KanexPro®

User Manual

KanexPro Modular Matrix Switcher

4K 60Hz UHD Scaling

FLEX-MF8X10

FLEX-MF16X20

FLEX-MF24X36

FLEX-MF24X60

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§ 1 Product Introduction

Introducing the KanexPro FLEX series matrix switcher – your ultimate solution for hassle-free video distribution in bars, restaurants, and the hospitality industry. Tailored to meet your specific needs, this flexible system is available in four main chassis sizes: 8x10, 16x20, 24x36, and 24x60, allowing you to choose the perfect fit based on the number of inputs and outputs required.

Unlocking the potential for up to 24 inputs, the FLEX series by KanexPro guarantees ample connections for all your must-have devices. From set-top boxes and cable boxes to streaming devices, digital signage, and other playback gadgets, the FLEX series ensures seamless and dependable video distribution. Elevate your viewing experience with KanexPro FLEX – where performance seamlessly blends with flexibility.

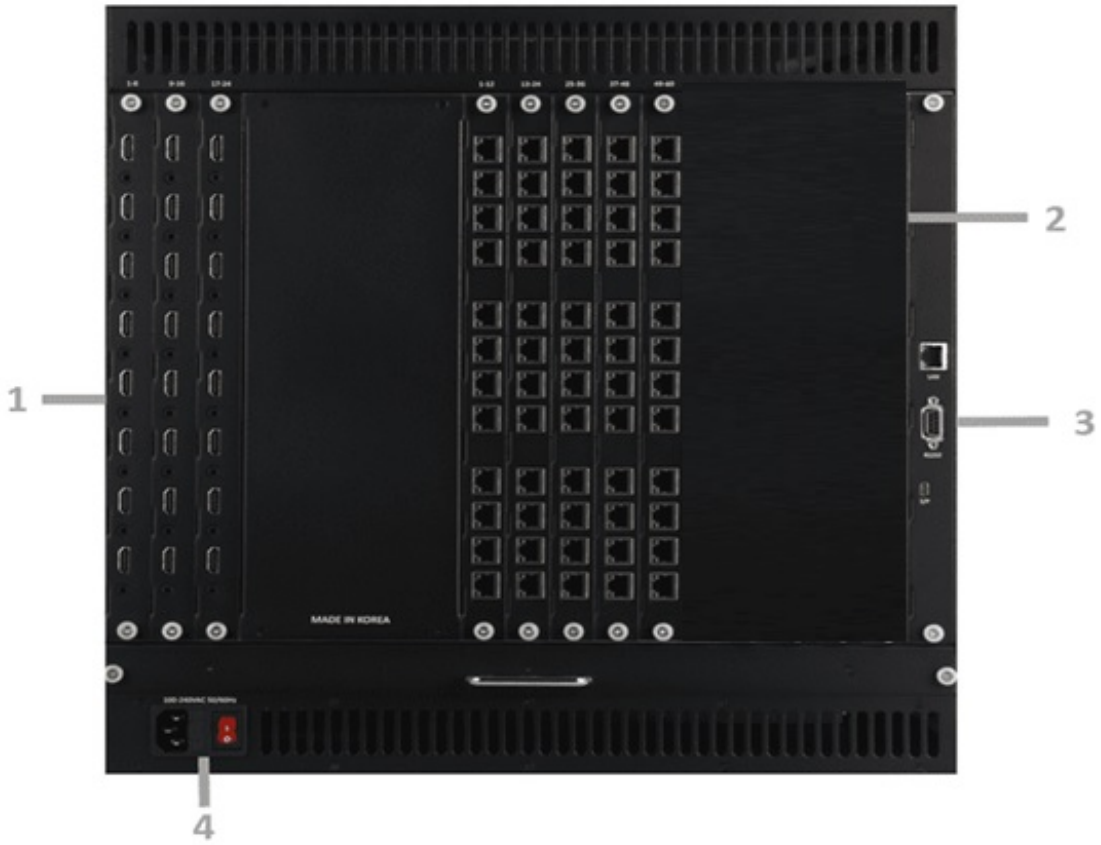
Experience seamless switching speed, independent scaling output, video wall capabilities, quad view, audio extraction, and CEC display control with the FLEX series matrix switcher. This cost-effective solution offers simplicity and power in media distribution, providing an alternative to AV over IP.

1.1 Overview

Front view

- **Touch panel control**

Rear view



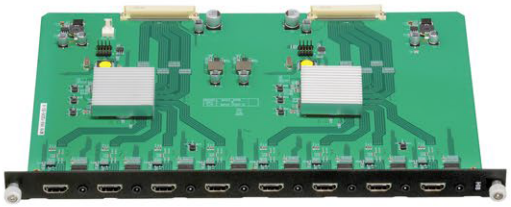
① **Input** ····· 8 ports per input card up to 3 cards, 8 ports for FLEX-MF8X10, 16 ports for FLEX-MF16X20, 24 ports for FLEX-MF24X36, and 24 ports for FLEX-MF24X60

② **Output** ····· 12 ports per output card up to 5 cards, 12 ports for FLEX-MF8X10, 24 ports for FLEX-MF16X20, 36 ports for FLEX-MF24X36, and 60 ports for FLEX-MF24X60

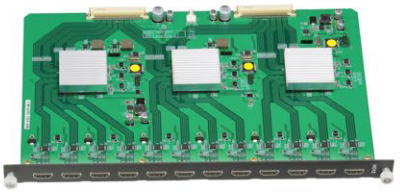
③ **MCU board** ····· LAN, RS232, and firmware update port

④ **Power Switch**····· 100~240VAC 50/60Hz

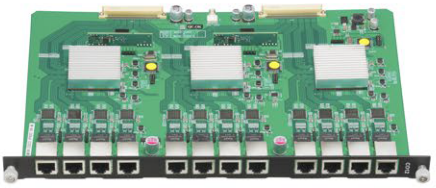
Available Input and Output cards (Sold Separately)



FLEX-HDMI8IN: 8 ports HDMI Input Card



FLEX-HDMIOUT: 12 ports HDMI Output Card



FLEX-CATOUT: 12 ports CAT Output Card

CAT Receiver - FLEX -CATRX (Sold Separately)

§ 2 Product Specifications

Video

- Standard ····· HDMI 2.0, HDCP 1.x, HDCP 2.2
- HDR ····· Support
- Maximum data rate ····· 18 Gbps
- Video Resolution ····· Up to 3840x2160 60Hz 4:4:4 (8bit)
- Chroma sampling ····· RGB and YCbCr 4:4:4, YCbCr 4:2:2:/4:2:0
- Color bit depth ····· 8, 10, 12 bits per color

Audio

- Formats
  LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus(DD+),
  DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X

Connectors

- RS232 (9pin D-sub) Control Port x1
- TCP/IP (RJ45) Control Port x 1
- Input card: 8 x HDMI Type A (19-pin female) Input Ports
- Output card: 12 x CAT (RJ45) Output Ports

