4x2 HDMI 2.0 Matrix

4KMX42-H2A

API Command Set

AV Access

RS232 Default Setting

Parameters	Value
Baud Rate	115200 bps
Data bits	8 bits
Parity	None
Stop bits	1 bit
Flow control	None

Command

Take Command SET OUTPUT_MODE prm<CR><LF> as an example:

1. [SET OUTPUT_MODE] denotes command key words, case insensitive.
2. [prm] denotes parameters, case insensitive; incorrect parameters number will not be recognized.
3. <CR><LF> denotes a carriage return or a line feed; all commands must be ended up with a carriage return or a line feed.

No.	Description	Command	Example
Normal switch case			
1	Switch Input for Output	**Command:** SET SW *in out*<CR><LF> **Return:** SW *in out*<CR><LF> **Parameter:** *in* = {in1, in2, in3, in4}; *out* = {out1, out2}; **Description:** SW is short for Switch Switch one input source for one output sink.	**Command:** SET SW in1 out2<CR><LF> **Return:** SW in1 out2<CR><LF> **Description:** Switch input 1 for hdmi output 2
2	Get which input is mapping to the indicate Output	**Command:** GET MP out<CR><LF> **Return:** Mp in out<CR><LF> **Parameter:** in = {in1, in2, in3, in4}; out = {out1, out2}; **Description:** MP is short for mapping. Get which input mapping to the indicate Output.	**Command:** GET MP out1<CR><LF> **Return:** MP in1 out1<CR><LF> **Description:** Get which input is mapping to output 1.

No.	Description	Command	Example
3	Switch indicate input for all output	**Command:** SET SW in all<CR><LF> **Return:** SW in all <CR><LF> **Parameter:** in = {in1, in2, in3, in4}; all = {all}; **Description:** SW is short for Switch. Switch one input source for all output sink.	**Command:** SET SW in1 all <CR><LF> **Return:** SW in1 all<CR><LF> **Description:** Switch input1 for all output sink.
4	Get which output mapping to all input	**Command:** GET MP all<CR><LF> **Return:** MP in out<CR><LF> MP in out<CR><LF> ..... **Parameter:** in = {in1, in2, in3, in4}; all = {all}; **Description:** MP is short for mapping. Get which output mapping to all input.	**Command:** GET MP all <CR><LF> **Return:** MP in1 out1<CR><LF> MP in2 out2<CR><LF> **Description:** Get which output mapping to all input.
CEC Control			
1	Set CEC POWER ON/OFF	**Command:** SET CEC_PWR *out prm*<CR><LF> **Return:** CEC_PWR *out prm*<CR><LF>	**Command:** SET CEC_PWR out1 *on*<CR><LF> **Return:** CEC_PWR out1

No.	Description	Command	Example
		Parameter: *prm* = {on, off} *out* = {out1, out2}; **Description:** Set sink power on or off.	*on*<CR><LF> **Description:** Set sink hdmi output 1 power on.
2	Set CEC AUTO POWER ON/OFF	**Command:** SET AUTOCEC_FN *out prm*<CR><LF> **Return:** AUTOCEC_FN *out prm*<CR><LF> **Parameter:** *prm* = {on, off} *out* = {out1, out2}; **Description:** Set sink auto power Function ON or OFF.	**Command:** SET AUTOCEC_FN *out1 on*<CR><LF> **Return:** AUTOCEC_FN out1 *on*<CR><LF> **Description:** Set sink hdmi output 1 auto power ON.
3	Get CEC AUTO POWER ON/OFF Status	**Command:** GET AUTOCEC_FN *out*<CR><LF> **Return:** AUTOCEC_FN *out prm*<CR><LF> **Parameter:** *prm* = {on, off} *out* = {out1, out2}; **Description:** Get Sink auto power Function ON or OFF Status.	**Command:** GET AUTOCEC_FN out1<CR><LF> **Return:** AUTOCEC_FN *out1 on* **Description:** Get Sink auto power status, and the status is ON.

