



D i s t r i b u t i o n   A G

## **API Command Set\_ SCT-MXKVM42-H2U3**

**HDMI2.0 KVM Matrix Switcher**

**Version: V1.0.2**

# 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.

No.	Description	Command	Example
<b>Normal switch case</b>			
1	Switch one input to one output	<p><b>Command:</b> SET VIDSW <i>out</i> <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW <i>out in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i00, i01, i02, i03, i04}; <i>out</i> = {o01, o02};</p> <p><b>Description:</b> SW is short for Switch Switch one input source to one output sink. i00 is none input.</p>	<p><b>Command:</b> SET VIDSW o01 i02&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW o01 i02&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Switch input 2 to hdmi output 1.</p>
2	Switch one input to all outputs	<p><b>Command:</b> SET VIDSW <i>all</i> <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW <i>all in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i00, i01, i02, i03, i04}; <i>all</i> = {all};</p> <p><b>Description:</b> SW is short for Switch. Switch one input source to all output sinks. i00 is none input.</p>	<p><b>Command:</b> SET VIDSW <i>all</i> i01 &lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW <i>all</i> i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Switch input1 to all output sinks.</p>

No.	Description	Command	Example
3	Get which input is mapping to the indicate Output	<p><b>Command:</b> GET VIDSW <i>out</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW <i>out in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> in = {i00, i01, i02, i03, i04}; out = {o01, o02};</p> <p><b>Description:</b> Get which input is mapping to the indicate Output. i00 is none input.</p>	<p><b>Command:</b> GET VIDSW <i>o02</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW o02 i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get which input is mapping to output 2.</p>
4	Get the correspondence among all inputs and outputs	<p><b>Command:</b> GET VIDSW <i>all</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW <i>out in</i>&lt;CR&gt;&lt;LF&gt; VIDSW <i>out in</i>&lt;CR&gt;&lt;LF&gt; .....</p> <p><b>Parameter:</b> in = {i00, i01, i02, i03, i04}; out = {o01, o02}; <i>all</i> = {all};</p> <p><b>Description:</b> Get the correspondence among all inputs and outputs. i00 is none input.</p>	<p><b>Command:</b> GET VIDSW <i>all</i> &lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDSW <i>o01</i> <i>i01</i>&lt;CR&gt;&lt;LF&gt; VIDSW <i>o02</i> <i>i01</i>&lt;CR&gt;&lt;LF&gt; ...</p> <p><b>Description:</b> Get the correspondence among all inputs and outputs.</p>

No.	Description	Command	Example
<b>CEC Control</b>			
1	Set CEC POWER ON/OFF.	<p><b>Command:</b> SET CEC_PWR <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> CEC_PWR <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {on, off} <i>out</i> = {o01, o02, o03, o04, all};</p> <p><b>Description:</b> Set sink power on or off. <i>out</i>={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} all = {all};</p>	<p><b>Command:</b> SET CEC_PWR o01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> CEC_PWR o01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set sink hdmi output 1 power on.</p>

No.	Description	Command	Example
2	Set CEC AUTO POWER ON/OFF.	<p><b>Command:</b> SET AUTOCEC_FN <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_FN <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {on, off} <i>out</i> = {o01, o02, o03, o04, all};</p> <p><b>Description:</b> Set sink auto power Function ON or OFF. <i>out</i>= {o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} all = {all};</p> <p><b>Default:</b> on</p>	<p><b>Command:</b> SET AUTOCEC_FN o01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_FN o01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set sink hdmi output 1 auto power ON.</p>

No.	Description	Command	Example
3	Get CEC AUTO POWER ON/OFF Status	<p><b>Command:</b> GET AUTOCEC_FN <i>out</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_FN <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {on, off} <i>out</i> = {o01, o02, o03, o04, all};</p> <p><b>Description:</b> Get Sink auto power Function ON or OFF Status. <i>out</i>={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} <i>all</i> = {all};</p> <p><b>Default:</b> on</p>	<p><b>Command:</b> GET AUTOCEC_FN o01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_FN o01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get Sink auto power status, and the status is ON.</p>

