Hisense

USER MANUAL

Read the manual carefully and ensure you have fully understood its contents before operating this device for the first time.

20277992 C

English

Setting

1 Calling Methods:

Press the ⚙ **SETTING button** on the remote control to enter the setting interface.

2 Setting:

Network

2nd	3rd	Description
Ethernet	Automatic IP acquisition	-Wired priority, connects automatically when wired is plugged in. -Cannot be turned on when not connected to a wired network. -By default, the IP address is obtained automatically. **[Note]** When the wired network lock is enabled, the wired network is locked and unavailable. It can be used normally only after the lock is disabled.
	Manual IP	Users are connected to a wired network and can also manually configure an IP address for Internet access.
	MAC address	Showcase a wired Mac
Wi-Fi	On/Off	The wireless network has two states: on and off, and is off by default. **[Note]** When the Wi-Fi lock is enabled, this function will be unavailable. The Wi-Fi function can be used normally only after the Wi-Fi lock is disabled.
	MAC address	Showcase Wireless Mac Address. -It includes random MAC and device MAC. Random MAC is used by default. -The random MAC changes with each SSID. -The device MAC is fixed and does not change with different SSIDs.

	Available network	Display a list of currently connectable WiFi. -The WiFi list is automatically refreshed every 10s. -Shows the current status of each SSID: Connected, Not Connected or No Internet Access. -For connected networks, click to view the IP address (including the IPV6 address) or to disconnect; for unconnected networks, click to enter a password to connect, or open the Advanced Settings and select Manual Settings.
	Add other network	Manually add the network you want to connect to.
Network Diagnostic		Detects the current network connection status.
Hotspot	On/Off	-The hotspot has two states, on and off, and is off by default. -Note: Hotspot and wireless network are mutually exclusive, i.e., if the hotspot is on, the wireless network is automatically off.
	Name and password	Enter the name and password of the hotspot you want to connect to.
	Advanced setting	Users can select the encryption method and channel in the advanced settings.
Bluetooth	On/Off	Bluetooth has both on and off states, and is off by default.
	Paired devices	-Show paired devices. -Note: Users can click on the device to cancel the pairing.
	Available devices	-Show the list of currently searched Bluetooth devices. -Note: Users can perform pairing operation by clicking the device.
	Search Equipment	Users can start the search function by clicking the "Available Devices" button to search for Bluetooth devices around them. Once a device is searched, it will be displayed in the "Available Devices" list.

Display

2nd	3rd	Description
Brightness		Backlight brightness, range 0-100 **[Note]** When "Auto adjust" is enabled, Brightness cannot be adjusted manually.
Auto adjust		Automatically adjusts the brightness of the whole backlight according to the light sense, and is on by default.
Image mode	Standard, Text, Bright, Natural, HDR	-Normal videos correspond to five image modes: Standard, Bright, Natural, Text, and Customization. -When HDR video is played back, the image mode automatically switches to HDR standard mode.
Image mode	Customization	-Black Level: This parameter has a value range of 0-100 and is used to describe the degree of black expression in the image. -Contrast: The value of this parameter ranges from 0 to 100 and is used to describe the contrast between light and dark of the image. -Chroma: The value of this parameter ranges from 0 to 100, and is used to describe the degree of colour performance of the image. -Sharpness: The value of this parameter ranges from 0 to 20, which is used to describe the degree of detail performance of the image. -Colour Temperature: This parameter has five grades, namely, Cool, Cooler, Standard, Warmer and Warmer, which are used to describe the tonal performance of the image. -Noise Reduction: This parameter has four levels, namely Off, Low, Medium and High, and the default level is Medium, which is used to describe the degree of noise reduction of the image.
Screen rotation	Landscape Portrait	-Rotation of the whole machine content, i.e. the signal display is rotated synchronously with the menu display. -Provides two angles, Landscape and Portrait, the default is Portrait.

Menu rotation	Landscape	-Only menu shows rotation.
	Portrait	-Provides both Landscape and Portrait angles, default Portrait.
Screen saver	Screen burn protection	Enabling this feature protects the screen from burn-in damage caused by prolonged display of static content. On/Off, Default Off
	Regular execution	You can configure the screen saver timer. The screen saver will automatically activate and deactivate based on the designated time interval. Off, Repeat, Interval. Default is Off
	Mode	You may select an appropriate mode to prevent image retention. Pixels, Scroll bar, Gradient screens, Default Pixels
	Period	1 hour, 2 hours, ..., 10 hours Default 1 hour
	Time	10s, 20s, ..., 50s, Default 10s
	Start time	24-hour system
	End time	24-hour system
	Execute immediately	Select the screen saver you want to display immediately. Off, Pixel, Scroll bar, Gradient screens. Default Off
	[Note] The functions of different models may vary, please refer to the actual model.	

Advanced setting	Ambient Light Settings	**[Statement]** The specifications of the built-in light sensor and the external light sensor are different. Please refer to the actual light sensor. -Maximum Brightness -Default: 100 Range: 50 ~ 100 -Minimum Brightness -Default: 0 Range: 0 ~ 49 -0% Luminance (Amb.) -Default: 1lux Range: 1~88000 -10% Luminance (Amb.) -Default: 50lux Range: 1~88000 -20% Luminance (Amb.) -Default: 100lux Range: 1~88000 -30% Luminance (Amb.) -Default: 150lux Range: 1~88000 -40% Luminance (Amb.) -Default: 200lux Range: 1~88000 -50% Luminance (Amb.) -Default: 900lux Range: 1~88000 -60% Luminance (Amb.) -Default: 1600lux Range: 1~88000 -70% Luminance (Amb.) -Default: 2199lux Range: 1~88000 -80% Luminance (Amb.) -Default: 2599lux Range: 1~88000 -90% Luminance (Amb.) -Default: 2999lux Range: 1~88000

	-100% Luminance (Amb.) -Default: 8800lux Range: 1~88000
Zoom	-Lanscape: full screen, zoom. -Portrait : full screen, custom.
Dynamic Contrast	On, off, default on.
Local Dimming	High, Medium, Low, Off.

