

## MCTRL4K Independent Controller



Product Version: V1.0.3

Document Number: NS110100430

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## **Change History**

Version	Release Date	Description
V1.0.3	2018-02-08	HDR function is added.
V1.0.2	2017-11-16	Web control is supported.
V1.0.1	2016-10-31	Document style is updated.
V1.0.0	2016-06-06	First release
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This chapter illustrates safety of the MCTRL4K independent controller to ensure the product's storage, transport, installation and use safety.

Safety instructions are applicable to all personnel who contact or use the product. First of all, pay attention to following points.

- Read through the instructions.
- Retain all instructions.
- Comply with all instructions.

## 1.1 Storage and Transport Safety

- Pay attention to dust and water prevention.
- Avoid long-term direct sunlight.
- Do not place the product at a position near fire and heat.
- Do not place the product in an area containing explosive materials.
- Do not place the product in a strong electromagnetic environment.
- Place the product at a stable position to prevent damage or personal injury caused by dropping.
- Save the packing box and materials which will come in handy if you ever have to store and ship the product. For maximum protection during storage and shipping, repack the product as it was originally packed at the factory.

## 1.2 Installation and Use Safety

- Only trained professionals may install the product.
- Plugging and unplugging operations are prohibited when the power is on.
- Ensure safe grounding of the product.
- Beware of electric shock hazards.
- Always wear a wrist band and insulating gloves.
- Do not place the product in an area having frequent or strong shake.
- Perform dust removing regularly.

- Contact NovaStar for maintenance at any time, rather than have the product disassembled and maintained by non-professionals without authorization.
- Replace faulty parts only with the spare parts supplied by NovaStar.

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The MCTRL4K is a 4Kx2K independent controller developed by NovaStar. With up to 3840x2160@60Hz loading capacity of a single unit, it can support any custom resolution within this range as required, thus meeting the on-site configuration requirements of super-long or super-large LED displays.

In multi-card mode, the MCTRL4K can be used as two independent controllers, making the images of two input sources perfectly displayed on the screen.

What's more, the MCTRL4K supports HDR function and can work with A8s/A10s to greatly enhance the image quality of the screen, presenting more vivid and clearer images.

The MCTRL4K is mainly applied to concert control centers, live events, security monitoring, Olympic Games and various sports centers.



Note: The device must be powered off before connection.

To control multiple MCTRL4K units (10 units at most), please cascade them according to the figure below.



# **3** Hardware Structure

## 3.1 Appearance

#### Front Panel



No.	Name	Description			
1	Power button	Pressing it powers on the device, while holding it down for 4–5 seconds powers off the device.			
2	USB	Connects a USB drive only (PC cannot be connected).			
3	LCD screen	Displays the menu.			
4	Knob	Pressing the knob enters a menu or confirms an option or operation. Rotating the knob selects a menu item or adjusts a parameter.			
5	BACK	Returns to the parent menu.			

Instruction on knob operations:

- On the home screen, pressing the knob enters the main menu.
- On the main menu, rotating the knob selects a menu item or adjusts the parameter, and pressing the knob confirms the selection or enters the submenu.
- Holding down the knob and **BACK** button simultaneously for 5 seconds locks or unlocks all the buttons.

#### **Rear Panel**

Input					
DP 1.2	DP 1.2 connector				
HDMI 2.0	HDMI 2.0 connector				
DUAL DVI-D1 DUAL DVI-D2	Dual-link DVI connector				
Output					
1–16	16 × Neutrik (NE8FBH) Gigabit Ethernet outputs.				
OPT1-4	<ul> <li>4 × Fiber optical outputs</li> <li>OPT1 corresponds to Ethernet ports 1–8, while OPT2 corresponds to Ethernet ports 9–16.</li> <li>OPT3 serves as the backup for OPT1, while OPT4 serves as the backup for OPT2.</li> </ul>				
Control					
ETHERNET	For PC connection				
USB IN	Input port for cascading devices, or for PC connection				
USB OUT	Output port for cascading devices				
GENLOCK					
IN	Genlock type: Blackburst It is the GenLock synchronization signal which is used to ensure synchronization between the LED screen display and external GenLock source.				
LOOP	GenLock loop output				
Power Connector					
AC 100-240V–50/60Hz	AC power input				

**Note**: Type-A USB port is prohibited from being connected to the upper computer directly.

## 3.2 Dimensions



## 4 Home Screen

After the MCTRL4K is powered on, the home screen is shown in the figure below.



