

SANDEX-N002-A90

4K@60Hz HDBaseT Scaler Receiver

API Command Set

Version: V1.0.0

Telnet Connection

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

The form of telnet command are as follow:

telnet ip port

ip: The IP of required device

port: Port number of the device (Sandex-N002-A90 fixed port number is 23)

Example: The IP of required device is 192.168.1.122,

The telnet command is *telnet 192.168.1.122 23*

About the Command Set

Take Command *SET VOL prm[CR/LF]* as an example:

1. *[SET VOL]* denotes command key words, case in-sensitive.
2. *[prm]* denotes parameters, case in-sensitive, incorrect parameters number will not be recognized.
3. *[CR/LF]* is needed, all commands end up with [CR/LF].

IDX	Function Description	More Details	
Normal switch case			
1	Get the Mapping Status for Outputs and Inputs	<p style="text-align: center;">Syntax</p> <p>Command: GET MP all[CR/LF]</p> <p>Return: MP in out[CR/LF] MP in out[CR/LF]</p> <p>Description: MP is short for mapping in = {dp, vga, hdmi, hdbt}; out = {hdmi, hdbt}; all = {all};</p>	<p style="text-align: center;">Example</p> <p>Command: GET MP all[CR/LF]</p> <p>Return: MP hdmi hdmi[CR/LF] MP hdmi hdbt[CR/LF]</p> <p>Description: HDMI output is mapping HDMI input HDBT output is mapping HDMI input</p>
Especially control or config for Sandex series			
2	Set Subgroup	<p style="text-align: center;">Syntax</p> <p>Command: SET SUBGROUP prm1 prm2[CR/LF]</p> <p>Return: SUBGROUP prm1 prm2 [CR/LF]</p> <p>Description: prm1 = {self, all} //self: Current device //all: All the Sandex in link prm2 = {true, false} //true: Current device Subgroup //false: Current device no Subgroup</p>	<p style="text-align: center;">Example</p> <p>Command: SET SUBGROUP self true[CR/LF]</p> <p>Return: SUBGROUP self true[CR/LF]</p> <p>Description: Set current device subgroup</p>
3	Get Subgroup	<p style="text-align: center;">Syntax</p> <p>Command: GET SUBGROUP[CR/LF]</p> <p>Return: SUBGROUP prm[CR/LF]</p> <p>Description: prm = {true, false} //true: Current Device is Subgroup //false: Current device is no Subgroup</p>	<p style="text-align: center;">Example</p> <p>Command: GET SUBGROUP[CR/LF]</p> <p>Return: SUBGROUP true[CR/LF]</p> <p>Description: Current Device is Subgroup</p>

IDX	Function Description	More Details	
Volume			
4	Set Volume gain	<p style="text-align: center;">Syntax</p> <p>Command: SET VOL prm[CR/LF]</p> <p>Return: VOL prm[CR/LF]</p> <p>Description: prm = {0~100}</p>	<p style="text-align: center;">Example</p> <p>Command: SET VOL 50[CR/LF]</p> <p>Return: VOL 50[CR/LF]</p> <p>Description: Set volume gain 50</p>
5	Get Volume gain	<p style="text-align: center;">Syntax</p> <p>Command: GET VOL[CR/LF]</p> <p>Return: VOL prm[CR/LF]</p> <p>Description: prm = {0~100}</p>	<p style="text-align: center;">Example</p> <p>Command: GET VOL[CR/LF]</p> <p>Return: VOL 50[CR/LF]</p> <p>Description: Get volume gain 50</p>
6	Audio Mute cmd	<p style="text-align: center;">Syntax</p> <p>Command: SET MUTE prm[CR/LF]</p> <p>Return: MUTE prm[CR/LF]</p> <p>Description: prm = {on, off} // on means mute; off means unmute</p>	<p style="text-align: center;">Example</p> <p>Command: SET MUTE on[CR/LF]</p> <p>Return: MUTE on[CR/LF]</p> <p>Description: Mute on</p>
7	Get Audio Mute Status	<p style="text-align: center;">Syntax</p> <p>Command: GET MUTE[CR/LF]</p> <p>Return: MUTE prm[CR/LF]</p> <p>Description: Get Audio Mute Status</p>	<p style="text-align: center;">Example</p> <p>Command: GET MUTE[CR/LF]</p> <p>Return: MUTE on[CR/LF]</p> <p>Description: Mute status is on.</p>