[Note]
The functions of different models may vary, please refer to the actual model.

Luminance dynamic range	Auto, Limit, All, default Auto.
White balance	Users can adjust the white balance of the video image -2-point and 20-point white balance can be selected for adjustment; -2-point white balance adjusts the white balance sub-items of the image: red gain, green gain, blue gain, red deviation, green deviation, blue deviation. The adjustment range is (-30 --- +30), and the default is 0. -20-point : 1.Gamma Adjustment Point:Each gamma adjustment point allows independent adjustment of the grayscale curve slope for the red, green, and blue channels at the corresponding luminance level, correcting tonal transitions and color cast in that specific region. 2.Gain:Gain adjustment directly modifies the signal output amplitude of the red, green, and blue channels, adjusting the overall brightness of the image and the purity of white.
Gamma	-Adjust the centre brightness of the image. -The user has the option to turn gamma on or off. Sub options include: 2.0, 2.2, 2.4.
Colour correction	Users can adjust the colour of the video image. 1. Adjustment sub-items: red, green, blue, cyan, yellow, purple, skin tone hue, colour saturation, brightness options. 2. Adjustment range (-15 --- +15), default is 0. 3. The setting effect takes effect instantly.

Multi-screen display	Used in multiple screen splicing scenarios. 1. Set the position and display content of each screen through the four options of "Horizontal Ratio", "Vertical Ratio", "Screen Position" and "Edge Masking". Set the position and display content of each screen; 2. Horizontal and vertical settings for the number of rows and columns of the splicing settings, the default is 1 row and 1 column, range 1-15. 3. Screen Position is the position of the row and column where the screen is located. 4. Edge Masking Setting sub-option for On and Off, default Off, when turned on, the splicing position image is used to crop off.
Image parameter reset	Rest preset values for image settings.

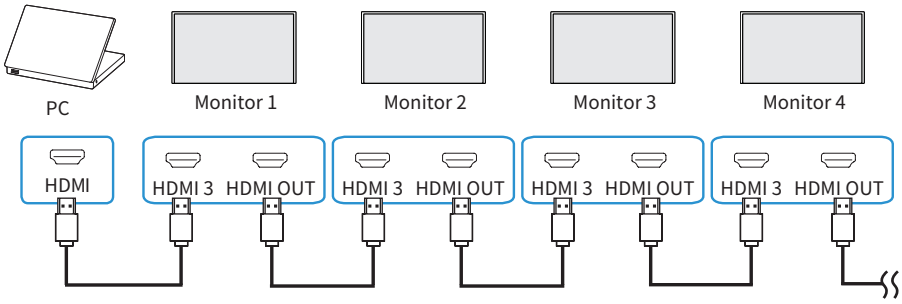
Multi-screen display

Only the ports that are marked as HDMI 3 &HDMI OUT are supported.

Use a cable shorter than 10 feet (3m) to get the best UHD content viewing quality.

Maximum loopouts: Up to 6 are supported if HDCP2.2 is supported, up to 9 if HDCP1.4 is supported.

HDMI 1/2 is not supported.



Sound

2nd	3rd	Description
Sound mode	Standard, Cinema, Music, Meeting,	Users can adjust several sound modes preset by the unit: standard, cinema, music, meeting. Default standard.
Output device	Device speakers, HDMI eARC, Bluetooth Audio Device, USB sound equipment, Headphones	Users can adjust the sound output device selection. 1. Output devices include: Device speakers, HDMI eARC, Bluetooth Audio Device, USB sound equipment, Headphones 2. Default native speakers. When a device type is selected, other types of audio devices do not output sound
Advanced setting	Equalizer	· 7-band EQ · Frequency points: 100Hz, 250Hz, 600Hz, 1kHz, 2.5kHz, 6kHz, 10kHz · The 7-band equalizer allows precise adjustment of low, mid and high frequencies to optimize sound quality according to content type and listening environment, achieving full bass, clear vocals and transparent treble.
	Dolby Atmos	On, Off, Default: On Dolby Atmos delivers immersive 3D surround sound for realistic audio experience. Actual sound performance is subject to hardware limitations and may vary by device.
	Balance	Users can adjust the left/right balance of the sound output. 1. Adjustment range -10 to 10, default 0.
	Audio output format	Audio output supports Auto, PCM and Pass-through modes, defaulting to PCM. Actual sound performance depends on external devices and environment. · Auto: Automatically matches the optimal audio output format according to external devices. · PCM: Outputs decoded standard audio signal with wide compatibility, which is the default mode. · Pass-through: Outputs original audio stream directly for decoding by external speakers or amplifiers.

	Maximum Volume/ Minimum Volume	Users can set the maximum and minimum volume.
	Sound parameter reset	Users has the option to restore the sound settings to the factory preset state.

Switch on/off

2nd	3rd	Description
Switch-on source	Memory, Home, HDMI1, HDMI2, HDMI3, Media Autoplay	1. Media autoplay option is displayed according to the playlist, it is not displayed when the playlist is empty. 2. Default boot source is home.
Power on mode	Boot, Standby, Last	Default boot.
Wake-on LAN	Switch on, switch off	Users can wake up the device through wired network. 1. When it is on, you can wake up the device through the network, and off, you can't wake up. 2. Off by default.*
Sleep mode settings	Switch on, switch off	Users can set whether or not to enter the hibernation state through the hibernation menu.
Turn-on delay	Switch on, switch off	Sets the power-on delay default value. Setting range 2-255s.
Timed switch on/off	Boot, Shutdown	Users can activate and deactivate the timer on/ off function. The clock sets hours and minutes in a 24-hour manner, and up to three different switch-on/switch-off time points can be set per day (each switch is a time period).
No signal standby	Off, 30S, 1 minute, 5 minutes, 10 minutes, 15 minutes, 30 minutes, 60 minutes	Automatic standby with no signal from the source. Default 10 minutes. **[Note]** Default values may vary across different devices. Please refer to actual conditions.
No operation standby	Off, 10 minutes, 15 minutes, 30 minutes, 60 minutes, 90 minutes, 120 minutes	Auto standby for Android without operation. Default 15 minutes.

