Quick Start Guide

MCTRL660 PRO

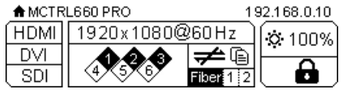
Independent Controller

The MCTRL660 PRO is a professional controller developed by NovaStar. A single MCTRL660 PRO has a loading capacity of up to 1920×1200@60Hz. It supports custom resolutions with the width up to 3840 pixels and height up to 2560 pixels, which meets configuration requirement of ultra-large screens.
The MCTRL660 PRO is mainly used for the rental and fixed fields, such as concerts, live events, security monitoring centers, Olympic Games and various sports centers.

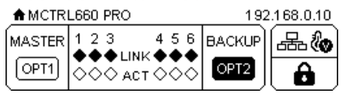
Features

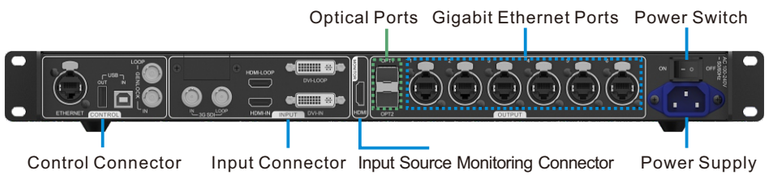
- Input of ultra-high color depths: 10-bit/12-bit RGB 4:4:4/YCbCr 4:4:4, with input resolutions up to 1920×1080@60Hz, increasing color expression capabilities by 4096 times compared to 8-bit inputs, and presenting images with rich and delicate colors, smoother transitions, as well as clearer details
- Supports individual Gamma adjustment for RGB when the color depth of input source is 10-bit or 12-bit, which effectively controls image non-uniformity under low grayscale and white balance offset to improve image quality.
- Low latency: Less than 1 ms (when the start position of image is 0.)
- Dual working modes: working as sending card and fiber converter
- One-click backup and recovery, quickly recovering previous screen configurations to deal with sudden on-site failure
- Image mirroring, allowing for more cool and dazzling stage effects
- Auto LED screen configuration
- Web control
- Pixel level brightness and chroma calibration
- Monitoring of inputs
- Multiple MCTRL660 PRO units can be cascaded.

Sending Card Mode



Fiber Converter Mode





Sending Card Mode

Ethernet port connection status

- Always on: The Ethernet port connection works and the port serves as master.
- Off: The Ethernet port is not connected or the connection does not work.
- A mark (not flashing) on top corner of icon: The Ethernet port is in redundancy status, but the redundancy has not taken effect.
- A mark (flashing) on top corner of icon: The Ethernet port is in redundancy status and the redundancy has taken effect.

Common Operations

Function knob

- Press the knob to enter a menu page or confirm an operation.
- Rotate the knob to select a menu item or adjust a menu parameter.
- Hold the knob and **BACK** button simultaneously for 3 seconds to lock or unlock all the buttons.

Standby button

- Press the button to turn on the device.
- Hold down the button to turn off the device.

USB port

- Used to update firmware

Fiber Converter Mode

The OPT1 port is the master input/output optical port, corresponding to the 6 Gigabit Ethernet ports. The OPT1 icon has different statuses:

- Always on: The OPT1 port connection works.
- Off: The OPT1 port is not connected or the connection does not work.

The OPT2 port works as the backup input/output port of OPT1.

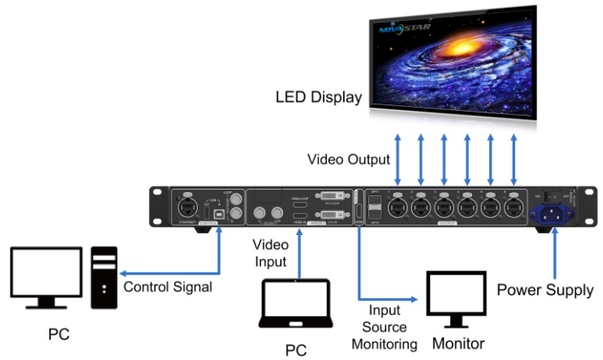
- Always on: The OPT2 port connection works.
- Off: The OPT2 port is not connected or the connection does not work.

1–6: Indicate Ethernet ports 1–6.