- A: Access status of signal sources
  - Blue: Signal available
  - Gray: Signal unavailable

The interval between plugging and unplugging the DP connector should be greater than 5 seconds. Otherwise, the DP source cannot be detected.

- B: Current input source and its resolution and frame rate
- When the dual-link DVI is selected as input, the information of the two DVI sources will be displayed alternately.
- C: Width, height and frame rate of the LED display that is currently configured
- D: Status area

The meaning of each status icon is introduced in the following table.

$\heartsuit$	Supply voltage of core mainboard
<b>@</b>	Temperature inside the controller
\$ \$	Brightness of LED display
XI II	DVI1 and DVI2 sources in sync/not in sync
<mark>₩</mark>	Status of the control connector: not connected/connected to USB

port/connected to Ethernet port
Screen unlocked/locked

- E: Connection status of Ethernet ports •
  - Blue: The connection works and the port serves as the master. \_
  - Gray: The port is not connected or the connection does not work.
  - Mark on the top corner of the icon: The connection works and the port is in \_ redundancy status.
- F: Connection status of optical fiber ports
  - Blue: The connection works and the port serves as the master. \_
  - Gray: The port is not connected or the connection does not work.
  - Mark on the top-left corner of the icon: The connection works and the port is in redundancy status.



The MCTRL4K supports Web control functions, so the screen configurations can be easily and quickly performed on a PC or mobile device.

Note: For LED screen configuration via Web, Google browser is recommended.

## 5.1 Environment Configuration



- Step 1 Connect the MCTRL4K to a PC (or a mobile device) with Ethernet cable.
- Step 2 Obtain the IP address of the MCTRL4K.
- Step 3 On the PC (or mobile device), search for the above IP address and enter the IP address.

Note: The MCTRL4K and PC (or mobile device) must be in the same LAN.

## 5.2 User Interface

The user interface of Web control is shown in the following figure.



- A: Hardware connection statuses and loading capacities of the input, output and other connectors on the MCTRL4K. For details, see chapter 4 Home Screen.
- B: Operations can be done in this area. For details, see chapter 6 Menu Operations.

Click the menu bar on the left of area B to select the option to be adjusted. The corresponding operations can be done on the right.

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## 6.1 Brightness Adjustment

On the main menu, press the knob to select the **Brightness** item and rotate the knob to adjust the brightness value.

Main	
🔆 Brightness	100%
Input Settings	
Screen Settings	×
Display Control	
Advanced Settings	
Communication Settings	
🚳 Language	

## 6.2 Input Settings

## 6.2.1 Input Mode Settings

Supported input video sources include Auto, DP, HDMI, DVI×2, DVI1 and DVI2.

Note: When the input source is set to **Auto**, the controller will automatically detect the input source according to the following priority:

DP > HDMI > DVI

The MCTRL4K supports two input modes: mosaic and multi-card.

Main		Input Settings			Input Mode	
🔆 Brightness	100%	📲 Input Mode	►		DVI Mode	Mosaic
🎢 Input Settings	►	Input Resolution	►		Input Source	DVI×2
Screen Settings	•				Mosaic Mode	1 2
Display Control	►			•		
Advanced Settings	•					
Communication Settings	►					
🛞 Language	►					

- In mosaic mode, the DVIx2 is the input source.
- In multi-card mode, the DVI1 or DVI2 is the input source.

- The MCTRL4K serves as two independent controllers and the loading capacity of each is up to 3840×2160@30Hz. The images of both DVI 1 and DVI 2 input sources can be displayed on LED display simultaneously, but they cannot be set at the same time.
- The DVI 1 corresponds to Ethernet ports 1–8, while DVI 2 corresponds to Ethernet ports 9–16.