No.	Description	Command	Example
4	Set CEC POWER Delay Time	**Command:** SET AUTOCEC_D *out prm*<CR><LF> **Return:** AUTOCEC_D *out prm*<CR><LF> **Parameter:** *out* = {out1, out2}; *prm* = {1,2,3…,}// according to the actual time counter,1 means 1 minute ,2 means 2 minutes, Default wait time is 2 minutes, Max wait time is 30 minutes. **Description:** AUTOCEC_D is short for CEC auto Power Delay Timing.	**Command:** SET AUTOCEC_D *out1 2*<CR><LF> **Return:** AUTOCEC_D out1 *2*<CR><LF> **Description:** when no active signal to hdmiout1, 2 minutes later, the unit will auto power off.
5	Get CEC POWER Delay Time Status	**Command:** GET AUTOCEC_D *out* <CR><LF> **Return:** AUTOCEC_D *out prm*<CR><LF> **Parameter:** *out* = {out1, out2}; *prm* = {1,2,3…,}// according to the actual time counter,1 means 1 minute, 2 means 2 minutes, Default wait time is 2 minutes, Max wait time is 30 minutes. **Description:** AUTOCEC_D is short for CEC auto Power Delay Timing.	**Command:** GET AUTOCEC_D out1 <CR><LF> **Return:** AUTOCEC_D *out1 2* <CR><LF> **Description:** Get hdmiout1 auto power delay time, the result is 2 minutes.

No.	Description	Command	Example
6	Enable/Disable CEC Function	**Command:** SET CEC_EN *out prm*<CR><LF> **Return:** CEC_EN *out prm*<CR><LF> **Parameter:** *prm* = {on, off} *out* = {out1, out2, all}; **Description:** Set sink cec enable Function ON or OFF.	**Command:** SET CEC_EN *out1 on*<CR><LF> **Return:** CEC_EN out1 *on*<CR><LF> **Description:** Enable hdmi out1 cec function.
7	Get CEC Function enable	**Command:** GET CEC_EN *out*<CR><LF> **Return:** CEC_EN *out prm*<CR><LF> **Parameter:** *prm* = {on, off} *out* = {out1, out2, all}; **Description:** Get Sink cec enable Function ON or OFF Status. **Default:** on	**Command:** GET CEC_EN out1<CR><LF> **Return:** CEC_EN out1 *on*<CR><LF> **Description:** Get hdmi out1 cec enable function status.

No.	Description	Command	Example
		EDID	
1	Set Input EDID	**Command:** SET EDID *in prm*<CR><LF> **Return:** EDID *in prm*<CR><LF> **Parameter:** *in* = {in1, in2, in3, in4}; prm = {1 ~11} 1) Restore Defaults; 2) Copy EDID from HDMI out1; 3) Copy EDID from HDMI out2; 4) 4K@60Hz 4:4:4, 2.0ch, with HDR; 5) 4K@60Hz 4:4:4, 5.1ch, with HDR; 6) 4K@60Hz 4:4:4, 7.1ch, with HDR; 7) 4K@30Hz 4:4:4, 2.0ch, with HDR and 4:2:0; 8) 4K@30Hz 4:4:4, 7.1ch, with HDR and 4:2:0; 9) 1080P@60Hz, 2.0ch; 10) 1080P@60Hz, 5.1ch; 11) 1080P@60Hz, 7.1ch**;** **Description:** Set Input EDID.	**Command:** SET EDID *in1 4*<CR><LF> **Return:** EDID *in1 4*<CR><LF> **Description:** Set in1 EDID 4K@60Hz 4:4:4, 2.0ch, with HDR.

No.	Description	Command	Example
2	Get All Input EDID status	**Command:** GET EDID *all* <CR><LF> **Return:** EDID *in prm*<CR> EDID *in prm*<CR> EDID *in prm*<CR><LF> ..... **Parameter:** in = {in1, in2, in3, in4}; prm = {1 ~11} 1) Restore Defaults; 2) Copy EDID from HDMI out1; 3) Copy EDID from HDMI out2; 4) 4K@60Hz 4:4:4, 2.0ch, with HDR; 5) 4K@60Hz 4:4:4, 5.1ch, with HDR; 6) 4K@60Hz 4:4:4, 7.1ch, with HDR; 7) 4K@30Hz 4:4:4, 2.0ch, with HDR and 4:2:0; 8) 4K@30Hz 4:4:4, 7.1ch, with HDR and 4:2:0; 9) 1080P@60Hz, 2.0ch; 10) 1080P@60Hz, 5.1ch; 11) 1080P@60Hz, 7.1ch**;** **Description:** Get all input EDID Status.	**Command:** GET EDID *all* <CR><LF> **Return:** EDID in1 *1*<CR> EDID in2 *2*<CR> **Description:** Get all input EDID Status.

