# MCTRL660

## LED Display Controller

Specifications

# Change History

| Document Version | Release Date | Description |
|---|---|---|
| V1.4.4 | 2024-08-22 | Updated the packing box dimensions. |
| V1.4.3 | 2021-09-28 | • Added the hot backup verification function.<br>• Added the 10-bit Gamma adjustment function.<br>• Support the 10-bit and 12-bit video source inputs.<br>• Optimized the device cascading solution. Up to 20 devices can be cascaded.<br>• Changed the document style.<br>• Optimized the document content. |
| V1.4.2 | 2019-10-31 | Updated the product dimensions diagram. |
| V1.4.1 | 2019-09-06 | Supplemented and optimized the document content. |
| V1.4.0 | 2019-05-15 | • Changed the document style.<br>• Optimized the document content. |

# Introduction

The MCTRL660 is an LED display controller developed by Xi'an NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar). It supports 1x DVI input, 1x HDMI input, 1x audio input, and 4x Ethernet outputs. A single MCTRL660 device supports input resolutions up to 1920×1200@60Hz.

The MCTRL660 adopts an innovative architecture to implement smart screen configuration without using a computer, allowing a screen to be configured within 30 seconds. It also allows users to adjust screen brightness manually, which is faster and more convenient.

The MCTRL660 can be mainly used in the rental and fixed applications, such as concerts, live events, security monitoring centers, Olympic Games and various sports centers.

# Certifications

FCC, CE, EAC, UL/CUL, KC, CCC, PSE, CB

**If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.**

# Features

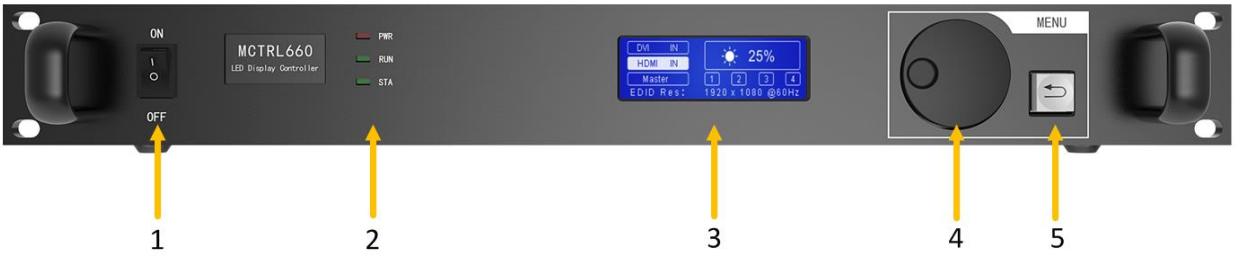
- 3 types of input connectors
  - 1x SL-DVI
  - 1x HDMI 1.3
  - 1x AUDIO
- 4x Gigabit Ethernet outputs
- 1x type-B USB control port
- 2x UART control ports

  They are used for device cascading. Up to 20 devices can be cascaded.
- Support for high-bit-depth inputs: 8bit/10bit/12bit
- Support for 18-bit grayscale processing and display
- Support for manual screen brightness adjustment, which is fast and convenient
- Quick screen configuration without using a computer
- An innovative architecture to implement smart screen configuration, allowing a screen to be configured within 30 seconds and greatly shortening the stage preparation time
- Pixel level brightness and chroma calibration

  Work with the calibration platform to perform brightness and chroma calibration on each LED to effectively remove color differences and greatly improve display brightness consistency and chroma consistency, allowing for better image quality.

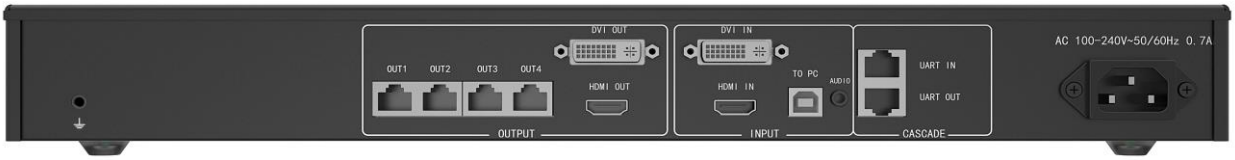
# Appearance

## Front Panel




| No. | Name | Description | |
|---|---|---|---|
| 1 | Power switch | ON/OFF | |
| 2 | Indicator | PWR (Red) | Always on: The power supply is normal. |
| | | | Off: The power is not supplied, or the power supply is abnormal. |
| | | RUN (Green) | Slow flashing (flashing once in 2s): The video input is unavailable. |
| | | | Normal flashing (flashing 4 times in 1s): The video input is available. |
| | | | Rapid flashing (flashing 30 times in 1s): The screen is displaying startup image. |
| | | | Breathing: The Ethernet port redundancy has taken effect. |
| | | STA (Green) | Always on: The device is operating normally. |
| | | | Off: The device is not operating, or operating abnormally. |
| 3 | LCD screen | Display the device status, menus, submenus and messages. | |
| 4 | Knob | Rotate the knob to select a menu item or adjust the parameter value.<br>Press the knob to confirm the setting or operation. | |
| 5 | BACK button | Go back to the previous menu or exit the current operation. | |