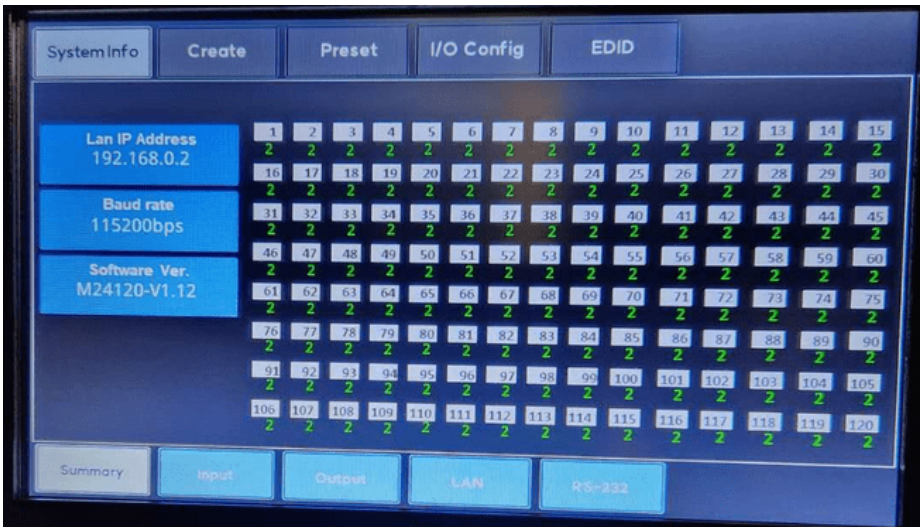
General

- Human body model ····· ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
- Temperature ····· 32° to 104° F (0° to 40° C)
- Humidity ····· 10% to 90% RH (non-condensing)
- Dimensions ····· 445mm (17.5″) [W] ×355mm (14″) [D] ×450mm (17.7″) [H]
- Weight ····· 21 kg (46 lbs)
- Power consumption ····· 540 Watts for M2472, and 800 Watts for M24120

§ 3 Operation

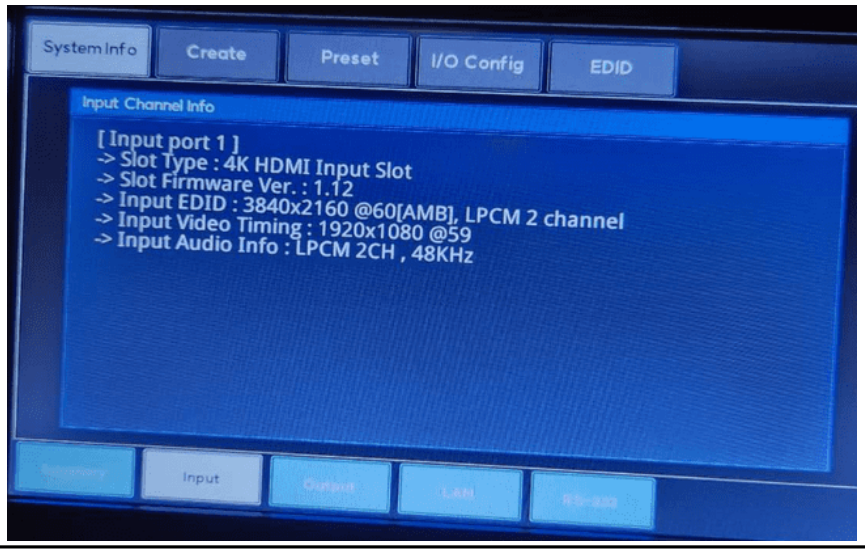
1) **System Info** – Displays matrix switcher's current status and matrix communication setting configuration
2) **Create** – Configuring input – output switching connections
3) **Preset** – Recall stored presets
4) **I/O Config** – Configure I/O options
5) **EDID** – Configure EDID settings

◆ System info - Summary



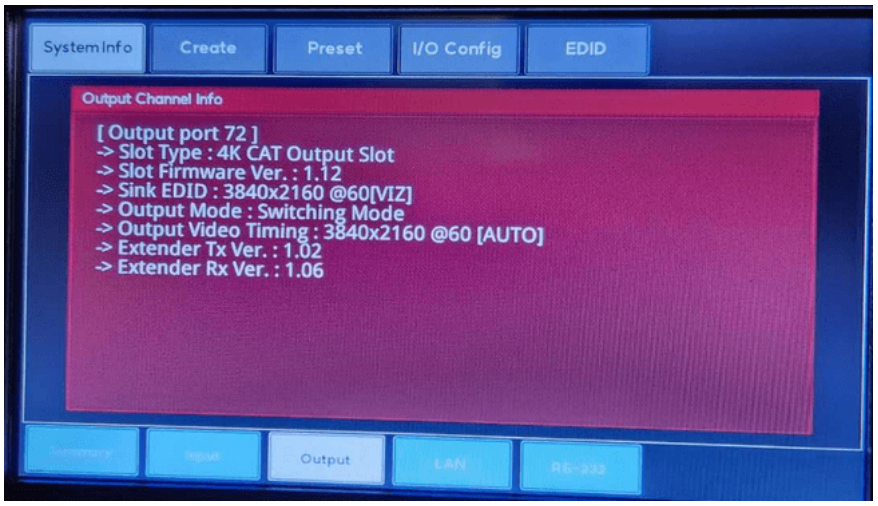
- It displays Matrix switcher's current communication setting status (IP address, RS-232 Baud rate, and firmware version)
- It displays Matrix switcher's current switching status
  - 1st row in white color represents output numbers
  - 2nd row in green color represents input numbers

◆ System info – Input



- It displays the input port number, EDID information, firmware version, and incoming signal information.

◆ System info – Output

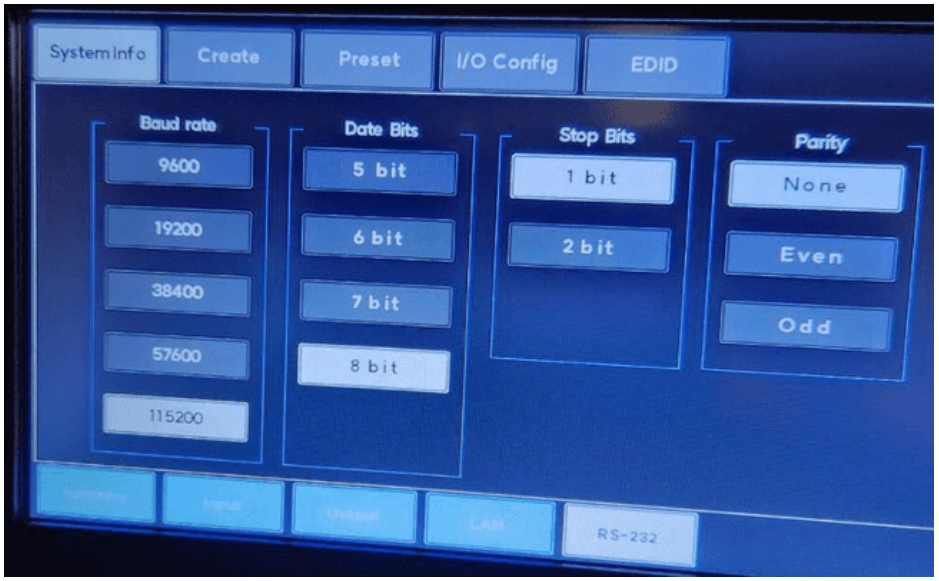


- It displays the output port number, sink EDID information, firmware version, output mode, and outgoing signal information.

◆ System info – LAN

- It displays the matrix switcher's current LAN setting status. Users can change the LAN setting according to the installation environment.

