MSD600

Sending Card

Specifications

Change History

Document Version	Release Date	Description
V2.4.1	2024-12-06	Updated the product appearance diagram.
V2.4.0	2021-03-21	• Updated the product appearance diagram. • Added the certifications description.
V2.3.0	2020-10-12	• Added the hot backup verification function. • Added the 10bit gamma adjustment function. • Optimized the device cascading solution. Up to 20 devices can be cascaded. • The default screen configuration information becomes 128×128 after factory reset. • Updated the product appearance diagram.
V2.2.1	2019-10-31	Optimized the dimensions diagram.
V2.2.0	2019-03-13	• Updated the document style. • Optimized the document content.

Introduction

The MSD600 is a sending card developed by NovaStar. It supports 1x DVI input, 1x HDMI input, 1x audio input, and 4x Ethernet outputs. A single MSD600 supports input resolutions up to 1920×1200@60Hz.

The MSD600 communicates with PC via type-B USB port. Multiple MSD600 units can be cascaded via UART port.

As a highly cost-effective sending card, the MSD600 can be mainly used in the rental and fixed installation applications, such as concerts, live events, security monitoring centers, Olympic Games and various sports centers.

Certifications

EMC, RoHS, PFoS, FCC

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 light sensor connector
- 1x type-B USB control port

- 2x UART control ports

  They are used for device cascading. Up to 20 devices can be cascaded.
- Pixel level brightness and chroma calibration

  Work with NovaStar's high-precision calibration system to calibrate the brightness and chroma of each pixel, effectively removing brightness differences and chroma differences, and enabling high brightness consistency and chroma consistency.

Appearance
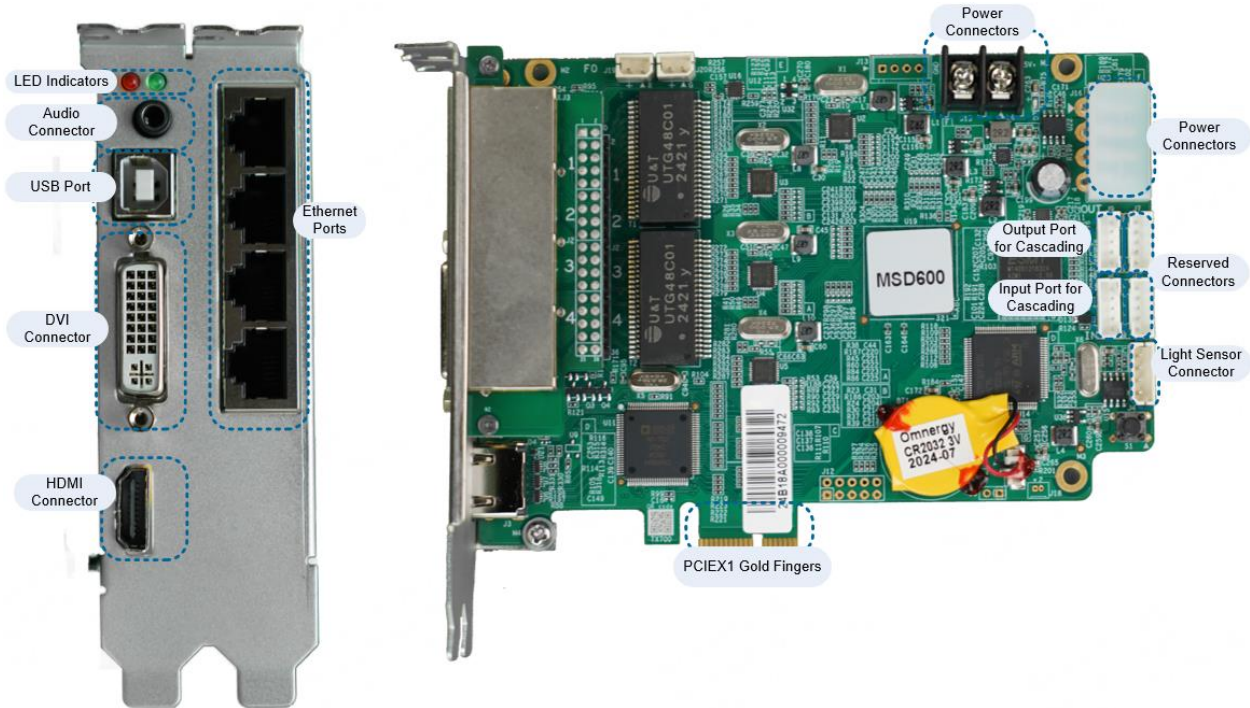
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Indicator	Status	Description
RUN (Green)	Slow flashing (flashing once in 2s)	No video input is available.
	Normal flashing (flashing 4 times in 1s)	The video input is available.
	Fast flashing (flashing 30 times in 1s)	The screen is displaying the startup image.
	Breathing	The Ethernet port redundancy has taken effect.
STA (Red)	Always on	The power supply is normal.
	Off	The power is not supplied, or the power supply is abnormal.