No.	Description	Command	Example
4	Set CEC POWER Delay Time	<p><b>Command:</b> SET AUTOCEC_D <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_D <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>out</i> = {o01, o02, o03, o04, all}; <i>prm</i> = {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.</p> <p><b>Description:</b> AUTOCEC_D is short for CEC auto Power Delay Timing. <i>out</i>={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} <i>all</i>={all};</p>	<p><b>Command:</b> SET AUTOCEC_D o01 2&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_D o01 2&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> when no active signal to hdmi1, 2 minutes later, the unit will auto power off.</p>



No.	Description	Command	Example
5	Get CEC POWER Delay Time	<p><b>Command:</b> GET AUTOCEC_D <i>out</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_D <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>out</i> = {o01, o02, o03, o04, all}; <i>prm</i> = {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.</p> <p><b>Description:</b> AUTOCEC_D is short for CEC auto Power Delay Timing. <i>out</i>={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} all = {all}; <b>Default:</b> 2</p>	<p><b>Command:</b> GET AUTOCEC_D o01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUTOCEC_D o01 2&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get hdmi1 auto power delay time, the result is 2 minutes.</p>

No.	Description	Command	Example
<b>HDCP</b>			
1	Set Input HDCP to ON/OFF	<p><b>Command:</b> SET HDCP_S <i>in prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> HDCP_S <i>in prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {on, off} <i>in</i> = {i01, i02, i03, i04};</p> <p><b>Description:</b> HDCP_S will control source hdcp support on or off.</p> <p><b>Default:</b> on</p>	<p><b>Command:</b> SET HDCP_S i01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> HDCP_S i01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set hdmi input 1 hdcp support on.</p>
2	Get Input HDCP ON/OFF Status	<p><b>Command:</b> GET HDCP_S <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> HDCP_S <i>in prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {on, off} <i>in</i> = {i01,i02,i03,i04};</p> <p><b>Description:</b> HDCP_S is short for HDCP support.</p> <p><b>Default:</b> on</p>	<p><b>Command:</b> GET HDCP_S i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> HDCP_S i01 <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get hdmi1 hdcp support on or off status, and the result is on.</p>

No.	Description	Command EDID	Example
1	Set Input EDID	<p><b>Command:</b> SET EDID <i>in</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID <i>in prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i01,i02,i03,i04}; <i>prm</i> = {1 ~07}</p> <p>01: Copy form HDMIoutput 1 02: Copy form HDMIoutput 2 03: Copy form HDBT output 1 04: Copy form HDBT output 2 05: 4K@60Hz 2.0ch PCM With SDR 06: 4K@30Hz 2.0ch PCM With SDR 07: 1080P@60Hz 2.0ch PCM With SDR                   ...</p> <p><b>Description:</b> Set Input EDID. default EDID is 4K60 444 2.0ch PCM With SDR.</p>	<p><b>Command:</b> SET EDID i01 06&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID i01 06&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set in1 EDID Fix 1080P@60Hz 2.0ch PCM With SDR.</p>

No.	Description	Command	Example
2	Get All Input EDID	<p><b>Command:</b> GET EDID <i>all</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID <i>in prm</i>&lt;CR&gt; EDID <i>in prm</i>&lt;CR&gt; EDID <i>in prm</i>&lt;CR&gt;&lt;LF&gt; .....</p> <p><b>Parameter:</b> <i>in</i> = {i01, i02, i03, i04}; <i>prm</i> = {1 ~8} 01: Copy form HDMI output 1 02: Copy form HDMI output 2 03: Copy form HDBT output 1 04: Copy form HDBT output 2 05: 4K@60Hz 2.0ch PCM With SDR 06: 4K@30Hz 2.0ch PCM With SDR 07: 1080P@60Hz 2.0ch PCM With SDR                    ... 08 : EDID Write</p> <p><b>Description:</b> Get all input EDID.</p> <p><b>Default:</b> Default EDID is 4K60 444 2.0ch PCM With SDR.</p>	<p><b>Command:</b> GET EDID <i>all</i> &lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID i01 <i>01</i>&lt;CR&gt; EDID i02 <i>02</i>&lt;CR&gt; EDID i03 <i>03</i>&lt;CR&gt;&lt;LF&gt; .....</p> <p><b>Description:</b> Get all input EDID.</p>