◆ System info – RS-232

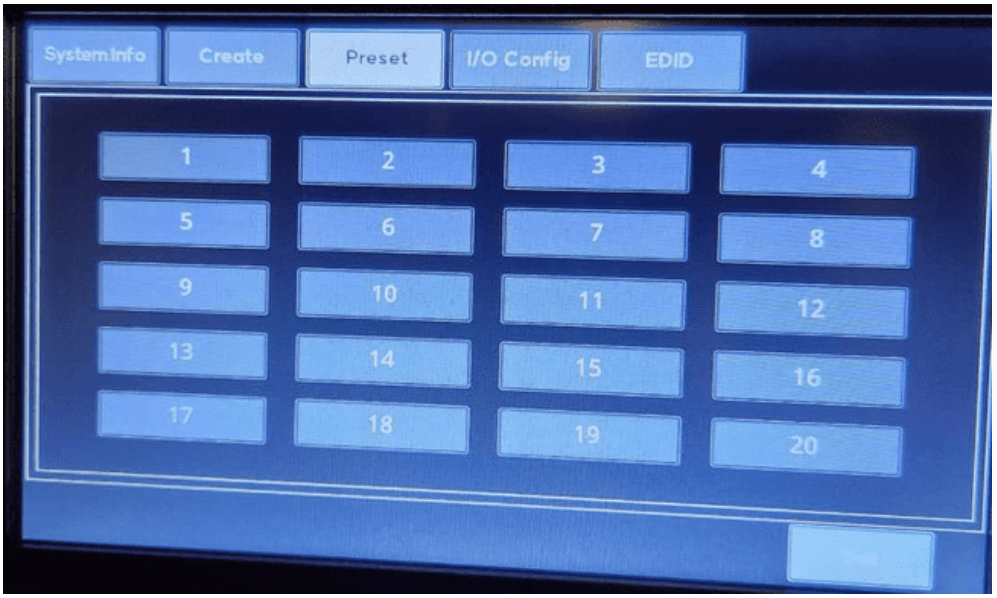


- It displays the matrix switcher's current RS-232 serial communication setting. Users can change the setting according to the installation environment.

◆ Create

- This section will guide users on how to create switching between inputs and outputs.
- Press each input and output number(s) to route the source signal to the destination device(s) and press the "Enter" button on the bottom right to execute. Users can send one input to multiple outputs. "Set ALL" to select All outputs, and "Clr ALL" to clear All outputs.

◆ Preset

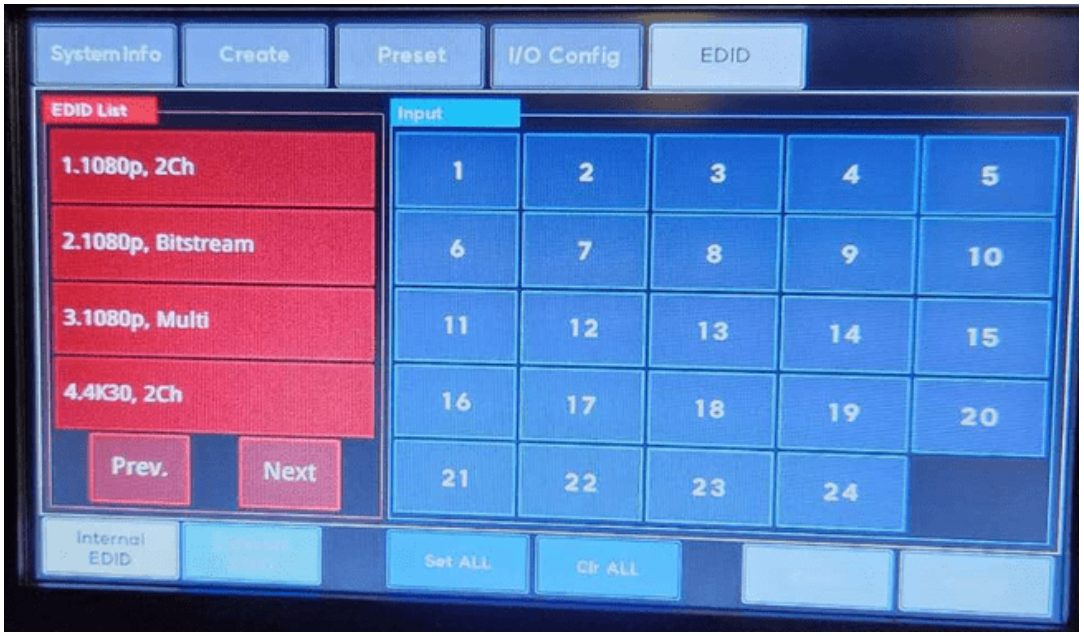


- This section provides a Preset recall function for the users to execute predefined multiple switching at once.
- Preset can be configured via the web interface or API commands.
- When a preset is recalled, it replaces the current switching configuration.

◆ I/O Config

- This section provides output scaling settings for the users.
- Users can set output resolution independently per output channel or all outputs together.
- Select scaler output timing -> output #(s) -> Enter

