RS232, IR control signals over a single Cat-5E cable.

Splitter (One-to-Many)
With only one encoder and one Ethernet switch (100Mbps or higher), any A/V signal can be flawlessly and instantly distributed to a near limitless number of decoder and screens, any number of times.

Matrix Switcher (Many-to-One, Many-to-Many)
The combination of switching and splitting enables a completely scalable matrix system. Independently route video, audio and RS232, IR control signal from any source to any endpoint. The IP streaming system allows for on-the-fly upgrading and a virtually unlimited number of I/O ports.

System Diagram
The following diagram illustrates typical input and output connections that can be utilized with the IP streaming encoder/decoder:
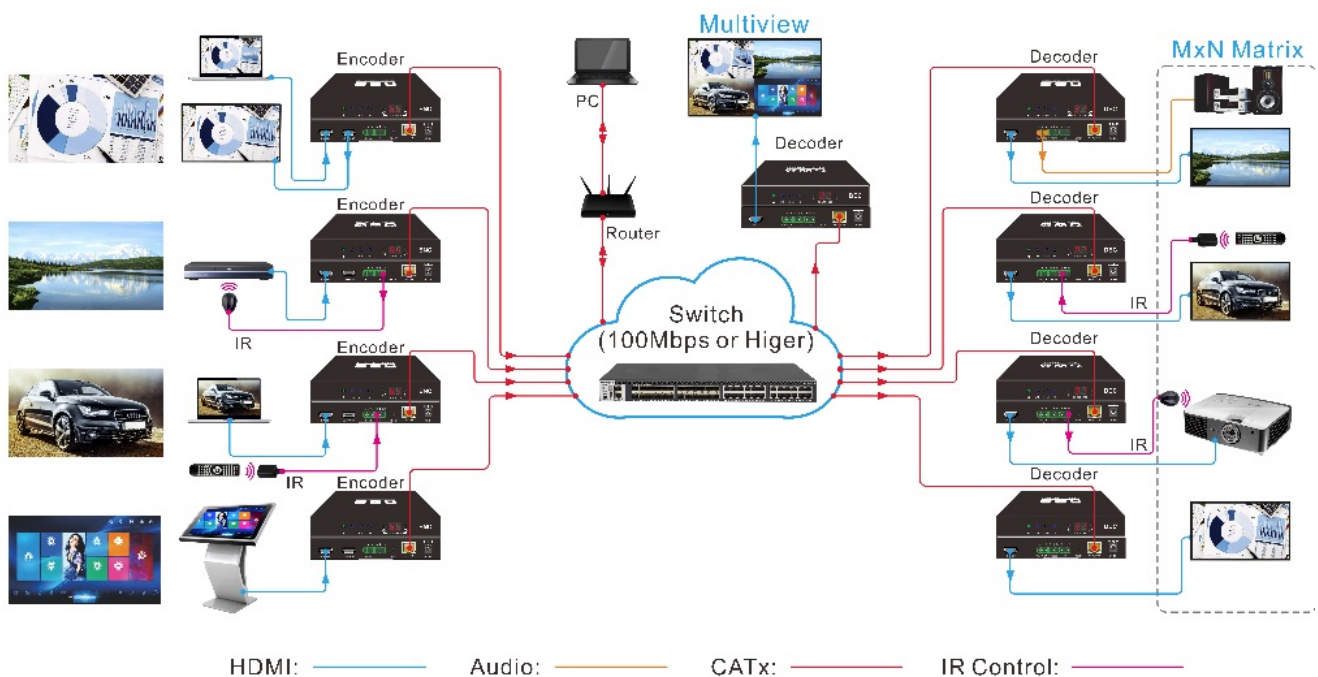
IP Streaming System

Hardware Setup
Please follow the steps below to complete the system installation:

1. Connect the video/graphics source device to the HDMI input connector on each TX unit.
2. (Optional) Connect the video display device to the HDMI output connector on each TX unit.
3. Connect the video display device to the HDMI output connector on each RX unit.
4. (Optional) Connect audio output device (e.g. speaker or headphone) to the audio output connector of the RX if
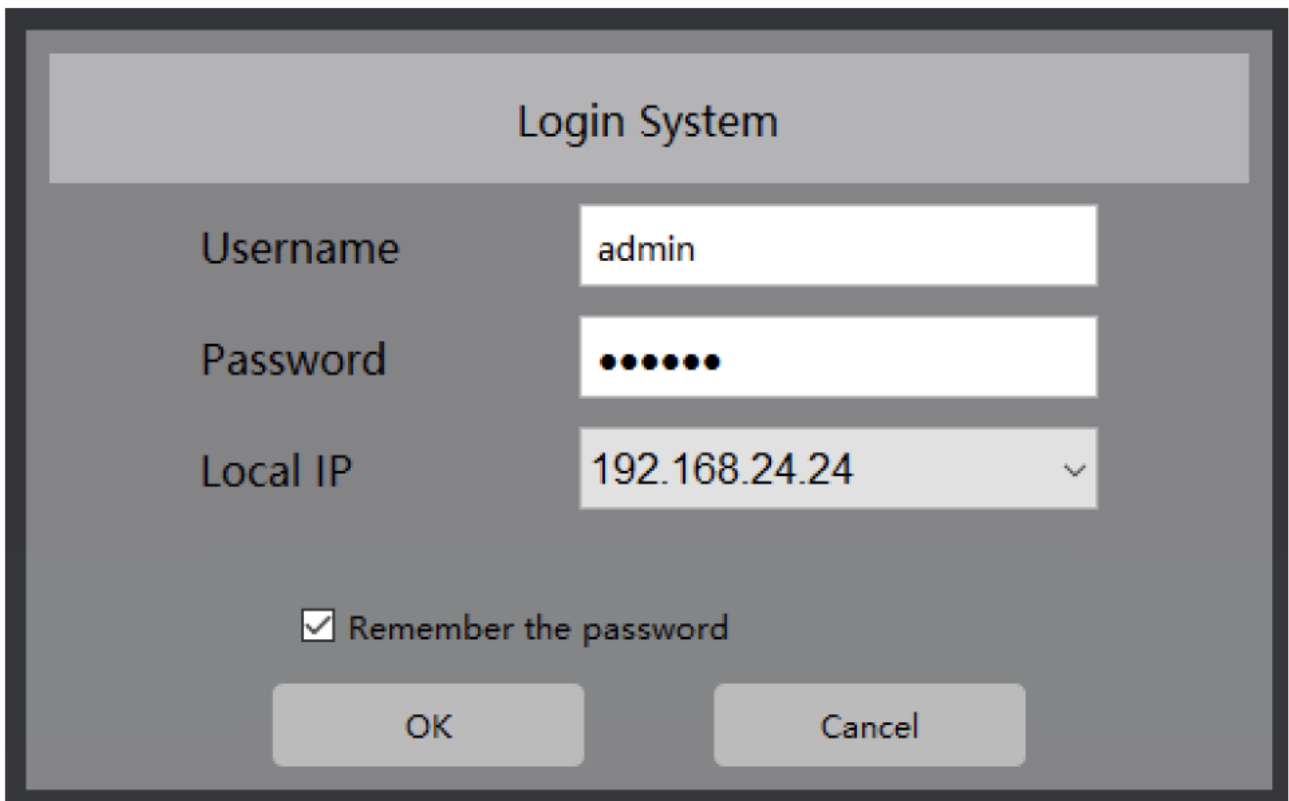
you want to test additional audio extension.

5. (Optional) Connect RS232 devices as needed if you want to test RS232 serial extension between TX and RX units.
6. (Optional) Connect compatible IR emitter modules to the IR output connectors of any TX or RX.
7. (Optional) Connect compatible IR receiver modules to the IR input connectors of any TX or RX.
8. Connect an Ethernet cable (Cat-6a recommended) from the LAN port each TX and RX unit to any available LAN port.
9. Connect the control PC to the LAN port of router device or to a Cat-x port of the switch (except the management/console port of the switch).
10. The hardware setup is now complete.

Operation of DVSTool

General Information

- The DVSTool is a control software used to configure and control signal extension, routing and switching between Encoder and Decoder units.
- Before proceeding ensure that the IP addresses of PC and all units are on the same local area network (LAN).
- After install the control software, start the application by double clicking on DVSTool.exe file

- **Username**: admin
- **Password**: 123456

After starting the software, click the setting icon in the upper right corner to enter the setting interface:

**System configuration includes the following main functions:**

1. Device: perform operations such as device model, device name, ID, IP and other parameter settings, and restore defaults.
2. Source: Carry out information source grouping, and bind the corresponding grouping to the input.
3. Output: Mainly to add the output to the device status list for operation and maintenance management, and places can be bound.
4. Place: Mainly realizes output device area management and screen binding settings.
5. User management: It mainly realizes that different users use different input groups and place authorization.
6. System log: Generate a log and view it.
7. Data management: mainly to update the interface and functions of the WINDOS client to the PAD client.
8. Status: check the current online status of the equipment, which is convenient for maintenance.

