

SD-PS-M641 6x1 4K Presentation Switcher with Multi-view & HDBaseT

User Manual

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1. Product Introduction

Thank you for selecting the 6x1 4k presentation switcher. The presentation switcher offers four HDMI, one display port and one USB-C inputs along with mirrored HDMI and HDBaseT outputs. The HDBaseT output supports PoC and can be paired with a compatible HDBaseT receiver to extend 4k@30Hz/1080P signal up to 40 meters (131ft) / 70 meters (230ft) all over a single CATx cable.

The switcher features external line audio input that can be embedded into any HDMI input, and provides microphone input for audio mixing. The presentation switcher provides multi-view functionality and supports up to 16 multi-mode layouts. The switcher features a wide range of control flexibility via front panel buttons, built-in web GUI, IR remote, RS232 and CEC.

1.1. Features

- 6x1 4K Presentation Switcher with HDBaseT output.
- Supports seamless and auto switching.
- HDMI 1.4 and HDCP 2.2 compliant.
- Extends HDMI signals to distance up to 40 meters at 4K and 70 meters at 1080p.
- Supports audio embedded, audio de-embedding and microphone audio mixing.
- Supports multi-view with 16 preset layouts and 4 custom layouts
- Controllable via front panel buttons, GUI, IR remote, RS232 and CEC.

1.2. Package List

SD-PS-M641 (NR) Switcher

- 1x 6x1 4K Presentation Switcher
- 2x Mounting Ears with 4 Screws
- 4x Plastic Cushions
- 2x 3-pin Terminal Blocks
- 2x 5-pin Terminal Blocks
- 1x IR Remote
- 1x IR Receiver
- 1x IR Emitter
- 1x RS232 Cable (3-pin to DB9)
- 1x Power Adapter (24V DC 5A)
- 1x Power Cord
- 1x User Manual

HBT70PHS-RX Receiver

- 1x HDBaseT Receiver
- 2x Mounting Ears with 4 Screws
- 4x Plastic Cushions
- 1x 3-pin Terminal Block

2. Specification 2.1. SD-PS-M641 Switcher

Video Input							
Video Input	(4) HDMI IN (1~4), (1) DP, (1) USB-C						
Video Input Connector	(4) Type-A female HDMI, (1) DisplayPort, (1) Type-C USB						
	HDMI: Up to 4K@30Hz 4:4:4						
Input Resolution	DP: Up to 4K@30Hz 4:4:4						
	USB-C: Up to 4K@30Hz 4:4:4						
Video Output							
Video Output	(1) HDMI, (1) HDBaseT						
Video Output Connector	(1) Type-A female HDMI, (1) RJ45						
Output Decelution	HDMI: Up to 4K@30Hz 4:4:4						
Output Resolution	HDBaseT: Up to 4K@30Hz 4:4:4						
HDMI Standard	Up to 1.4						
HDCP Version	Up to 2.2						
Audio Input							
Audio Input	(1) LINE, (1) MIC						
Audio Input Connector	(2) 3-pin terminal blocks						
Frequency Response	20Hz ~ 20kHz, ±3dB						
Max Input Level	2.0Vrms ± 0.1						
L-R Level Deviation	< 0.3dB, 1kHz sine at 0dBFS level (or max level before clipping)						
Input Impedance	> 10KΩ						
LINE/MIC Audio Format	PCM 2.0						
HDMI/DP Audio Format	PCM 2.0 48K						
L+R Audio Output							
Audio Output	(1) L+R						
Audio Output Connector	(1) 5-pin terminal block						
Frequency Response	20Hz ~ 20kHz, ±1dB						
Max Output Level	2.0 ± 0.1Vrms						
THD+N	< 0.05%, 20Hz ~ 20kHz bandwidth, 1kHz sine at 0dBFS level (or						
	max level)						
SNR	> 80dB, 20Hz ~ 20kHz bandwidth						
Crosstalk Isolation	< -70dB, 10kHz sine at 0dBFS level						

L-R Level Deviation	< 0.3dB, 1kHz sine at 0dBFS level (or max level before clipping)					
Output Load Capability	1KΩ and higher (Supports 10x paralleled 10KΩ loads)					
Noise Level	-80dB					
SPDIF Audio Output						
SPDIF Out	(1) SPDIF					
Audio Out Connector	(1) Toslink					
Max Output level	±0.3dBFS					
Frequency Response	20Hz ~ 20kHz, ±1dB					
THD+N	< 0.05%, 20Hz ~ 20kHz bandwidth, 1kHz sine at 0dBFS level (or max level)					
Signal-to-Noise Ratio	> 90dB, 20Hz ~ 20kHz bandwidth					
Crosstalk isolation	< -70dB, 10kHz sine at 0dBFS level (or max level before clipping)					
Noise	- 90dB					
Audio Format	PCM 2.0					
Control						
Control port	(1) CONTACT IN, (1) IR IN, (1) IR OUT, (1) IR EYE,					
Control port	(1) FIRMWARE, (1) RS232, (1) TCP/IP					
Control Connector	(1) 5-pin terminal block, (3) 3.5mm jack, (1) Type-A USB,					
Control Connector	(1) 3-pin terminal block, (1) RJ45					
General						
General						
Operation Temperature	-5°C ~ +55°C					
Operation Temperature Storage Temperature	-5°C ~ +55°C -25°C ~ +70°C					
Operation Temperature Storage Temperature Relative Humidity	-5°C ~ +55°C -25°C ~ +70°C 10% ~ 90%					
Operation Temperature Storage Temperature Relative Humidity External Power Supply	-5°C ~ +55°C -25°C ~ +70°C 10% ~ 90% Input: AC 100~240V, 50/60Hz; Output: 24V DC 5A					
Operation Temperature Storage Temperature Relative Humidity External Power Supply Power Consumption	-5°C ~ +55°C -25°C ~ +70°C 10% ~ 90% Input: AC 100~240V, 50/60Hz; Output: 24V DC 5A 90w (Max)					
Operation Temperature Storage Temperature Relative Humidity External Power Supply Power Consumption USB-C Power Charging	-5°C ~ +55°C -25°C ~ +70°C 10% ~ 90% Input: AC 100~240V, 50/60Hz; Output: 24V DC 5A 90w (Max) 60w (Max)					
Operation Temperature Storage Temperature Relative Humidity External Power Supply Power Consumption USB-C Power Charging Dimension (W*H*D)	-5°C ~ +55°C -25°C ~ +70°C 10% ~ 90% Input: AC 100~240V, 50/60Hz; Output: 24V DC 5A 90w (Max) 60w (Max) 250mm x 44mm x 200mm					