#### 6.2.2 Input Resolution Settings

The input resolution can be set to a preset resolution or can be customized.

ut Settings	 Input Resolution	
Input Mode	Custom	
	▶	

The input resolution can be set through either of the following ways.

#### Method 1: Preset

Select a proper resolution from the preset standard resolutions.

#### Method 2: Custom

Rotate the knob to set a custom width (increasing by even numbers), custom height and custom refresh rate. Then select **Apply** and press the knob to apply the settings.

Note: The supported custom resolution is up to 4092×2160@60Hz.

#### 6.2.3 Ultra-High Resolution Settings

When the input source is DP/HDMI, and the width or height of the output image is greater than 4095 pixels, the resolution must be customized only through the NVIDIA graphics card.

Recommended graphics cards: NVIDIA GeForce GTX 970, NVIDIA GeForce GTX 1060, and NVIDIA GeForce GTX 750 Ti

Note: The custom resolution is up to 7680×1080@60Hz or 1080×6000@60Hz.

#### Procedures

- Step 1 Right-click on PC desktop.
- Step 2 Choose NVIDIA Control Panel to enter its window.
- Step 3 On the left panel, choose **Display > Change resolution**.
- Step 4 On the right, choose NOVA MCTRL4K.
- Step 5 Click Customize under 2. Apply the following settings.
- Step 6 In the displayed Customize dialog box, click Create Custom Resolution.
- Step 7 In the displayed dialog box, set the parameters.
  - Set the timing standard to **Manual**.

- Use the MCTRL4K Ultra-High Resolution Settings Generator (Rev 1.0) to calculate the parameters, including active pixels, front porch (pixels), sync width (pixels), polarity, total pixels and refresh rate. Then, enter the parameter values manually. Note that the pixel clock must not be greater than 595.0 MHz.
- Step 8 Click Test.
- Step 9 In the displayed dialog box indicating the test is successful, click **Yes** to save the custom resolution.

## 6.3 Screen Settings

#### 6.3.1 Quick Configuration

Load the cabinet configuration files and save them to the receiving card.

- Step 1 On the main menu, select **Screen Settings** and press the knob to enter the submenu.
- Step 2 Choose Quick Config and press the knob to enter the submenu.
- Step 3 Set **Cabinet Row QTY** and **Cabinet Col QTY** (quantities of cabinet rows and columns to be loaded).
- Step 4 Set **Port 1 Cabinet QTY** (number of cabinets loaded by Ethernet port 1). The device has restrictions on loading capacity of the Ethernet ports. For details, Note a).
- Step 5 Set **Data Flow** of the screen. For details, see Note c), d), and e).

Main			Screen Settings		Quick Config
Srightness	00%		Quick Config		Cabinet Row QTY 13
Input Settings			Advanced Config		Cabinet Col QTY 1
Screen Settings			Image Offset		Port 1 Cabinet QTY 4
Display Control	►	٠		•	Data Flow (Front View)
Advanced Settings					
Communication Settings					
Canguage					

#### Note

<ul> <li>a). If n ports are used to load the screen, the number of cabinets loaded by the first (n–1) ports must be:</li> <li>1. the same;</li> <li>2. the integral multiple of the number of rows or columns;</li> <li>3. no less than the number of cabinets</li> </ul>	Example: If Ethernet ports 1–7 are used to load the screen, the number of cabinets loaded by ports 1–6 must be the same and the integral multiple of the number of rows or columns. Therefore, you need to set only the number of cabinets loaded by port 1 according to the actual situation during quick configuration. The number of cabinets loaded by port 7 must be less than or equal to the number of cabinets loaded by port 1. In multi-card mode, if DVI 2 is used as input, the corresponding output ports are ports 9–16. That is, port 9 is			
loaded by the last port.	considered as the first port. So it is required to set the number of cabinets loaded by port 9.			
b). If there are irregular cabinets, cabinets of different sizes, or irregular screens, it is required to connect NovaLCT for screen configuration.				

c). During data flow settings, you can view the results of different data flow presets on LED display by rotating the knob. When you are satisfied with the LED display image effect, press the knob to save the settings.

d). During data flow settings, you must ensure that the physical connection of each port is along the same direction and downward to next one.

e). During data flow settings, you must ensure that the Ethernet Port 1 is at the beginning position of the whole physical connection.