IP System Setting

Control operations include the following main functions:
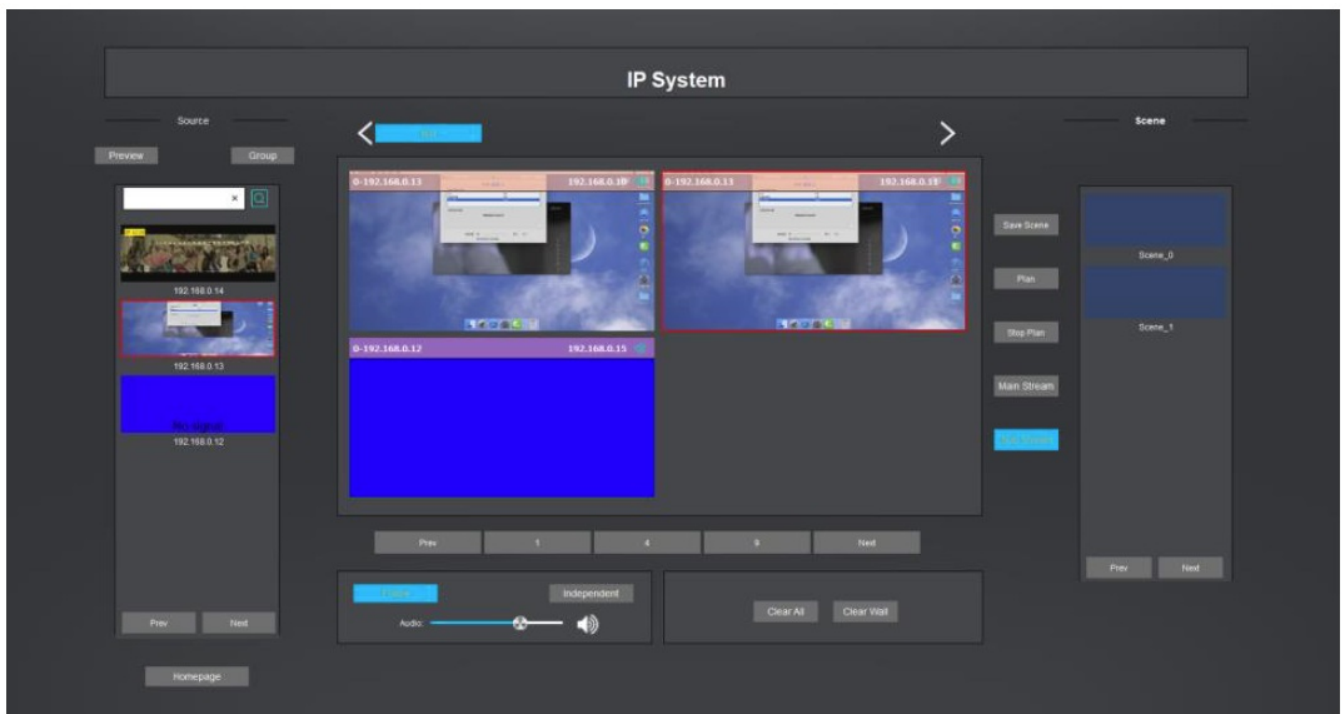
1. Signal source: It can be previewed and switched by group. It supports keyword search for signal sources. Select the preview window or signal and drag it to the output node on the virtual large screen to open the window. window (the opened window is set according to the output node), and the signal can be turned up and down with more than five preview windows.
2. Large screen switching: When creating multiple large screens, you can switch the large screens arbitrarily, and you can turn pages left and right if you exceed five
3. Screen operation area: display a virtual large-screen image; window can be opened, and the virtual large screen can be switched to display the number of output nodes on one page (can be switched to display 1, 4, or 9 output nodes), and the virtual large screen exceeds the setting When outputting the number of nodes, you can turn the page up and down.
4. Volume control: Select any output node on the virtual large screen, the selected output node can turn on and off the sound, and control the volume. You can choose whether the audio follows the video switch.

Devices Management

1. There are multiple IPs on the computer, you need to select the corresponding IP on the login interface, and then modify or configure the parameters.
2. Any modification of parameters requires re-searching.

Device model and name modification

Check the device that needs to be modified, then check the parameter that needs to be modified, then set the parameter value, and click Modify.

Then search again.