2.2. HBT70PHS-RX Receiver

Input and Output	
Input	(1) HDBT IN
Input Connector	(1) RJ45
Output	(1) HDMI OUT
Output Connector	(1) Type-A female HDMI
Control	(1) IR IN, (1) IR OUT, (1) RS232
Control Connector	(2) 3.5mm jack, (1) 3-pin terminal block
General	
Maximum Video Resolution	4K@60Hz 4:2:0, including 1080p@60Hz
Transmission Mode	HDBaseT
Transmission Distance	1080p signal to 70m, 4K signal to 40m
Bandwidth	10.2Gbps
Video Standard	HDMI 1.4 with HDCP 2.2
Power Consumption	7 watts
Operation Temperature	-5℃ ~ +55℃
Storage Temperature	-25℃ ~ +70℃
Operating Humidity	0% ~ 90%
Power Supply	Input Power: 24VDC 1.25A or Power over HDBaseT (PoH);
	AC Adaptor Input Power: 100~240VAC, 50/60Hz
Dimension (W*H*D)	115mmx16.2mm x109mm
Net Weight (g)	196g



- (1) IR LED: Built-in IR sensor, receives IR signal sent from IR remote.
- (2) **POWER LED:** Illuminates red when switcher is in standby mode or illuminates green when device is powered on.
- (3) INPUT BUTTONS (1~4): Input source selectors.
 - HDMI/DP LED: Indicates HDMI or DP source for the third input channel.
 - HDMI/USB-C LED: Indicates HDMI or USB-C source for the fourth input channel.
- (4) AUTO BUTTON: Auto switching mode selector.
- **(5) SWAP:** Cycle swap the video source of window display in anticlockwise.
- 6 MULTIVIEW: Total four buttons for choosing Multi-view mode.
- SELECT/FULL SCREENS (A~B): Four buttons for window selection and full screen setting.
- (8) **RESIZE:** Adjust the windows size.
- AUDIO SOURCE: Select the audio source, and the correspond LED (1~4) will illuminate blue. When select the LINE audio, the button illuminates blue.
- (1) VOLUME: Variable audio control
 - Press the volume knob to select microphone or source audio control.
 - Rotate the knob to increase or decrease the volume of the selected audio.
 - Press and hold the knob at least 3 seconds to mute the selected audio, rotate the knob to unmute.

3.2. Switcher Rear Panel



- (1) INPUTS: Four HDMI inputs, one DisplayPort and one USB-C input.
- (2) OUTPUTS: One HDMI and one HDBaseT output. The HDBaseT output supports 48V PoC.
- 3 AUDIO IN:
 - LINE: Line audio input which can be embedded in any HDMI input.
 - MIC: Microphone input for audio mixing. Set 48V phantom power mode switch as needed: ON for Condenser microphone; OFF for Dynamic microphone.
- **4** AUDIO OUT:
 - L+R: Balanced analog audio ouput for audio de-embedding.
 - SPDIF: Digital SPDIF audio output for audio de-embedding.
- **5** CONTROL:
 - CONTACT IN: Contact external sensors, buttons and other devices for input source selection.
 - IR IN: Connects to IR receiver for IR pass-through.
 - IR OUT: Connects to IR emitter for IR pass-through.
 - IR EYE: Connects to IR receiver for local switcher control.
 - FIRMWARE: Type-A USB for firmware upgrade.
 - RS232: 3-pin terminal block for RS232 control.
 - TCP/IP: RJ45 port to control the switcher via GUI.
- 6 DC 24V: DC connector for power adapter connection.

3.3. Receiver Front and Rear Panel



- 1 LINK: HDBT Link status indicator:
 - OFF: No Link.
 - GREEN: Link Successful.
 - Blinking GREEN: Link abnormal.
- 2 HDCP: HDCP compliant indicator
 - OFF: No HDMI traffic.
 - GREEN: Traffic with HDCP.
 - Blinking GREEN: Traffic without HDCP.
- ③ POWER LED: Illuminates red when device is powered on.
- (4) RS232: 3-pin terminal block for RS232 control.
- (5) IR IN: Connects to IR receiver for IR pass-through.
- 6 IR OUT: Connects to IR emitter for IR pass-through.
- 7 HDMI Output: Connect with HDMI display.
- (8) **HDBaseT input:** Connect to the HDBT OUT port on the transmitter via CAT5e/ CAT6a cable.
- (9) DC 24V: DC connector for power adapter connection.

3.4. System Connection



4. Front Panel Control

4.1. Multi-view Mode Selection

There are four multi-view modes can be selected by front panel buttons.



The factory default multi-view mode is quartered window mode, and there is a one-one correspondence between the four input sources and the four output windows: input 1 -> window A, input 2 -> window B, input 3 -> window C, input 4-> window D. The button LEDs (A~D) illuminate blue.

When switching to two-window (A&B) mode, the corresponding mode LED will illuminate blue, and the window A and B LEDs illuminate blue. The factory default correspondence between the two input sources and the two output windows is: input 1 -> window A, input 2 -> window B.

4.2. Full Screen Setting



Press **Windows A~D** button to select the corresponding window to display in full-screen. Meanwhile, the corresponding input source button LED and window button A LED illuminate blue, other window buttons and previous multi-view mode button LED goes out.

4.3. Swap Window Setting

Press **SWAP** button to cycle swap the video source of window display in anticlockwise, the SWAP LED lights once when press its button once.



Example: In Multi-view Mode

4.4. Window Size Setting

The window A/B/C/D size can be adjusted by repeatedly pressing the **RESIZE** button, the button LED lights once when press its button once. Please refer the GUI Multi-view Tab for more details.





4.5. Video Signal Switching

• In the Multi-view mode

Operation: Inputs# + Windows#

Example: Switch Input 1 to Windows B:

Press **INPUT 1** (The input 1 LED illuminates blue, the windows A~D LEDs flash.) Press **Windows B** (The windows A, C and D LEDs go out, then input 1 and windows B LED flash three times, last, input 1 LED goes out and windows A~D LEDs illuminate blue.)

• In the Full Screen mode

1) Manual Switching

Operation: Inputs# + Windows#

Example: Switch Input 2 to Windows A:

2) Auto Switching

Press AUTO button to enable or disable auto-switching mode. Note that auto switching

mode only works in full screen mode.

