MFN300

Multifunction Card



Specifications

Change History

Document Version	Release Date	Description
V2.1.4	2025-02-20	Updated the information for electrical specifications.
V2.1.3	2022-04-19	• Added the certifications description. • Added a description for the dimensions diagram. • Updated the appearance diagram.
V2.1.2	2021-02-06	Updated the certification information.
V2.1.1	2020-07-01	• Added the product introduction. • Added pin definition of the sensor port. • Added the indicator description. • Added the rated voltage and current information for power switch control. • Updated the product features. • Updated the legends in the appearance diagram.

Introduction

The MFN300 is a multifunction card developed by NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar). It offers various functions such as power switch control, sensor connection, and audio output.

Certifications

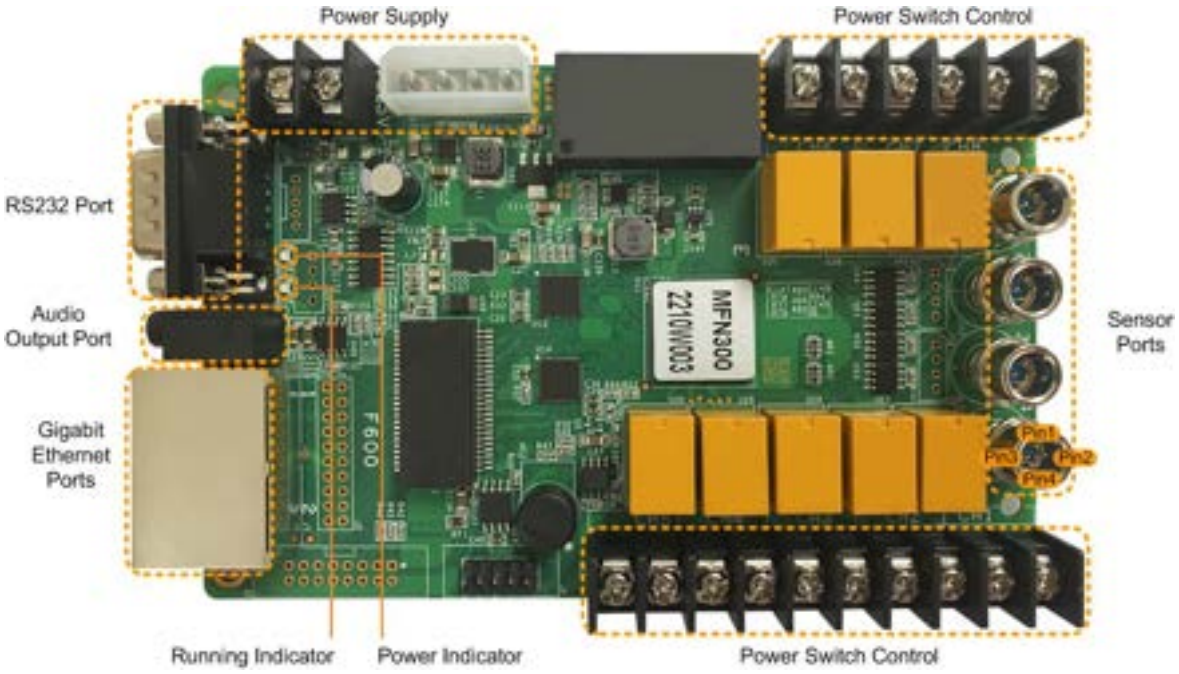
FCC, IC, EMC, RoHS, PFOS

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

- RS232 serial port or Gigabit Ethernet port communication
- Connected via Ethernet port before the first receiving card, between any two receiving cards, or after the last receiving card
- Timer function, able to replace a timer and delayer
- Temperature detection of the power distribution box
- 8x Channels of power switch control
- 4x Sensor ports to connect light sensors for automatic brightness adjustment, or connect other peripherals, such as temperature sensors
- 1x Audio output port

Appearance



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

The sensor port uses the RS485 protocol for communication. Its pins are defined in the table below.