ID, IP modification

Check the device that needs to be modified, check the parameter that needs to be modified, set the parameter value, and click Modify. Search again

ID and IP support batch modification

Output resolution, image, audio

Output Property

Resolution	1920x1080P60
接口模式:	HDMI

Output Image

Lightness:	[slider]	50
Contrast:	[slider]	50
Hue:	[slider]	50
Saturation:	[slider]	40
Restore Default:	Set Default	

Audio Output Setting

Audio Output	HDMI&&3.5mm

Select or check the Decoder device, in the device information, you can modify the output resolution, output image, audio output.

Setting

Search	Add Manually	Upgrade	Reboot	Factory Reset	Device Reset
Image Quality Setting	OSD Setting	EDID Setting	Restore EDID	Peripheral Setting	

Device Info

All	No.	Device ID	IP Addr	Devic
☑	1	40	192.168.11.40	N/A

Device Basic Infomation

Device Model:	N/A
Device Name	N/A

- Select the device and choose OSD Setting

- Select the device and choose EDID Setting:
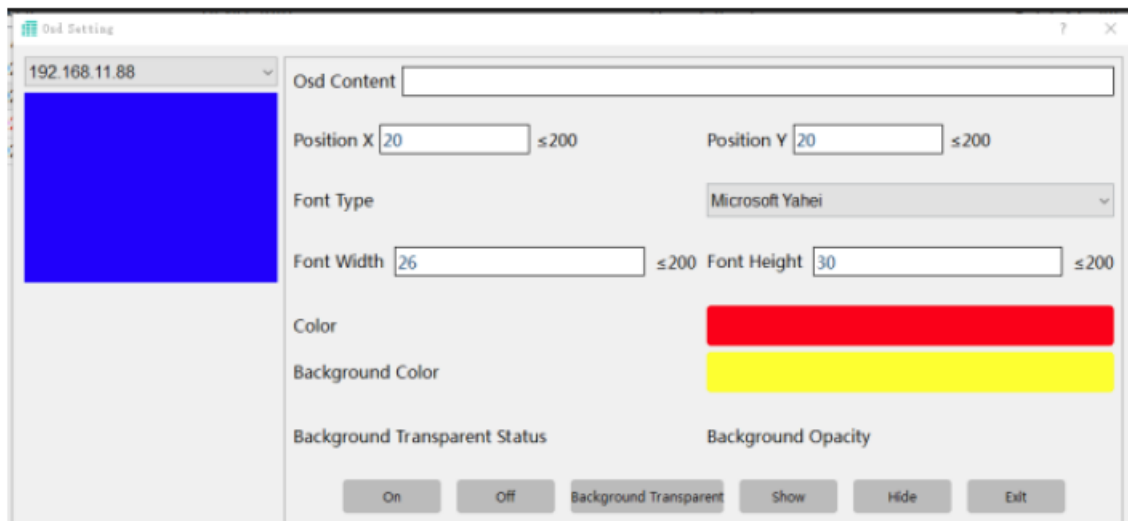
Source Management
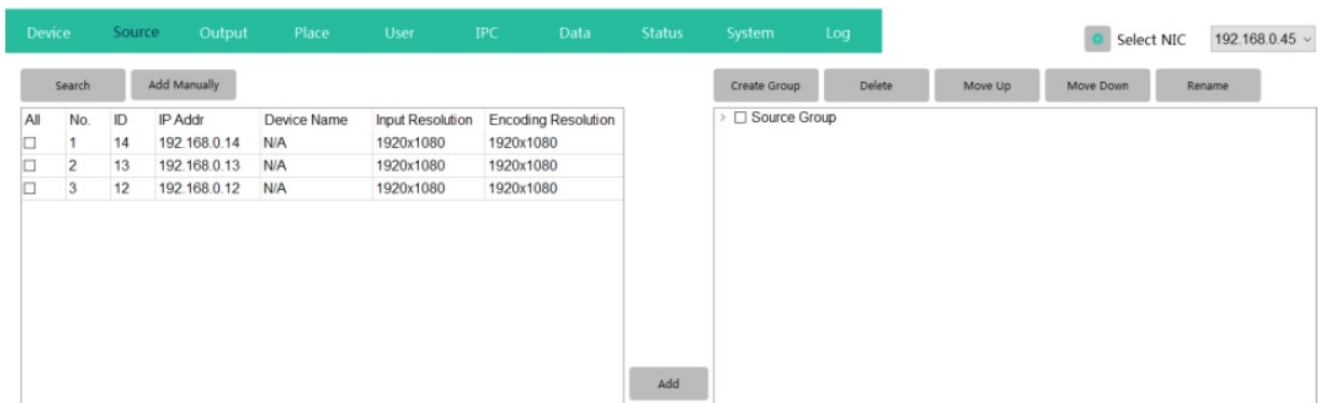
Carry out source grouping, and group the corresponding input binding

1. Select the signal list,
2. Click Add Group,
3. Double-click the added group to modify the group name,
4. Select the corresponding group name, and check the input source list on the left.
5. Click Add.