LED status of power off	On/Off; Default On	If the light effect is on, the indicator light will be on during sleep mode; If the light effect is off, the indicator light will be off during sleep mode.
LED status of power on	On/Off; Default Off	If the light effect is on, the indicator light will be on when the power is turned on; If the light effect is off, the indicator light will be off when the power is turned on.

Signal management

2nd	3rd	Description
Failover	switch on, switch off	The sub-options contain On and Off, with Off being the default. When on, you can select master signal source and slave signal source. 1. Among the channels supported by the whole machine, select two signal sources as master signal source and slave signal source; 2. When there is no signal from the master signal source and there is signal from the slave signal source, it will automatically jump to the slave signal source; 3. When there is no signal from the master signal source and no signal from the slave signal source, out of the no signal screen saver; 4. when the signal from the main signal source is restored, automatically switch to the main signal source; 5. When the master signal source is not restored and the slave signal source is restored, automatically switch to the slave signal source;
Auto switch source	switch on, switch off	The device automatically switches channels when it detects a new signal access. Enabled by default.
Automatic wake-up	switch on, switch off	-Supports external signal for whole machine standby wake-up. -Enabled by default. -This option unifies the control of the standby wake-up function for HDMI signals.
HDMI version	HDMI standard, HDMI enhanced	Default HDMI standard

HDMI CEC	CEC switch	-On, off, default On. -When the control switch is on, the HDMI CEC control takes effect and the standby control, auto power on, and remote control switches are highlighted.
	Standby control	-On, off, default off. -When the device is switched off by remote control, the external HDMI CEC device also enters the standby state. -When the external CEC device is in standby mode, the device will also enter standby mode.
	Automatic power-on	-On, off, default off. -When switching on the device, the CEC device will automatically switch on after receiving the command from the device. -When the external CEC device power on, the device will also power on.
	Remote control	-On, off, default off. -Through the remote control, you can control the external HDMI CEC device, such as up, down, left, right, OK, return.
Homepage setting		Users can customise the homepage according to their needs. Supports browsers, HiShare (provided that the multi-screen interactive service lock is on) and installed third-party applications. **[Note]** HiShare support varies by device model. Please refer to the actual model for details.
Serial port ID setting	Manual ID Setup	Users can manually set an ID to identify the device during serial communication. -ID setting data range is: 1-255.

Application

2nd	3rd	Description
Application list Display all applications		Application information: icon, application name, version information, uninstall, force stop, total, application, data, delete data, cache, clear cache
Application permissions		After selecting an application, display the permissions currently applied for by the application
Application installation and uninstallation permissions		On, off, default on.

System

2nd	3rd	Description
Language	Simplified Chinese, English, French, German, Polish, Sipan, Russian, Italian, Finnish, Norwegian, Swedish, Israeli, Arabic, Thai, Malay, Bahasa Indonesia,Catalan, Japanese	-Switches the system language. -The default language is set according to the shipping country.
Input method	kika input method	Currently there is only one kika input method.
Country/Time zone selection		Select country and time zone
Time and date	Network synchronization	Select whether to enable network synchronisation of the system date and time.
	Date	Modify the system date.
	Time	Modify the system time.
	NTP Time Synchronization	Users may enter the server address for time calibration.
Upgrade and update	Device upgrade	-Detect the availability of new system software versions through the network. -Performs an OTA upgrade of the entire system.

	USB upgrade and update	-Detect the availability of updatable system software through the USB port. -Upgrade the whole system.
	USB differential upgrade	Differential upgrade of the complete system via USB interface.
Over temperature protection	Protection level 1	When the device temperature reaches the Level 1 threshold, the fan is activated.
	Protection level 2	If the temperature rises to the Level 2 threshold, the fan speed will be boosted.
	Protection level 3	Upon reaching the Level 3 threshold, the system automatically dims the backlight brightness.
	Protection level 4	When the Level 4 threshold is exceeded, the device initiates sleep mode to prevent overheating.
Disclaimer	User agreement	Displaying user agreement.
	Privacy policy	Showcasing the privacy policy.
About	Device name	-Display the name of the local machine. -The device name supports customisation.
	Serial number	Display the SN code of unit.
	Device ID	Display device ID.
	Android version	Display the current system Android version.
	System capacity	Display system capacity.
	Software version	Display the current system software version number.
	HDMI FW Ver:	Displays the current firmware version of the HDMI chip.
	Wired MAC	Display wired mac.
	Wireless MAC	-Display the mac address after connecting to the wireless network.
	Booting running time	Records and displays the power-on run time.
	Export logs to USB	Export logs to a storage device via the USB port.

Security and Permission

2nd	3rd	Description
Security and Permission	Accessing Security and Permission	1. For the first access, you need to enter the initial password "0000". After changing the password, you must enter the new password; if not changed, you will always be prompted to enter "0000". 2. Entering the correct password allows you to open the Security and Permission menu (including various lock functions, which may vary by model).
	IR Remote Lock	1. Select "IR Remote Lock" in the menu, which is disabled by default. You can choose two activation modes: "Only Power Available" and "Full Shielding". 2. The lock takes effect immediately after activation and is unlocked immediately after deactivation; A corresponding prompt will appear when the lock is active and you press the remote control. 3. When locked, you can temporarily unlock it by pressing the combination keys "Lock+OK+OK+Lock" or "Left+OK+OK+Left" (it will lock automatically after 15 minutes).
	Local Key Lock	1. Select "Local Key Lock" in the menu, which is disabled by default. The local keys will be locked immediately after activation. 2. After locking, the local keys are unavailable when the device is powered on, and you can press the local key to power on when the device is in standby mode. This function is not displayed for models without local keys.
	Setup Menu Lock	1. Select "Setup Menu Lock" in the menu, which is disabled by default. After activation, only three setting options—"Display", "Sound", and "Security and Permission"—are retained. 2. After activation, the WiFi Lock and Wired Network Lock are grayed out and cannot be modified, and they will be restored after deactivation.