## Rear Panel

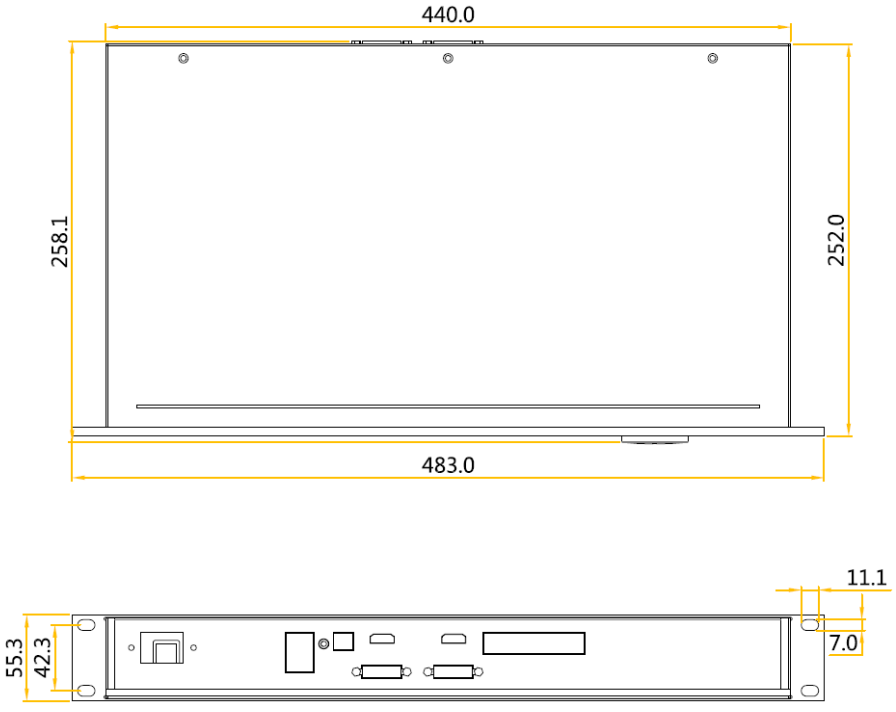



| Connector Type | Connector Name | Description |
|---|---|---|
| Input | DVI IN | 1x SL-DVI input connector<br>• Maximum resolution: 1920×1200@60Hz<br>• Support custom input resolutions.<br>Maximum width: 3840 (3840×600@60Hz)<br>Maximum height: 3840 (548×3840@60Hz)<br>• Do NOT support interlaced signal input. |
| | HDMI IN | 1x HDMI 1.3 input connector<br>• Maximum resolution: 1920×1200@60Hz |

| | | |
|---|---|---|
| | | • Support custom input resolutions.<br>Maximum width: 3840 (3840×600@60Hz)<br>Maximum height: 3840 (548×3840@60Hz)<br>• Support HDCP 1.4.<br>• Do NOT support interlaced signal input. |
| | AUDIO | Audio input connector |
| Output | 4x RJ45 | 4x RJ45 Gigabit Ethernet ports<br>• Capacity per port up to 650,000 pixels<br>• Support redundancy between Ethernet ports. |
| | HDMI OUT | 1x HDMI 1.3 output connector for cascading |
| | DVI OUT | 1x SL-DVI output connector for cascading |
| Control | TO PC | Type-B USB 2.0 port to connect to PC |
| | UART IN/OUT | Input and output ports to cascade devices.<br>Up to 20 devices can be cascaded. |
| Power | AC 100V-240V~50/60Hz | |

Note: This product can only be placed horizontally. Do not mount vertically or upside-down.

## Dimensions




Tolerance: ±0.3 Unit: mm

## Specifications

| | | |
|---|---|---|
| Electrical Specifications | Input voltage | AC 100V~240V-50/60Hz |
| | Rated power consumption | 16 W |

| | | |
|---|---|---|
| Operating Environment | Temperature | –20ºC to +60ºC |
| | Humidity | 10% RH to 90% RH, non-condensing |
| Physical Specifications | Dimensions | 483.0 mm × 258.1 mm × 55.3 mm |
| | Net weight | 3.6 kg |
| Packing Information | Packing box | 560 mm × 405 mm × 180 mm |
| | Carrying case | 545 mm × 370 mm × 145 mm |
| | Accessory | 1x power cord, 1x USB cable, 1x DVI cable |

The amount of power consumption may vary depending on factors such as product settings, usage, and environment.

## Video Source Features

| Input Connector | Features | | |
|---|---|---|---|
| | Bit Depth | Sampling Format | Max. Input Resolution |
| Single-link DVI | 8bit | RGB 4:4:4 | 1920×1200@60Hz |
| | 10bit/ 12bit | | 1440×900@60Hz |
| HDMI 1.3 | 8bit | | 1920×1200@60Hz |
| | 10bit/ 12bit | | 1440×900@60Hz |

# FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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