No.	Description	Command	Example
3	Get one input EDID Status	**Command:** GET EDID *in* <CR><LF> **Return:** EDID *in prm*<CR><LF> **Parameter:** *in* = {in1, in2, in3, in4}; prm = {1 ~11} 1) Restore Defaults; 2) Copy EDID from HDMI out1; 3) Copy EDID from HDMI out2; 4) 4K@60Hz 4:4:4, 2.0ch, with HDR; 5) 4K@60Hz 4:4:4, 5.1ch, with HDR; 6) 4K@60Hz 4:4:4, 7.1ch, with HDR; 7) 4K@30Hz 4:4:4, 2.0ch, with HDR and 4:2:0; 8) 4K@30Hz 4:4:4, 7.1ch, with HDR and 4:2:0; 9) 1080P@60Hz, 2.0ch; 10) 1080P@60Hz, 5.1ch; 11) 1080P@60Hz, 7.1ch**;** **Description:** Get one input EDID Status.	**Command:** GET EDID in1<CR><LF> **Return:** EDID in1 *4*<CR><LF> **Description:** Get in1 edid status, and the status is 4K@60Hz 4:4:4, 2.0ch, with HDR.
System Info			
1	Factory reset	**Command:** RESET<CR><LF> **Return:** RESET<CR><LF> **Description:** Factory reset.	**Command:** RESET<CR><LF> **Return:** RESET<CR><LF> **Description:** Factory reset all board.

No.	Description	Command	Example
2	System reboot	**Command:** REBOOT<CR><LF> **Return:** REBOOT<CR><LF> **Description:** System reboot.	**Command:** REBOOT<CR><LF> **Return:** REBOOT<CR><LF> **Description:** System reboot.
3	Get selected target firmware version	**Command:** GET VER<CR><LF> **Return:** VER *prm*<CR><LF> **Parameter:** *prm* = {…}// according to actual firmware version **Description:** Get selected target firmware version.	**Command:** GET VER<CR><LF> **Return:** VER 1.0<CR><LF> **Description:** Get firmware version.
4	Set IR System Code	**Command:** SET IR_SC *prm* <CR><LF> **Return:** IR_SC *prm*<CR><LF> **Parameter:** *prm* = {*all, mode1, mode2*}; *mode1 = 0x00* *mode2 = 0x4e* **Description:** Set IR System Code.	**Command:** SET IR_SC *mode1*<CR><LF> **Return:** IR_SC *mode1*<CR><LF> **Description:** Set IR System code mode 1.

No.	Description	Command	Example
5	Get IR System Code	**Command:** GET IR_SC <CR><LF> **Return:** IR_SC *prm*<CR><LF> **Parameter:** *prm* = {*all, mode1, mode2*}; *mode1 = 0x00* *mode2 = 0x4e* **Description:** Get IR System Code.	**Command:** GET IR_SC <CR><LF> **Return:** IR_SC *mode1*<CR><LF> **Description:** Get IR System code, IR System code is mode 1.
6	Get the API list	**Command:** HELP<CR><LF> **Return:** xxxx **Description:** Get the API list.	**Command:** HELP<CR><LF> **Return:** xxxx **Description:** Get the API list.
		Audio Mute	

1	Set Audio Output mute	**Command:**
		SET MUTE o*ut pcm*<CR><LF>
		
		Return:
		MUTE *out pcm*<CR><LF>
		
		Parameter:
		pcm = {on, off};//on means mute; off means unmute
		out = {hdmiaudioout1, hdmiaudioout2, spdifaudioout2, audioout1};
		
		Description:
		Set Audio mute or not mute.
			Command:
			SET MUTE *audioout1 on*<CR><LF>
			
			Return:
			MUTE *audioout1 on*<CR><LF>
			
			Description:
			Set audioout1 mute on.

No.	Description	Command	Example

2	Get Audio Output mute status	**Command:**
		GET MUTE *out*<CR><LF>
		
		Return:
		MUTE *out pcm*<CR><LF>
		
		Parameter:
		pcm = {on, off};;//on means mute; off means unmute
		out = {hdmiaudioout1,hdmiaudioout2, spdifaudioout2, audioout1, all};
		
		Description:
		Get Audio Output mute status.
			Command:
			GET MUTE *audioout1*<CR><LF>
			
			Return:
			MUTE *audioout1 pcm*<CR><LF>
			
			Description:
			Get Audio Output mute status.



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