AV Access
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4KMX44-H2

4 x 4 HDMI Matrix with Audio Outputs

API Command Set

Version: V1.0.0

RS232 Default Setting

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

About Telnet Connection

Before the process of sending the telnet command, shall make telnet connection to the corresponding device.

The form of telnet command is as follow:

telnet ip (port)

ip: The unit's IP address.

port: The unit's port number, this is non-required on some Telnet control tools or platforms. If required, port number is 23 by default.

Example: If the unit's IP address is 192.168.11.143,

The telnet command is *telnet 192.168.11.143*

Command

Take Command SET SW in out<CR><LF> as an example:

1. [SET SW] denotes command key words, case insensitive.
2. [in out] 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.

IDX	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* = {hdmiin1, hdmiin2…hdmiin4}; *out* = {hdmiout1, hdmiout2…hdmiout4}; **Description:** SW is short for Switch Switch one input source for one output sink	**Command:** SET SW hdmiin1 hdmiout2<CR><LF> **Return:** SW hdmiin1 hdmiout2<CR><LF> **Description:** Switch input 1 for hdmi output 2
2	Switch indicate input for all outputs	**Command:** SET SW *in all*<CR><LF> **Return:** SW *in all* <CR><LF> **Parameter:** *in* = { hdmiin1, hdmiin2… hdmiin4}; *all* = {all}; **Description:** SW is short for Switch Switch one input source for all output sink	**Command:** SET SW hdmiin1 *all* <CR><LF> **Return:** SW hdmiin1 all<CR><LF> **Description:** Switch input1 for all output sink

IDX	Description	Command	Example
3	Get which input mapping to the indicate Output	**Command:** GET MP *out*<CR><LF> **Return:** Mp *in out*<CR><LF> **Parameter:** *in* = {hdmiin1, hdmiin2…hdmiin4}; *out* = {hdmiout1, hdmiout2…hdmiout4}; **Description:** MP is short for mapping Get which input mapping to the indicate Output	**Command:** GET MP *hdmiout1*<CR><LF> **Return:** MP *hdmiin2 hdmiout1*<CR><LF> **Description:** Get which input mapping to output 1
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 = {hdmiin1, hdmiin2…hdmiin4}; out = {hdmiout1, hdmiout2…hdmiout4}; *all* = {all}; **Description:** MP is short for mapping Get which output mapping to all input	**Command:** GET MP *all* <CR><LF> **Return:** MP *hdmiin1 hdmiout1*<CR>… MP *hdmiin2 hdmiout2*<CR><LF> …... **Description:** Get which output mapping to all input

IDX	Description	Command	Example
		CEC Control	
1	Set CEC POWER ON/OFF	**Command:** SET CEC_PWR *out prm*<CR><LF> **Return:** CEC_PWR *out prm*<CR><LF> **Parameter:** *prm* = {on, off} *out* = {hdmiout1, hdmiout2…hdmiout4, all }; **Description:** Set sink power on or off	**Command:** SET CEC_PWR hdmiout1 *on*<CR><LF> **Return:** CEC_PWR hdmiout1 *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* = {hdmiout1, hdmiout2…hdmiout4}; **Description:** Set sink auto power Function ON or OFF	**Command:** SET AUTOCEC_FN *hdmiout1 on*<CR><LF> **Return:** AUTOCEC_FN hdmiout1 *on*<CR><LF> **Description:** Set sink hdmi output 1 auto power ON

IDX	Description	Command	Example
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* = {hdmiout1, hdmiout2…hdmiout4}; **Description:** Get Sink auto power Function ON or OFF Status. **Default:** on	**Command:** GET AUTOCEC_FN hdmiout1<CR><LF> **Return:** AUTOCEC_FN *on* **Description:** Get Sink auto power status, and the status is ON.
4	Set CEC POWER Delay Time	**Command:** SET AUTOCEC_D *out prm*<CR><LF> **Return:** AUTOCEC_D *out prm*<CR><LF> **Parameter:** *out* = {hdmiout1, hdmiout2…hdmiout4}; *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 *hdmiout1 2*<CR><LF> **Return:** AUTOCEC_D hdmiout1 *2*<CR><LF> **Description:** when no active signal to hdmi1, 2 minutes later, the unit will auto power off.

