B-660-MTRX-8x8

8x8 HDMI 2.0 Matrix Switcher with HDBaseT VLC OUT and Audio Matrix

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 Example

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
		Video Switch	
1	Switch one Input for one Output	**Command:** SET SW in out<CR><LF> **Return:** SW in out<CR><LF> **Parameter:** in = {in1, in2…in8, in0}; out = {out1, out2…out8}; **Description:** in -in0 means power down output 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	Switch indicate input for all outputs	**Command:** SET SW in all<CR><LF> **Return:** SW in all <CR><LF> **Parameter:** in = {in1, in2… in8, in0}; all = {all}; **Description:** in - in0 means power down output 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

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 = {in1, in2…in8,in0}; out = {out1,out2…out8}; **Description:** in - in0 means power down output MP is short for mapping Get which input mapping to the indicate Output	**Command:** GET MP out1<CR><LF> **Return:** MP in2 out1<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 = {in1, in2…in8, in0}; out = {out1, out2…out8}; all = {all}; **Description:** in - none means power down output MP is short for mapping Get which output mapping to all input	**Command:** GET MP all <CR><LF> **Return:** MP in1 out1<CR>... MP in2 out2<CR><LF> …... **Description:** Get which output mapping to all input

IDX	Description	Command	Example
Audio Switch			
1	Audio Switch Input for Output	**Command:** SET AUDIOSW *in out*<CR><LF> **Return:** AUDIOSW *in out*<CR><LF> **Parameter:** *in* = {hdmi, arc}; *out* = {audioout1, audioout2,…audioout8}; **Description:** AUDIOSW is short for audio switch Set Audio Switch form one input source to one audio output. in = {hdmi, arc}; // hdmi means the audio source extract from HDMI OUT , arc means the audio source is ARC from HDMI OUT.	**Command:** SET AUDIOSW arc audioout1<CR><LF> **Return:** AUDIOSW arc audioout1<CR><LF> **Description:** Set Audio Switch ARC from out1 to audioout1.

IDX	Description	Command	Example

2	Get which audio input mapping to the indicate Output	**Command:**
		GET AUDIOMP *out*<CR><LF>
		
		Return:
		AUDIOMP *in out*<CR><LF>
		
		Parameter:
		in = {hdmi, arc};
		out = {audioout1, audioout2,…audioout8};
		
		Description:
		AUDIOSW is short for audio switch
		Get which input mapping to the indicate Output
		in = {hdmi, arc}; // hdmi means the audio source extract from HDMI OUT , arc means
		the audio source is ARC from HDMI OUT.
			Command:
			GET AUDIOMP audioout1<CR><LF>
			
			Return:
			AUDIOSW arc audioout1<CR><LF>
			
			Description:
			Get who is mapping to audioout1, the result is ARC from out1.

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 = {out1, out2…out8,all}; **Description:** Set sink power on or off	**Command:** SET CEC_PWR out1 on<CR><LF> **Return:** CEC_PWR out1 on<CR><LF> **Description:** Set sink hdmi output 1 power on

IDX	Description	Command	Example
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…out8}; **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…out8}; **Description:** Get Sink auto power Function ON or OFF Status.	**Command:** GET AUTOCEC_FN out1<CR><LF> **Return:** AUTOCEC_FN on **Description:** Get Sink auto power status, and the status is ON.

IDX	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…out8}; 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. 0 means when no active signal, the unit auto power off immediately. **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 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 = {out1,out2…out8}; 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. 0 means when no active signal, the unit auto power off immediately. **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 hdmi1 auto power delay time, the result is 2 minutes