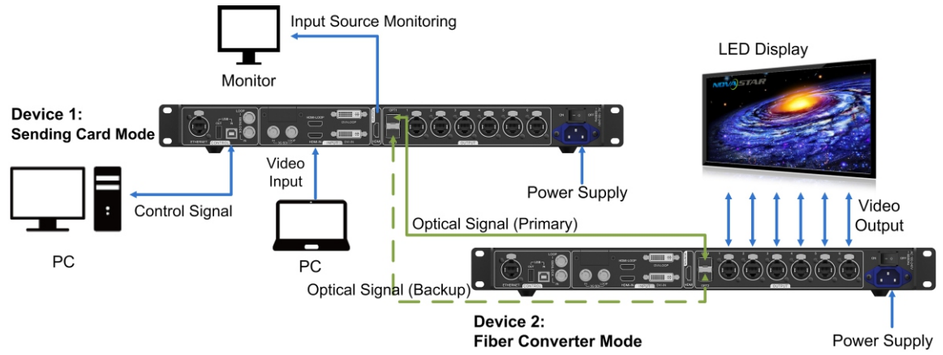
- **LINK**: Ethernet port connection status
  - Always on: The Ethernet port connection works.
  - Off: The Ethernet port is not connected or the connection does not work.
- **ACT**: Signal transmission status of Ethernet port
  - Fflashing: The Ethernet port is transmitting signals.
  - Off: The Ethernet port is not transmitting signals.

Applications

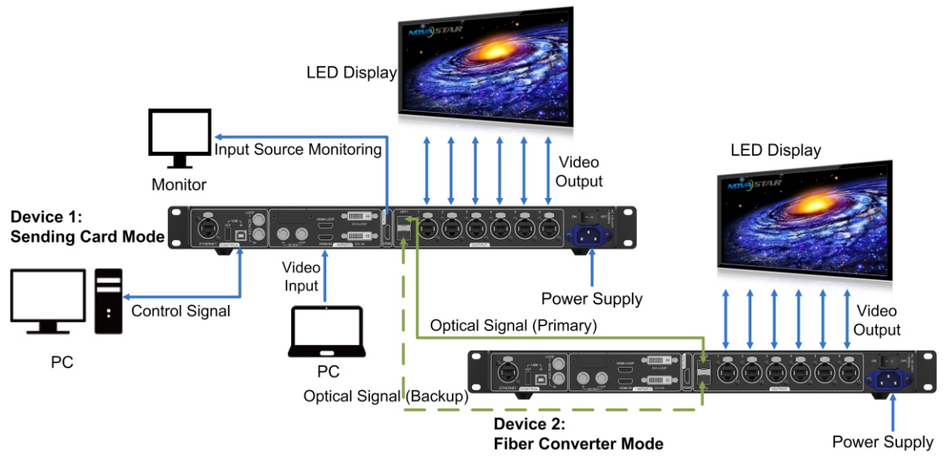
Application of Sending Card Mode



Application of Fiber Converter Mode



Application of Dual-Output Working Mode

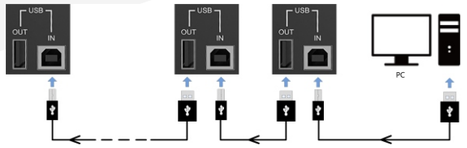


NOVASTAR

Cascading Devices

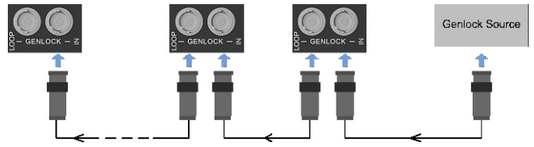
Method 1

The control computer needs to control multiple MCTRL660 PRO devices. Up to 8 devices can be cascaded.



Method 2

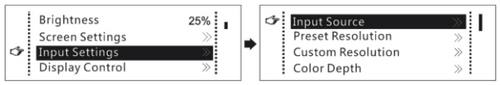
Multiple MCTRL660 PRO devices need to output image synchronously. Up to 8 devices can be cascaded.



Quick Screen Configuration

Step 1 Setting Input Source

Supported input sources include 3G-SDI, single-link DVI and HDMI 1.4a.



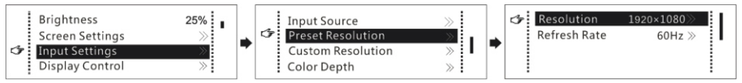
Step 1 On the home screen, press the knob to enter the menu.

Step 2 Chose **Input Settings** > **Input Source** to enter its submenu.

Step 3 Select the target video source and press the knob to enable it.

Step 2 Setting Input Resolution

Method 1: Selecting a Preset Resolution



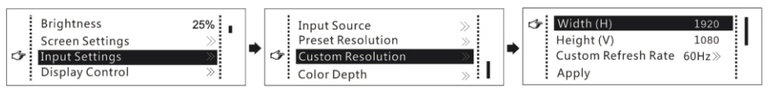
Select an appropriate preset resolution and refresh rate as the input resolution.