IDX	Description	Command	Example
5	Get CEC POWER Delay Time Status	**Command:** GET AUTOCEC_D *out* <CR><LF> **Return:** AUTOCEC_D *out prm*<CR><LF> **Parameter:** *out* = {hdmiout1, hdmiout2…hdmiout4}; *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 **Default:** 2	**Command:** GET AUTOCEC_D hdmiout1 <CR><LF> **Return:** AUTOCEC_D *hdmiout1 2* <CR><LF> **Description:** Get hdmi1 auto power delay time, the result is 2 minutes
		HDCP	
1	Set Input HDCP support ON/OFF	**Command:** SET HDCP_S *in prm*<CR><LF> **Return:** HDCP_S *in prm*<CR><LF> **Parameter:** *prm* = {on, off} *in* = {hdmiin1, hdmiin2…hdmiin4} **Description:** HDCP_S will control source hdcp support on or off	**Command:** SET HDCP_S hdmiin1 *on*<CR><LF> **Return:** HDCP_S hdmiin1 *on*<CR><LF> **Description:** Set hdmi input 1 hdcp support on

IDX	Description	Command	Example
2	Get Input HDCP support ON/OFF Status	**Command:** GET HDCP_S *in* <CR><LF> **Return:** HDCP_S *in prm*<CR><LF> **Parameter:** *prm* = {on, off} *in* = {hdmiin1, hdmiin2…hdmiin4} **Description:** HDCP_S is short for HDCP support **Default:** on	**Command:** GET HDCP_S hdmiin1<CR><LF> **Return:** HDCP_S *hdmiin1 on*<CR><LF> **Description:** Get hdmi1 hdcp support on or off status, and the result is on

IDX	Description	Command	Example
		EDID	
1	Set Input EDID	**Command:** SET EDID *in prm*<CR><LF> **Return:** EDID *in prm*<CR><LF> **Parameter:** *in* = {hdmiin1, hdmiin2...hdmiin4}; prm = {1 ~12} 01: Copy form output 1 02: Copy form output 2 03: Copy form output 3 04: Copy form output 4 05 : 4K@60Hz 5.1ch audio With HDR 06: 4K@60Hz 2.0ch audio With HDR 07: 4K@30Hz 7.1ch audio With HDR 08: 4K@30Hz 5.1ch audio With HDR 09: 4K@30Hz 2.0ch audio With HDR 10: 4K@30Hz/8bit only 2.0ch audio Without HDR 11: 1080P@60Hz 2.0ch audio ... 12: Smart EDID **Description:** Set Input EDID	**Command:** SET EDID hdmi*in1* *10*<CR><LF> **Return:** EDID hdmi*in1* *10*<CR><LF> **Description:** Set in1 EDID Fix 4K@30Hz/8bit only 2.0ch audio Without HDR

IDX	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* = {hdmiin1, hdmiin2…hdmiin4}; prm = {1 ~13} 01: Copy form output 1 02: Copy form output 2 03: Copy form output 3 04: Copy form output 4 05 : 4K@60Hz 5.1ch audio With HDR 06: 4K@60Hz 2.0ch audio With HDR 07: 4K@30Hz 7.1ch audio With HDR 08: 4K@30Hz 5.1ch audio With HDR 09: 4K@30Hz 2.0ch audio With HDR 10: 4K@30Hz/8bit only 2.0ch audio Without HDR 11: 1080P@60Hz 2.0ch audio … 12: Smart EDID 13: EDID Write **Description:** Get all input EDID Status **Default:** 5	**Command:** GET EDID *all* <CR><LF> **Return:** EDID hdmiin1 *01*<CR> EDID hdmiin2 *02*<CR> EDID hdmiin3 *03*<CR><LF> …… **Description:** Get all input EDID Status

IDX	Description	Command	Example
3	Get one input EDID Status	**Command:** GET EDID *in* <CR><LF> **Return:** EDID *in prm*<CR><LF> **Parameter:** *in* = {hdmiin1, hdmiin2....hdmiin4}; prm = {1 ~13} 01: Copy form output 1 02: Copy form output 2 03: Copy form output 3 04: Copy form output 4 05 : 4K@60Hz 5.1ch audio With HDR 06: 4K@60Hz 2.0ch audio With HDR 07: 4K@30Hz 7.1ch audio With HDR 08: 4K@30Hz 5.1ch audio With HDR 09: 4K@30Hz 2.0ch audio With HDR 10: 4K@30Hz/8bit only 2.0ch audio Without HDR 11: 1080P@60Hz 2.0ch audio ... 12: Smart EDID 13: EDID Write **Description:** Get one input EDID Status Default: 5	**Command:** GET EDID hdmiin1<CR><LF> **Return:** EDID hdmiin1 *10*<CR><LF> **Description:** Get in1 edid status, and the status is Fix 4K@30Hz/8bit only 2.0ch audio Without HDR

IDX	Description	Command	Example
		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
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 the API list	**Command:** help<CR><LF> **Description:** Get the API list	**Command:** help<CR><LF> **Description:** Get the API list
4	Set IP Mode	**Command:** SET IP MODE pcm<CR><LF> **Return:** IP MODE pcm <CR><LF> **Parameter:** pcm= {static, dhcp} **Description:** Set IP mode **Default:** DHCP	**Command:** SET IP MODE dhcp<CR><LF> **Return:** IP MODE dhcp [<CR><LF> **Description:** Set IP mode is dhcp

