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ALFATRON ELECTRONICS GmbH

GERMANY

API Guide for ALF-MUK44N

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 <i>in out</i><CR><LF> Return: SW <i>in out</i><CR><LF> Parameter: <i>in</i> = {hdmiin1, hdmiin2...hdmiin4}; <i>out</i> = {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 <i>in all</i><CR><LF> Return: SW <i>in all</i><CR><LF> Parameter: <i>in</i> = { hdmiin1, hdmiin2...hdmiin4}; <i>all</i> = {all}; Description: SW is short for Switch Switch one input source for all output sink	Command: SET SW hdmiin1 <i>all</i><CR><LF> Return: SW hdmiin1 <i>all</i><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 <i>out</i><CR><LF> Return: <i>Mp in out</i><CR><LF> Parameter: <i>in</i> = {hdmiin1, hdmiin2...hdmiin4}; <i>out</i> = {hdmiout1, hdmiout2...hdmiout4}; Description: MP is short for mapping Get which input mapping to the indicate Output	Command: GET MP <i>hdmiout1</i><CR><LF> Return: MP <i>hdmiin2</i> <i>hdmiout1</i><CR><LF> Description: Get which input mapping to output 1
4	Get which output mapping to all input	Command: GET MP <i>all</i><CR><LF> Return: MP <i>in out</i><CR><LF> MP <i>in out</i><CR><LF> Parameter: <i>in</i> = {hdmiin1, hdmiin2...hdmiin4}; <i>out</i> = {hdmiout1, hdmiout2...hdmiout4}; <i>all</i> = {all}; Description: MP is short for mapping Get which output mapping to all input	Command: GET MP <i>all</i><CR><LF> Return: MP <i>hdmiin1</i> <i>hdmiout1</i><CR>... MP <i>hdmiin2</i> <i>hdmiout2</i><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 <i>out prm</i><CR><LF> Return: CEC_PWR <i>out prm</i><CR><LF> Parameter: <i>prm</i> = {on, off} <i>out</i> = {hdmiout1, hdmiout2...hdmiout4, all }; Description: Set sink power on or off	Command: SET CEC_PWR hdmiout1 <i>on</i><CR><LF> Return: CEC_PWR hdmiout1 <i>on</i><CR><LF> Description: Set sink hdmi output 1 power on
2	Set CEC AUTO POWER ON/OFF	Command: SET AUTOCEC_FN <i>out prm</i><CR><LF> Return: AUTOCEC_FN <i>out prm</i><CR><LF> Parameter: <i>prm</i> = {on, off} <i>out</i> = {hdmiout1, hdmiout2...hdmiout4}; Description: Set sink auto power Function ON or OFF	Command: SET AUTOCEC_FN <i>hdmiout1</i> <i>on</i><CR><LF> Return: AUTOCEC_FN hdmiout1 <i>on</i><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 <i>out</i><CR><LF> Return: AUTOCEC_FN <i>out</i> <i>prm</i><CR><LF> Parameter: <i>prm</i> = {on, off} <i>out</i> = {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 <i>on</i> Description: Get Sink auto power status, and the status is ON.
4	Set CEC POWER Delay Time	Command: SET AUTOCEC_D <i>out</i> <i>prm</i><CR><LF> Return: AUTOCEC_D <i>out</i> <i>prm</i><CR><LF> Parameter: <i>out</i> = {hdmiout1, hdmiout2...hdmiout4}; <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. Description: AUTOCEC_D is short for CEC auto Power Delay Timing	Command: SET AUTOCEC_D <i>hdmiout1 2</i><CR><LF> Return: AUTOCEC_D <i>hdmiout1</i> <i>2</i><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 <i>out</i> <CR><LF> Return: AUTOCEC_D <i>out</i> <i>prm</i><CR><LF> Parameter: <i>out</i> = {hdmiout1, hdmiout2...hdmiout4}; <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. Description: AUTOCEC_D is short for CEC auto Power Delay Timing Default: 2	Command: GET AUTOCEC_D hdmiout1 <CR><LF> Return: AUTOCEC_D <i>hdmiout1</i> 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 <i>in prm</i><CR><LF> Return: HDCP_S <i>in prm</i><CR><LF> Parameter: <i>prm</i> = {on, off} <i>in</i> = {hdmiin1, hdmiin2...hdmiin4} Description: HDCP_S will control source hdcpc support on or off	Command: SET HDCP_S hdmiin1 <i>on</i><CR><LF> Return: HDCP_S hdmiin1 <i>on</i><CR><LF> Description: Set hdmi input 1 hdcpc support on

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

IDX	Description	Command	Example
EDID			
1	Set Input EDID	Command: SET EDID <i>in prm</i><CR><LF> Return: EDID <i>in prm</i><CR><LF> Parameter: <i>in</i> = {hdmiin1, hdmiin2...hdmiin4}; <i>prm</i> = {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<i>in1</i> 10<CR><LF> Return: EDID hdmi<i>in1</i> 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 <i>all</i> <CR><LF> Return: EDID <i>in prm</i><CR> EDID <i>in prm</i><CR> EDID <i>in prm</i><CR><LF> Parameter: <i>in</i> = {hdmiin1, hdmiin2...hdmiin4}; <i>prm</i> = {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 <i>all</i> <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 <i>in</i> <CR><LF> Return: EDID <i>in prm</i><CR><LF> Parameter: <i>in</i> = {hdmiin1, hdmiin2....hdmiin4}; <i>prm</i> = {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 <i>10</i><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 <i>prm</i> <CR><LF> Parameter: <i>prm</i> = {...} // 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 [<i>prm</i>] <CR><LF> Return: UPG [<i>prm</i>] <CR><LF> Parameter: <i>prm</i> = {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 <i>prm</i> <CR><LF> Return: PRESET <i>prm</i> <CR><LF> Parameter: <i>prm</i> = {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 <i>prm</i> <CR><LF> Return: PRESET <i>prm</i> <CR><LF> Parameter: <i>prm</i> = {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 <i>out</i> <i>pcm</i><CR><LF> Return: MUTE <i>out</i> <i>pcm</i><CR><LF> Parameter: <i>pcm</i> = {on, off}; //on means mute; off means unmute <i>out</i> = {audioout1, audioout2,...audioout4, all}; Description: Set Audio mute or not mute	Command: SET MUTE <i>audioout1</i> <i>on</i><CR><LF> Return: MUTE <i>audioout1</i> <i>on</i><CR><LF> Description: Set audioout1 mute on
2	Get Audio Output mute status	Command: GET MUTE <i>out</i><CR><LF> Return: MUTE <i>out</i> <i>pcm</i><CR><LF> Parameter: <i>pcm</i> = {on, off}; //on means mute; off means unmute <i>out</i> = {audioout1, audioout2,...audioout4, all}; Description: Get Audio Output mute status Default: off	Command: GET MUTE <i>audioout1</i><CR><LF> Return: MUTE <i>audioout1</i> <i>off</i><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 hdmiout1 on<CR><LF> Description: Get video Output scaler status.