IDX	Function Description	More Details	
8	Set Output Resolution	<p style="text-align: center;">Syntax</p> <p>Command: SET SCALER prm1 prm2[CR/LF]</p> <p>Return: SCALER prm1 prm2[CR/LF]</p> <p>Description: prm1 = {ByWeb} prm2 = {3840x2160@60, 3840x2160@30, 1920x1200@60, 1920x1080@60, 1280x1024@60, 1280x800@60, 1280x720@60, 1024x768@60, Auto} note: Auto (preferred native timing of the display)</p>	<p style="text-align: center;">Example</p> <p>Command: SET SCALER ByWeb 3840x2160@60[CR/LF]</p> <p>Return: SCALER ByWeb 3840x2160@60[CR/LF]</p> <p>Description: Set hdmi resolution 3840x2160@60.</p>
9	Get Output Resolution	<p style="text-align: center;">Syntax</p> <p>Command: GET SCALER[CR/LF]</p> <p>Return: SCALER prm1 prm2[CR/LF]</p> <p>Description: prm1 = {ByWeb, ByDIP} prm2 = {Fix:3840x2160@60, Fix:3840x2160@30, Fix:1920x1200@60, Fix:1920x1080@60, Fix:1280x1024@60, Fix:1280x800@60, Fix:1280x720@60, Fix:1024x768@60, Auto:3840x2160@60, Auto:3840x2160@30, Auto:1920x1200@60, Auto:1920x1080@60, Auto:1280x1024@60, Auto:1280x800@60, Auto:1280x720@60, Auto:1024x768@60}</p>	<p style="text-align: center;">Example</p> <p>Command: GET SCALER[CR/LF]</p> <p>Return: SCALE ByWeb Fix:3840x2160@60[CR/LF]</p> <p>Description: Get hdmi output resolution 3840x2160@60.</p>
CEC Control			
10	Set CEC for Sink Power On/Off	<p style="text-align: center;">Syntax</p> <p>Command: SET CECPWR_ONOFF out prm[CR/LF]</p> <p>Return: CECPWR_ONOFF out prm[CR/LF]</p> <p>Description: CECPWR_ONOFF will control sink power on or off prm = {on, off} out = {hdmi};</p>	<p style="text-align: center;">Example</p> <p>Command: SET CECPWR_ONOFF hdmi on[CR/LF]</p> <p>Return: CECPWR_ONOFF hdmi on[CR/LF]</p> <p>Description: Set CEC control for sink power on with HDMI out</p>
11	Get CEC Power Status	<p style="text-align: center;">Syntax</p> <p>Command: GET CECPWR_ONOFF out[CR/LF]</p> <p>Return: CECPWR_ONOFF out prm[CR/LF]</p> <p>Description: CECPWR is short for CEC Power prm = {on, off} out = {hdmi};</p>	<p style="text-align: center;">Example</p> <p>Command: GET CECPWR_ONOFF hdmi[CR/LF]</p> <p>Return: CECPWR_ONOFF hdmi on[CR/LF]</p> <p>Description: CEC control for sink is power on with HDMI out</p>