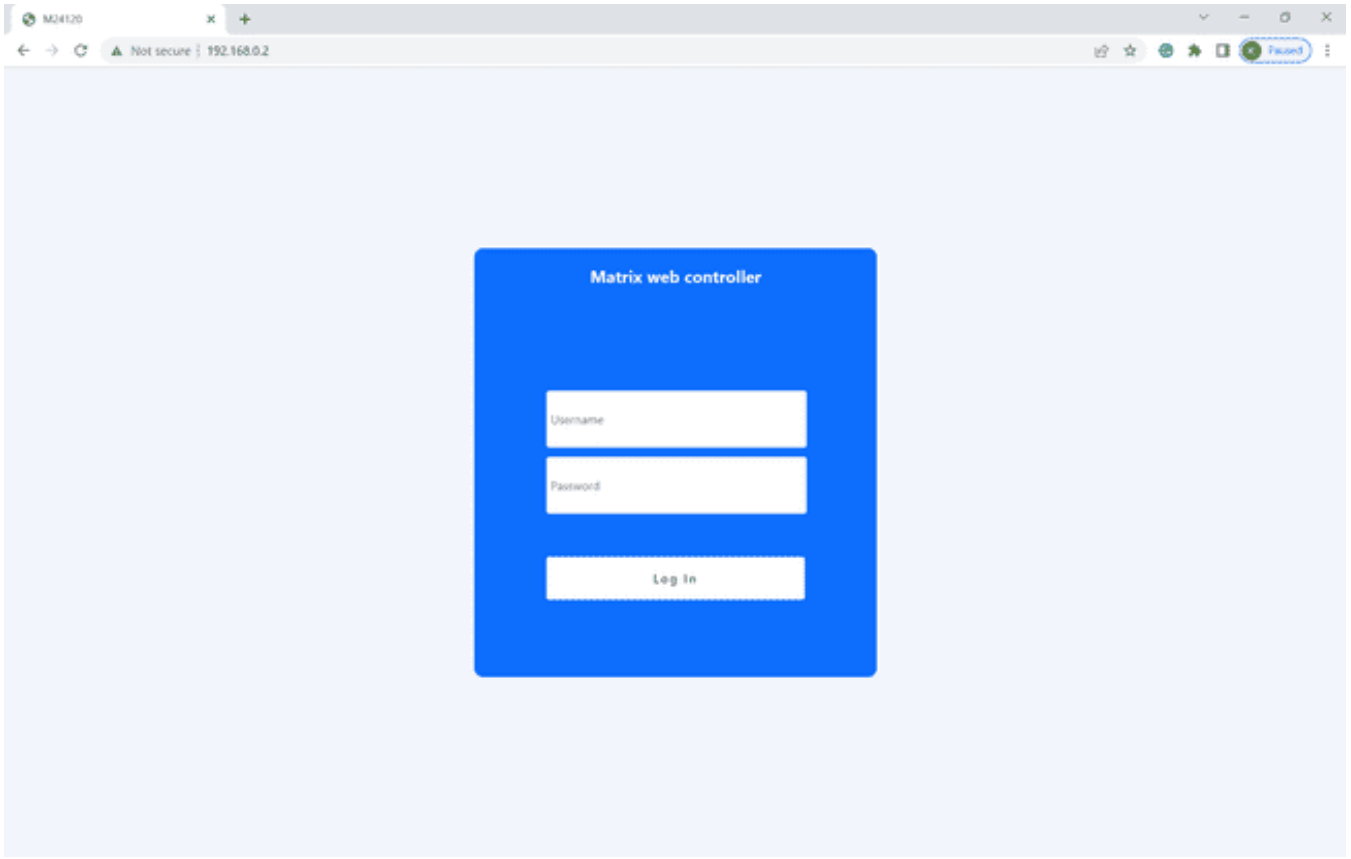
◆ EDID



- This section provides an EDID management system; an easy and fail-safe way to handle EDID, via internal EDID and output EDID emulation.
- User can either use pre-stored internal EDID or emulate EDID data from display devices that are connected to the matrix switcher's output port.
- Select EDID from EDID list -> Enter to save.

§ 4 Web GUI User Guide

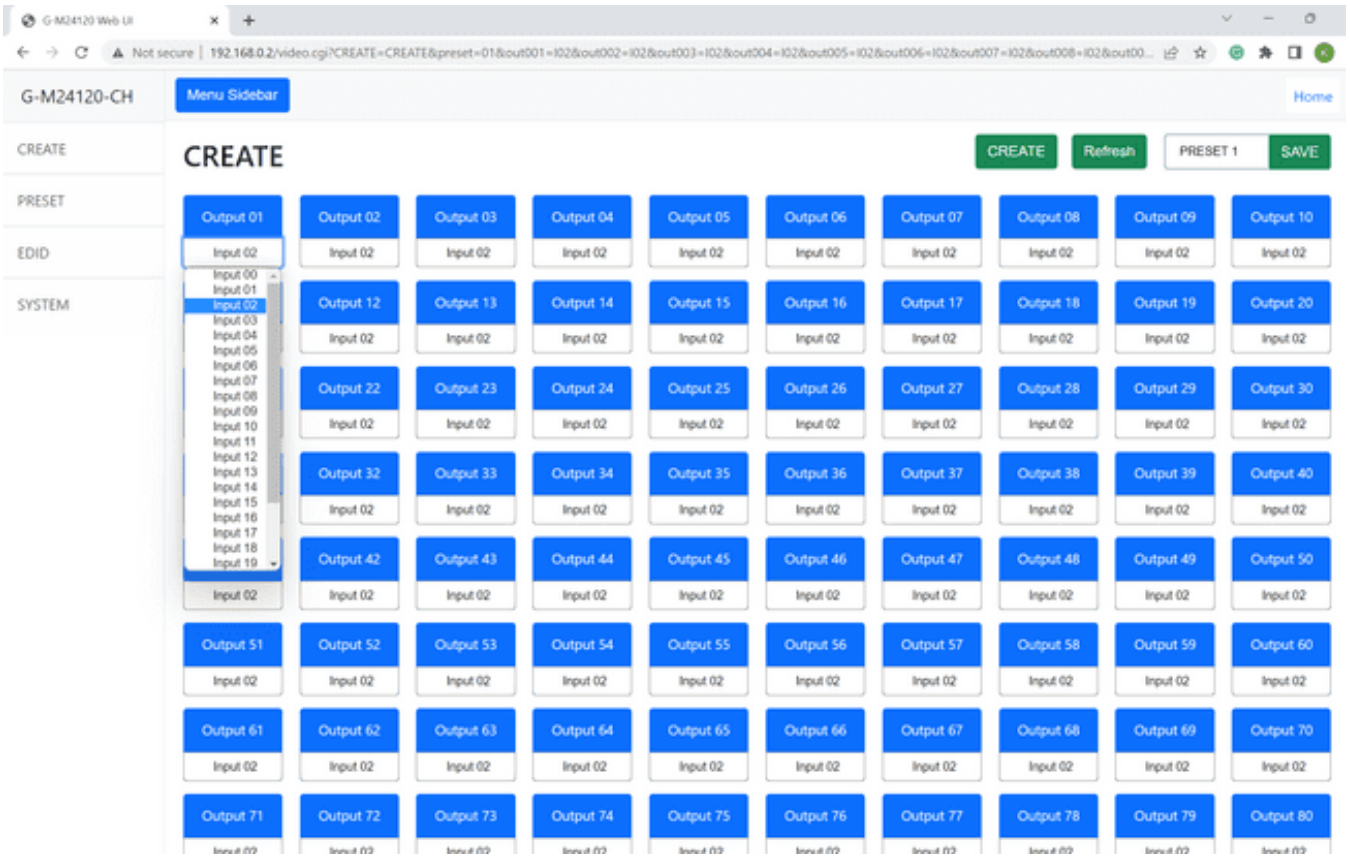
1) Type Matrix's IP address on PC's web browser to enter Web GUI page
2) Login page will appear when you enter Web GUI page