USB Lock	1. Select "USB Lock" in the menu, which is enabled and grayed out (cannot be deactivated) by default. 2. After activation, U disk content cannot be read.
Multi-screen collabration service lock	1. Select "Multi-screen collabration service lock" in the menu, which is enabled by default. 2. After activation, multi-screen interaction functions are unavailable. It will be restored to normal after deactivation.
Android Lock	1. Select "Android Lock" in the menu, which is disabled by default. All Android-related functions are unavailable after activation. 2. After activation, it automatically switches to the physical channel. All Android functions are restored after deactivation.
Change password	1. Select "Change password" in the menu. For the first modification, you need to enter the original password first . 2. You need to set a 4-digit numeric password, and the modification is successful only if the two entries are consistent.
Wi-Fi Lock	1. Disabled by default. Enabling this disables Wi-Fi and hotspot. 2.Wi-Fi and hotspot will re-enable once disabled.
Ethernet Lock	It is disabled by default. After activation, the wired network is disconnected. It can be connected normally after deactivation.
Remote Control Lock	1. It includes three sub-locks: IP Control Lock, REST API Lock, and SNMP Lock, all of which are disabled by default. 2. After activation, the corresponding remote control service stops and communication is unavailable. The service needs to be restarted to resume after deactivation.
Signal Lock	1. It applies to physical channels (with signal). Each channel lock is disabled by default and controls the display of the corresponding channel signal. 2. The corresponding channel signal is not displayed after activation and is restored after deactivation.
Reset	Reset all device settings to the initial state.

RS232

Serial Port State: When the serial port is open, the machine can receive serial port commands sent by the external controller. See the table below for the specific command protocol.

Data Parameters

DM-SERIES	
Baud Rate	9600
Data length (bits)	8
Parity	None
Stop bit	1
Flow control	None

Command Format

PC -> TV:

Header (2 Bytes)		Length (2 Bytes)		Command (4 Bytes)				Monitor ID (1 Byte)	Data (N Bytes)				Checksum (1 Bytes)	End (2 Bytes)	
DD	FF													BB	CC

TV -> PC:

Header (2 Bytes)		Length (2 Bytes)		Command (4 Bytes)				Monitor ID (1 Byte)	Data (N Bytes)				Checksum (1 Bytes)	End (2 Bytes)	
AB	AB													CD	CD

[Note]

- Length is the number of bytes of Command, Data and Checksum.
- Checksum is XOR of Length, Command, Monitor ID and Data.

RS232 Command

Description	Command (HEX Bytes)	Example (PC -> TV ID 01)	TV -> PC
Power On	DD FF 00 08 C1 15 00 00 xx BB BB yy BB CC	DDFF0008C115000001 BBBBDDBBCC	AB AB 00 08 C1 15 00 00 xx BB BB yy CD CD When TV is in standby sate, send this command will get one feedback from TV, once TV starts up, it will send feedback again.
Power Off	DD FF 00 08 C1 15 00 00 xx AA AA yy BB CC	DD FF 00 08 C1 15 00 00 01 AA AA DD BB CC	AB AB 00 08 C1 15 00 00 xx AA AA yy CD CD
Screen Off	DD FF 00 07 C1 31 00 00 xx 00 yy BB CC	DD FF 00 07 C1 31 00 00 01 00 F6 BB CC	AB AB 00 07 C1 31 00 00 xx 00 yy CD CD
Screen On	DD FF 00 07 C1 31 00 00 xx 01 yy BB CC	DD FF 00 07 C1 31 00 00 01 01 F7 BB CC	AB AB 00 07 C1 31 00 00 xx 01 yy CD CD
Reboot	DD FF 00 06 C1 1E 00 00 xx yy BB CC	DD FF 00 06 C1 1E 00 00 01 D8 BB CC	AB AB 00 06 C1 1E 00 00 xx yy CD CD
Set AC Power On Mode	DD FF 00 07 C1 FF 00 09 xx zz yy BB CC	DDFF0007C1FF00090 10031BBCC zz: power on mode. 00 – direct, 01 – last, 02 – standby direct: DD FF 00 07 C1 FF 00 09 01 00 31 BB CC last: DD FF 00 07 C1 FF 00 09 01 01 30 BB CC standby: DD FF 00 07 C1 FF 00 09 01 02 33 BB CC	AB AB 00 07 C1 FF 00 09 xx zz yy CD CD
HDMI1 Input	DD FF 00 07 C1 08 00 00 xx 0E yy BB CC	DDFF0007C1080000010 EC1BBCC	AB AB 00 07 C1 08 00 00 xx 0E yy CD CD
HDMI2 Input	DD FF 00 07 C1 08 00 00 xx 0F yy BB CC	DDFF0007C1080000010 FC0BBCC	AB AB 00 07 C1 08 00 00 xx 0F yy CD CD
HDMI3 Input	DD FF 00 07 C1 08 00 00 xx 12 yy BB CC	DD FF 00 07 C1 08 00 00 01 12 DD BB CC	AB AB 00 07 C1 08 00 00 xx 12 yy CD CD

