



NOVASTAR MCTRL660 LED Display Controller Owner's Manual

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Change History

Document Version	Release Date	Description
V1.4.4	2024-08-22	Updated the packing box dimensions
V1.4.3	2021-09-28	<ul style="list-style-type: none"> • Added the hot backup verification function. • Added the 10-bit Gamma adjustment function. • Support the 10-bit and 12-bit video source inputs. • Optimized the device cascading solution. Up to 20 devices can be cascaded. • Changed the document style. • Optimized the document content
V1.4.2	2019-10-31	1 Updated the product dimensions diagram.
V1.4.1	2019-09-06	Supplemented and optimized the document content
V1.4.0	2019-05-15	<ul style="list-style-type: none"> • Changed the document style. • 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

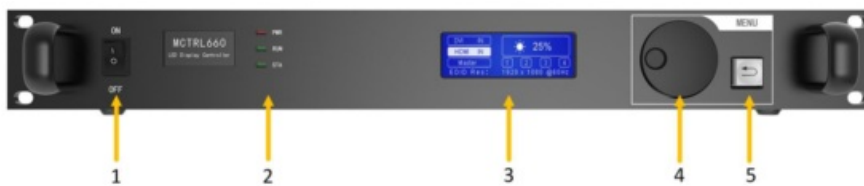
They are used for device cascading. Up to 20 devices can be cascaded.

- 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. 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

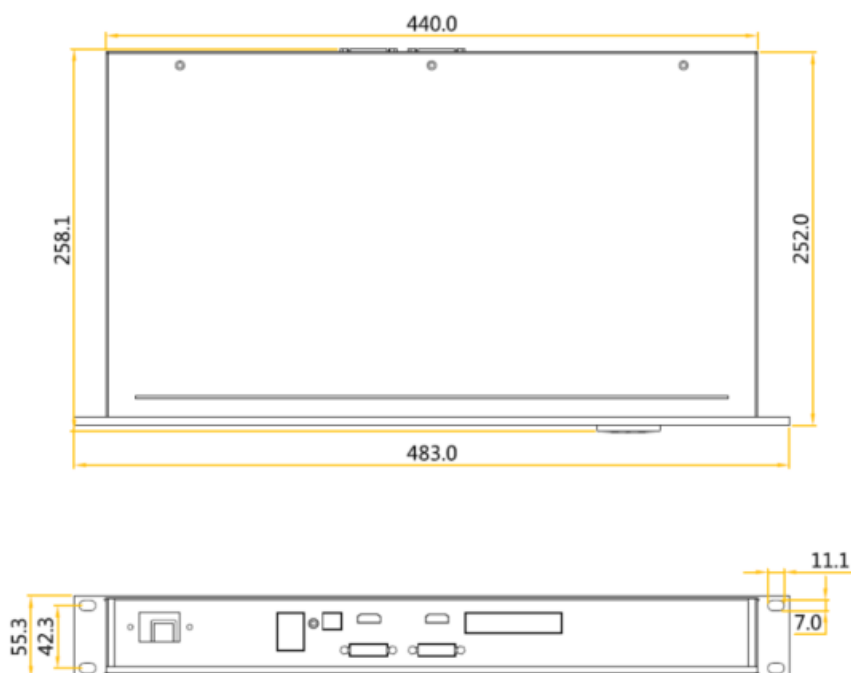


Connector Type	Connector Name	Description
Input	Input	1x SL-DVI input connector <ul style="list-style-type: none"> Maximum resolution: 1920×1200 @60Hz Support custom input resolutions . Maximum width: 3840 (3840×600@60Hz) Maximum height: 3840 (548×3840@60Hz) Do NOT support interlaced signal input

	HDMI IN	1x HDMI 1.3 input connector <ul style="list-style-type: none"> Maximum resolution: 1920×1200 @60Hz Support custom input resolutions Maximum width: 3840 (3840×600@60Hz) Maximum height: 3840 (548×3840@60Hz) <ul style="list-style-type: none"> Support HDCP 1.4. Do NOT support interlaced signal input.
	AUDIO	Audio input connector
Output	4x RJ45	4x RJ45 Gigabit Ethernet ports <ul style="list-style-type: none"> Capacity per port up to 650,000 pixels 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. 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



Specifications

Electrical Specifications	Input voltage	AC 100V~240V-50/60Hz
	Rated power consumption	16 W
Operating Environment	Temperature	−20°C to +60°C
	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 D VI 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 DV	8bit	RGB 4:4:4	1920×1200@60Hz
	10bit/ 12bit		1440×900@60Hz
HDMI 1.3	8bit		1920×1200@60Hz
	10bit/ 12bi		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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Statement

Thank you for choosing NovaStar's product. This document is intended to help you understand and use the product. For accuracy and reliability, NovaStar may make improvements and/or changes to this document at any time and without notice. If you experience any problems in use or have any suggestions, please contact us via the contact information given in this document. We will do our best to solve any issues, as well as evaluate and implement any suggestions.

Customer Support

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Documents / Resources

	<p>NOVASTAR MCTRL660 LED Display Controller [pdf] Owner's Manual MCTRL660 LED Display Controller, MCTRL660, LED Display Controller, Display Controller, Controller</p>
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References

- [User Manual](#)

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