IDX	Function Description	More Details	
		Syntax	Example
12	Set CEC Auto Power On/Off	<p>Command: SET CECAUTO_ONOFF out prm[CR/LF]</p> <p>Return: CECAUTO_ONOFF out prm[CR/LF]</p> <p>Description: prm = {on, off} out = {hdmi};</p>	<p>Command: SET CECAUTO_ONOFF hdmi on[CR/LF]</p> <p>Return: CECAUTO_ONOFF hdmi on[CR/LF]</p> <p>Description: Set CEC Auto power on with HDMI out</p>
13	Get CEC Auto Power Status	<p>Command: GET CECAUTO_ONOFF out[CR/LF]</p> <p>Return: CECAUTO_ONOFF out prm[CR/LF]</p> <p>Description: prm = {on, off} out = {hdmi};</p>	<p>Command: GET CECAUTO_ONOFF hdmi[CR/LF]</p> <p>Return: CECAUTO_ONOFF hdmi on[CR/LF]</p> <p>Description: Get CEC Auto power on with HDMI out</p>
14	Set CEC Power Delay Time	<p>Command: SET CECAUTO_DELAY out prm[CR/LF]</p> <p>Return: CECAUTO_DELAY out prm[CR/LF]</p> <p>Description: CECAUTO_DELAY is short for CEC auto Power Delay Timing out = {hdmi}; prm = {0,1,2,3,...,30}// according to the actual time counter,1 means 1 minute ,2 means 2 minutes, Default wait time is 2 minutes 0 means when no active signal ,the unit auto power off immediately.</p>	<p>Command: SET CECAUTO_DELAY hdmi 3[CR/LF]</p> <p>Return: CECAUTO_DELAY hdmi 3[CR/LF]</p> <p>Description: Set CEC power delay time for 3 minutes</p>
15	Get CEC POWER Delay Time Status	<p>Command: GET CECAUTO_DELAY out[CR/LF]</p> <p>Return: CECAUTO_DELAY out prm[CR/LF]</p> <p>Description: CECAUTO_DELAY is short for CEC auto Power Delay Timing out = {hdmi}; prm = {0,1,2,3,...,30}// according to the actual time counter,1 means 1 minute ,2 means 2 minutes, Default wait time is 2 minutes 0 means when no active signal ,the unit auto power off immediately.</p>	<p>Command: GET CECAUTO_DELAY hdmi[CR/LF]</p> <p>Return: CECAUTO_DELAY hdmi 3[CR/LF]</p> <p>Description: Get CEC power delay time for HDMI is 3 minutes</p>

IDX	Function Description	More Details	
RS232 Control			
16	Set UART Baud Rate	<p style="text-align: center;">Syntax</p> <p>Command: SET UARTBAUDRATE prm[CR/LF]</p> <p>Return: UARTBAUDRATE prm[CR/LF]</p> <p>Description: prm = {9600,19200,38400,57600,115200}</p>	<p style="text-align: center;">Example</p> <p>Command: SET UARTBAUDRATE 9600[CR/LF]</p> <p>Return: UARTBAUDRATE 9600[CR/LF]</p> <p>Description: Set 9600 as UART BAUDRATE</p>
17	Set UART End Character	<p style="text-align: center;">Syntax</p> <p>Command: SET UARTENDCHAR prm[CR/LF]</p> <p>Return: UARTENDCHAR prm[CR/LF]</p> <p>Description: prm = {null, cr, lf, crlf} null: empty cr: carriage return lf: line feed crlf: carriage return and line feed</p>	<p style="text-align: center;">Example</p> <p>Command: SET UARTENDCHAR cr[CR/LF]</p> <p>Return: UARTENDCHAR cr[CR/LF]</p> <p>Description: Set cr as UART End Character</p>
18	Character UART Command Edit	<p style="text-align: center;">Syntax</p> <p>Command: SET UARTCMD_STREDIT prm1 prm2[CR/LF]</p> <p>Return: UARTCMD_STREDIT prm1 prm2[CR/LF]</p> <p>Description: prm1 = {poweron, poweroff} // prm1 is to set Power ON or Power OFF of display device prm2 = {xxxx} // prm2 is the specific Power ON or Power OFF command of display device, up to 30 characters.</p>	<p style="text-align: center;">Example</p> <p>Command: SET UARTCMD_STREDIT poweron pwr on[CR/LF]</p> <p>Return: UARTCMD_STREDIT poweron pwr on[CR/LF]</p> <p>Description: Set poweron pwr on to control the projector power</p>
19	Hex UART Command Edit	<p style="text-align: center;">Syntax</p> <p>Command: SETEX UARTCMD_HEXEDIT prm1 hex1 hex2 hex3 ... [CR/LF]</p> <p>Return: UARTCMD_HEXEDIT prm1 hex1 hex2 hex3 ... [CR/LF]</p> <p>Description: prm1 = { poweron, poweroff} // prm1 is to set Power ON or Power OFF of display device Hex1, hex2 = {xx xx xx xx} // hex1, hex2..., is ASC II string of hex value. For example, string "123", convert to correct format string is"31 32 33".</p>	<p style="text-align: center;">Example</p> <p>Command: SETEX UARTCMD_HEXEDIT poweron 70 77 72 20 6F 6E 0D 0A[CR/LF]</p> <p>Return: UARTCMD_HEXEDIT poweron 70 77 72 20 6F 6E 0D 0A[CR/LF]</p> <p>Description: Set poweron 70 77 72 20 6F 6E 0D 0A to control the projector power.</p>