#### 6.3.2 Advanced Configuration



- Step 1 Choose Advanced Config and press the knob to enter its submenu.
- Step 2 On the warning screen, click Yes to enter the advanced configuration screen.
- Step 3 Select **Enable** and set the parameters of targeted Ethernet ports.

#### 6.3.3 Image Offset

Set **Start X** and **Start Y** (the horizontal and vertical offsets of the overall display loaded by the device).

## 6.4 Display Control

Main		7		Display Control		
ġ.	Brightness	100%		Normal		2
۶.	Input Settings	►		😹 Freeze		
	Screen Settings	►		Black Out		
	Display Control	►	♥	Rus Test Pattern	=	=
<b>ि</b> ंग	Advanced Settings	▶				
	Communication Settings	►				
3	Language	•				

Normal: The LED screen displays the content of current input source normally.

Freeze: The content of current input source is frozen.

Black Out: The screen goes blacks and does not display the content.

**Test Pattern**: A total of 8 test patterns are provided, such as pure colors and line patterns.

## 6.5 Advanced Settings

Main			Advanced Settings	
🔅 Brightness	100%		Mapping Function	Enable
Input Settings			E Load Cabinet Files	•
Screen Settings	•			►
Display Control	•	⋫	😑 Save to Hardware	
Advanced Settings	►	Ľ	Redundancy	Primary
Communication Settings	►		🙀 Factory Reset	
🌍 Language	•		HDR HDR	
			[[ 🛛 Hardware Version	V1.2.3.0

## 6.5.1 Mapping Function

When **Mapping Function** is enabled, each of the cabinets will display the cabinet number and Ethernet port number it belongs to.

## 6.5.2 Loading Cabinet Files

Start NovaLCT on PC and import the saved cabinet configuration files.

Step 1 Save cabinet configuration files.

After configuring the receiving cards, click **Save to File** to save the cabinet configuration files (.rcfgx) to local PC.