No.	Description	Command	Example
3	Get one input's EDID	<p><b>Command:</b> GET EDID <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID <i>in prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i01, i02, i03, i04}; <i>prm</i> = {1 ~8}</p> <p>01: Copy form HDMI output 1 02: Copy form HDMI output 2 03: Copy form HDBT output 1 04: Copy form HDBT output 2 05: 4K@60Hz 2.0ch PCM With SDR 06: 4K@30Hz 2.0ch PCM With SDR 07: 1080P@60Hz 2.0ch PCM With SDR ... 08: EDID Write</p> <p><b>Description:</b> Get one input's EDID.</p> <p><b>Default:</b> default EDID is 4K60 444 2.0ch PCM With SDR.</p>	<p><b>Command:</b> GET EDID i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID i01 06&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get in1 edid status, and the status is Fix 1080P@60Hz 2.0ch PCM With SDR.</p>

No.	Description	Command	Example
5	Set Write Input EDID.	<p><b>Command:</b> SET EDID_W in <i>prm1</i> <i>prm2</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID_W in <i>prm1</i> <i>prm3</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> in = {i01, i02, i03, i04}; <i>prm1</i> = {block0, block1}; <i>prm2</i> = one block of 256 bytes edid ascii data with no spaces (hex data need conversion into ASCII code) <i>prm3</i> = {ok, error}; error: check sum error</p> <p><b>Description:</b> Write EDID content to one input.</p>	<p><b>Command:</b> SET EDID_W i01 <i>block0</i> XX...XX&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID_W i01 <i>block0</i> ok&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Write EDID content to one input.</p>

No.	Description	Command	Example
6	Get Read Output EDID	<p><b>Command:</b> GET EDID_R <i>out</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID_R <i>out prm1</i> <i>prm2</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>out</i> = {o01, o02, o03, o04}; <i>prm1</i> = {block0, block1}; <i>prm2</i> = { one block of 256 bytes edid ascii data with no spaces(hex data need conversion into ASCII code), error, unconnect};</p> <p><b>Description:</b> Read EDID content form output. <i>out</i>={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2}</p>	<p><b>Command:</b> GET EDID_R <i>o01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> EDID_R <i>o01 block0</i> <i>XX...XX</i>&lt;CR&gt;&lt;LF&gt; EDID_R <i>o01 block1</i> <i>XX...XX</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> EDID_R <i>o01 block0</i> <i>XX...XX</i>&lt;CR&gt;&lt;LF&gt; --- Read EDID ok or EDID_R <i>o01</i> <i>error</i>&lt;CR&gt;&lt;LF&gt; --- Check Sum Error or EDID_R <i>o01</i> <i>unconnect</i>&lt;CR&gt;&lt;LF&gt; --- Sink unconnect</p>
<b>System Info</b>			
1	Standby	<p><b>Command:</b> Standby&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> Standby!&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Enter Standby mode.</p>	<p><b>Command:</b> Standby&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> Standby!&lt;CR&gt;&lt;LF&gt;</p>
2	Wake	<p><b>Command:</b> Wake&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> Wake!&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Exit Standby mode.</p>	<p><b>Command:</b> Wake&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> Wake!&lt;CR&gt;&lt;LF&gt;</p>

No.	Description	Command	Example
3	Factory reset	<b>Command:</b> RESET<CR><LF>  <b>Return:</b> RESET<CR><LF>  <b>Description:</b> Factory reset.	<b>Command:</b> RESET<CR><LF>  <b>Return:</b> RESET<CR><LF>  <b>Description:</b> Factory reset all board.
4	System reboot	<b>Command:</b> REBOOT<CR><LF>  <b>Return:</b> REBOOT<CR><LF>  <b>Description:</b> System reboot	<b>Command:</b> REBOOT<CR><LF> >  <b>Return:</b> REBOOT<CR><LF> >  <b>Description:</b> System reboot
5	Get the API list	<b>Command:</b> help<CR><LF>  <b>Return:</b> xxxx  <b>Description:</b> Get the API list	<b>Command:</b> help<CR><LF>  <b>Return:</b> xxxx  <b>Description:</b> Get the API list



No.	Description	Command	Example
6	Set IP Mode	<p><b>Command:</b> SET IP MODE prm&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> IP MODE prm &lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> pcm= {static, dhcp}</p> <p><b>Description:</b> Set IP mode.</p> <p><b>Default:</b> DHCP</p>	<p><b>Command:</b> SET IP MODE dhcp&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> IP MODE dhcp [&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set IP mode to dhcp.</p>
7	Get IP Mode	<p><b>Command:</b> GET IP MODE&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> IP MODE prm &lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> pcm= {static, dhcp}</p> <p><b>Description:</b> Get IP mode.</p> <p><b>Default:</b> DHCP</p>	<p><b>Command:</b> GET IP MODE&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> IP MODE dhcp &lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> IP mode is dhcp.</p>