IDX	Function Description	More Details	
		Syntax	Example
20	Set UART Power On/Off	<p>Command: SET UARTPWR_ONOFF out prm[CR/LF]</p> <p>Return: UARTPWR_ONOFF out prm[CR/LF]</p> <p>Description: UARTPWR_ONOFF will control sink is power on or off prm = {on, off} out = {hdmi};</p> <p>Note: Before sending command" SET UARTPWR_ONOFF", shall configure the projector as following:(Shown as IDX 13, 14, 15, 16) 1. Baud Rate; (SET UARTBAUDRATE) 2. API end character; (SET UARTENDCHAR) 3. Set projector API; (SET UARTCMD_STREDIT or SETEX UARTCMD_HEXEDIT)</p>	<p>Command: SET UARTPWR_ONOFF hdmi on[CR/LF]</p> <p>Return: UARTPWR_ONOFF hdmi on[CR/LF]</p> <p>Description: Set UART to control the projector power, the projector is power on</p>
21	Get UART Power Status	<p>Command: GET UARTPWR_ONOFF out[CR/LF]</p> <p>Return: UARTPWR_ONOFF out prm[CR/LF]</p> <p>Description: UARTPWR is short for UART Power prm = {on, off} out = {hdmi};</p>	<p>Command: GET UARTPWR_ONOFF hdmi[CR/LF]</p> <p>Return: UARTPWR_ONOFF hdmi on[CR/LF]</p> <p>Description: The projector is power on</p>
22	Set UART Auto Power On/Off	<p>Command: SET UARTAUTO_ONOFF out prm[CR/LF]</p> <p>Return: UARTAUTO_ONOFF out prm[CR/LF]</p> <p>Description: prm = {on, off} out = {hdmi};</p>	<p>Command: SET UARTAUTO_ONOFF hdmi on[CR/LF]</p> <p>Return: UARTAUTO_ONOFF hdmi on[CR/LF]</p> <p>Description: Set UART to control projector auto power on</p>
23	Get UART Auto Power Status	<p>Command: GET UARTAUTO_ONOFF out[CR/LF]</p> <p>Return: UARTAUTO_ONOFF out prm[CR/LF]</p> <p>Description: prm = {on, off} out = {hdmi};</p>	<p>Command: GET UARTAUTO_ONOFF hdmi[CR/LF]</p> <p>Return: UARTAUTO_ONOFF hdmi on[CR/LF]</p> <p>Description: The projector is power on</p>