Set Screen Aspect Ratio	DD FF 00 07 C1 35 00 00 xx zz yy BB CC Once this command is set, reboot TV, it will show with expected ratio	ex: set screep ratio 90 degrees DDFF0007C1350000010 9FBBBCC zz = 00 - 0 degree, 01 - 90 degree	AB AB 00 07 C1 35 00 00 xx zz yy CD CD
Set Mute	DD FF 00 07 C1 26 00 00 xx 01 yy BB CC	DDFF0007C1260000010 1E0BBCC	AB AB 00 07 C1 26 00 00 xx 01 yy CD CD
Set Unmute	DD FF 00 07 C1 26 00 00 xx 00 yy BB CC	DDFF0007C1260000010 0E1BBCC	AB AB 00 07 C1 26 00 00 xx 00 yy CD CD
Set Volume	DD FF 00 07 C1 27 00 00 xx zz yy BB CC	DDFF0007C1270000010 1E1BBCC zz: volume range 0-100	AB AB 00 07 C1 27 00 00 xx zz yy CD CD
Set Backlight Brightness	DD FF 00 08 C1 32 00 00 xx 06 zz yy BB CC	ex: set brightness to 32 - zz = 0x20 DDFF0008C1320000010 620DCBBCC	AB AB 00 08 C1 32 00 00 xx 06 zz CD CD
Set Backlight Brightness Auto Adjust	DD FF 00 07 C1 34 00 00 xx zz yy BB CC	ex: set brightness auto adust off DDFF0007C1340000010 0F3BBCC zz = 00 - off, 01 - on	AB AB 00 07 C1 34 00 00 xx zz yy CD CD
Set Date	DD FF 00 09 C1 1C 00 00 xx zz zz zz yy BB CC	ex: set date to 23.Jan.2 DDFF0009C11C0000011 7010 2C1BBCC zz zz zz = Year Month Day	AB AB 00 09 C1 1C 00 00 xx zz zz zz yy CD CD zz zz zz = FF FF FF when error
Set Time	DD FF 00 09 C1 1D 00 00 xx zz zz zz yy BB CC	ex: set time to 12:25:2 DDFF0009C11D0000010 C1902C3BBCC zz zz zz = Hour Minute Second	AB AB 00 09 C1 1D 00 00 xx zz zz zz yy CD CD zz zz zz = FF FF FF when error

Set Schedule for Power On	DD FF 00 09 C1 3E 00 00 xx tt zz zz yy BB CC	ex: power on at 9:10 every day DDFF0009C13E0000010 1090AF5BBCC tt = 00 - turn off schedule, 01 - tt= 1-12 Month zz zz = Hour Minute Tips: If the device has been set to power on and off at a scheduled time, sending this command will clear the original settings, and leaving only the one sent.	AB AB 00 09 C1 3E 00 00 xx zz zz zz yy CD CD
Set Schedule for Power Off	DD FF 00 09 C1 3F 00 00 xx tt zz zz yy BB CC	ex: power off at 18:10 every day DDFF0009C13F0000010 1120AEFBBCC tt = 0 - turn off schedule, 1 - tt= 1-12 Month zz zz = Hour Minute Tips: If the device has been set with a timed power on/off command, all previously set power on/off will be turned off	AB AB 00 09 C1 3F 00 00 xx zz zz zz yy CD CD
Set Brightness	DD FF 00 07 C1 36 00 00 xx zz yy BB CC	ex: set brightness to 32 - zz = 0x20 DDFF0007C1360000012 0D1BBCC	AB AB 00 07 C1 36 00 00 xx zz yy CD CD
Set Contrast	DD FF 00 07 C1 37 00 00 xx zz yy BB CC current source must be: DP, VGA, HDMI, PC, DVI	ex: set contrast to 32 - zz = 0x20 DDFF0007C1370000012 0D0BBCC	AB AB 00 07 C1 37 00 00 xx zz yy CD CD
Set Sharpness	DD FF 00 07 C1 38 00 00 xx zz yy BB CC current source must be: DP, VGA, HDMI, PC, DVI	ex: set sharpness to 32 - zz = 0x20 DDFF0007C1380000012 0DFBBCC	AB AB 00 07 C1 38 00 00 xx zz yy CD CD
Set Color Temperature	DD FF 00 07 C1 39 00 00 xx zz yy BB CC current source must be: DP, VGA, HDMI, PC, DVI	ex: set colour temperature to 32 - zz = 0x20 DDFF0007C1390000012 0DEBBCC	AB AB 00 07 C1 39 00 00 xx zz yy CD CD

<table>
<tr><td>Set Noise Reduction</td><td>DD FF 00 07 C1 3A 00 00 xx zz yy BB CC
current source must be: DP, VGA, HDMI, PC, DVI</td><td>ex: set noise reduction to High - zz = 0x03
DDFF0007C13A0000010 3FEBBCC
zz = 01 - low, 02 - medium, 03 - high, 04 - auto, 00 – off</td><td>AB AB 00 07 C1 3A 00 00 xx zz yy CD CD</td></tr>
<tr><td>Set Image Scaling</td><td>DD FF 00 07 C1 3B 00 00 xx zz yy BB CC
current source must be: DP, VGA, HDMI, PC, DVI</td><td>ex: set image scaling to Full - zz = 0x03
DDFF0007C13B0000010 3FFBBCC
zz = 00 - full, 01 - 16:9, 02 - 4:3</td><td>AB AB 00 07 C1 3B 00 00 xx zz yy CD CD</td></tr>
<tr><td>Set Picture Mode</td><td>DD FF 00 07 C1 0F 06 00 xx zz yy BB CC</td><td>ex: set picture mode to movie mode - zz = 0x03
DDFF0007C10F0600010 30CBBCC
zz = 00 - standard, 01 - bright, 02 - soft, 03 - Movie, 04 - Text, 5 - gaming 12 – natural</td><td>AB AB 00 07 C1 0F 06 00 xx zz yy CD CD</td></tr>
<tr><td>Set Sound Mode</td><td>DD FF 00 07 C1 FF 00 03 xx zz yy BB CC</td><td>ex: set sound mode to standard mode - zz = 0x00
DDFF0007C1FF0003010 03BBBCC
zz = 00 - standard，01 - music, 02 - news, 08 - movie, 10 - sports，20 - custom, 30 - voice, 40 - meeting</td><td>AB AB 00 07 C1 FF 00 03 xx zz yy CD CD</td></tr>
<tr><td>Set Power on delay</td><td>DD FF 00 07 C1 3C 00 00 xx zz yy BB CC</td><td>ex: set power on delay to 10s
DDFF0007C13C0000010 AF1BBCC
zz = 00 - off, others - delay time, range: 2s - 255s</td><td>AB AB 00 07 C1 3C 00 00 xx zz yy CD CD</td></tr>
<tr><td>Set Video Wall</td><td>DD FF 00 09 C1 0A 00 00 xx zz zz zz yy BB CC</td><td>ex: vertical 3 devices, horizontal 4 devices, device position: 6
DDFF0009C10A0000010 30406C2BBCC
zz: how many devices in vertical
zz: how many devices in horizontal
zz: current device position</td><td>AB AB 00 09 C1 0A 00 00 xx zz zz zz yy CD CD
<table><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>10</td><td>11</td><td>12</td></tr></table></td></tr>
</table>