IDX	Description	Command	Example
		HDCP	
1	Set Input HDCP support ON/OFF	**Command:** SET HDCP_S in prm<CR><LF> SET HDCP_S in prm<CR><LF> **Return:** HDCP_S in prm<CR><LF> **Parameter:** prm = {on, off} in = {in1, in2…in8} **Description:** HDCP_S will control source hdcp support on or off	**Command:** SET HDCP_S in1 on<CR><LF> **Return:** HDCP_S in1 on<CR><LF> **Description:** Set hdmi input 1 hdcp support on
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 = {in1, in2…in8} **Description:** HDCP_S is short for HDCP support	**Command:** GET HDCP_S in1<CR><LF> **Return:** HDCP_S in1 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 = {in1, in2...in8}; prm = {1 ~27} 1: Copy form hdmi output 1 2: Copy form hdmi output 2 ... 8: Copy form hdmi output 8 9: Fixed 4K60 7.1CH Encoded Audio with HDR; 10: Fixed 4K60 5.1CH Encoded Audio with HDR; 11: Fixed 4K60 2.0CH PCM Audio with HDR; 12: Fixed 4K60 2.0CH PCM Audio with SDR; 13: Fixed 4K30 7.1CH Encoded Audio with HDR; 14: Fixed 4K30 5.1CH Encoded Audio with HDR; 15: Fixed 4K30 2.0CH PCM Audio with HDR; 16: Fixed 4K30 2.0CH PCM Audio with SDR; 17: Fixed 1080p@60Hz 7.1CH Encoded Audio with HDR; 18: Fixed 1080p@60Hz 5.1CH Encoded Audio with HDR; 19: Fixed 1080p@60Hz 2.0CH PCM Audio with HDR; 20: Fixed 1080p@60Hz 2.0CH PCM Audio with SDR; 21: Fixed 4K60 7.1CH Encoded Audio with SDR; 22: Fixed 4K60 5.1CH Encoded Audio with SDR; 23: Fixed 4K30 7.1CH Encoded	**Command:** SET EDID in1 13<CR><LF> **Return:** EDID in1 13<CR><LF> **Description:** Set in1 EDID Fixed 4K60 2.0CH PCM Audio with SDR

IDX	Description	Command	Example
		Audio with SDR; 24: Fixed 4K30 5.1CH Encoded Audio with SDR; 25: Fixed 1080p@60Hz 7.1CH Encoded Audio with SDR; 26: Fixed 1080p@60Hz 5.1CH Encoded Audio with SDR; **Description:** Set Input EDID	
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...in8}; prm = {1 ~27} 1: Copy form hdmi output 1 2: Copy form hdmi output 2 ... 8: Copy form hdmi output 8 9: Fixed 4K60 7.1CH Encoded Audio with HDR; 10:Fixed 4K60 5.1CH Encoded Audio with HDR; 11: Fixed 4K60 2.0CH PCM Audio with HDR; 12: Fixed 4K60 2.0CH PCM Audio with SDR; 13: Fixed 4K30 7.1CH Encoded Audio with HDR; 14: Fixed 4K30 5.1CH Encoded Audio with HDR; 15: Fixed 4K30 2.0CH PCM Audio with HDR; 16: Fixed 4K30 2.0CH PCM Audio with SDR; 17: Fixed 1080p@60Hz 7.1CH Encoded Audio with HDR;	**Command:** GET EDID all <CR><LF> **Return:** EDID in1 01<CR> EDID in2 02<CR> EDID in3 03<CR><LF> …… **Description:** Get all input EDID Status

IDX	Description	Command	Example
		18: Fixed 1080p@60Hz 5.1CH Encoded Audio with HDR; 19: Fixed 1080p@60Hz 2.0CH PCM Audio with HDR; 20: Fixed 1080p@60Hz 2.0CH PCM Audio with SDR; **Description:** Get all input EDID Status	
3	Get one input EDID Status	**Command:** GET EDID in <CR><LF> **Return:** EDID in prm<CR><LF> **Parameter:** in = {in1, in2....in8}; prm = {1 ~27} 1: Copy form hdmi output 1 2: Copy form hdmi output 2 ... 8: Copy form hdmi output 8 9: Fixed 4K60 7.1CH Encoded Audio with HDR; 10:Fixed 4K60 5.1CH Encoded Audio with HDR; 11: Fixed 4K60 2.0CH PCM Audio with HDR; 12: Fixed 4K60 2.0CH PCM Audio with SDR; 13: Fixed 4K30 7.1CH Encoded Audio with HDR; 14: Fixed 4K30 5.1CH Encoded Audio with HDR; 15: Fixed 4K30 2.0CH PCM Audio with HDR; 16: Fixed 4K30 2.0CH PCM Audio with SDR; 17: Fixed 1080p@60Hz 7.1CH Encoded Audio with HDR; 18: Fixed 1080p@60Hz 5.1CH Encoded Audio with HDR; 19: Fixed 1080p@60Hz 2.0CH PCM Audio with HDR;	**Command:** GET EDID in1<CR><LF> **Return:** EDID in1 13<CR><LF> **Description:** Get in1 edid status, and the status is Fixed 4K60 2.0CH PCM Audio with SDR

