

# MFN300

## Multifunction Card

V2.1.2



Specifications

## Change History

Document Version	Release Date	Description
V2.1.2	2021-02-06	Updated the certification information.
V2.1.1	2020-07-01	<ul style="list-style-type: none"> <li>Added the product introduction.</li> <li>Added pin definition of the sensor port.</li> <li>Added the indicator description.</li> <li>Added the rated voltage and current information for power switch control.</li> <li>Updated the feature description.</li> <li>Updated the legends in the appearance diagram.</li> </ul>

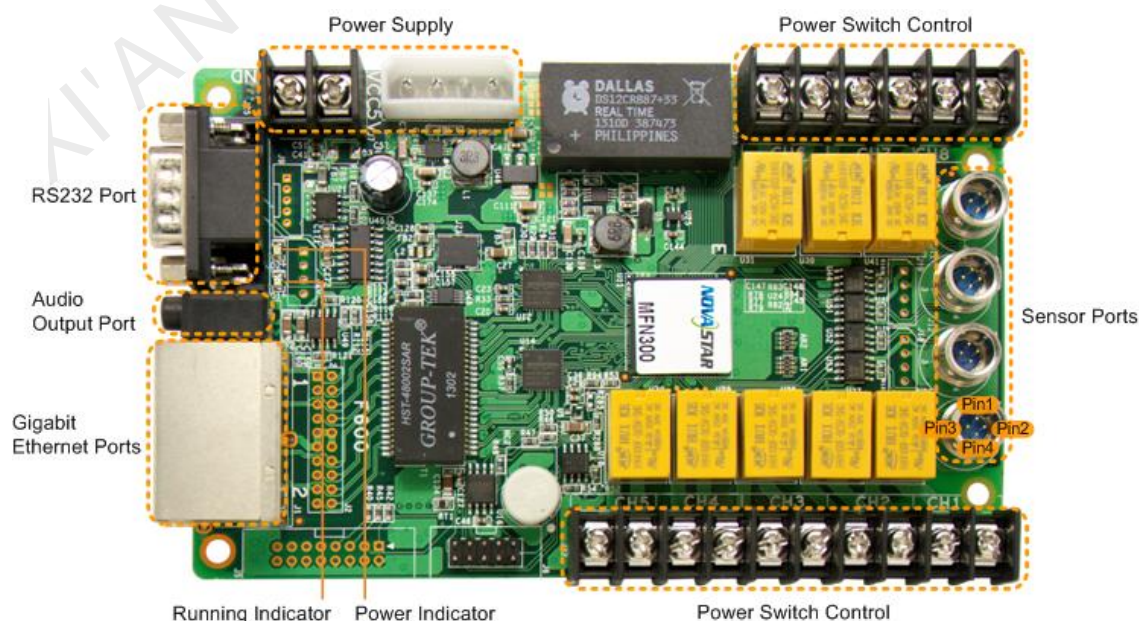
## Introduction

The MFN300 is a multifunction card with various functions, such as power switch control, sensor connection, and audio output.

## 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 [Table 1-1](#).

Table 1-1 Pin definition of the sensor port

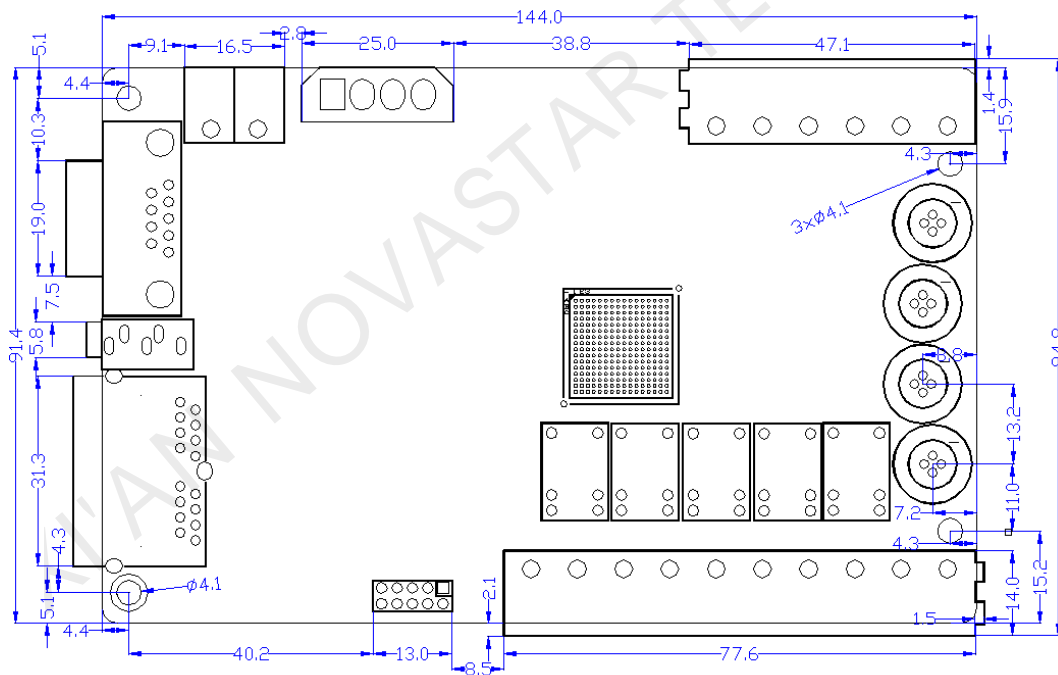
Pin	Pin1	Pin2	Pin3	Pin4
Definition	VDD5.0	GND	RS485 A0	RS485 B0