Set Static IP Address of LAN	DD FF 00 16 C1 1B 30 00 xx zz … zz yy BB CC	Ex: set IP 10.16.150.225, subnet mask: 255.255.248.0, gateway: 10.16.144.1, DNS: 10.16.144.2 DDFF0016C11B3000010 A1096E1FFFFF8000A10 90010 A10900249BBCC zz .. zz - 16 bytes, IP address - 4 bytes, Subnet mask - 4 bytes, gateway - 4 bytes, DNS - 4 bytes	AB AB 00 16 C1 1B 30 00 xx zz … zz yy CD CD
Set USB Lock	DD FF 00 07 C1 FF 00 0E xx zz yy BB CC	ex: lock USB DDFF0007C1FF000E010 036BBCC zz = 00 - lock USB, 01 - enable USB	AB AB 00 07 C1 FF 00 0E xx zz yy CD CD
Factory Reset	DD FF 00 06 C1 10 00 00 xx yy BB CC	DDFF0006C110000001D 6BBCC	AB AB 00 06 C1 10 00 00 xx yy CD CD
Query TV Status	DD FF 00 06 C1 28 00 00 xx yy BB CC	DDFF0006C128000001E EBBCC	AB AB 00 0C C1 28 00 00 xx zz zz zz zz zz zz yy CD CD zz: volume zz zz: 05 05-HDMI1 05 04-HDMI2 05 0B-HDMI3 05 2A-HDBT zz: 00 - power on, FF - power off zz: 01 - mute; 00 - unmute zz: 00 - no signal, 01 - has signal
Query Screen Status	DD FF 00 06 C1 32 00 01 xx yy BB CC	DD FF 00 06 C1 32 00 01 01 F5 BB CC	AB AB 00 07 C1 32 00 01 xx zz yy CD CD zz: 00 - screen off; 01 - screen on
Query Source	DD FF 00 06 C1 1A 00 00 xx yy BB CC	DDFF0006C11A000001D CBBCC	AB AB 00 08 C1 1A 00 00 xx zz zz yy CD CD zz zz - source, refer to user menu for source definition

Query SW Version	DD FF 00 06 C1 1B 00 00 xx yy BB CC	DDFF0006C11B000001D DBBCC	AB AB 00 09 C1 1B 00 00 xx zz zz zz yy CD CD zz zz zz - Year Month Date
Query Backlight Brightness	DD FF 00 06 C1 3E 00 24 xx yy BB CC	DDFF0006C13E000001F 8BBCC	AB AB 00 LL C1 3E 00 24 xx zz zz yy CD CD zz:01 - bright，02 - soft, 03 - auto adjust, 04 - stereo frequency conversion，05 - Comfort frequency conversion，06 - custom zz: when first zz is 06 custom, this byte means backlight brightness value: 0-30 LL: when first zz is zz, LL = 08, otherwise, LL = 07
Query Brightness	DD FF 00 06 C1 36 00 01 xx yy BB CC	DDFF0006C136000101F 0BBCC	AB AB 00 07 C1 36 00 01 xx zz yy CD CD zz is the brightness value
Query Network Status	DD FF 00 06 C1 FF 00 16 xx yy BB CC	DDFF0006C1FF0016012 FBBCC	AB AB 00 07 C1 FF 00 16 xx zz yy CD CD zz: 00 - no network connection; 01 - network connected
Query Sound Mode	DD FF 00 06 C1 FF 00 02 xx yy BB CC	DDFF0006C1FF0002013 BBBCC	AB AB 00 07 C1 FF 00 02 xx zz yy CD CD zz = 00 - standard，01 - music, 02 - news, 08 - movie, 10 - sports，20 - custom, 30 - voice, 40 - meeting