IDX	Description	Command	Example
		20: Fixed 1080p@60Hz 2.0CH PCM Audio with SDR; **Description:** Get one input EDID Status	
4	Set Write Input EDID	**Command:** SET EDID_W in prm1 prm2<CR><LF> **Return:** EDID_W in prm1 prm3<CR><LF> **Parameter:** in = {in1, in2...in8}; prm1 = {block0, block1}; prm2 = one block of 256 bytes edid ascii data with spaces(hex data need conversion into ASCII code) prm3 = {ok, error}; error :check sum error **Description:** Write EDID content to input.	**Command:** SET EDID_W in1 block0 XX…XX<CR><LF> **Return:** EDID_W in1 block0 ok<CR><LF> **Description:** write EDID content to input

IDX	Description	Command	Example
5	Get Read Output EDID	**Command:** GET EDID_R out<CR><LF> **Return:** EDID_R out prm1 prm2<CR><LF> **Parameter:** out = {out1,out2...out8}; prm1 = {block0, block1}; prm2 ={ one block of 256 bytes edid ascii data with no spaces(hex data need conversion into ASCII code), error, unconnect}; **Description:** Read EDID content form output.	**Command**: GET EDID_R out1<CR><LF> **Return:** EDID_R out1 block0 XX…XX<CR><LF> EDID_R out1 block1 XX…XX<CR><LF> **Description:** EDID_R out1 block0 XX…XX<CR><LF> --- Read EDID ok or EDID_R out1 error<CR><LF> --- Check Sum Error or EDID_R out1 unconnect<CR><LF> --- Sink unconnect
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

IDX	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	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
4	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:** **G**et 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

IDX	Description	Command	Example
5	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
6	GET IP address	**Command:** GET IPADDR<CR><LF> **Return:** IPADDR xx.xx.xx.xx<CR><LF> **Description:** GET IP address	**Command:** GET IPADDR<CR><LF> **Return:** IPADDR 192.168.11.243<CR><LF>
7	Set Standby	**Command:** STANDBY<CR><LF> **Return:** STANDBY!<CR><LF>	**Command:** STANDBY<CR><LF> **Return:** STANDBY!<CR><LF>
8	Set Wake	**Command:** WAKE<CR><LF> **Return:** WAKE!<CR><LF>	**Command:** WAKE<CR><LF> **Return:** WAKE!<CR><LF>
9	Get Standby	**Command:** GET STANDBY<CR><LF> **Return:** STANDBY!<CR><LF> or WAKE!<CR><LF>	**Command:** GET STANDBY<CR><LF> **Return:** STANDBY!<CR><LF> or WAKE!<CR><LF>

IDX	Description	Command	Example
10	hardware reboot	**Command:** HW_REBOOT<CR><LF> **Return:** HW_REBOOT<CR><LF> **Description:** hardware reboot	**Command:** HW_REBOOT<CR><LF> **Return:** HW_REBOOT<CR><LF> **Description:** hardware reboot
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:** VER 1.0<CR><LF> **Description:** Get all module firmware version
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

IDX	Description	Command	Example
2	Restore Preset Scene	**Command:** RESTORE PRESET *prm*<CR><LF> **Return:** PRESET *prm*<CR><LF> **Parameter:** *prm* = {1,2,3}// **Description:** Restore Preset Scene	**Command:** RESTORE PRESET *1*<CR><LF> **Return:** PRESET *1*<CR><LF> **Description:** Restore preset scene
HDCPout Info			

1	Set Output HDCP	**Command:**
		SET HDCP out prm<CR><LF>
		Return:
		HDCP out prm<CR><LF>
		Parameter:
		out = {out1,out2…out8,all};// all includeout1-out6
		prm = { follow，hdcp1.4，off...}// off means without HDCP， follow means source use hdcp 1.4 ,then output also use hdcp 1.4. the same with hdcp 2.2 and off.
		Description:
		Set Output HDCP
			Command:
			SET HDCP out1 follow<CR><LF>
			
			Return:
			HDCP out1 follow<CR><LF>
			
			Description:
			set output hdcp is follow mode

2	Get Output HDCP	**Command:**
		GET HDCP out<CR><LF>
		Return:
		HDCP out prm<CR><LF>
		Parameter:
		out = {out1,out2…out8,all};// all include out1-out6
		prm = { follow，hdcp1.4，off...}// off means without HDCP， follow means source use hdcp 1.4 ,then output also use hdcp 1.4. the same with hdcp 2.2 and off.
		Description:
		Get Output HDCP
			Command:
			GET HDCP out1<CR><LF>
			
			Return:
			HDCP out1 follow<CR><LF>
			
			Description:
			Get output hdcp is follow mode