- Factory default Username and Password

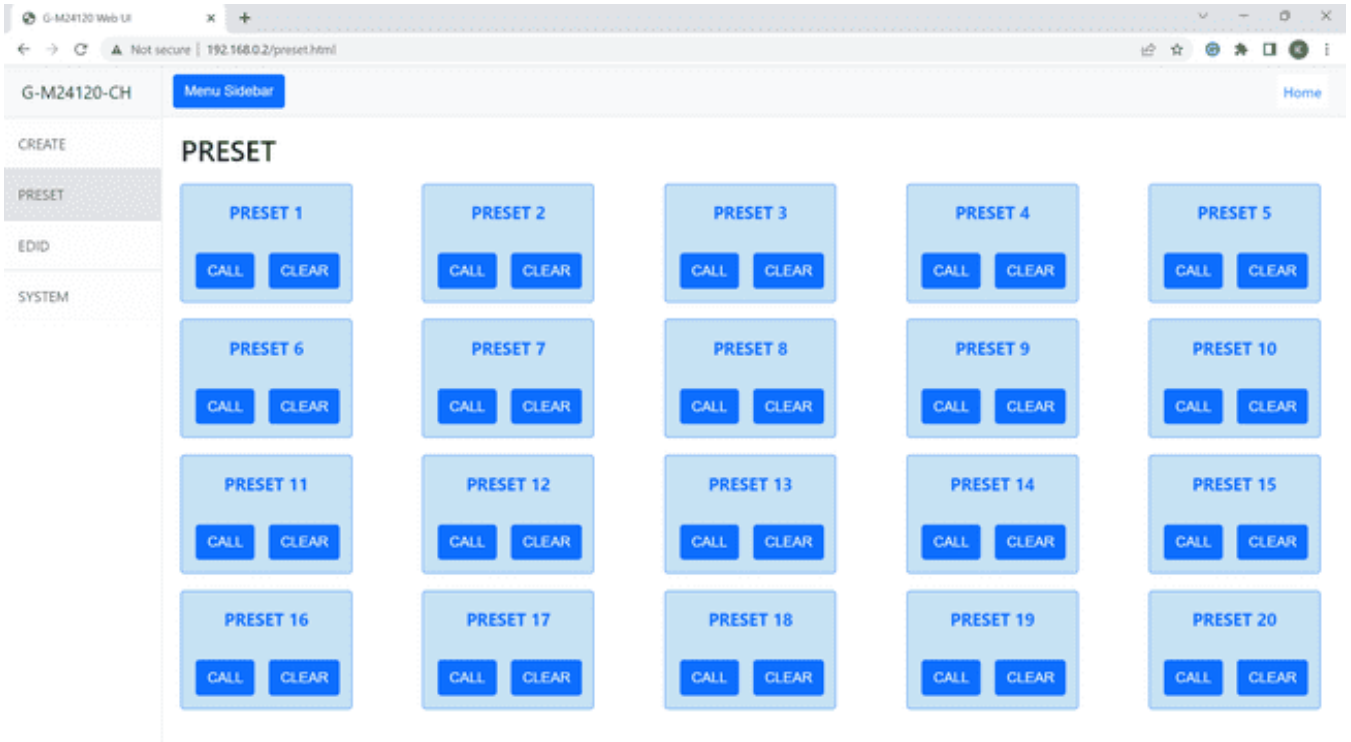
Username : Admin
Password : admin

3) CREATE



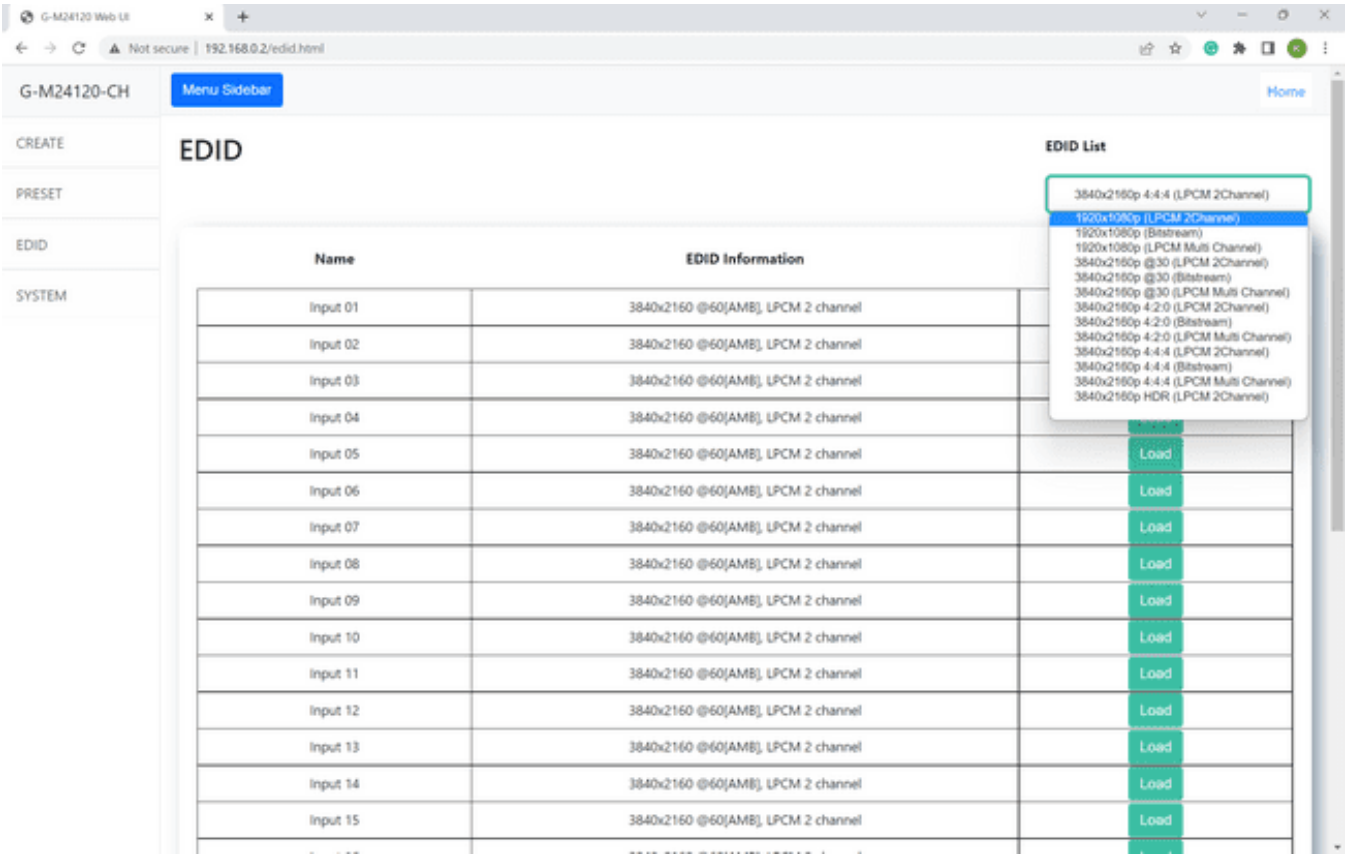
- For each output, please use the input's drop-down menu to select input # to switch video source for the output port, and then click Create button to execute.
- When the Refresh button is clicked, it will display the matrix's current switching status.
- When the Preset Save button is clicked, the current input/output switching status will be saved as a preset.

4) PRESET



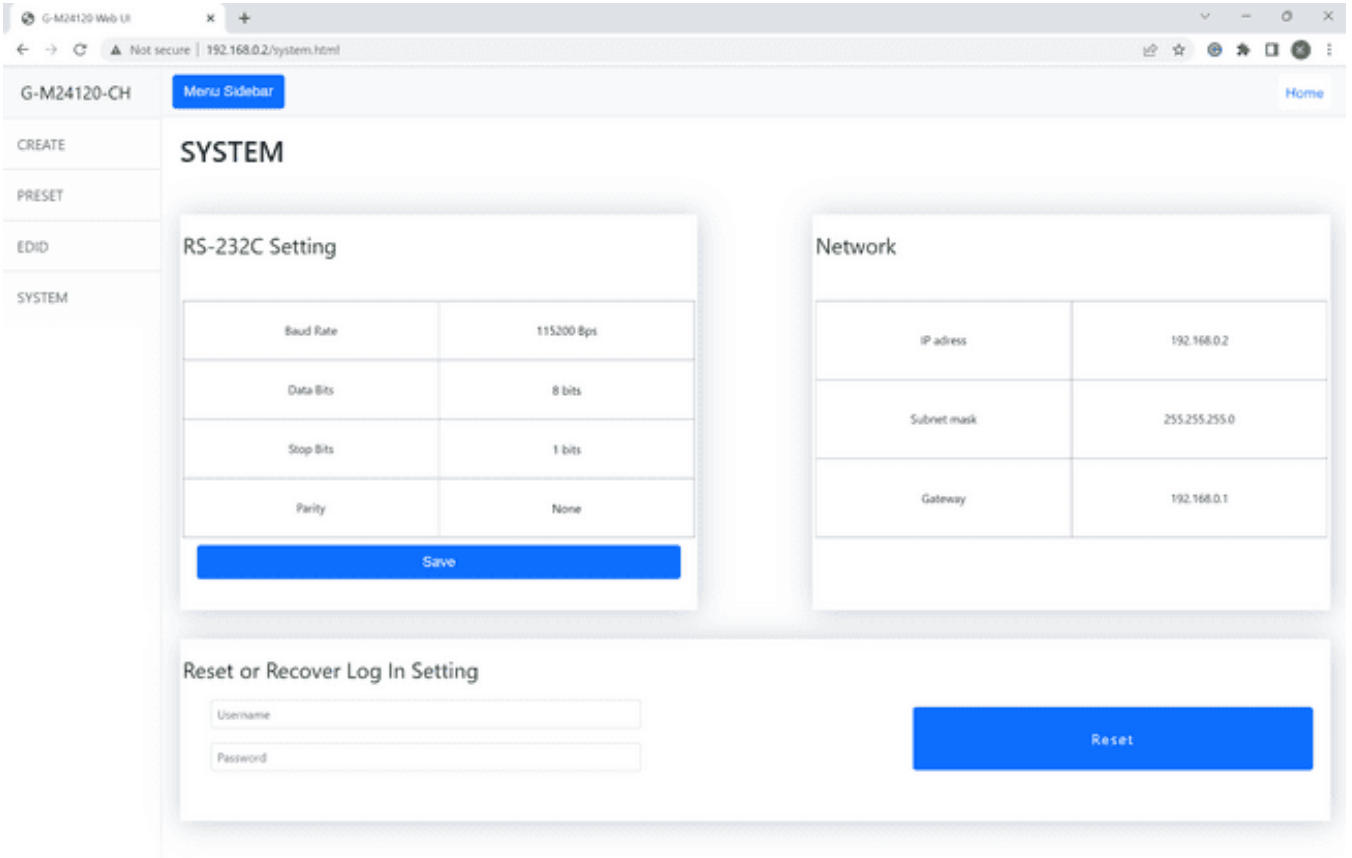
- Users can recall preset or clear the presets.