Query AC Power On Status	DD FF 00 06 C1 FF 00 08 xx yy BB CC	DDFF0006C1FF0008013 1BBCC	AB AB 00 07 C1 FF 00 08 xx zz yy CD CD zz: 00 - power on; 01 - Last mode; 02 - standby
Query IP Address	DD FF 00 06 C1 1B 20 00 xx yy BB CC	DDFF0006C11B200001F DBBCC	AB AB 00 16 C1 1B 20 00 xx zz … zz yy CD CD zz zz zz zz - IP address zz zz zz zz - Subnet mask zz zz zz zz Gateway zz zz zz zz - DNS
Query Device Temperature	DD FF 00 06 C1 FE 00 00 xx yy BB CC	DDFF0006C1FE0000013 8BBCC	AB AB 00 07 C1 FE 00 00 xx zz yy CD CD zz: temperature in centigrade
Query Picture Mode	DD FF 00 06 C1 6D 00 00 xx yy BB CC	DD FF 00 06 C1 6D 00 00 64 CE BB CC	AB AB 00 07 C1 6D 00 00 xx zz yy CD CD zz: 00 – standard, 01 – bright, 06 – AI, 07 – user, 02 – soft, 03 – movie, 04 – text, 05 – game, 12- nature
Query USB Status	DD FF 00 06 C1 6E 00 00 xx yy BB CC	DD FF 00 06 C1 6E 00 00 64 CD BB CC	AB AB 00 07 C1 6E 00 00 xx zz yy CD CD zz: 00 - off, 01 - on
Query SN	DD FF 00 06 C1 FF 00 0B xx yy BB CC	DDFF0006C1FF000B013 2BBCC	AB AB 00 1D C1 FF 00 0B xx zz…zz yy CD CD zz .. zz: 23 bytes serial number
Query Devicd ID	DD FF 00 06 C1 FF 00 0D xx yy BB CC	DDFF0006C1FF000D013 4BBCC	AB AB 00 26 C1 FF 00 0D xx zz…zz yy CD CD zz .. zz: 32 bytes device ID
Query MAC Address	DD FF 00 06 C1 6C 00 00 xx yy BB CC	DDFF0006C16C000001A ABBCC	AB AB 00 0C C1 6C 00 00 xx zz…zz yy CD CD zz .. zz: 6 bytes

Query volume	DD FF 00 06 C1 7D 00 00 xx yy BB CC	DD FF 00 06 C1 7D 00 00 64 DE BB CC	AB AB 00 07 C1 7D 00 00 xx zz yy CD CD zz: volume
Query Serial Port ID	DD FF 00 06 C1 1B 10 00 xx yy BB CC	DD FF 00 06 C1 1B 10 00 64 A8 BB CC	AB AB 00 06 C1 1B 10 00 xx zz yy CD CD zz: serial port ID. Settings -> signal manager -> serial port ID
Query brand	DD FF 00 06 C1 FE 00 01 xx yy BB CC	DD FF 00 06 C1 FE 00 01 64 5C BB CC	AB AB 00 06 C1 FE 00 01 xx zz…zz yy CD CD zz…zz: brand. ex: hisense (ASCII)
Query model	DD FF 00 06 C1 FE 00 02 xx yy BB CC	DD FF 00 06 C1 FE 00 02 64 5F BB CC	AB AB 00 06 C1 FE 00 02 xx zz…zz yy CD CD zz…zz: model name
Send Remote Controller Key Code	DD FF 00 08 C1 17 00 00 xx zz zz yy BB CC	ex: send menu key: zz zz = 00 00 DDFF0008C1170000010 000DFBBCC zz zz = 00 00 - Menu; 00 01 - UP, 00 02 - DOWN, 00 03 - LEFT, 00 04 - RIGHT， 00 05 - OK， 00 06 - Return, 00 07 - Source,00 08 - Volume +,00 09 - Vulme -	AB AB 00 08 C1 17 00 00 xx zz zz yy CD CD
Open Settings	DD FF 00 06 C1 41 00 00 xx yy BB CC		AB AB 00 06 C1 41 00 00 xx yy CD CD
Open Home	DD FF 00 06 C1 FF 00 1A xx yy BB CC	DDFF0006C1FF001A 0123BBCC	AB AB 00 06 C1 FF 00 1A xx yy CD CD
Open CMS	DD FF 00 06 C1 FF 00 13 xx yy BB CC	DDFF0006C1FF0013012 ABBCC	AB AB 00 06 C1 FF 00 13 xx yy CD CD
Turn on Hotspot	DD FF 00 06 C1 44 00 00 xx yy BB CC	DDFF0006C1440000018 2BBCC	AB AB 00 06 C1 44 00 00 xx yy CD CD
Take Screenshot	DD FF 00 06 C1 4B 00 00 xx yy BB CC	DDFF0006C14B0000018 DBBCC	AB AB 00 06 C1 4B 00 00 xx yy CD CD
Set Max_ Backlight	DD FF 00 07 C1 0F 00 05 xx zz yy BB CC	DD FF 00 07 C1 0F 00 05 01 50 9D BB CC zz: the max backlight, range: 50-100 (0x32- 0x64)	AB AB 00 07 C1 0F 00 05 xx zz yy CD CD

<table>
<tr>
<td>Set Min_ Backlight</td>
<td>DD FF 00 07 C1 0F 00 06 xx zz yy BB CC</td>
<td>DD FF 00 07 C1 0F 00 06 01 14 DA BB CC
zz: the min backlight, range: 0-49 (0x00- 0x31)</td>
<td>AB AB 00 07 C1 0F 00 06 xx zz yy CD CD</td>
</tr>
<tr>
<td>Set Brightness_ Ambient Light</td>
<td>DD FF 00 09 C1 0F 00 07 xx zz1 zz2 zz3 yy BB CC</td>
<td>DD FF 00 09 C1 0F 00 07 01 02 03 20 E0 BB CC
The device with ID 01 and brightness 20 corresponds to an ambient light setting of 800 lux.
Note:
zz1: represents the corresponding brightness level. The corresponding relationship is as follows:
<table>
<tr><td>zz1</td><td>Brightness_</td></tr>
<tr><td>0x00</td><td>0</td></tr>
<tr><td>0x01</td><td>10</td></tr>
<tr><td>0x02</td><td>20</td></tr>
<tr><td>0x03</td><td>30</td></tr>
<tr><td>0x04</td><td>40</td></tr>
<tr><td>0x05</td><td>50</td></tr>
<tr><td>0x06</td><td>60</td></tr>
<tr><td>0x07</td><td>70</td></tr>
<tr><td>0x08</td><td>80</td></tr>
<tr><td>0x09</td><td>90</td></tr>
<tr><td>0x0A</td><td>100</td></tr>
</table>
zz2 zz3: Ambient light corresponding to each stage of brightness. Please set it within the corresponding range.
2000lux -> zz2 zz3: 0x 07 0xD0</td>
<td>AB AB 00 09 C1 0F 00 07 xx zz1 zz2 zz3 yy CD CD</td>
</tr>
</table>