No.	Description	Command	Example
8	SET IP address	<p><b>Command:</b>  SET IPADDR xx.xx.xx.xx  xx.xx.xx.xx  xx.xx.xx.xx&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b>  IPADDR IP:xx.xx.xx.xx  MASK: xx.xx.xx.xx  GATE:  xx.xx.xx.xx&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b>  SET IP address</p>	<p><b>Command:</b>  SET IPADDR  192.168.1.4  255.255.255.0  192.168.1.1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b>  IPADDR  IP:192.168.1.4  MASK:255.255.255.0  GATE:192.168.1.1[  &lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b>  Set IP address is  192.168.1.4, MASK  is 255.255.255.0,  GATE is  192.168.1.1.</p>
9	GET IP address	<p><b>Command:</b>  GET IPADDR&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b>  IPADDR IP:xx.xx.xx.xx  MASK: xx.xx.xx.xx  GATE:  xx.xx.xx.xx&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b>  GET IP address</p>	<p><b>Command:</b>  GET  IPADDR&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b>  IPADDR  IP:192.168.1.4  MASK:255.255.255.0  GATE:192.168.1.1&lt;  CR&gt;&lt;LF&gt;</p> <p><b>Description:</b>  Get IP address is  192.168.1.4, MASK  is 255.255.255.0,  GATE is  192.168.1.1.</p>

No.	Description	Command	Example
<b>Update info</b>			
1	Get selected target firmware version	<p><b>Command:</b> GET VER&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VER <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {...} // according to actual firmware version</p> <p><b>Description:</b> Get selected target firmware version</p>	<p><b>Command:</b> GET VER&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VER 1.0, ARM VER 1.0&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get all module firmware version</p>
<b>Preset scene</b>			
1	Save Preset Scene	<p><b>Command:</b> SAVE PRESET <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> SAVE PRESET <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {1,2,3} //</p> <p><b>Description:</b> Save Preset Scene.</p>	<p><b>Command:</b> SAVE PRESET 1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> SAVE PRESET 1 &lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Save preset scene.</p>

No.	Description	Command	Example
2	Restore Preset Scene	<p><b>Command:</b> RESTORE PRESET <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> RESTORE PRESET <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {1,2,3}//</p> <p><b>Description:</b> Restore Preset Scene</p> <p><b>Default:</b> mp hdmi in1 out1. mp hdmi in2 out2.</p>	<p><b>Command:</b> RESTORE PRESET 1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> RESTORE PRESET 1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Restore preset scene.</p>
<b>Audio</b>			
1	Switch one audio Input to one audio Output	<p><b>Command:</b> SET AUDSW aout out&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUDSW aout out&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> out = {o00, o01, o02}; aout = {ao01};</p> <p><b>Description:</b> Switch one input source to one output sink for audio.</p>	<p><b>Command:</b> SET AUDSW ao01 o02&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUDSW ao01 o02&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Switch audio input 2 to audio output 1.</p>

No.	Description	Command	Example
2	Get which audio input mapping is to the indicate audio Output.	<p><b>Command:</b> GET AUDSW aout&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUDSW aout out&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> out = {o00,o01,o02}; aout = {ao01};</p> <p><b>Description:</b> Get which audio input mapping is to the indicate audio Output.</p>	<p><b>Command:</b> GET AUDSW ao01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUDSW ao01 o01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get which audio input mapping is to audio Output 1.</p>
3	Set Audio Output to mute/unmute	<p><b>Command:</b> SET MUTE aout prm&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> MUTE aout prm&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> prm = {on,off};//on means mute; off means unmute aout = {ao01};</p> <p><b>Description:</b> Set Audio Output to mute/unmute.</p>	<p><b>Command:</b> SET MUTE ao01 on&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> MUTE ao01 on&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set Audio Output to mute/unmute.</p>