IDX	Function Description	More Details	
24	Set UART Power Delay Time	<p style="text-align: center;">Syntax</p> <p>Command: SET UARTPWR_DELAY out prm[CR/LF]</p> <p>Return: UARTPWR_DELAY out prm[CR/LF]</p> <p>Description: UARTPWR_DELAY is short for UART Power Delay Timing out = {hdmi}; prm = {0,1,2,3...30 }// according to the actual time counter,1 means 1 minute ,2 means 2 minutes, Default wait time is 2 minutes 0 means when no active signal ,the unit auto power off immediately.</p>	<p style="text-align: center;">Example</p> <p>Command: SET UARTPWR_DELAY hdmi 2[CR/LF]</p> <p>Return: UARTPWR_DELAY hdmi 2[CR/LF]</p> <p>Description: Set HDMI out UART power delay time 2 minutes</p>
25	Get display POWER Delay Time Status	<p style="text-align: center;">Syntax</p> <p>Command: GET UARTPWR_DELAY out[CR/LF]</p> <p>Return: UARTPWR_DELAY out prm[CR/LF]</p> <p>Description: UARTPWR_DELAY is short for UART Power Delay Timing out = {hdmi}; prm = {0,1,2,3...} // according to the actual time counter,1 means 1 minute ,2 means 2 minutes, Default wait time is 2 minutes 0 means when no active signal ,the unit auto power off immediately.</p>	<p style="text-align: center;">Example</p> <p>Command: GET UARTPWR_DELAY hdmi[CR/LF]</p> <p>Return: UARTPWR_DELAY hdmi 3[CR/LF]</p> <p>Description: HDMI out UART power delay time is 3 minutes</p>
HDCP			
26	Get Input HDCP status	<p style="text-align: center;">Syntax</p> <p>Command: GET HDCP_IN in[CR/LF]</p> <p>Return: HDCP_IN in prm[CR/LF]</p> <p>Description: in= {dp, vga, hdmi, hdbt} prm = {hdcp1.4, hdcp2.2, off} // off means Non-HDCP</p>	<p style="text-align: center;">Example</p> <p>Command: GET HDCP_IN hdmi[CR/LF]</p> <p>Return: HDCP_IN hdmi hdcp1.4[CR/LF]</p> <p>Description: HDMI input supports HDCP 1.4</p>

IDX	Function Description	More Details	
System Info			
		Syntax	Example
27	Factory Reset	Command: RESET[CR/LF] Return: RESET[CR/LF] Description: Factory Reset	Command: RESET[CR/LF] Return: RESET[CR/LF] Description: Factory Reset
28	System Reboot	Command: REBOOT[CR/LF] Return: REBOOT[CR/LF] Description: System Reboot	Command: REBOOT[CR/LF] Return: REBOOT[CR/LF] Description: System Reboot
LAN Module			
		Syntax	Example
29	Set Static IP Address	Command: SET IPADDRESS STATIC ip4addr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx[CR/LF] Return: IPADDRESS STATIC ip4addr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx[CR/LF] Description: Set Static IP Address	Command: SET IPADDRESS STATIC ip4addr 192.168.11.243 netmask 255.255.255.0 gateway 192.168.2.1[CR/LF] Return: IPADDRESS STATIC ip4addr 192.168.11.243 netmask 255.255.255.0 gateway 192.168.2.1[CR/LF] Description: Set static IP address 192.168.11.243; netmask 255.255.255.0; gateway 192.168.2.1
30	Set DHCP (Dynamic Host Configuration Protocol) IP Address	Command: SET IPADDRESS dhcp[CR/LF] Return: IPADDRESS dhcp[CR/LF] Description: Set DHCP IP Address	Command: SET IPADDRESS dhcp[CR/LF] Return: IPADDRESS dhcp[CR/LF] Description: Set DHCP IP address

IDX	Function Description	More Details	
		Syntax	Example
31	GET IP Address	<p>Command: GET IPADDRESS[CR/LF]</p> <p>Return: IPADDRESS dhcp[CR/LF] OR IPADDRESS STATIC ip4addr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx [CR/LF]</p> <p>Description: GET IP Address</p>	<p>Command: GET IPADDRESS[CR/LF]</p> <p>Return: IPADDRESS dhcp[CR/LF]</p> <p>Description: Get DHCP</p>



■ Grandbeing Offices

Address: B-301, Science and Technology Building Phase 11. 1057 Nanhai Road, Nanshan District, Shenzhen, P.R, China.

Official Website: www.grandbeing.com

Tel: +86-755-21620566

Fax: +86-755-21620564

■ Grandbeing Technical Support

Email: support@grandbeing.com

We reserve the right to change specification or product dimensions at any time.