## Indicators

Indicator	Color	Status	Description
Power indicator	Red	Always on	The power supply 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.



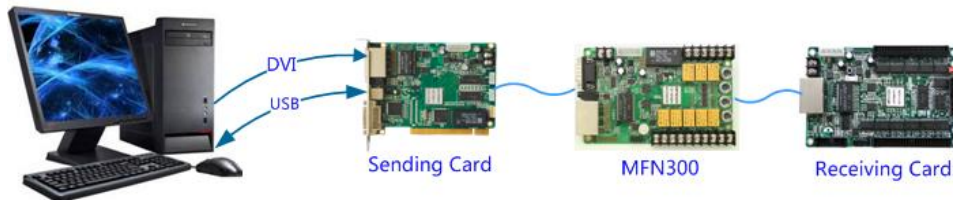
Tolerance: ±0.1 Unit: mm

## Connections

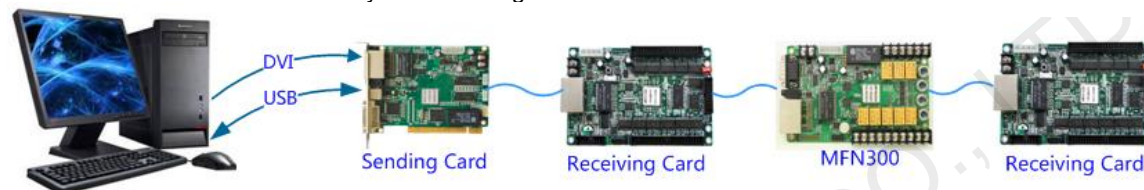
- Connect the MFN300 to the computer directly via serial cable.



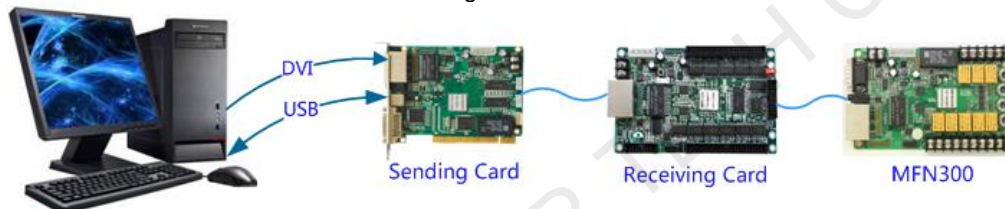
- Connect the MFN300 between the first receiving card and the sending card (or independent controller).



- Connect the MFN300 between any two receiving cards.



- Connect the MFN300 after the last receiving card.



## Specifications

Electrical Specifications	Input voltage	DC 3.3 V to 5.5 V
	Rated current	0.38 A
	Maximum power consumption	2.5 W
Operating Environment	Temperature	-20°C to +75°C
	Humidity	0% RH to 90% RH, non-condensing
Physical Specifications	Dimensions	144.0 mm x 94.8 mm x 20.0 mm
	Net weight	164.4 g
Power Switch Control	Rated voltage	AC 250 V / DC 30 V
	Rated current	3 A
Certifications	FCC, IC, EMC, RoHS, PFOS	

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

## 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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