IDX	Description	Command	Example
5	Get IP Mode	**Command:** GET IP MODE<CR><LF> **Return:** IP MODE pcm <CR><LF> **Parameter:** pcm= {static, dhcp} **Description:** Get IP mode **Default:** DHCP	**Command:** GET IP MODE<CR><LF> **Return:** IP MODE dhcp <CR><LF> **Description:** IP mode is dhcp
6	SET IP address	**Command:** SET IPADDR xx.xx.xx.xx xx.xx.xx.xx xx.xx.xx.xx<CR><LF> **Return:** IPADDR IP:xx.xx.xx.xx MASK: xx.xx.xx.xx GATE: xx.xx.xx.xx<CR><LF> **Description:** SET IP address	**Command:** SET IPADDR 192.168.1.4 255.255.255.0 192.168.1.1<CR><LF> **Return:** IPADDR IP:192.168.1.4 MASK:255.255.255.0 GATE:192.168.1.1[<CR><LF> **Description:** Set IP address is 192.168.1.4, MASK is 255.255.255.0，GATE is 192.168.1.1

IDX	Description	Command	Example
7	GET IP address	**Command:** GET IPADDR<CR><LF> **Return:** IPADDR IP:xx.xx.xx.xx MASK: xx.xx.xx.xx GATE: xx.xx.xx.xx<CR><LF> **Description:** GET IP address	**Command:** GET IPADDR<CR><LF> **Return:** IPADDR IP:192.168.1.4 MASK:255.255.255.0 GATE:192.168.1.1<CR><LF> **Description:** Get IP address is 192.168.1.4, MASK is 255.255.255.0，GATE is 192.168.1.1
Update info			
1	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:** 4KMX44-H2 VER 1.0, ARM VER 1.0<CR><LF> **Description:** Get all module firmware version
2	Upgrade module	**Command:** UPG [*prm*] <CR><LF> **Return:** UPG [*prm*] <CR><LF> **Parameter:** *prm*= {MASTER, ARM} **Description:** Upgrade module	**Command:** UPG MASTER<CR><LF> **Return:** UPG MASTER<CR><LF> **Description:** upgrade module

IDX	Description	Command	Example
		Preset scene	
1	Save Preset Scene	**Command:** SAVE PRESET *prm*<CR><LF> **Return:** PRESET *prm*<CR><LF> **Parameter:** *prm* = {1,2,3}// **Description:** Save Preset Scene	**Command:** SAVE PRESET *1*<CR><LF> **Return:** PRESET *1* <CR><LF> **Description:** Save preset scene
2	Restore Preset Scene	**Command:** RESTORE PRESET *prm*<CR><LF> **Return:** PRESET *prm*<CR><LF> **Parameter:** *prm* = {1,2,3}// **Description:** Restore Preset Scene **Default:** mp hdmiin1 hdmiout1 mp hdmiin2 hdmiout2 mp hdmiin3 hdmiout3 mp hdmiin4 hdmiout4	**Command:** RESTORE PRESET *1*<CR><LF> **Return:** PRESET *1*<CR><LF> **Description:** Restore preset scene

IDX	Description	Command	Example
Audio			

1	Set Audio Output mute	**Command:**
		SET MUTE *out pcm*<CR><LF>
		
		Return:
		MUTE *out pcm*<CR><LF>
		
		Parameter:
		pcm = {on, off};//on means mute; off means unmute
		out = {audioout1, audioout2,…audioout4, all };
		
		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

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 = {audioout1, audioout2,…audioout4, all};
		
		Description:
		Get Audio Output mute status
		
		Default:
		off
			Command:
			GET MUTE *audioout1*<CR><LF>
			
			Return:
			MUTE *audioout1 off*<CR><LF>
			
			Description:
			Get Audio Output mute status.

IDX	Description	Command	Example
		Scaler	

1	Set video Output scaler	**Command:**
		SET SCALER out pcm<CR><LF>
		
		Return:
		 SCALER out pcm<CR><LF>
		
		Parameter:
		pcm = {on, off};//on means scaler; off means not scaler
		out = {hdmiout1, hdmiout2,…hdmiout4, all };
		
		Description:
		Set Video scaler or not scaler
			Command:
			SET SCALER hdmiout1 on<CR><LF>
			
			Return:
			SCALER hdmiout1 on<CR><LF>
			
			Description:
			Set hdmiout1 scaler on

2	Get video Output scaler status	**Command:**
		GET SCALER *out*<CR><LF>
		
		Return:
		SCALER *out* pcm<CR><LF>
		
		Parameter:
		pcm = {on, off};;//on means mute; off means unmute
		out = {hdmiout1, hdmiout2,…hdmiout4, all};
		
		Description:
		Get video Output scaler status
		
		Default:
		on
			Command:
			GET SCALER *hdmiout1*<CR><LF>
			
			Return:
			SCALER hdmi*out1 on*<CR><LF>
			
			Description:
			Get video Output scaler status.

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