When in auto mode, the switcher will switch according to the following rules:

- The switcher will switch to the available active inputs with the priority: 1-HDMI > 2-HDMI > 3-HDMI > 3-DP > 4-HDMI > 4-USB-C. When input source and output window are connected, the corresponding LEDs illuminate blue.
- New input: The switcher will automatically select the new input once detecting a new input.
- Reboot: If power is restored to the switcher, it will automatically reconnect the input before powered off.
- In auto mode, the input source also can be switched by the manual switching steps, but not exit auto mode.
- > When full screen mode is switched into multi-view mode, the auto mode will not exit.

4.6. Switching Status Inquiry

In the Multi-view mode (Window A, B, C and D LED illuminate blue).

Operation: Windows#

Example: Press and hold **Windows B** button at least 3 seconds (Window A, C and D LED go out, and then the corresponding input source LED will illuminate blue). After 3 seconds, Window A, B, C and D LED illuminate blue.

4.7. Audio Control



By default, the HDMI and HDBT output audio follows the video source in the full screen mode, but in the Multi-view mode, the output audio is from the 1-HDMI input. The audio source can be changed by pressing the **SOURCE** button.

Press the volume knob to select microphone or source audio control. Rotate the knob to increase or decrease the volume of the selected audio. Press and hold the knob at least 3 seconds to mute the selected audio, rotate the knob to unmute.

5. IR Remote Control

The switch provides IR EYE port for IR receiver connection, and then it can be control by the below IR remote.

Note: There is no long pressing function on this IR remote, and its button functions are the same as the front panel buttons.



INPUTS: Six buttons for input source selection.
 CONFIG:

- A/M button for auto-switching mode setting.
- SWAP button for cycle swap the video source of window display.
- RESIZE button for window size adjustion.
- RES button for output resolution selection.
- ③ SELECT/FULL SCREEN: A~D buttons for output window selection and full screen setting.
- (4) MULTIVIEW: Four buttons for built-in multiview mode selection and four buttons for user-defined mode selection. The user-defined multiview modes can be set via GUI.
- (5) AUDIO SOURCE: Four buttons for audio source selection.
- 6 VOLUME:
 - Microphone audio: Mute, volume up and volume down.
 - Source audio: Mute, volume up and volume down.

6. GUI Control

The switcher can be controlled via TCP/IP. The default IP settings are:

IP Address: 192.168.0.178 Subnet Mask: 255.255.255.0

Type 192.168.0.178 in the internet browser, it will enter the below log-in webpage:

	User Name
	Please Enter
	Password
	Please Enter
1000	Login
	GUI : V1.0.0 Firmware: V1.0.0
	Username: admin

Password: admin

Type the user name and password, and then click **Login** to enter the section for video switching.

6.1. Control Tab

6.1.1. Video Control

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
			Source	eo Disp	olay Au	dio Select / Fu	Il Screen		
		1. HDMI	2. HDMI 3. H	IDMI 3. DP		A	В		
		4. HDMI	4. USB-C Au	uto		с	D		
				(00	from				
				con					
								P	ower Off

- The source selection buttons, Auto button and window A~D buttons are same as the buttons of front panel button. Please find <u>4.5 Video Signal Switching</u> for more details.
- Click "Power Off" to enter system standby mode.

			Vide	90	Display	Aud	io			
	Display:									
		On	Off							
	Command:				Send					
	Relay 1:		0-	15		Relay 2:		-		
		Manual	AULO IIII	e(1 1005)			manuat	Auto III	le(1 1005)	

6.1.2. Display Control

• **Display:** Click "On" or "Off" to power on or off the display device.

- **Command:** Type command in this box to be send to control the display device, and then click "Send".
- Relay 1~2: The function is for projection screen control, and the HDBaseT receiver which is connected to the switcher needs to have two relay ports. Click "Manual", the projection screen starts to roll up or drop down, and then click "Manual" again to stop process. After setting the auto stop time, click "Auto", the projection screen starts to roll up or drop down until the auto stop time is up.

6.1.3. Audio Control

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
			Vic	leo Disp	olay Au	dio			
		Audio Out &	HDMI Out				Mix		
	Source:	Input 1 Input	t 2 Input 3 Ir	nput 4 Line			\bigcirc		
	Source Volume:		-15	60-0dB	MI	C Volume: 📃		-60-0	dB
	Audio Out Delay	50) (0-	-150ms)		C		•	
	nadio odi ociaj.	30	115 (0	1901137					
								P	ower Off

- Source: Select audio source for audio outputs, HDMI and HDBaseT outputs.
- **Source Volume:** Volume bar, volume up, volume down and mute buttons for source audio control.
- Audio Out Delay: Set the delay time of audio output to 0~150ms.
- MIC: Turn on or off microphone input.
- **MIC Volume:** Volume bar, volume up, volume down and mute buttons for microphone audio control.

6.2. Multiview Tab

1) Pre-defined

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
				Pre-defined	User-defined	đ			
		A		B	A C	B	A B C D		
		B A		A	A		A R		
		Layout 5		Layout 6	Layout 7	, – – P	Layout 8		Resize
		Layout 9		ayout 10	A Layout 1		B C D Layout 12		Swap
		C A D Layout 13		A C D ayout 14	Layout 1	5	A C D Layout 16		Confirm
ţ									

- Up to 16 multi-view modes can be selected.
- **RESIZE:** Click the button to adjust the window size. Note that only Layout 2, Layout 5~Layout 8, Layout 9~Layout 12 can be adjusted window size.
- **SWAP:** Click the button to cycle swap the video source of window display in anticlockwise.
- Click gear icon to enter the below interface to select input souce for each window.

Setting Window Select	×
Window Select	~
Input 1 Input 2 Input 3 Input 4 HDMI DP HDMI USB-C	
Window A 💿 💿 💿 💿 💿	
Window B 💿 💿 💿 💿 💿	
Window C O O O O O O	Decire
Window D	Resize
	Swap
Confirm	Confirm
rodine	

2) User-defined

				Pr	e-define	ed 🚺	User-de	fined						
	User Layout							Wine	dow Sel	lect				
				None	Input 1	Input 2	Inp HDMI	ut 3 DP	Іпрі НDМІ	ut 4 USB-C	Start Po	osition(0-100)	End Po	sition(0~100)
1		2	Window A	۲	0	۲		•		•	[X, Y]	0, 0	[X, Y]	20, 20
3		4	Window B	•	۲	0		۲		۲	[X, Y]	0,0	[X, Y]	10, 10
0 Start		×	Window C	۲	0	0	0	•	0	۲	[X, Y]	5, 5	[X, Y]	50, 50
Posico	n ⇒ End Position		Window D	0	•	0	0	۲	0	0	[X, Y]	50, 50	[X, Y]	80, 80
Ŷ			1	Save		Recal		Defa	ult					

- User Layout: Select the user-defined layout number 1~4.
- Window Select: Select the input source for each window, and then adjust window size by setting start position and end position. Click "Save" to save the user-defined layout.