<table>
<tr>
<td>Set All Ambient Light</td>
<td>DD FF 00 1C C1 0F 00 08 xx zz1 zz2 … zz22 yy BB CC</td>
<td>
<table>
<tr><th>Data</th><th>Brightness_</th><th>Ambient Light</th></tr>
<tr><td>zz1 zz2</td><td>0</td><td>0-487
(0x00 0x00 - 0x01 0xE7)</td></tr>
<tr><td>Zz3 zz4</td><td>10</td><td>500-987
(0x01 0xF4- 0x03 0xDB)</td></tr>
<tr><td>Zz5 zz6</td><td>20</td><td>1000-1487
(0x03 0xE8 – 0x05 0xCF)</td></tr>
<tr><td>Zz7 zz8</td><td>30</td><td>1500-1987
(0x05 0xDC – 0x07 0xC3)</td></tr>
<tr><td>Zz9 zz10</td><td>40</td><td>2000-3987
(0x07 0xD0 – 0x0F 0x93)</td></tr>
<tr><td>zz11 zz12</td><td>50</td><td>4000-9987
(0x01 0x90 – 0x27 0x03)</td></tr>
<tr><td>zz13 zz14</td><td>60</td><td>10000-16987
(0x27 0x10 – 0x42 0x5B)</td></tr>
<tr><td>zz15 zz16</td><td>70</td><td>17000-21987
(0x42 0x68 – 0x55 0xE3)</td></tr>
<tr><td>zz17 zz18</td><td>80</td><td>22000-25987
(0x55 0xF0 – 0x65 0x83)</td></tr>
<tr><td>zz19 zz20</td><td>90</td><td>26000-29987
(0x65 0x90 – 0x75 0x23)</td></tr>
<tr><td>Zz21 zz22</td><td>100</td><td>30000-88000
(0x75 0x30 – 0x01 0x57 0xC0)</td></tr>
</table>
</td>
<td>AB AB 00 1C C1 0F 00 08 xx zz1 zz2 … zz22 yy CD CD</td>
</tr>
<tr>
<td>Query Max_ Backlight</td>
<td>DD FF 00 06 C1 FE 00 04 xx yy BB CC</td>
<td>DD FF 00 06 C1 FE 00 04 01 50 6C BB CC
Set the maximum brightness to 80.</td>
<td>AB AB 00 07 C1 FE 00 04 xx zz yy CD CD</td>
</tr>
<tr>
<td>Query Min_ Backlight</td>
<td>DD FF 00 06 C1 FE 00 05 xx yy BB CC</td>
<td>DD FF 00 06 C1 FE 00 05 01 14 29 BB CC
Set the minimum brightness to 20</td>
<td>AB AB 00 07 C1 FE 00 05 xx zz yy CD CD</td>
</tr>
<tr>
<td>Query Brightness_ Ambient Light</td>
<td>DD FF 00 07 C1 FE 00 06 xx zz yy BB CC</td>
<td>
<table>
<tr><th>zz</th><th>Brightness_</th></tr>
<tr><td>0x00</td><td>0</td></tr>
<tr><td>0x01</td><td>10</td></tr>
<tr><td>0x02</td><td>20</td></tr>
<tr><td>0x03</td><td>30</td></tr>
<tr><td>0x04</td><td>40</td></tr>
<tr><td>0x05</td><td>50</td></tr>
<tr><td>0x06</td><td>60</td></tr>
<tr><td>0x07</td><td>70</td></tr>
<tr><td>0x08</td><td>80</td></tr>
<tr><td>0x09</td><td>90</td></tr>
<tr><td>0x0A</td><td>100</td></tr>
</table>
</td>
<td>AB AB 00 09 C1 FE 00 06 xx zz1 zz2 zz3 yy CD CD</td>
</tr>
</table>

Query All Ambient Light	DD FF 00 06 C1 FE 00 07 xx yy BB CC	DD FF 00 06 C1 FE 00 07 01 3F BB CC	AB AB 00 1C C1 FE 00 07 xx zz1 zz2 … zz22 yy CD CD
Query Sharpness	DD FF 00 06 C1 3C 00 02 xx yy BB CC	DD FF 00 06 C1 3C 00 02 01 F8 BB CC	AB AB 00 07 C1 3C 00 02 xx zz yy CD CD
Query Contrast	DD FF 00 06 C1 3C 00 03 xx yy BB CC	DD FF 00 06 C1 3C 00 03 01 F9 BB CC	AB AB 00 07 C1 3C 00 03 xx zz yy CD CD
Query Color Temperature	DD FF 00 07 C1 3C 00 04 xx zz yy BB CC	DD FF 00 07 C1 3C 00 04 01 12 ED BB CC	AB AB 00 07 C1 3C 00 04 xx zz yy CD CD

[Note]

- The range of BoardID is from 01 to FF, supporting 255 machines to be networked together. 00 is the broadcast address, the commands issued by this ID will be executed by all MFPs, but the commands will not be returned.
- When all the commands received from TV terminal are returned to PC terminal, the start code should be changed to AB AB, and the end code should be changed to CD CD.
- Note for programming of control terminal: For power-on instruction, after power-on action is executed, it returns AB AB 00 08 C1 15 00 00 XX BB BB XX CD CD (refer to the above table for the meaning of XX); if the instruction is not received, it is necessary to send the power-on instruction again. after TV is turned on, the PC will receive AB AB 00 08 C1 15 00 00 00 XX BB BB XX CD CD again, and then the PC can send the control instruction. After the TV is switched on, the PC will receive the command again, then the PC can send control commands to the TV; if any command is not returned correctly, the interval between sending the command again should be more than 500ms.
- When TV is in sleep state, only power-on command and query command are supported.

[Statement]

- The functions of different models may vary. Please refer to the status supported by the actual model.



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