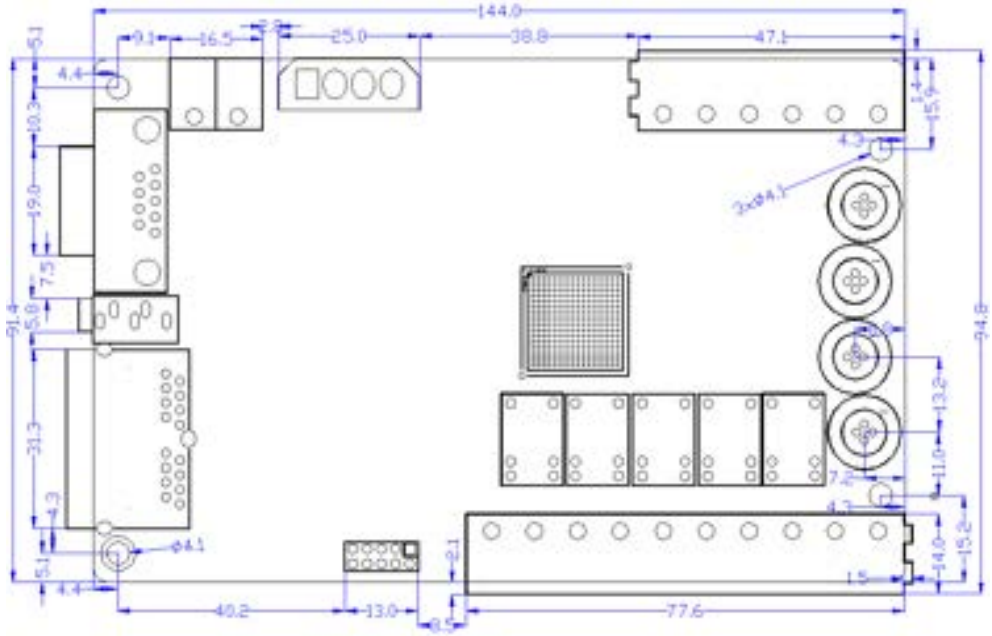
Pin	Pin1	Pin2	Pin3	Pin4
Definition	VDD5.0	GND	RS485 A0	RS485 B0

Indicators

Indicator	Color	Status	Description
Power indicator	Red	Always on	The power input is normal.
Running indicator	Red	Flashing once every 1s	The multifunction card is functioning normally, and Ethernet cable connection is normal.
		Flashing once every 2s	Ethernet cable connection is abnormal.

Dimensions

The board thickness is 1.6 mm, and the total thickness (board thickness + thickness of components on the top and bottom sides) is about 20.0 mm.



Tolerance: ±0.3 Unit: mm

Note

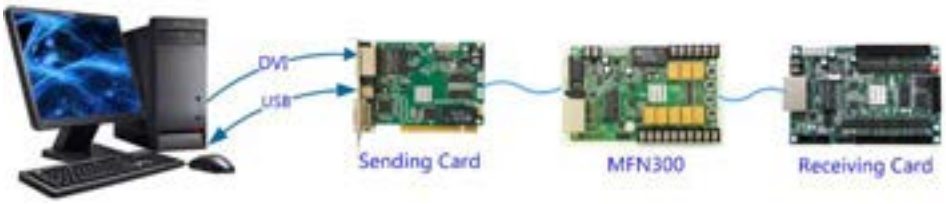
To make molds or trepan mounting holes, please contact NovaStar for a higher-precision structural drawing.

Connections

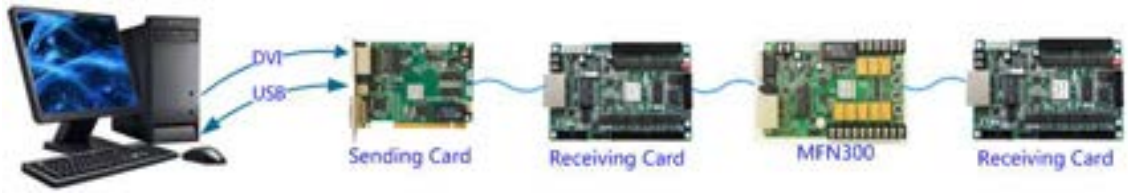
- Connect the MFN300 to the computer directly via serial cable.



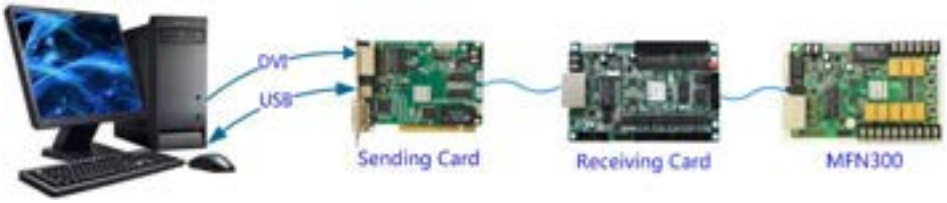
- Connect the MFN300 between the first receiving card and sending card (or LED display controller).



- Connect the MFN300 between any two receiving cards.



- Connect the MFN300 after the last receiving card.



Specifications

Electrical Specifications	Input voltage	DC 4.5 V to 5.5 V
	Maximum current	1.3 A
	Maximum power consumption	6.5 W Test conditions: Ambient temperature 25°C, input voltage 5 V, connected with 4 NS060 light sensors.
Operating	Temperature	−20°C to 75°C

Environment	Humidity	0% RH to 90% RH, non-condensing
Physical Specifications	Dimensions	144.0 mm × 94.8 mm × 20.0 mm
	Net weight	164.4 g
Power Switch Control	Rated voltage	AC 250 V / DC 30 V
	Rated current	3 A

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

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