

Novastar MCTRL300

Novastar MCTRL300 LED Screen Sending Box User Manual

Model: MCTRL300

INTRODUCTION

The Novastar MCTRL300 is an independent control card from the M3 Series, designed for LED screen display management. It processes and sends audio and video data to the display, supporting various resolutions and offering flexible control options for a wide range of applications, including live events, monitoring centers, and sports venues. This manual provides essential information for the setup, operation, and maintenance of your MCTRL300 unit.

PRODUCT OVERVIEW

The MCTRL300 is a robust LED display controller featuring multiple input and output options for comprehensive display management.

Key Features:

- **DVI Video Input:** Supports high-quality video signals.
- **Audio Input:** For integrated audio transmission.
- **Dual Ethernet Outputs:** Features two RJ45 Gigabit Ethernet ports with hot backup for reliable data transmission.
- **USB Control Port:** Type-B USB for PC communication and control.
- **UART Control Ports:** Allows cascading of multiple MCTRL300 units for synchronized control.
- **High Loading Capacity:** Supports up to 1.3 million pixels, with resolutions such as 2048×668@60Hz.
- **Light Sensor Interface:** Enables automatic screen brightness adjustment.
- **NovaStar Calibration Technology:** Supports advanced calibration for optimal display quality.



Figure 1: Front view of the Novastar MCTRL300 LED Screen Sending Box, showing the "MCTRL300 LED Display Controller" label and a "QC Passed" sticker.

SETUP

Follow these steps to set up your Novastar MCTRL300 unit.

1. **Power Connection:** Connect the provided power cable to the AC input port on the rear of the MCTRL300 and then to a suitable power outlet (AC 100-240V~50/60Hz). Ensure the power switch is in the OFF position before connecting.
2. **Video Input:** Connect your video source (e.g., computer, media player) to the DVI input port on the MCTRL300 using a DVI cable.
3. **Audio Input:** If audio transmission is required, connect your audio source to the audio input port.
4. **Ethernet Output to LED Display:** Connect the dual Ethernet outputs (OUT1, OUT2) to your LED display receiving cards using standard Ethernet cables. The MCTRL300 supports hot backup between these ports.
5. **USB Connection to PC:** Connect the type-B USB control port on the MCTRL300 to your computer using a USB cable. This connection is necessary for configuring and controlling the display via NovaStar software.
6. **Light Sensor (Optional):** Connect a compatible light sensor to the dedicated light sensor interface if automatic brightness adjustment is desired.
7. **Cascading (Optional):** For controlling multiple MCTRL300 units, use the UART IN and UART OUT ports to cascade devices.



Figure 2: Rear panel of the MCTRL300, illustrating the power switch, AC input, DVI input, audio input, USB port, UART ports, light sensor port, and dual Ethernet outputs (OUT1, OUT2).



Figure 3: Standard cables included with the MCTRL300, typically comprising a power cable, DVI cable, and USB cable for connectivity.

OPERATING INSTRUCTIONS

Once the MCTRL300 is physically connected, follow these steps for operation:

1. **Power On:** Flip the power switch on the rear panel to the ON position. The "RUN" indicator light should illuminate.
2. **Software Installation:** Install the latest version of NovaStar's control software (e.g., NovaLCT) on your connected PC. This software is essential for configuring and managing your LED display.
3. **Device Recognition:** Launch the NovaStar software. The MCTRL300 should be automatically detected via the USB connection.
4. **Display Configuration:** Use the software to configure your LED display parameters, including resolution, screen mapping, brightness, and color settings. Refer to the NovaStar software documentation for detailed instructions on configuration.
5. **Brightness Adjustment:** If a light sensor is connected, the display brightness can be set to adjust automatically based on ambient light conditions through the software. Manual brightness control is also available.
6. **Cascaded Control:** If multiple MCTRL300 units are cascaded, the software allows for unified control and synchronization across all connected controllers.



Figure 4: Top view of the MCTRL300, highlighting its compact and durable design with heat dissipation fins.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your MCTRL300.

- **Cleaning:** Regularly clean the exterior of the unit with a soft, dry cloth. Avoid using liquid cleaners or solvents. Ensure ventilation slots are free from dust and debris to prevent overheating.
- **Environment:** Operate the device within the specified temperature range (15°C) and in a dry, well-ventilated area. Avoid exposure to extreme temperatures, humidity, or direct sunlight.
- **Cable Management:** Ensure all cables are securely connected and not under strain. Periodically check for any signs of wear or damage to cables.
- **Firmware Updates:** Check the official Novastar website periodically for firmware updates. Keeping the firmware updated can improve performance and add new features.

TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Power:**
 - Ensure the power cable is securely connected to both the MCTRL300 and the power outlet.
 - Verify the power switch is in the ON position.
 - Check the power outlet for functionality.
- **No Display Output:**
 - Confirm the DVI input cable is properly connected from the source to the MCTRL300.
 - Check the Ethernet cables connecting the MCTRL300 to the LED display receiving cards.
 - Verify the display configuration settings within the NovaStar control software.
 - Ensure the LED display itself is powered on and functioning correctly.
- **MCTRL300 Not Detected by PC:**
 - Ensure the USB cable is securely connected between the MCTRL300 and the PC.
 - Try a different USB port on your PC or a different USB cable.
 - Reinstall the NovaStar control software and any necessary USB drivers.
- **Incorrect Display Colors/Resolution:**
 - Adjust the resolution and color settings within the NovaStar control software.
 - Perform a screen calibration using the NovaStar calibration technology if available.

SPECIFICATIONS

Detailed technical specifications for the Novastar MCTRL300.

Feature	Detail
Brand	Novastar
Model	MCTRL300

Feature	Detail
Manufacturer	Novastar
Input Resolution Support	Up to 1920x1200@60Hz
Loading Capacity	1.3 million pixels (e.g., 2048×668@60Hz)
Video Input	1 × DVI
Audio Input	1 × Audio
Control Port	1 × Type-B USB
Output Ports	2 × RJ45 Gigabit Ethernet (with hot backup)
Cascading Ports	UART IN/OUT
Light Sensor Interface	1 × Connector
Operating Temperature	15°C (as per provided data, typically a range is given, but using what's provided)
Item Weight	3.76 pounds
Package Dimensions	10.8 x 8.4 x 4.5 inches
Certifications	CE, RoHS, EAC, FCC, IC

WARRANTY INFORMATION

Novastar products typically come with a limited manufacturer's warranty. Please refer to the official Novastar website or your purchase documentation for specific warranty terms, conditions, and duration applicable to your region and product model. Keep your proof of purchase for warranty claims.

SUPPORT AND CONTACT

For technical support, troubleshooting assistance beyond this manual, or inquiries regarding your Novastar MCTRL300, please visit the official Novastar support website or contact their customer service. Ensure you have your product model and serial number ready when seeking support.

Official Novastar Website: www.novastar.tech

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question