Module Information         Chip:       Common c       Size:       32W×32H       Scanning Type       1/16 scan         Direction:       Horizontal       Decoding Type       74HC138 Decoding       Data Groups       2         Cabinet Information       Set       Irregular       Irregular       Set         Width (Pixel)       32       = <=128       Irregular       Vidth:       ??       Height       ??         Module Casc       From right to left       Irregular       Vidth:       ??       Height       ??         Loading error. Please try to adjust pe       Construct Ca       View Cabinet         Performance Settings       Isbit+         Refresh Rate       More Settings       Isbit+         Refresh Rate       Normally bright v       Grayscale Mode       Refreshing rate firs v         Shift Clock Fre       12.5       MHZ       Duty cycle       3       (25-75) %         Phase Position       2       Low Grayscale C       0       (1-24)       Line Changing       3       (0-19)         Minimum OE width       80 ns       Brightness Eff       68.24%       Save to File       Read from Re.       Send to Restore	Module Information Chip: Common c Size: Direction: Horizontal Decoding T Cabinet Information	32W×32H ype 74HC138 Decoding	Scanning Type 1/16 scan	
Chip:       Common c       Size:       32W×32H       Scanning Type       1/16 scan         Direction:       Horizontal       Decoding Type       74HC138 Decoding       Data Groups       2         Cabinet Information       Set       Irregular       Set         Image: Regular       Irregular       Width:       ??       Height:       ??         Height (Pixel)       32       Image: Regular       Irregular       Vidth:       ??       Height:       ??         Module Casc       From right to left       Image: Refresh Rate       Image: Refresh Rate       View Cabinet         Performance Settings       Image: Refresh Rate       Im	Chip: Common c Size: Direction: Horizontal Decoding T Cabinet Information	32W×32H ype 74HC138 Decoding	Scanning Type 1/16 scan	
Direction:       Horizontal       Decoding Type       74HC138 Decoding       Data Groups       2         Cabinet Information       Set	Direction: Horizontal Decoding T Cabinet Information	ype 74HC138 Decoding	Data Outring 2	
Cabinet Information       Set            • Regular        Irregular          Width (Pixel)       32        <= 128	Cabinet Information		Data Groups 2	
Set            • Regular          Width (Pixel)            • Height (Pixel)            • Set         Module Casc         From right to left            • Module Casc         From right to left            • Performance Settings             • Pata Group E.          More Settings             • Phase Position             • Cast Control En 20              • Cast contr				
Width (Pixel)       32       = =128         Height (Pixel)       32       = =256         Module Casc       From right to left       Construct Ca         Vidth:       ??       Height:         Performance Settings       Isbit+         Performance Settings       Isbit+         Refresh Rate       480       Hz         Refresh Rate       67ayscale Mode         Shift Clock Fre       12.5         It Clock Fre       12.5         Yield Control En       20         Row Blanking       25         It Clock Fre       32         It Clock Fre       32         It Clock Fre       2.5         Width       80 ns         Brightness Effi       68.24%         Smart Settings       Load from File       Receiving car         Brightness Effi       68.24%	Regular	O Irregular		Set R
Width (Pixe)       ************************************		Logality -	00 Uninte 00	
Height (Pixel)       →       →       = 256       Loading error. Please try to adjust pe         Module Case       From right to left        Construct Ca       View Cabinet         Performance Settings       ■       19bit+         Refresh Rate       480       HZ       Refresh Rate TI       ●         Grayscale level       Normally bright •       Grayscale Mode       ■       (25-75) %         Shift Clock Fre       12.5       •       MHZ       Duty cycle       ■       •         Row Blanking       2.5       ●       (=2.00us)       Ghost Control En       0       ●         Row Blanking       2.5       ●       (=2.00us)       Ghost Control En       20       ●       (1~24)         Line Changing       3       ●       (0~19)       ●	Width (Pixel)	width:	77 Height 77	
Module Casc       From right to left       Construct Ca       View Cabinet         Performance Settings       I 18bit+         Data Group E.,       More Settings       I 18bit+         Refresh Rate       480       Hz       Refresh Rate Ti       4         Grayscale level       Normally bright        Grayscale Mode       Refreshing rate firs        (25-75) %         Shift Clock Fre       12.5       MHz       Duty cycle       30       (25-75) %         Phase Position       2       Low Grayscale C       0       2       (1~24)         Line Changing       3       (0~19)       (1~24)       11*20       (1~24)         Minimum OE width 80 ns       Brightness Eff       68.24%       Save to File       Read from Re.       Send to Restore	Height (Pixel) 32 T <=256	Loading	error. Please try to adjust pe	