Connector Type	Connector Name	Description

Input	DVI	1x SL-DVI input connector
		• Resolutions up to 1920×1200@60Hz
		• Custom resolutions supported
		    Maximum width: 3840 (3840×600@60Hz)
		    Maximum height: 3840 (548×3840@60Hz)
		• DOES NOT support interlaced signal input.

	HDMI	1x HDMI 1.3 input connector
		• Resolutions up to 1920×1200@60Hz
		• Custom resolutions supported
		    Maximum width: 3840 (3840×600@60Hz)
		    Maximum height: 3840 (548×3840@60Hz)
		• HDCP 1.4 compliant
		• DOES NOT support interlaced signal input.

|	AUDIO	Audio input connector
Output	4x RJ45	4x RJ45 Gigabit Ethernet ports • Capacity per port up to 650,000 pixels • Redundancy between Ethernet ports supported
Functionality	LIGHT SENSOR	Connect to a light sensor to monitor ambient brightness to allow for automatic screen brightness adjustment.
Control	USB	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	DC 3.3 V to 5.5 V	

Dimensions
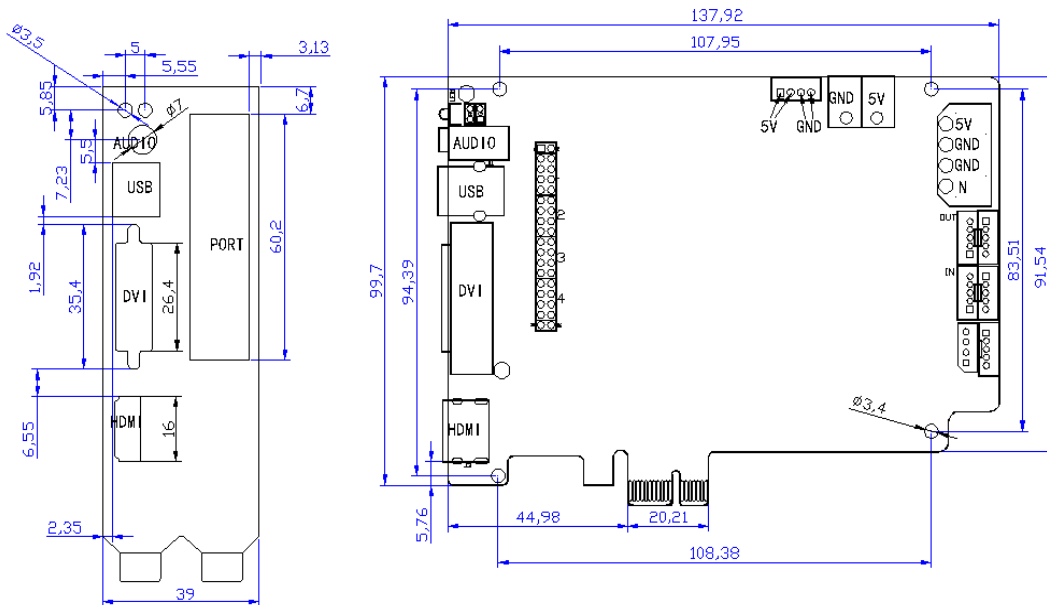
Tolerance: ±0.3   Unit: mm

Pin Definitions

The pins of the UART IN port, UART OUT port, and light sensor connector are defined as follows.
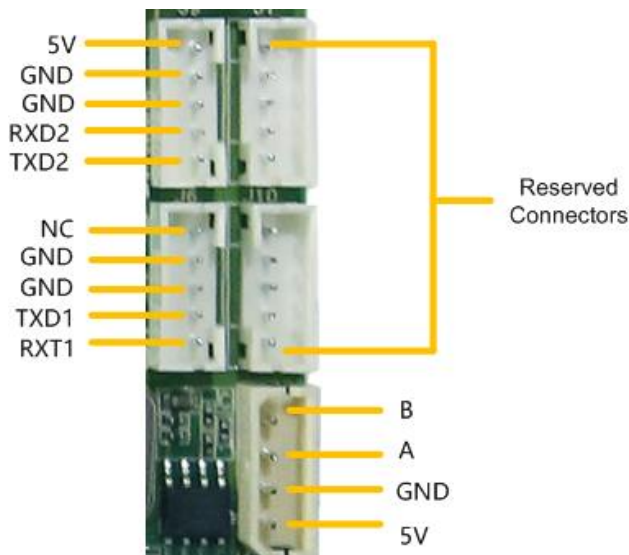
Specifications

Electrical Specifications	Input voltage	DC 3.3 V to 5.5 V
	Rated current	1.32 A
	Rated power consumption	6.6 W
Operating Environment	Temperature	–20°C to +75°C
	Humidity	10% RH to 90% RH, non-condensing
Physical Specifications	Dimensions	137.9 mm × 99.7 mm × 39.0 mm
	Net weight	125.3 g Note: It is the weight of a single card only.
Packing Information	Cardboard box	335 mm × 190 mm × 62 mm Accessories: 1x USB cable, 1x DVI cable
	Packing box	400 mm × 365 mm × 355 mm

The amount of power consumption may vary depending on various 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@60H

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.

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.

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