6.3. Display Setting Tab

Autom	natic Display Co	ontrol: ON			No Signal Timeout:	10	s	Send	
	Baud Rate:	9600	•	Save	l	V Hex			
Con	nmand Ending:	NULL	•	Save	Display Off:			Save	☐ x2
	Display On:			Save	Display Off x2 Delay:	1	s	Save	
	Input Delay:	3	5	Save	Display Input Select:			Save	

• Automatic Display Control: Enable or disable the function to automatically control display device.

- No Signal Timeout: Set the auto power off time that the display device will automatically power off after no signal is detected and the setting time is up.
- Baud Rate: Supports 9600, 19200, 38400, 57600 or 115200.
- **Command Format:** The default command format is ASCII, and **HEX** can be selected.
- Command Ending: NULL, CR, LF or CR+LF can be chosen.
- **Display Off:** Type RS232 command to turn off display device, and then click "Save". Select "x2" to send the command two times.
- **Display Offx2 Delay:** Set the delay time of sending the Display Off command again, and then click "Save".
- Display On: Type RS232 command to turn on display, and then click "Save".
- **Input Delay:** Set the delay time in seconds between the "Display On" and "Display Input Select" commands.
- **Display Input Select:** Type the RS232 command to select the current input source of switcher for the display device.
- Trigger: "Display On" -> Wait "Delay" -> Send "Display Input Select".

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
			O 4K@3	oHz	•	1360 × 768			
			1920 >	1200	0	1024 × 768			
			1080P			720P			
			1600>	(1200	•	Auto for Rx			
				Cor	nfirm				

6.4. Resolution Tab

- Select the output resolution for HDMI and HDBaseT outputs.
- Select "Auto for Rx" that the output resolution follows the display device.

6.5. CEC Tab

6.5.1. Source Control

Source Display User-defined Source Function 1. HDMI U E F 2. HDMI On Off Menu Play 3. HDMI Back Up Enter Stop 4. HDMI Left Down Right Pause 4. HDMI Frevious Next REW Ff	Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
Source Function Source Function 1. HDMI 2. HDMI 3. HDMI 4. HDMI 4. HDMI Freevious Next REW FF							c			
Source Function				50	Displa	y User-de	enneo			
● 1. HDMI ↓ ↓ ↓ ↓ Play ● 2. HDMI On Off Menu Play ● 3. HDMI ● ↓ ↓ ↓ ↓ ● 4. HDMI ↓ ↓ ↓ ↓ ↓ ● 5. HDMI ↓ ↓ ↓ ↓ ↓			Sour	ce		Fun	nction			
2. HDMI 3. HDMI 4. HDMI 4. HDMI 4. HDMI 4. HDMI 5. HDMI 5. HDMI 5. HDMI 5. HDMI 6. HDMI 6. HDMI 6. HDMI 6. HDMI 6. HDMI 7.			0 1.	HDMI	C	U	≡			
3. HDMI Image: Constraint of the sector of			. 2.	HDMI	On	Off	Menu	Play		
4. HDMI			3.	HDMI	Back		Enter	Stop		
4. HDMI					+	I	-			
Previous Next REW FF			. 4.	HDMI	Left	Down	Right	Pause		
Previous Next REW FF					×		-	₩		
					Previous	Next	REW	**		

• Select the HDMI input source which needs to be control, and then click function buttons.

6.5.2. Display Control

Control	Multiview	Display Setting	Resolution		EDID	Network	Tags	Security	Additional
			50	Die	lau	fined			
			50		und and a service	anneo -			
			Display		Fun	ction			
			• НДМІ		On C	Off Source			
			HDBT		Mute Volu	Ume - Volume +			

• Select the output display device which needs to be control, and then click function buttons.

6.5.3. User-defined CEC Command

			Sour	ce Display	User-defined			
		Source				Display		
(1. HDMI	Trigger 1:				Trigger 1:		
	2. HDMI		Send		• HDMI		Send	
9	3. HDMI		-					
		Trigger 2:		-		Trigger 2:		4
6	4. HDMI		Send		HDBT		Send	

• Select input source or display device, and then type CEC command in the corresponding Trigger 1 or Trigger 2 box to be sent to control the selected device.

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Таį
			0	Setting	0	Upload	
		1. HDMI	2. HDMI	3. HDMI	3. DP	4. HDMI	4. USB-
			0	HDMI Out Pass-th	irough		
			•	1920 x 1080@60	0Hz 8bit Stere	o Audio	
			•	3840 x 2160@30 User-defined	0Hz 8bit Stere	o Audio	
				Con	firm		

6 6

Select the compatible built-in EDID for the selected input source. •

Security

Additional

6.6.2. EDID Upload

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
				Setting	0	Upload			
			ι	lser-defined					
				6	poly				
				Aţ	ppy				

• Upload user-defined EDID by the below steps:

Step 1: Prepare the EDID file (.bin) on the control PC.

Step 2: Click the user-defined box, and then select the EDID file (.bin).

Step 3: Click "Apply" to upload the user-defined EDID.

6.7. Network Tab

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
			MAC Addres	s: 44-33-4C	-C9-35-12	Card ID			
			IP Addres	S: 192.168	3.0.178	Static IP			
			Subnet Mas	k: 255.255	5.255.0				
			Gatewa	y: 192.168	3.0.1				
				Cor	าทีเกา				

- Static IP or Dynamic Host Configuration Protocol (DHCP).
- Modify the static IP Address, Subnet Mask, and Gateway.

6.8. Tags Tab

	Layout 4	Layout 3	Layout 2	Layout 1	
				_	
	Layout 8	Layout 7	Layout 6	Layout 5	
	Layout 12	Layout 11	Layout 10	Layout 9	
	Layout 16	Layout 15	Layout 14	 Layout 13	
	User Layout 4	User Layout 3	User Layout 2	User Layout 1	
		ofirm			

• Modify the multiview layout labels.

6.9. Security Tab

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	Additional
				Cred	entials				
			Password:	admin		Confirm			
				Front P	anel Lock				
				ON	OFF				

- Modify the login password.
- Lock or unlock the front panel buttons.