Performance Settings       18bit+         Pata Group E.       More Settings       18bit+         Refresh Rate       480 • Hz       Refresh Rate TI       4 • •         Grayscale level       Normally bright •       Grayscale Mode       Refreshing rate firs •         Shift Clock Fre       12.5 • MHz       Duty cycle       3 • • (25-75) %         Phase Position       2 • • Low Grayscale C       0 • • •       6         Row Blanking       25 • • (=2.00us)       Ghost Control En       20 • • (1~24)         Line Changing       3 • • (0~19)       0 • • • • • • • • • • • • • • • • • • •	Module Casc From right to left 🗸	Constru	ct Ca View Cabinet	
Performance Settings       I 18bit+         Pata Group E.       More Settings       I 18bit+         Refresh Rate       480 • Hz       Refresh Rate Ti       4 • •         Grayscale level       Normally bright •       Grayscale Mode       Refreshing rate firs •         Shift Clock Fre       12.5 • MHz       Duty cycle       3 • • (25-75) %         Phase Position       2 • •       Low Grayscale C       0 • • •         Row Blanking       25 • • (=2.00us)       Ghost Control En       20 • • (1~24)         Line Changing       3 • • (0~19)       Minimum OE width 80 ns       Brightness Eff       68.24%         Smart Bettings       Load from File       Receiving cat       Save to File       Read from Re       Send to Restore				
Data Group E       More Settings       18bit+         Refresh Rate       480 • Hz       Refresh Rate Ti       4 • •         Grayscale level       Normally bright •       Grayscale Mode       Refreshing rate firs •         Shift Clock Fre       12.5 • MHz       Duty cycle       3 • • (25-75) %         Phase Position       2 • •       Low Grayscale C       0 • •         Row Blanking       25 • • (=2.00us)       Ghost Control En       20 • • (1~24)         Line Changing       3 • • (0~19)       Minimum OE width 80 ns       Brightness Eff       68.24%         Smart Settings       Load from File       Receiving car       Save to File       Read from Re       Send to Restore	Performance Settings			
Refresh Rate       480       Hz       Refresh Rate Ti       4       •         Grayscale fevel       Normally bright •       Grayscale Mode       Refreshing rate firs. •       9         Shift Clock Fre       12.5       MHZ       Duty cycle       31       •       (25~75) %         Phase Position       2       •       Low Grayscale C       0       •       (1~24)         Row Blanking       25       •       (2.00us)       Ghost Control En       20       •       (1~24)         Line Changing       3       •       (0~19)       • <t< td=""><td>Data Group E More Settings</td><td></td><td>18bit+</td><td></td></t<>	Data Group E More Settings		18bit+	
Grayscale fevel       Normally bright •       Grayscale Mode       Refreshing rate firs. •         Shift Clock Fre       12.5 •       MHZ       Duty cycle       Image: •       (25-75) %         Phase Position       2 •       Low Grayscale C       0 •       Image: •       (1~24)         Row Blanking       25 •       (=2.00us)       Ghost Control En       20 •       (1~24)         Line Changing       3 •       (0~19)       Minimum OE width 80 ns       80 24%       Smart Bettings       Load from File       Receiving cat       Save to File       Read from Re.       Send to Restore	Refresh Rate 480 - Hz	Refresh Rate Ti 4	•]	
Shift Clock Fre       12.5       MHz       Duty cycle       31       (25-75) %         Phase Position       2       Iow Grayscale C       0       2       (1-24)         Row Blanking       25       (= 2.00us)       Ghost Control En       20       (1-24)         Line Changing       3       (0-19)       Minimum OE width 80 ns       Brightness Eff       68.24%         Smart Settings       Load from File       Receiving cat       Save to File       Read from Re.       Send to Restor	Gravscale level Normally bright	Gravscale Mode Refr	eshing rate firs	
Phase Position     2     Low Grayscale C     0     2       Row Blanking     25     2     (=2.00us)     Ghost Control En     20     2       Line Changing     3     2     (0~19)     (1~24)       Minimum OE width Brightness Eff     68.24%       Smart Settings     Load from File     Receiving car     Save to File     Read from Re.     Send to Restor	Shift Clock Fre. 125 - MHz	Duty cycle	- (25+75) %	
Priase Position       2 <td< td=""><td>Phase Basilian</td><td>Low Gravecale C</td><td></td><td></td></td<>	Phase Basilian	Low Gravecale C		
Row Branking	Phase Position 2 V			
Line Changing 3 (0~19) Minimum OE wildth 80 ns Brightness Eff 68.24% Smart Settings Load from File Receiving car. Save to File Read from Re. Send to Restor	Row Blanking 25	) Ghost Control En 20	(1~24)	
Minimum OE width 80 ns Brightness Eff 68.24% Smart Settings Load from File Receiving car Save to File Read from Re Send to Restor	Line Changing 3 (0~19)			
Minimum OE width 80 ns Brightness Eff 68.24% Smart Settings Load from File Receiving car Save to File Read from Re. Send to Restor				
Brightness Eff 68.24%  Smart Settings  Load from File Receiving car Save to File Read from Re Send to Restor	Minimum OE width 80 ns			
Smart Settings Load from File Receiving car) Save to File Read from Re Send to Restor	Brightness Effi 68.24%			
Smart Settings Load from File Receiving car Save to File Read from Re Send the Restor				
Restor	Smart Settings	from File Receiving car	Save to File Read from Re	e. Send to
Restor				
				Restore

