MSD600-1

Sending Card

V1.0.0

Specifications

Change History

Document Version	Release Date	Description
V1.0.0	2021-03-30	First release

Introduction

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

The MSD600-1 communicates with PC via type-B USB port. Multiple MSD600-1 units can be cascaded via UART port.

As a highly cost-effective sending card, the MSD600-1 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.

Features

- 2 types of input connectors
    - 1x SL-DVI
    - 1x HDMI 1.3
- 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

    Working with NovaLCT and NovaCLB, the sending card supports brightness and chroma calibration on each LED, which can effectively remove color discrepancies and greatly improve LED display brightness and chroma consistency, allowing for better image quality.
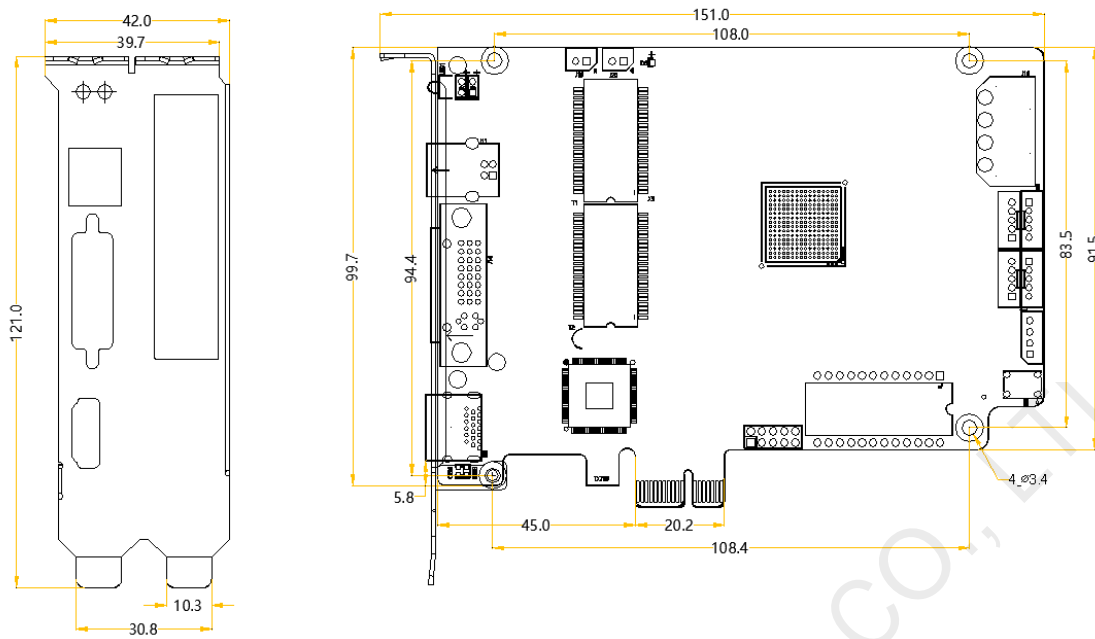
Appearance
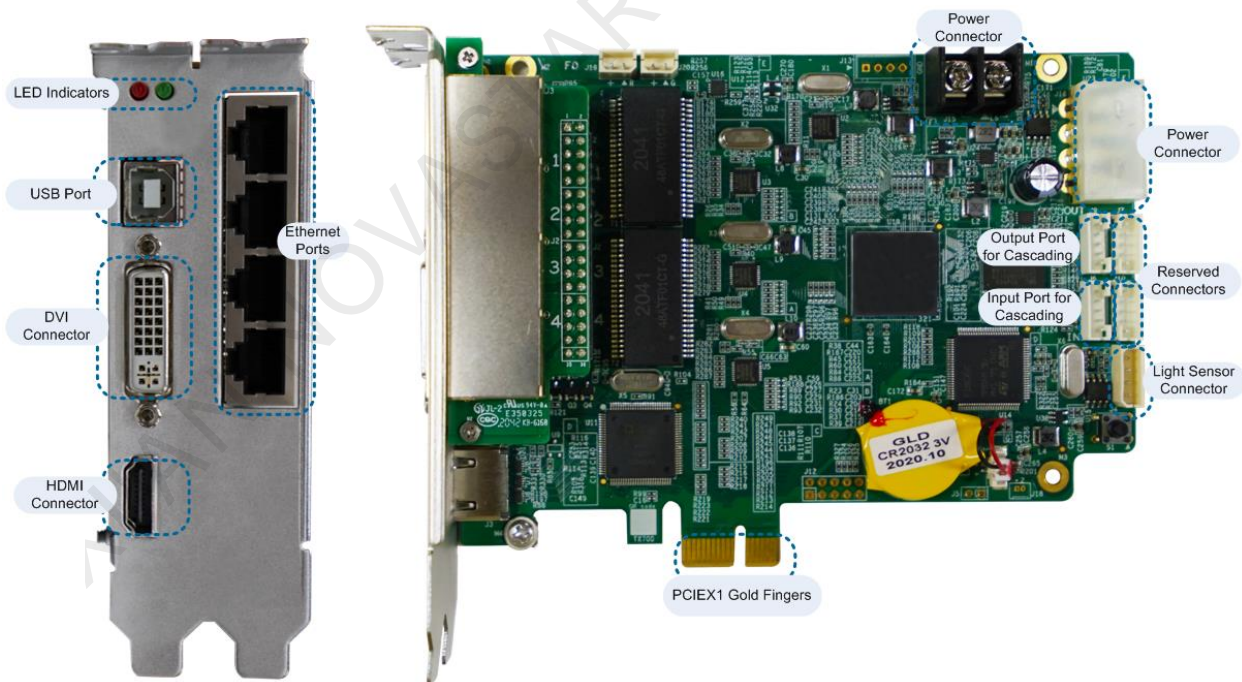
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

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.
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: ±0.1   Unit: mm

Pin Definitions

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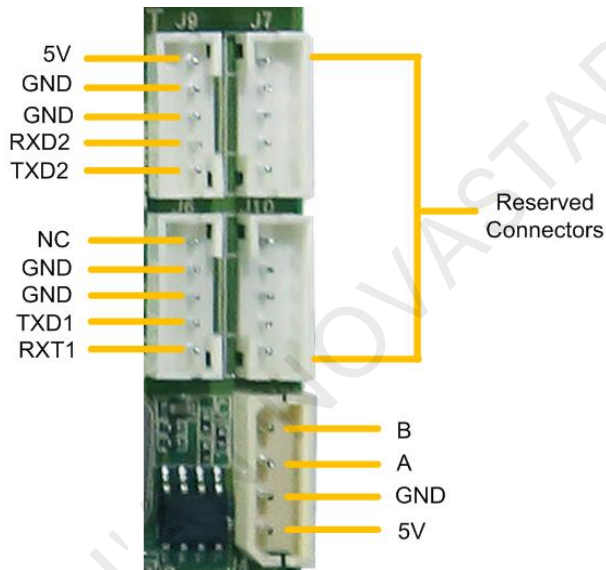
Specifications

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	Dimensions	151.0 mm × 121.0 mm × 42.0 mm

Specifications	Net weight	157.6 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

Note:

The values of rated current and power consumption are measured under the following conditions. The data may vary due to the onsite conditions and different measuring environments. The data is subject to actual usage.

- A single MSD600-1 is used without device cascading.
- An HDMI video input and four Ethernet outputs are used.

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

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