Output Management
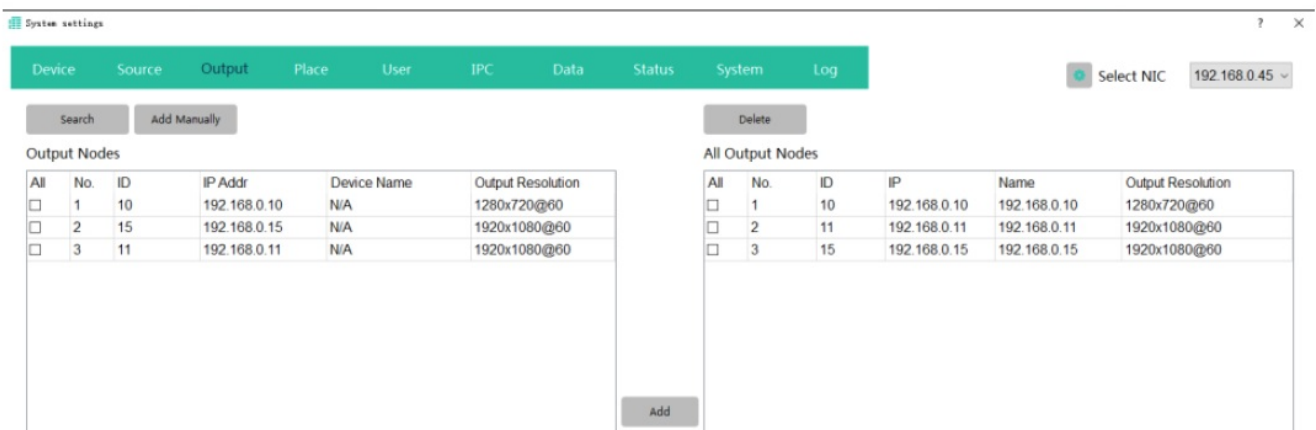
It is mainly to add the output to the device status list for management, and at the same time, the binding can be realized on the site.

1. Select the output device that needs to be added to the maintenance binding list,

2. Click Add,

3. You can view the added devices on the right.

Note: If the device name is in N/A state, the name of the maintenance list is automatically changed to the IP address of the device.

Place

Follow the steps as shown in the image above. Implement matrix group binding.

1. Click Manage Matrix Group

2. Set ID and name, ID needs to be unique

3. Click Add

4. Select the added matrix group

5. Click Add Node. Pop-up screen and output node binding window

6. Select the corresponding output node. Can only choose idle nodes

7. Click Add, and the list of nodes bound to this group is displayed on the right

8. Click to close

Note: This operation takes effect directly without confirmation.

User

Note: The default account admin has full authority and supports password modification. Other users must be authorized by admin. Other users can modify their passwords by themselves, and authorization is not allowed

IPC

This function is unavailable.

Data

Realize data transmission between windows client and Android client in the same LAN.

1. Turn on the server, and then upload data to the host computer. After the upload is successful, it will prompt that the device uploaded data and updated successfully.
2. Fill in the IP of the corresponding device in the remote IP, and open the server of the device, and then click Upload Data or Upload Configuration.
   When uploading, it will prompt that the connection to the device (IP of the device) is successful and the sending (IP of the device) is successful

Status
On the device status page, you can see the status of the added devices for source management and output management.

System
This page is design for system setting.

Log
The system log can be selected by level and filtered by time period. After filtering, click OK, and the corresponding log will pop up below; click Show All, and all logs will pop up.

Documents / Resources

User Manual MP-IP200E/ MP-IP200D 1080p IP Streaming Encoder/Decoder All Rights Reserved	**Milestone PRO MP-IP200E IP Streaming Encoder-Decoder** [pdf] Instruction Manual MP-IP200E IP Streaming Encoder-Decoder, MP-IP200E, IP Streaming Encoder-Decoder, Streaming Encoder-Decoder, Encoder-Decoder, Decoder

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