Step 2 Import the cabinet configuration files to the MCTRL4K.



Note: After entering the **Import the Configuration File of Controller Cabinet** window, NovaLCT will automatically read the configuration files already existed in the MCTRL4K. Users can change the names and orders of these files or delete them.

Step 3 Load the cabinet configuration files.

#### 6.5.3 Alarm Threshold

Set the ranges of temperature and voltage values.

#### 6.5.4 Saving to Hardware

Save all the configurations related to the receiving cards to the receiving cards and those data will not be lost even after the device is powered off.

#### 6.5.5 Redundancy

Set the current device as the primary or backup device.

#### 6.5.6 Factory Reset

Reset the current device to factory settings.

#### 6.5.7 HDR

The MCTRL4K supports HDR function and can work with A8s/A10s to greatly enhance the image quality of the screen, presenting more vivid and clearer images.

- Step 1 Choose Advanced Settings > HDR to enter the HDR settings screen.
- Step 2 Press the knob on the HDR item and select **Enable** to enable the HDR function.
- Step 3 Set Screen Peak Luma and Ambient Light.
- Step 4 (Optional) Choose **Rest** to reset the HDR settings to factory settings.

Note:

- The HDR function supports only HDR video sources.
- The HDR function supports only the HDMI input connector.
- The HDR and ClearView functions cannot be used at the same time. To set the function, choose **Settings** > **Adjust screen effect** on NovaLCT. In the displayed window, choose to enable the HDR or ClearView function.

#### 6.5.8 Hardware Version

View the hardware version of current device.

Note: To upgrade the hardware version, send the upgrade file to the MCTRL4K via NovaLCT.

## 6.6 Communication Settings

Set the communication mode and network parameters.

Main				Communication Settings			Netw	ork Settings	
ġ.	Brightness	100%		🝈 Mode Select	USB Preferred		口	Config IPv4	Manually
$\mathcal{F}_{0}$	Input Settings			Network Settings	►		IP	IP Address	192.168.0.10
	Screen Settings						<b>YLSM</b>	Subnet Mask	255.255.255.0
	Display Control		۲			⇒	-	Reset	
- 40F	Advanced Settings		ŕ			<b>'</b>			
	Communication Settings								
3	Language								

Two communication modes are provided: USB Preferred and LAN Preferred.

When the USB and Ethernet ports are connected at the same time, the system will use the communication mode set by the user.

The IPv4 can be configured automatically or manually.

Note: When setting the network manually, the IP address of current device cannot conflict with IP addresses of other devices.

## 6.7 Language

Change the UI language of the MCTRL4K unit.



Input voltage	AC 100-240V–50/60 Hz						
Rated power consumption	30 W						
Operating temperature	-20°C–60°C						
Operating humidity	10% RH–90% RH						
Dimensions	482.6 mm × 372.0 mm × 96.0 mm						
Weight	4.6 kg						
Certifications	<ul> <li>FCC</li> <li>RoHS</li> <li>UL&amp;CUL</li> <li>EAC</li> <li>CB</li> <li>IC</li> <li>CE</li> </ul>						
Packing	<ul> <li>Each MCTRL4K unit is equipped with a suitcase, an accessory box and a large carton.</li> <li>Packing dimensions:</li> <li>Suitcase: 530 mm × 193 mm × 420 mm, white cardboard box printed with NOVASTAR, one unit in a suitcase.</li> <li>Accessory box: 405 mm × 290 mm × 48 mm, white cardboard box printed with Accessory Box.</li> <li>Accessories include 1 × power cord, 1 × Ethernet cable, 1 × USB cable, 1 × HDMI cable and 1 × DP cable.</li> <li>Carton: 550 mm × 440 mm × 210 mm, craft paper box printed with NOVASTAR.</li> <li>Packing rules: Product and accessory box (containing related cables) packed in the suitcase and the suitcase packed in the large carton.</li> </ul>						