5) EDID



- For each input, the users can select EDID from the EDID list.
- Click the Load button to save the EDID setting.
- Click the Refresh button to retrieve each input's current EDID information from the matrix switcher.

6) SYSTEM



- Set the RS-232C setting and click the Save button to save.
- On the Network Information menu, the user can only check the matrix switcher's current IP settings and the user can use the matrix switcher's front panel button to configure the Network setting.
- On the Reset or Recover Log In the setting menu, the user can change the login username and password.

§ 5 Control Command

KanexPro FLEX series can be controlled by the front panel, RS-232 and Ethernet.
API command is consist with ASCII and it uses combination of letters and numbers.

ASCII Command
x – Parameter 1 y - Parameter 2 ! - Delimiter

5.1 System Setup Command

Command Code	Function Description	Example	Feedback
s reboot!	Reboot the device	s reboot!	Reboot... System Initializing... Initialization Finished! FW version x.xx.xx
r type!	Get device model	r type!	M1616KT
r fw version!	Get Firmware version	r fw version!	MCU APP: Vx.xx.xx
s reset!	Reset to factory defaults	s reset!	Reset to factory defaults System Initializing... Initialization Finished! FW version x.xx.xx
r link in x!	Get the connection status of the x input port，x=0~16(0=all	r link in 1!	hdmi input 1: connect
r link out y!	Get the connection status of the y output port, y=0~16(0=all)	r link out 1!	hdmi output 1: connect
r ipconfing!	Get the Current IP Configuration	r ipconfig!	IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=80 Telnetport=23 Mac address: 00:1C:91:03:80:01
r mac addr!	Get network MAC address	r mac addr!	Mac address: 00:1C:91:03:80:01
r ip mode!	Get network IP mode	r ip mode!	IP Mode: Static
r ip addr!	Get network IP address	r ip addr!	IP address: 192.168.1.100
r subnet!	Get network subnet mask	r subnet!	Subnet Mask: 255.255.255.0
r gateway!	Get network gateway	r gateway!	Gateway:192.168.1.1
r tcp/ip port!	Get network TCP/IP port	r tcp/ip port!	TCP/IP port:80
r telnet port!	Get network telnet port	r telnet port!	Telnet port:23
r connect!	Get connection status	r connect!	

5.2 Preset Command

Command Code	Function Description	Example	Feedback
s save preset z!	Save switch state between all output port and the input port to preset z, z=1~8	s save preset 1!	save to preset 1
s recall preset z!	Call saved preset z scenarios, z=1~8	s recall preset 1!	recall from preset 1
s clear preset z!	Clear stored preset z scenarios, z=1~8	s clear preset 1!	clear preset 1
r preset z!	Get preset z information, z=1~8	r preset 1!	Video crosspoint

5.3 Output Setting Command

Command Code	Function Description	Example	Feedback
s in x av out y!	Set input x to output y， x=1~16, y=0~16(0=all	s in 1 av out 2!	input 1 -> output 2
r av out y!	Get output y signal status y=0~16(0=all)	r av out 0!	input 1 -> output1 input 2 -> output2 …… input 16 -> output 16
s hdmi y stream z!	Set output y stream on/off, y=0~16(0=all) z=0~1(0:disable,1:enable)	s hdmi 1 stream1! s hdmi 0 stream1!	Enable hdmi output 1 stream Disable hdmi output 1 stream Enable hdmi all outputs stream Disable hdmi all outputs stream
r hdmi y stream!	Get output y stream status, y=0~16(0=all)	r hdmi 1 stream!	Enable hdmi output 1 stream

5.4 EDID Setting Command

Command Code	Function Description	Example	Feedback
s edid in x from z!	Set input x EDID from default EDID z, x=0~16 (0=all),z=1~39 1, 1080p,Stereo Audio 2.0 2, 1080p,Dolby/DTS 5.1 3, 1080p,HD Audio 7.1 7, 3D,Stereo Audio 2.0 8, 3D,Dolby/DTS 5.1 9, 3D,HD Audio 7.1 10, 4K2K30_444,Stereo Audio 2.0 11, 4K2K30_444,Dolby/DTS 5.1 12, 4K2K30_444,HD Audio 7.1 13, 4K2K60_420,Stereo Audio 2.0 14, 4K2K60_420,Dolby/DTS 5.1 15, 4K2K60_420,HD Audio 7.1 16, 4K2K60_444,Stereo Audio 2.0 17, 4K2K60_444,Dolby/DTS 5.1 18, 4K2K60_444,HD Audio 7.1 19, 4K2K60_444,Stereo Audio2.0 HDR 24, copy from hdmi output1 25, copy from hdmi output2 26, copy from hdmi output3 27, copy from hdmi output4 28, copy from hdmi output5 29, copy from hdmi output6 30, copy from hdmi output7 31, copy from hdmi output8 32, copy from hdmi output9 33, copy from hdmi output10 34, copy from hdmi output11 35, copy from hdmi output12 36, copy from hdmi output13 37, copy from hdmi output14 38, copy from hdmi output15 39, copy from hdmi output16	s edid in 1 from 1! s edid in 0 from 1!	input1 EDID:1080p, StereoAudio2.0 all inputsEDID:1080p, StereoAudio2.0
edid in x!	Get EDID status of the input x，x=0~16(0=all input)	r edid in 0!	input1 EDID:4K2K60_444, StereoAudio 2.0 …… input4 EDID:4K2K60_444, StereoAudio 2.0
r edid data hdmi y!	Get the EDID data of the hdmi output y port，y=1~16	r edid data hdmi1!	EDID: 00 FF FF FF FF FF FF 00 ……

5.5 Video wall creation command

s wall v set hdiv w vdiv x time y out z!

- v : Wall number
  -> You can create up to 30 video wall. (1 ~ 30)
  When configuring multiple video walls within a matrix system, each video wall number must be set differently.
  Wall number is useful when changing the input source of the video wall.