Step 1 On the home screen, press the knob to enter the menu.

Step 2 Choose **Input Settings** > **Preset Resolution** to enter its submenu.

Step 3 Select a resolution and a refresh rate, and press the knob to apply them respectively.

Method 2: Customizing a Resolution



Customize a resolution by setting a custom width, height and refresh rate.

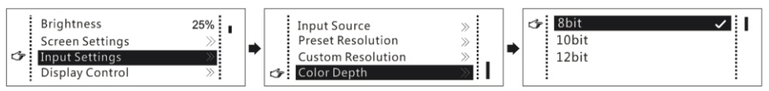
Step 1 On the home screen, press the knob to enter the menu.

Step 2 Choose **Input Settings** > **Custom Resolution** to enter its submenu and set the screen width, height and refresh rate.

Step 3 Select **Apply** and press the knob to apply the custom resolution.

Step 3 Setting Color Depth

Set the color depth of input source, including 8-bit, 10-bit and 12-bit.



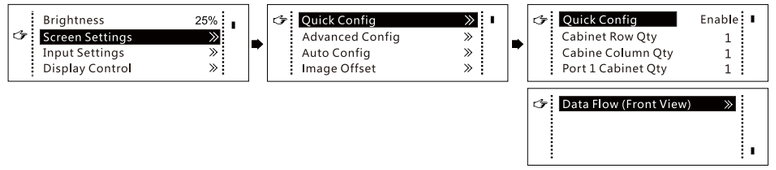
Step 1 On the home screen, press the knob to enter the menu.

Step 2 Choose **Input Settings** > **Color Depth** to enter its submenu, select a color depth and press the knob to apply it.

Step 4 Quickly Configuring Screen

This function is used to quickly configure a screen.

Quick Screen Configuration



Step 1 On the home screen, press the knob to enter the menu.

Step 2 Choose **Screen Settings** > **Quick Config** to enter its submenu.

Step 3 Enable **Quick Config** and set the parameters.

- Set **Cabinet Row Qty** and **Cabinet Column Qty** (number of cabinet rows and columns to be loaded).
- Set **Port 1 Cabinet Qty** (number of cabinets loaded by Ethernet port 1). The device has restrictions on the number of cabinets loaded by the Ethernet ports. For details, see Note a).
- Set **Data Flow** of the screen. For details, see Note c), d), and e).

Note	
a). If *n* ports are used to load the screen, the number of cabinets loaded by each of the first (*n*–1) ports must be the same and the integral multiple of the number of cabinet rows or columns, and it cannot be less than the number of cabinets loaded by the last port.	Example: If all the 6 Ethernet ports are used to load the screen, the number of cabinets loaded by ports 1–5 must be the same and the integral multiple of the number of cabinet rows or columns. Therefore, you need to set only the number of cabinets loaded by port 1 according to the actual situation. The number of cabinets loaded by port 6 must be less than or equal to the number of cabinets loaded by port 1.
b). Irregular screens must be configured in NovaLCT.	
c). Rotate the knob to select the target data flow which can be previewed on the LED screen in real time and then press the knob to save the one you selected.	
d). Ensure that the cabinets loaded by each Ethernet port are connected one by one in the same direction.	
e). Ensure that the Ethernet port 1 is at the beginning position of the whole physical connection.	

Firmware Update

Method 1: NovaLCT

In NovaLCT, perform the following steps to update the MCTRL660 PRO firmware.

Step 1 Start NovaLCT and choose **User** > **Advanced Synchronous System User Login** and log in as an advanced user.

Step 2 Type the secret code "**admin**" to enter the program loading page.

Step 3 Click **Browse** to select the update program path and then click **Update**.

Method 2: SmartLCT

In SmartLCT, perform the following steps to update the MCTRL660 PRO firmware.

Step 1 Start SmartLCT and enter the V-Sender page.

Step 2 In the properties area on the right, click to enter the **Firmware Upgrade** page.

Step 3 Click to select the update program path.

Step 4 Click **Update**.

Specifications

Input voltage	100 V–240 V AC
Rated power consumption	20 W
Operating temperature	-20°C–60°C
Operating humidity	0% RH–90% RH, non-condensing
Dimensions	482.6 mm × 356.0 mm × 50.1 mm
Net weight	4.6 kg
Space requirement	1U

Packing

Carrying case: 550 mm × 440 mm × 175 mm, white cardboard box

Packing box: 530 mm × 140 mm × 410 mm, craft paper box

Accessory box: white cardboard box

1 × MCTRL660 PRO unit

1 × Ethernet cable

1 × DVI cable

1 × USB cable

1 × HDMI cable

1 × Power cord