6.10. Additional Tab

Control	Multiview	Display Setting	Resolution	CEC	EDID	Network	Tags	Security	
						_			
			Device Baud Ra	te: 9600	•	Save			
			Factory Defaul	t					

Set the baud rate of switcher and restore the switcher to factory default setting.

6.11. GUI Upgrade

Please visit at http://192.168.0.178:100 for GUI online upgrade.

Type the username and password (the same as the GUI log-in setting, modified password will be available only after rebooting) to login the configuration interface. After that, click "Administration" in the source menu to get to "Upload Firmware" as shown below:



Select the desired update file and press "Apply", it will start upgrading then. **Note:** Please don't do anything during the upgrade process to avoid upgrade failure.

7. RS232 Control

The RS232 port of switcher has two control methods.

- Local control: Connect the RS232 port to control device (e.g.PC) to control the switcher by RS232 commands.
- 2) Display device control: The RS232 port is used with the RS232 port of far-end HDBaseT receiver to control the display device (e.g. Projector).

RS232 Commands:

The command lists are used to control the switcher. The RS232 control software (e.g. docklight) needs to be installed on the control PC to send RS232 commands. After installing the RS232 control software, please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then you are able to send command in command sending area.

Baud rate: 9600

Data bit: 8

Stop bit: 1

Parity bit: none

Note:

- All commands needs to be ended with "<CR><LF>".
- In the commands, "["and "]" are symbols for easy reading and do not need to be typed in actual operation.
- Type the command carefully, it is case-sensitive.

Command	Description	Command Example and Feedback
>GetFirewareVersion	Get the firmware version.	<v1.0.0< th=""></v1.0.0<>
>SetFactoryReset	Factory Default	<factoryreset_true< th=""></factoryreset_true<>
>SetReboot	System reboot.	<reboot_en< th=""></reboot_en<>
		>SetHelp SetAV
>SetHelp [Param]	Get the command details. [Param] = Any command. [Param] = Null (All commands)	<select input="" source<br="" the="">>SetAV InParam,OutParam InParam = 1~6 1 - HDMI 1 2 - HDMI 2 3 - HDMI 3</select>

7.1. System Commands

Command	Description	Command Example and
oominana		Feedback
		4 - DP 3
		5 - HDMI 4
		6 - TYPE-C 4
		OutParam = A ~ D(NO
		THIS PARAMETER TO
		SET TO A)
		<ipaddress:< th=""></ipaddress:<>
		192.168.0.178
>GetIpAddress	Get the IP to access GUI.	<subnetmask:< td=""></subnetmask:<>
		255.255.255.0
		<gateway: 192.168.0.1<="" td=""></gateway:>
	Lock/unlock the front panel buttons.	>SetKeyboardLock EN
>SetKeyboardLock	[Param] = EN,Dis	>SetKeyboardLock Dis
[Param]	EN - Lock	<keyboardlock td="" true<=""></keyboardlock>
	Dis - Unlock (Default)	<keyboardlock false<="" td=""></keyboardlock>
>GetKeyboardLock	Get the front buttons locking status.	<keyboardlock th="" true<=""></keyboardlock>
	Enter/exit standby mode	>SetPowerOn EN
SotBowerOn [Borom]	[Param] = EN,Dis	>SetPowerOn Dis
>SelFowerOn [Farani]	EN - Exit standby (Default)	<poweron td="" true<=""></poweron>
	Dis – Enter standby	<poweron false<="" td=""></poweron>
>GetPowerOn	Get the system standby status.	<poweron th="" true<=""></poweron>
		<v1.0.0< th=""></v1.0.0<>
>GetStatus		<video< td=""></video<>
		OUT A B C D
	Get the system status.	IN 1235
		<audiosource 1<="" td=""></audiosource>
		<outputresolution 8<="" td=""></outputresolution>

7.2. Signal Switching Commands

Command	Description	Command Example and Feedback
>SetAV [InParam],[OutParam]	Switch input source to output window. [InParam] = 1 ~ 6 1 - HDMI 1 2 - HDMI 2 3 - HDMI 3	>SetAV 3 >SetAV 1,A

Command	Description	Command Example and Feedback
	4 - DP 3 5 - HDMI 4 6 - USB-C 4 [OutParam] = A ~ D (No this parameter when switching input source to window A)	<av 3,a<br=""><av 1,a<="" td=""></av></av>
>GetAV [OutParam]	Get the input source of window [OutParam]. [OutParam] = A~D (No this parameter when get input sources of all windows)	>GetAV >GetAV A <video OUT A B C D IN 1 2 3 4 <audiosource 1<br=""><video 1,="" a<="" th=""></video></audiosource></video
>SetAutoSwitch [Param]	Enable/disable auto switching mode. [Param] = EN,Dis EN - Enable (Default) Dis - Disable	>SetAutoSwitch EN >SetAutoSwitch Dis <autoswitch true<br=""><autoswitch false<="" th=""></autoswitch></autoswitch>
>GetAutoSwitch	Get the auto switching status.	<autoswitch th="" true<=""></autoswitch>
>SetInput3Type [Param]	Select the input source for the third input channel. [Param] = H,Dp H - HDMI input Dp - DP input	>SetInput3Type H <input3type h<="" th=""></input3type>
>GetInput3Type	Get the input source of the third input channel.	<input3type h<="" td=""></input3type>
SetInnut4Tvne	Select the input source for the fourth input channel. [Param] = H, C	>SetInput4Type H
->эешрицатуре	H - HDMI input C – USB-C input	<input4type h<="" td=""></input4type>
>GetInput4Type	Get the input source for the fourth input channel.	<input4type h<="" th=""></input4type>

7.3. Audio Setting Commands

Command	Description	Command Example and Feedback
	Mute/Unmute microphone audio.	>SetMicAudioMute EN
>SetMicAudioMute	[Param] = EN, Dis	>SetMicAudioMute Dis
[Param]	EN - Mute.	<micaudiomute td="" true<=""></micaudiomute>
	Dis - Unmute (Default)	<micaudiomute false<="" td=""></micaudiomute>
>GetMicAudioMute	Get the microphone audio mute status	<micaudiomute false<="" th=""></micaudiomute>
· CotMioVOL [Devem]	Set the microphone audio volume to	>SetMicVOL 6
>SetwickOL [Param]	[Param]. [Param] = 0~60 (Default: 60)	<micvol 6<="" td=""></micvol>
>GetMicVOL	Get the microphone audio volume.	<micvol 6<="" th=""></micvol>