- w : # of Rows of the video wall
- x : # of Columns of the video wall
- y : Video wall output resolution
  -> You must set the output resolution of the video wall. It does not support Auto resolution setup.
  1. **Auto : Does not support**
  2. **720x480p60**
  3. **720x576p50**
  4. **1280x720p50**
  5. **1280x720p59**
  6. **1280x720p60**
  7. **1920x1080p50**
  8. **1920x1080p59**
  9. **1920x1080p60**
  10. **3840x2160p30**
  11. **3840x2160p50**
  12. **3840x2160p59**
  13. **3840x2160p60**
  14. **1024x768p60**
  15. **1280x1024p60**
  16. **1920x1200p60**

- z : Video wall starting output port# setting
  -> The video wall output starting port must always start with each output card's 1st, 5th and 9th ports. For example, output 1, 5, 9, 13, 17, 21, -----, 109, 113, and 117. It supports up to 4x3 video wall.
  In an example of 2x2 video wall with starting output port set to 1, output 1,2,3,4 will be used to configure the video wall automatically.

**** Example code: s wall 1 hdiv 3 vdiv 3 time 13 out 13!
-> Set video wall no.1 as 3x3 video wall mode with 3840x2160p60 and the video wall starts from output 13.

Output 13	**Output 14**	**Output 15**
Output 16	**Output 17**	**Output 18**
Output 19	**Output 20**	**Output 21**

5.6 Video wall switching command

s in x wall out y!

- x : input source number
- y : video wall number

  **** Example code: s in 2 wall out 2!

  -> Switch video wall no.2 input source to input number 2.

5.7 Video wall off command

s wall x off!

- x : video wall number

  **** Example code: s wall 2 off!

  -> Turn off the video wall no.2 and set it to a normal switching mode.

5.8 Quadiview creation command

s quad on layer x time y out z!

- x : Quadview layout setting

  -> 3 layouts (1 ~ 3)
- y : Quadview output resolution setting

  -> You must set the output resolution of the Quadview. It does not support Auto resolution setup.

  1. Auto : Does not support

  2. 720x480p60

  3. 720x576p50

  4. 1280x720p50

  5. 1280x720p59

  6. 1280x720p60

  7. 1920x1080p50

  8. 1920x1080p59

  9. 1920x1080p60

  10. 3840x2160p30

  11. 3840x2160p50

  12. 3840x2160p59

  13. 3840x2160p60

  14. 1024x768p60

  15. 1280x1024p60

16. 1920x1200p60

- z : Quadview starting output port# setting
  -> Same as the Video wall setting, Quadview output starting port must always start with each output card's 1st, 5th and 9th ports. For example, output 1, 5, 9, 13, 17, 21, -----, 109, 113, and 117.
  **** Example code: s quad on layer 1 time 9 out 1!
  -> Set a quadview layout 1 with 1920x1080p60 resolution starting with output 1.

5.9 Quadiview off command

s quad off out x!

- x : Quadview starting output number
  -> Turn off the quadview mode and set it to a normal switching mode
  **** Example code: s quad off out 1!
  -> Turn off the quadview mode on output 1,2,3,4 and set it to a normal switching mode.

5.10 CEC command

s cec hdmi out y on!

- y : CEC command output port number (0 : All output)
  -> Send power on CEC command to the display that is connected to the Rx extender
  **** Example code: s cec hdmi out 0 on!
  -> Send power on command to all the outputs

s cec hdmi out y off!

- y : CEC command output port number (0 : All output)
  -> Send power off CEC command to the display that is connected to the Rx extender
  **** Example code: s cec hdmi out 0 off!
  -> Send power off command to all the outputs

5.11 CEC custom command

s cec send out y cmd xx xx xx xx!

- y : CEC command output port number (0 : All output)
- xx : CEC command data (supports both lower and upper case letter)
  -> Send custom CEC command xx xx xx xx to the display that is connected to the Rx extender
  **** Example code: s cec send out 0 cmd ef 82 10 00!
  -> Send CEC command 0xEF/0x82/0x10/0x00 to all the outputs

5.12 Output scaler resolution setting command

s hdmi y scaler z!

- y : Output port number (0 : All output)
- z : Output resolution setting (1 ~ 16)

1. Auto :

2. 720x480p60

3. 720x576p50

4. 1280x720p50

5. 1280x720p59

6. 1280x720p60

7. 1920x1080p50

8. 1920x1080p59

9. 1920x1080p60

10. 3840x2160p30

11. 3840x2160p50

12. 3840x2160p59

13. 3840x2160p60

14. 1024x768p60

15. 1280x1024p60

16. 1920x1200p60

5.13 Output scaler contrast setting command

s hdmi y con z!

y : Output port (0 : All output)

z : Output contrast setting (0 ~ 255, default : 128)

5.14 Output scaler brightness setting command

s hdmi y bri z!

y : Output port (0 : All output)

z : Output brightness setting (0 ~ 255, default : 128)

5.15 Output scaler saturation setting command

s hdmi y sat z!

y : Output port (0 : All output)

z : Output saturation setting (0 ~ 255, default : 128)

5.16 Output scaler hue setting command

s hdmi y hue z!

y : Output port (0 : All output)

z : Output hue setting (0 ~ 255, default : 128)

5.17 Extender Rx reset command

s rx y reset!

y : Output port# of Rx (0: All Rx extender)

5.18 Type B command APIs

▣ Switching Command

*255C : Video connecting switch command

*255D : Video disconnecting switch command

*255P : Preset video connecting call command

▪ Video Connecting Switches

*255CIxxxOxxx!+0x0D : Command code

*255CIxxxOxxx-xxx!+0x0D : Command code

Ixxx : Input port number (I000 : Output disconnect)

Oxxx : Output port number

Examples ():

Command Codes	Action
*255CI001O012! ↵	Connect input 1 to output 12
*255CI002O001-005! ↵	Connection input 2 to output 1~5
*255CI000O002!↵	Disconnect output 2

▪ Video Disconnecting Switches

*255DI000Oxxx!+0x0D : Command code

I000 : Disconnect input parameter

Oxxx : Output port number

~~Examples ():~~

Command Codes	Action
*255DI000O012! ↵	Disconnect output 12
*255DI000O001-005! ↵	Disconnection output 1~5
*255DI000O002!↵	Disconnect output 2

▪ **Video Preset Call :**

*255PCxx!+0x0D : Command code

Cxx : Preset number

Examples ():

Command Codes	Action
*255PC02! ↵	Video preset 2 call
*255PC12! ↵	Video preset 12 call

▣ Input Config Command

*255IF : Input Infomation check command

▪ **Input Infoamtion Check Command :**

*255IFIxxx!+0x0D : Command code

Ixxx : Input number

Examples ():

Command Codes	Action

*255IFI001! ↵	Input 1 infomation check
*255IFI012! ↵	Input 12 infomation check

▣ Output Config Command

*255OF : Output infomation

*255OS : Output HDMI

*255OV : Output Video Stream Set

*255OT : Output Test Pattern Set

*255OG : Output Scaler Color Set

*255OQ : Output Quadview Set

*255OW : Output Wall Set

*255OB : Output Wall Bezel Set

*255OR : Output Reset Set

*255OC : Output CEC Set

▪ Output Infoamtion Check Command :

*255OFOxxx!+0x0D : Command code

Oxxx : Output number

Examples ():

Command Codes	Action
*255OFO001! ↵	Output 1 infomation check
*255OFO012! ↵	Output 12 infomation check