No.	Description	Command	Example
4	Get Audio Output mute status.	<p><b>Command:</b> GET MUTE <i>aout</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> MUTE <i>aout</i> <i>pcm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>pcm</i> = {on,off};; //on means mute; off means unmute <i>aout</i> = {ao01};</p> <p><b>Description:</b> Get Audio Output mute status.</p> <p><b>Default:</b> off</p>	<p><b>Command:</b> GET MUTE <i>ao01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> MUTE <i>ao01</i> <i>off</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get Audio Output mute status.</p>

No.	Description	Command Scaler	Example
1	Set video Output scaler to on/off	<p><b>Command:</b> SET SCALER out prm&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> SCALER out prm&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> pcm = {on,off}; //on means scaler; off means not scaler out = {o01, o02, o03, o04, all};</p> <p><b>Description:</b> Set 4K-to-1080p simple scaler on each video output ON or OFF. out={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} all = {all};</p>	<p><b>Command:</b> SET SCALER o01 on&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> SCALER o01 on&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set hdmiout 1 scaler to on.</p>

No.	Description	Command	Example
2	Get video Output scaler on/off status	<p><b>Command:</b> GET SCALER <i>out</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> SCALER <i>out</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {on, off}; //on means mute; off means unmute <i>out</i> = {o01, o02, o03, o04, all};</p> <p><b>Description:</b> Get video Output scaler status. <i>out</i>={o01=hdmiout1, o02=hdmiout2, o03=hdbtout1, o04=hdbtout2} <i>all</i> = {all};</p> <p><b>Default:</b> on</p>	<p><b>Command:</b> GET SCALER <i>o01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> SCALER <i>o01</i> <i>on</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get video Output 1 scaler status.</p>
3	Volume gain increase	<p><b>Command:</b> SET VOLGAIN_INC <i>aout</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_INC <i>aout</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>aout</i> = {ao01}; <i>prm</i>= {0~100}</p> <p><b>Description:</b> Increase AUDIO OUT volume by step level.</p> <p><b>Default:</b> 50</p>	<p><b>Command:</b> SET VOLGAIN_INC <i>ao01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_INC <i>ao01 60</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> After increasing volume, AUDIO OUT volume becomes 60 of 100 in total.</p>



No.	Description	Command	Example
4	Volume gain decrease	<p><b>Command:</b> SET VOLGAIN_DEC <i>aout</i> &lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_DEC <i>aout</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>aout</i> = {ao01}; <i>prm</i> = {0~100}</p> <p><b>Description:</b> Decrease AUDIO OUT volume by step level.</p> <p><b>Default:</b> 50</p>	<p><b>Command:</b> SET VOLGAIN_DEC ao01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_DEC ao01 40&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> After volume decreasing, the AUDIO OUT volume becomes 40.</p>
5	Volume gain adjust	<p><b>Command:</b> SET VOLGAIN_DATA <i>aout prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_DATA <i>aout</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>aout</i> = {ao01}; <i>prm</i> = {0~100}</p> <p><b>Description:</b> VOLGAIN is volgain.</p> <p><b>Default:</b> 50</p>	<p><b>Command:</b> SET VOLGAIN_DATA oa01 50&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_DATA oa01 50&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set volume gain of audio output1 at 50.</p>

No.	Description	Command	Example
6	Get current adjustment gain of volume	<p><b>Command:</b> GET VOLGAIN_DATA <i>aout</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_DATA <i>aout</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>aout</i> = {ao01}; <i>prm</i> = {0~100}</p> <p><b>Description:</b> VOLGAIN is volgain. {0~100}</p> <p><b>Default:</b> 50</p>	<p><b>Command:</b> GET VOLGAIN_DATA ao01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_DATA ao01 50 &lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get volume gain, the gain is 50.</p>
7	Set volume gain adjust step	<p><b>Command:</b> SET VOLGAIN_STEP <i>aout prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_STEP <i>aout</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>aout</i> = {ao01}; <i>prm</i> = {1~10}</p> <p><b>Default:</b> 5</p>	<p><b>Command:</b> SET VOLGAIN_STEP oa01 5&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_STEP oa01 5&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set volume gain adjust step 5.</p>