Command	Description	Command Example and Feedback
>SetSourceAudioMute [Param]	Mute/Unmute source audio. [Param] = EN, Dis EN - Mute. Dis - Unmute (Default)	 >SetSourceAudioMute EN >SetSourceAudioMute Dis <sourceaudiomute li="" true<=""> <sourceaudiomute false<="" li=""> </sourceaudiomute></sourceaudiomute>
>GetSourceAudioMute	Get the source audio mute status	<sourceaudiomute th="" true<=""></sourceaudiomute>
>SetSourceVOL	Set the source audio volume to [Param].	>SetSourceVOL 6
[Param]	[Param] = 0~60 (Default: 60)	<sourcevol 6<="" th=""></sourcevol>
>GetSourceVOL	Get the source audio volume.	<sourcevol 60<="" th=""></sourcevol>
>SetAudioSource	Set the source audio of ouput to [Param]. [Param] = 1~5. 1 – HDMI 1 (Default)	>SetAudioSource 2
[Param]	2 – HDMI 2 3 – HDMI/DP 3 4 – HDMI/USB-C 4 5 – LINE IN	<audiosource 2<="" td=""></audiosource>
>GetAudioSource	Get the source audio of ouput.	<audiosource 1<="" th=""></audiosource>
>SetAudioMix [Param]	Enable/Disable audio mixing. [Param] = EN, Dis EN - Enable (Default) Dis - Disable	>SetAudioMix EN <audiomix th="" true<=""></audiomix>
>GetAudioMix	Get audio mixing status.	<audiomix th="" true<=""></audiomix>
>SetFullModeAudioSw	Set whether the audio follows video switching in full screen mode.	>SetFullModeAudioSwitch EN
itch [Param]	[Param] = EN, Dis EN - Enable (Default) Dis - Disable	<fullmodeaudioswitch True</fullmodeaudioswitch
>GetFullModeAudioS witch	Get whether the audio follows video switching in full screen mode.	<fullmodeaudioswitch True</fullmodeaudioswitch
>SetAudioDelay [Param]	Set the delay time of audio output to [Param]. [Param] = 0 ~ 170 (ms) (Default: 0).	>SetAudioDelay 20 <audiodelay 20<="" th=""></audiodelay>
>GetAudioDelay	Get the delay time of audio output.	<audiodelay 20<="" th=""></audiodelay>

7.4. Function Setting Commands

Command	Description	Command Example and Feedback
	Set the baud rate of RS232 port to [Param].	>SetRS232Baudrate 5
>SetRS232Baudrate	[Param] = 1 ~ 5	
[Param]	1 - 115200	<rs232baudrate 5<="" th=""></rs232baudrate>
	2 - 57600	

Command	Description	Command Example and Feedback
	3 - 38400	
	4 - 19200	
	5 - 9600 (Default)	
>GetRS232Baudrate	Get the baud rate of RS232 port.	<rs232baudrate 5<="" th=""></rs232baudrate>
	Set the output resolution to [Param].	
	[Param] = 1 ~ 8	· CatOutnutDecalution 4
	1 - 1024x768@60Hz	>SetOutputResolution 4
	2 - 1280x720@60Hz	
>SetOutputResolution	3 - 1360x768@60Hz	
[Param]	4 - 1600x1200@60Hz	
	5 - 1920x1080@60Hz	Output Decelution 4
	6 - 1920x1200@60Hz	<outputresolution 4<="" th=""></outputresolution>
	7 - 3840x2160@30Hz (Default)	
	8 - AUTO	
>GetOutputResolution	Get the output resolution.	<outputresolution 4<="" th=""></outputresolution>
	Get the input resolution. [Param] = 1~4.	CotInnutResolution 1
SetInputResolution	1 - HDMI 1	>Getinput Resolution 1
[Param]	2 - HDMI 2	<pre>classification: 1</pre>
[. c. c	3 - HDMI/DP 3	
	4 - HDMI/USB-C 4	192021000 0002
	Set the HDCP mode of output port	SetHdenHdmiΩutput 1
>SetHdcpHdmiOutput	[Param] = 1 ~ 3	
[Param]	1 - HDCP 1.4 (Default)	
[]	2 - HDCP 2.2	<hdcphdmioutput 1<="" td=""></hdcphdmioutput>
	3 - OFF	
>GetHdcpHdmiOutput	Get the HDCP mode of output port.	<hdcphdmioutput 1<="" th=""></hdcphdmioutput>
	Set the EDID of input soure.	>SetInPortEdid 1,1
	$[Param1] = 1 \sim 6$	
	1 - HDMI 1	
	2 - HDMI 2	
	3 - HDMI 3	
	4 - DP 3	
>SetInPortEdid	5 - HDMI 4	
[Param1],[Param2]	6 - USB-C 4	<inportedid 1,1<="" th=""></inportedid>
	[Param2] = 1 ~ 5	
	1 - 1920x1080 60HZ PCM 2CH	
	2 - 3840x2160 30HZ PCM 2CH (Default)	
	3 - BYPASS HDMI	
	4 - BYPASS HDBT	
	5 - USER	

Command	Description	Command Example and Feedback
SetInPortEdid	Get the EDID of input source. [Param] = 1 ~ 6 1 - HDMI 1 2 - HDMI 2	>GetInPortEdid 1
[Param]	3 - HDMI 3 4 - DP 3 5 - HDMI 4 6 - USB-C 4	<inportedid 1,1<="" td=""></inportedid>
>SetUpdateEdid_EN	Upload the user-defined EDID.	<user edid="" ready,please<br="">send edid data in 10s. <setupdateedid_true fal<br="">se / <time edid<="" out="" send="" th="" to=""></time></setupdateedid_true></user>
>SetMvMode [Param]	Set multiview mode. [Param] = 1 ~ 20 1 - 1 WINDOWS Full 2 - 2 WINDOWS PBP 3 - 3 WINDOWS 2U1D 4 - 4 WINDOWS SAME SIZE (Default) 5 - 2 WINDOWS PIP LU 6 - 2 WINDOWS PIP LD 7 - 2 WINDOWS PIP RU 8 - 2 WINDOWS PIP RD 9 - 4 WINDOWS PIP RD 9 - 4 WINDOWS PBP 3L1R 10 - 4 WINDOWS PBP 3U1D 12 - 4 WINDOWS PBP 1L3R 11 - 4 WINDOWS PBP 1U3D 13 - 4 WINDOWS PIP 1F3L 14 - 4 WINDOWS PIP 1F3L 14 - 4 WINDOWS PIP 1F3U 15 - 4 WINDOWS PIP 1F3U 16 - 4 WINDOWS PIP 1F3D 17 - USER CONFIG 1 18 - USER CONFIG 2 19 - USER CONFIG 3	SetMvMode 1 <mvmode 1<="" p=""></mvmode>
>GetMvMode	20 - USER CONFIG 4 Get multiview mode	<mvmode 1<="" th=""></mvmode>
>SetSwapSrouce	Swap input source of window.	<video OUT A B C D IN 2513 <audiosource 1<="" th=""></audiosource></video
>SetResizeWin	Resize display windows.	<resizewin< th=""></resizewin<>