- **Output Port Wall Mode Setting Command:**

*255OWOxxx-xxxMxx : Command code

Oxxx-xxx : Wall mode all Output number

Mxx : Wall mode timing set (Mxx=00 : Wall mode off , Mxx>01 : Wall mode on)

M00: Wall mode off

M02: 720x480p@60 Wall mode on

M03: 720x576p@50 Wall mode on

M04: 1280x720p@50 Wall mode on

M05: 1280x720p@59 Wall mode on

M06: 1280x720p@60 Wall mode on

M07: 1920x1080p@50 Wall mode on

M08: 1920x1080p@59 Wall mode on

M09: 1920x1080p@60 Wall mode on

M10: 3840x2160p@30 Wall mode on

M11: 3840x2160p@50 Wall mode on

M12: 3840x2160p@59 Wall mode on

M13: 3840x2160p@60 Wall mode on

M14: 1024x768p@60 Wall mode on

M15: 1280x1024p@60 Wall mode on

M16: 1920x1200p@60 Wall mode on

Hxx : Horizontal layer division

Vxx : Vertical layer division

Oxxx : Wall layer output number

Examples) Wall mode off

*255OWO001-009M00!+0x0D

1	2	3
4	5	6
7	8	9

Examples) 2x2 wall(1,2,4,5) , 1x1(3,6,7,8,9)

*255OWO001-009M09H02V02O001O002O004O005H01V01O003O006O007O008O009!+0x0D

Examples) 3x3 wall(1,2,3,4,5,6,7,8,9)

*255OWO001-009M09H03V03O001O002O003O004O005O006O007O008O009!+0x0D

1	2
3	4

Examples) 2x2 wall(1,2,3,4)

*255OWO001-004M09H02V02O001O002O003O004!+0x0D

Examples) 1x1 wall(1,2,3,4)

*255OWO001-004M09H01V01O001O002O003O004!+0x0D

- **Output Port Wall Bezel Setting Command:**

*255OBOxxxHxxVxx!+0x0D : Command code

*255OBOxxx-xxxHxxVxx!+0x0D : Command code

*255OBOxxxOxxxHxxVxx!+0x0D : Command code

Examples ():

Command Codes	Action
*255OBO001H01V01! ↵	Ouput 1 hbezel + 1, vbezel +1
*255OBO001O005H01V01! ↵	Ouput 1,5 hbezel + 1, vbezel +1
*255OBO001-004H02V01! ↵	Ouput 1~4 hbezel + 2, vbezel +1

▪ **Output Port Quadview Setting Command:**

*255OQOxxxMxx!+0x0D : Command code

Oxxx : Output port number

Mxx : Quadview mode set (Mxx=00 : Quadview mode off , Mxx>01 : Quadview mode on)

M00: Quadview mode off

M02: 720x480p@60 Quadview mode on

M03: 720x576p@50 Quadview mode on

M04: 1280x720p@50 Quadview mode on

M05: 1280x720p@59 Quadview mode on

M06: 1280x720p@60 Quadview mode on

M07: 1920x1080p@50 Quadview mode on

M08: 1920x1080p@59 Quadview mode on

M09: 1920x1080p@60 Quadview mode on

M10: 3840x2160p@30 Quadview mode on

M11: 3840x2160p@50 Quadview mode on

M12: 3840x2160p@59 Quadview mode on

M13: 3840x2160p@60 Quadview mode on

M14: 1024x768p@60 Quadview mode on

M15: 1280x1024p@60 Quadview mode on

M16: 1920x1200p@60 Quadview mode on

Lxx : Quadview layer set

Examples ():

Command Codes	Action
*255OQO001M13L05! ↵	Set the quadview output 1~4 (Timing 3840x2160@60)

▪ **Output Port Scaler Timing Setting Command**

*255OSOxxxHxx!+0x0D : Command code

*255OSOxxx-xxxHxx!+0x0D : Command code

*255OSOxxxOxxxHxx!+0x0D : Command code

Oxxx : Output port number

Hxx: HDMI output timing set

H01: Auto

H02: 720x480p@60

H03: 720x576p@50

H04: 1280x720p@50

H05: 1280x720p@59

H06: 1280x720p@60

H07: 1920x1080p@50

H08: 1920x1080p@59

H09: 1920x1080p@60

H10: 3840x2160p@30

H11: 3840x2160p@50

H12: 3840x2160p@59

H13: 3840x2160p@60

H14: 1024x768p@60

H15: 1280x1024p@60

H16: 1920x1200p@60

Examples ():

Command Codes	Action
*255OSO001H01! ↵	Set auto Output 1 scaler timing
*255OSO002-006H09! ↵	Set 1920x1080p@60 Output 2~6 scaler timing
*255OSO001O004H13!↵	Set 3840x2160p@60 Output 1,4 scaler timing

- **Output Scaler Stream Setting Command**

*255OVOxxxMxx!+0x0D : Command code

*255OVOxxx-xxxMxx!+0x0D : Command code

*255OVOxxxOxxxMxx!+0x0D : Command code

Oxxx : Output port number

Mxx : Video Stream Set

(M00 : Normal , M01 : Freeze , M02 : Black)

Examples ():

Command Codes	Action
*255OVO001M01! ↵	Set output 1 video freeze
*255OVO001-004M02! ↵	Set output 1~4 video black
*255OVO001O004M02!↵	Set output 1,4 video black

▪ **OUT Test Pattern:**

*255OTO002M00! ↵	Output port 2 information return
*255OTO001-004M02! ↵	

▪ **Output Graphic Setting Command**

*255OGOxxxBxxx!+0x0D : Command code

*255OGOxxx-xxxHxxx!+0x0D : Command code

*255OGOxxxOxxxSxxx!+0x0D : Command code

Oxxx : Output port number

Bxxx : Brightness Set (0~255 , Default : 128)

Hxxx : Hue Set (0~255 , Default : 128)

Sxxx : Saturation Set (0~255 , Default : 128)

Cxxx : Contrast Set (0~255 , Default : 128)

Examples ():

Command Codes	Action
*255OGO001C128! ↵	Set output 1 contrast to 128
*255OGO001-004B100! ↵	Set output 1~4 brightness to 100
*255OGO001O004B100! ↵	Set output 1,4 brightness to 100

- **Output CEC Setting Command**

*255OCOxxxM01!+0x0D : Command code

*255OCOxxxOxxxM01!+0x0D : Command code

*255OCOxxx-xxxM01!+0x0D : Command code

*255OCOxxxOxxxS"xxxx"!+0x0D : Command code

Oxxx : Output port number

M00 : Power OFF

M01 : Power ON

S"xxxxxxxxxx" : CEC Stream Set

Examples ():

Command Codes	Action
*255OCO001O005S"FE36"! ↵	Set output 1,5 cec stream data
*255OCO001-004S"FE8210F0"! ↵	
*255OCO001-004M01!↵	Set output 1~4 power on cec

§ 6 Warranty Information

KanexPro – 3 Year Limited Warranty Policy

Coverage

* KanexPro Products must be acquired from an Authorized KanexPro reseller and purchased past September 1, 2015 in order to qualify for our three-year warranty.

KanexPro warrants its products will greatly perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service for up to three years.

Under its Limited Product Warranty, KanexPro, at its sole discretion, will either:

1. Repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping

OR

2. Replace and return, free of charge, any defective products with direct replacement or with similar products deemed by KanexPro to perform substantially the same function as the original products

Repair, replacement or refund of KanexPro products is the purchaser's exclusive remedy and KanexPro liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of KanexPro products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

For more information visit kanexpro.com/warranty