No.	Description	Command	Example
8	Set volume gain adjust step	<p><b>Command:</b> GET VOLGAIN_STEP <i>aout</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_STEP <i>aout</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>aout</i> = {ao01}; <i>prm</i> = {1~10}</p> <p><b>Default:</b> 5</p>	<p><b>Command:</b> GET VOLGAIN_STEP ao01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VOLGAIN_STEP ao01 5 &lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get volume gain adjust step is 5.</p>
<b>USB Matrix</b>			
1	Set USB Work Model	<p><b>Command:</b> SET USB_M <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USB_M <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {follow, independent}</p> <p><b>Description:</b> Set USB Work Model.</p>	<p><b>Command:</b> SET USB_M <i>follow</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USB_M <i>follow</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set usb work mode to follow.</p>
2	Get USB Work Model	<p><b>Command:</b> GET USB_M&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USB_M <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>prm</i> = {follow, independent}</p> <p><b>Description:</b> Get USB Work Model.</p>	<p><b>Command:</b> GET USB_M&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USB_M <i>follow</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get usb work mode, and the work mode is follow.</p>

No.	Description	Command	Example
13	Switch one USB source to one USB output	<p><b>Command:</b> SET USBSW <i>out in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBSW <i>out in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i00, i01, i02, i03, i04}; <i>out</i> = {o01, o02};</p> <p><b>Description:</b> i00 is blank. USBWS is short for usb switch. Set USB Switch from one USB input source to one USB output.</p>	<p><b>Command:</b> SET USBSW <i>o01 i01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWS <i>o01 i01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set USB Switch from USB input1 to USB output1</p>
14	Switch one USB input to all outputs	<p><b>Command:</b> SET USBSW <i>all in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWS <i>all in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i00, i01, i02, i03, i04}; <i>out</i> = {o01, o02}; <i>all</i> = {all};</p> <p><b>Description:</b> USBWS is short for usb switch Set USB Switch from one input source to all output sinks.</p>	<p><b>Command:</b> SET USBSW <i>all i01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWS <i>all i01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Set USB Switch from in1 to all output sinks.</p>

No.	Description	Command	Example
15	Get which usb input is mapping to the indicate Output	<p><b>Command:</b> GET USBSW <i>out</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWSW <i>out in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {<i>i00,i01,i02,i03,i04</i>}; <i>out</i> = {<i>o01,o02</i>};</p> <p><b>Description:</b> USBWSW is short for usb switch. Get which usb input is mapping to the indicate Output.</p>	<p><b>Command:</b> GET USBSW <i>o01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWSW <i>o01</i> <i>i02</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get which input is mapping to USB out1.</p>
16	Get all correspondence among all USB inputs and outputs	<p><b>Command:</b> GET USBSW <i>all</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWSW <i>out in</i>&lt;CR&gt;&lt;LF&gt; USBWSW <i>out in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {<i>i00, i01, i02, i03, i04</i>}; <i>out</i> = {<i>o01, o02</i>}; <i>all</i>= {<i>all</i>};</p> <p><b>Description:</b> USBWSW is short for usb switch. Get all correspondence among all USB inputs and outputs.</p>	<p><b>Command:</b> GET USBSW <i>all</i> &lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USBWSW <i>o01</i> <i>i01</i>&lt;CR&gt;&lt;LF&gt; USBWSW <i>o02</i> <i>i02</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get all correspondence among all USB inputs and outputs.</p>

No.	Description	Command	Example
4	Get USB Host Connection status	<p><b>Command:</b> GET USB_HOST_C in&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USB_HOST_C in <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> in = {i01, i02, i03, i04} <i>prm</i> = {connect, unconnect}</p> <p><b>Description:</b> Get USB Host Connection status.</p>	<p><b>Command:</b> GET USB_HOST_C i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> USB_HOST_C i01 <i>connect</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get USB Host Connection status.</p>
<b>Video Information</b>			
1	Get video cable connection status	<p><b>Command:</b> GET VIDIN_CONNECT in&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_CONNECT in <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i>= {i01, i02, i03, i04}; <i>prm</i> = {connect, unconnect}</p> <p><b>Description:</b> Get input cable connection status.</p>	<p><b>Command:</b> GET VIDIN_CONNECT i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_CONNECT i01 <i>connect</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get i01 cable connection status.</p>

No.	Description	Command	Example
2	Get output cable connection status	<p><b>Command:</b> GET VIDOUT_CONNECT OUT&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDOUT_CONNECT out <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> out= {o01, o02, o03, o04}; <i>prm</i> = {connect, unconnect}</p> <p><b>Description:</b> Get output cable connection status.</p>	<p><b>Command:</b> GET VIDOUT_CONNEC T o01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDOUT_CONNEC T o01 connect&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get o01 output connection status.</p>
3	Get the status of the video input signal	<p><b>Command:</b> GET VIDIN_SIG <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_SIG <i>in</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i01, i02, i03, i04}; <i>prm</i> = {no, valid}</p> <p><b>Description:</b> Get the status of the video input signal.</p>	<p><b>Command:</b> GET VIDIN_SIG i01&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_SIG i01 valid&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get the status of the video input1</p>