Command	Description	Command Example and Feedback
	Set whether to automatically send CEC commands after signal detection.	>SetAutoCec EN
>SetAutoCec [Param]	[Param] = EN, Dis EN - Enable (Default) Dis - Disable	<autocec td="" true<=""></autocec>
>GetAutoCec	Get whether to automatically send CEC commands after signal detection.	<autocec th="" true<=""></autocec>
>SetAutoCommand	Set whether to automatically send RS232 commands after signal detection.	>SetAutoCommand EN
[Param]	[Param] = EN, Dis EN - Enable (Default) Dis - Disable	<autocommand td="" true<=""></autocommand>
>GetAutoCommand	Get whether to automatically send RS232 commands after signal detection.	<autocommand th="" true<=""></autocommand>
>SetAutoStandby	Enable/disable auto standby after no signal detection. [Param] = EN, Dis	>SetAutoStandby EN
[Param]	EN - Enable Dis - Disable (Default)	<autostandby td="" true<=""></autostandby>
>GetAutoStandby	Get auto standby setting status.	<autostandby th="" true<=""></autostandby>
>SetAutoRelay	Enable/Disable auto power off function of relay. [Param] = EN, Dis	>SetAutoRelay EN
[Param]	EN - Enable Dis - Disable (Default)	<autorelay td="" true<=""></autorelay>
>GetAutoRelay	Get auto power off setting status of relay.	<autorelay th="" true<=""></autorelay>
>SetPanelCEC	Set the delay time to send CEC, RS232 and standby commands after removing	>SetPanelCEC 9
[Param]	input signal removed. [Param] = 0~1800 (s) (Default: 600s)	<panelcec 9<="" td=""></panelcec>
>GetPanelCEC	Get the delay time to send CEC, RS232 and standby commands after removing input signal removed.	<panelcec 9<="" th=""></panelcec>
>SetOffMsgLoopCnt	Set the number of times of sending Display	>SetOffMsgLoopCnt 1
[Param]	Off command. [Param] = 1 ~ 2 (Default: 1)	<offmsgloopcnt 1<="" th=""></offmsgloopcnt>
>GetOffMsgLoopCnt	Get the number of times of sending Display Off command.	<offmsgloopcnt 1<="" th=""></offmsgloopcnt>
>SetOffMsgLoopDelay	Set the delay time of sending Display Off command.	>SetOffMsgLoopDelayTim e 5
Time [Param]	[Param] = 5 ~ 100 (1=100ms) (Default: 10)	<offmsgloopdelaytime 5<="" td=""></offmsgloopdelaytime>
>GetOffMsgLoopDelay Time	Get the delay time of sending Display Off command.	<offmsgloopdelaytime 5<="" th=""></offmsgloopdelaytime>

Command	Description	Command Example and Feedback
>SetInputMsgDelayTi	Set the delay time of sending Display Input Select command.	>SetInputMsgDelayTime 10
me [Param]	[Param] = 1 ~ 100 (s) (Default: 3)	<inputmsgdelaytime 10<="" td=""></inputmsgdelaytime>
>GetInputMsgDelayTi me	Get the delay time of sending Display Input Select command.	<inputmsgdelaytime 10<="" th=""></inputmsgdelaytime>
>SetDisplayOn [Param]	Power on/off the display device. (Send RS232 and CEC commands at the same time). [Param] = EN, Dis EN - Power on	>SetDisplayOn EN >SetDisplayOn Dis <displayon true<br=""><displayon false<="" th=""></displayon></displayon>
>SetHdbtPOCOn [Param]	Dis - Power off Enable or disable PoC. [Param] = EN, Dis EN - Enable (Default) Dis - Disable	SetHdbtPOCOn EN HdbtPOCOn True
>GetHdbtPOCOn	Get PoC status.	<hdbtpocon th="" true<=""></hdbtpocon>

7.5. CEC Commands

Command	Description	Command Example and Feedback
>SetCecSrcMenu	Send CEC MENU command to source device. [Param] = 1 ~ 4 1 - HDMI 1	>SetCecSrcMenu 1
[Param]	2 - HDMI 2 3 - HDMI 3 4 - HDMI 4	<cecsrcmenu 1<="" td=""></cecsrcmenu>
>SetCecSrcUp	Send CEC UP command to source device.	>SetCecSrcUp 1
[Param]	[Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcup 1<="" td=""></cecsrcup>
>SetCecSrcDown	Send CEC DOWN command to source	>SetCecSrcDown 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcdown 1<="" td=""></cecsrcdown>
>SetCecSrcLeft	Send CEC LEFT command to source	>SetCecSrcLeft 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcleft 1<="" td=""></cecsrcleft>
>SetCecSrcRight	Send CEC RIGHT command to source	>SetCecSrcRight 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcright 1<="" td=""></cecsrcright>
>SetCecSrcBack	Send CEC BACK command to source	>SetCecSrcBack 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcback1< td=""></cecsrcback1<>
>SetCecSrcEnter	Send CEC ENTER command to source	>SetCecSrcEnter 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcenter 1<="" td=""></cecsrcenter>
		>SetCecSrcOn 1

Command	Description	Command Example and Feedback
>SetCecSrcOn [Param]	Send CEC ON command to source device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcon 1<="" th=""></cecsrcon>
>SetCecSrcOff	Send CEC OFF command to source device.	>SetCecSrcOff 1
[Param]	[Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcoff 1<="" td=""></cecsrcoff>
>SetCecSrcStop	Send CEC STOP command to source	>SetCecSrcStop 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcstop 1<="" td=""></cecsrcstop>
>SetCecSrcPlay	Send CEC PLAY command to source	>SetCecSrcPlay 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcplay 1<="" th=""></cecsrcplay>
>SetCecSrcPause	Send CEC PAUSE command to source	>SetCecSrcPause 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcpause 1<="" th=""></cecsrcpause>
>SetCecSrcPrev	Send CEC PREV command to source	>SetCecSrcPrev 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcprev 1<="" th=""></cecsrcprev>
>SetCecSrcNext	Send CEC NEXT command to source	>SetCecSrcNext 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcnext 1<="" th=""></cecsrcnext>
>SetCecSrcRewind	Send CEC REWIND command to source	>SetCecSrcRewind 1
[Param]	device. [Param] = 1 ~ 4 (HDMI 1~4)	<cecsrcrewind 1<="" th=""></cecsrcrewind>
>SetCecSrcFastForwa	Send CEC Fast-forward command to source	>SetCecSrcFastForward 1
ra [Param]		<cecsrcfastforward 1<="" td=""></cecsrcfastforward>
>SetCecDisplayOn	Send CEC ON command to display device.	>SetCecDisplayOn 1
[Param]	[Param] = 1 ~ 2 (1 - HDMI, 2 - HDBT)	<cecdisplayon 1<="" td=""></cecdisplayon>
>SetCecDisplayOff	Send CEC OFF command to display device.	>SetCecDisplayOff 1
[Param]	[Param] = 1 ~ 2 (1 - HDMI, 2 - HDBT)	<cecdisplayoff 1<="" th=""></cecdisplayoff>
>SetCecDisplaySourc	Send CEC SOURCE command to display	>SetCecDisplaySource 1
e [Param]	HDBT)	<cecdisplaysource 1<="" td=""></cecdisplaysource>
>SetCecDisplayMute	Send CEC MUTE command to display	>SetCecDisplayMute 1
[Param]	device. [Param] = 1 ~ 2 (1 - HDMI, 2 - HDBT)	<cecdisplaymute 1<="" td=""></cecdisplaymute>
>SetCecDisplayVol+	Send CEC VOLUME UP command to	>SetCecDisplayVol+ 1
[Param]	aispiay device. [Param] = 1 ~ 2 (1 - HDMI, 2 - HDBT)	<cecdisplayvol+ 1<="" td=""></cecdisplayvol+>
>SetCecDisplayVol-	Send CEC VOLUME DOWN command to	>SetCecDisplayVol- 1
[Param]	uispiay device. [Param] = 1 ~ 2 (1 - HDMI, 2 - HDBT)	<cecdisplayvol- 1<="" td=""></cecdisplayvol->

7.6. Special Commands

Command	Description	Command Example and Feedback
>SetDisplayInputSend Char_[Param]:XXXX	Set the ASCII "Display Input Select" command "XXXX" to be sent to display device when power on the switcher. [Param] = 1~5 (Baud rate of RS232 port) 1 - 115200	>SetDisplayInputSendCha r_5:1234567
	2 - 57600 3 - 38400 4 - 19200 5 - 9600 XXXX= ASCII data to be sent (Up to 48 characters).	<baudrate: 9600<br=""><display input="" select="" to<br="">send:1234567</display></baudrate:>
>SetDisplayInputSend Hex_[Param]:XX XX	Set the HEX "Display Input Select" command "XX XX" to be sent to display device when power on the switcher. [Param] = 1~5 (Baud rate of RS232 port) 1 - 115200	>SetDisplayInputSendHex _5:30 31 32 33
	2 - 57600 3 - 38400 4 - 19200 5 - 9600 XX XX= HEX data to be sent (X = 0~9, A~F and up to 20 XX).	<baudrate: 9600<br=""><display input="" select="" to<br="">send HEX:30 31 32 33</display></baudrate:>
>SetPowerOnSendCh ar_[Param]:XXXX	Set the ASCII "Power On" command "XXXX" to be sent to display device when power on the switcher. [Param] = 1~5 (Baud rate of RS232 port) 1 - 115200	>SetPowerOnSendChar_5 :1234567
	2 - 57600 3 - 38400 4 - 19200 5 - 9600 XXXX= ASCII data to be sent (Up to 48 characters).	<baudrate: 9600<br=""><power on="" to<br="">send:1234567</power></baudrate:>
>SetPowerOnSendHex _[Param]:XX XX	Set the HEX "Power On" command "XX XX" to be sent to display device when power on the switcher. [Param] = 1~5 (Baud rate of RS232 port) 1 - 115200	>SetPowerOnSendHex_5: 30 31 32 33

Note: The below commands don't need ending mark.

Command	Description	Command Example and Feedback
	2 - 57600 3 - 38400 4 - 19200 5 - 9600 XX XX= HEX data to be sent (X = 0~9, A~F and up to 20 XX).	<baudrate: 9600<br=""><power on="" send<br="" to="">HEX:30 31 32 33</power></baudrate:>
>SetSleepSendChar_[Param]:XXXX	Set the ASCII "Power Off" command "XXXX" to be sent to display device when the switcher enter standby mode. [Param] = 1~5 (Baud rate of RS232 port) 1 - 115200	>SetSleepSendChar_5:AB CDEFG
	2 - 57600 3 - 38400 4 - 19200 5 - 9600 XXXX= ASCII data to be sent (Up to 48 characters).	<baudrate: 9600<br=""><enter sleep="" to<br="">send:ABCDEFG</enter></baudrate:>
>SetSleepSendHex_[P aram]:XX XX	Set the HEX "Power Off" command "XX XX" to be sent to display device when the switcher enter standby mode. [Param] = 1~5 (Baud rate of RS232 port) 1 - 115200	>SetSleepSendHex_5:41 42 43 44
	2 - 57600 3 - 38400 4 - 19200 5 - 9600 XX XX= HEX data to be sent (X = 0~9, A~F and up to 20 XX).	<baudrate: 9600<br=""><enter send<br="" sleep="" to="">HEX:41 42 43 44</enter></baudrate:>

8. Firmware Upgrade

- 1) Prepare the latest upgrade file (.bin) and rename it as "FW_MV bin" on PC.
- Power off the switcher and connect the FIRMWARE port of switcher to the PC with type-A USB cable.
- Power on the switcher and then the PC will automatically detect a U-disk named of "BOOTDISK".
- 4) Directly copy the latest upgrade file (.bin) to the "BOOTDISK" U-disk.
- 5) Reopen the U-disk to check whether there is a filename "SUCCESS.TXT", if yes, the firmware was updated successfully, otherwise, the firmware updating is fail, the name of upgrade file (.bin) should be confirmed again, and then follow the above steps to update again.
- 6) Remove the type-A USB cable after firmware upgrade.
- 7) After firmware upgrade, the switcher should be restored to factory default by sending command.