No.	Description	Command	Example
4	Get input video format information	<p><b>Command:</b> GET VIDIN_FORMAT <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_FORMAT <i>in</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i01, i02, i03, i04}; <i>prm</i> = { }</p> <p><b>Description:</b> Get the resolution of the video input <i>prm</i> = {&lt;horizontal&gt;x&lt;vertical&gt;,&lt;rate&gt;; &lt;HDR info&gt;;&lt;ColorSpace&gt;,&lt;DeepColor&gt;} • horizontal = An integer value representing the horizontal. • vertical = An integer value representing the vertical. May have an additional qualifier such as 'i' or 'p'. • rate = An integer value representing the refresh rate. • HDR info = none hdr/ static hdr • Color space = RGB / Ycbcr 444 /Ycbcr 422/Ycbcr 420 • DeepColor = 8 bit/10 bit /12 bit/ 16 bit</p>	<p><b>Command:</b> GET VIDIN_FORMAT <i>in1</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_FORMAT <i>i01 3840x2160,60;</i> none hdr;rgb;8bit&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get the HDMI input1 video information</p>



No.	Description	Command	Example
5	Get input audio format information	<p><b>Command:</b> GET AUDIN_FORMAT <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUDIN_FORMAT <i>in</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i01, i02, i03, i04}; <i>prm</i> = { }</p> <p><b>Description:</b> Get the resolution of the video input. <i>prm</i> = {&lt;NONE / PCM / COMPRESSED/ HBR&gt;; &lt;Sampling rate&gt;}</p>	<p><b>Command:</b> GET AUDIN_FORMAT <i>i01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> AUDIN_FORMAT <i>i01</i> PCM;48kHZ&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> HDMI input1 supports PCM 48KHz.</p>
6	Get hdcp version of input video	<p><b>Command:</b> GET VIDIN_HDCP <i>in</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_HDCP <i>in</i> <i>prm</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> <i>in</i> = {i01, i02, i03, i04}; <i>prm</i> = {no hdcp, hdcp1.4, hdcp2.2}</p> <p><b>Description:</b> Get hdcp version of input video.</p>	<p><b>Command:</b> GET VIDIN_HDCP <i>i01</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> VIDIN_HDCP <i>i01</i> <i>no hdcp</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get the HDCP status of HDMI input1.</p>

No.	Description	Command	Example
<b>HDBT UART</b>			
1	Get hdbt uart property.	<p><b>Command:</b> GET UART_CFG out&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> UART_CFG out prm1 parm2 parm3 parm4&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b> out = {5001, 5002   UART1, UART2}; prm1 = {9600, 19200, 38400, 57600, 115200} prm2 = {NONE, ODD, EVEN} prm3 = {7,8} prm4 = {1,2}</p> <p><b>Description:</b> Get hdbt uart property.</p>	<p><b>Command:</b> GET UART_CFG 5001&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b> UART_CFG 5001 9600 none 8 1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b> Get hdbt uart1 property.</p>

No.	Description	Command	Example
2	Set hdbt uart property	<p><b>Command:</b>  SET UART_CFG out <i>prm1</i>  <i>parm2 parm3</i>  <i>parm4</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b>  UART_CFG out <i>prm1</i>  <i>parm2 parm3</i>  <i>parm4</i>&lt;CR&gt;&lt;LF&gt;</p> <p><b>Parameter:</b>  out = {5001,5002   UART1,  UART2};  prm1 = {9600, 19200,  38400, 57600, 115200}  prm2 = {NONE, ODD,  EVEN}  prm3 = {7, 8}  prm4 = {1, 2}</p> <p><b>Description:</b>  Set hdbt uart property.</p>	<p><b>Command:</b>  SET UART_CFG  5001 9600 none 8  1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Return:</b>  UART_CFG 5001  9600 none 8  1&lt;CR&gt;&lt;LF&gt;</p> <p><b>Description:</b>  Set hdbt uart1  property.</p>



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