MRV208

Receiving Card

V1.0.1
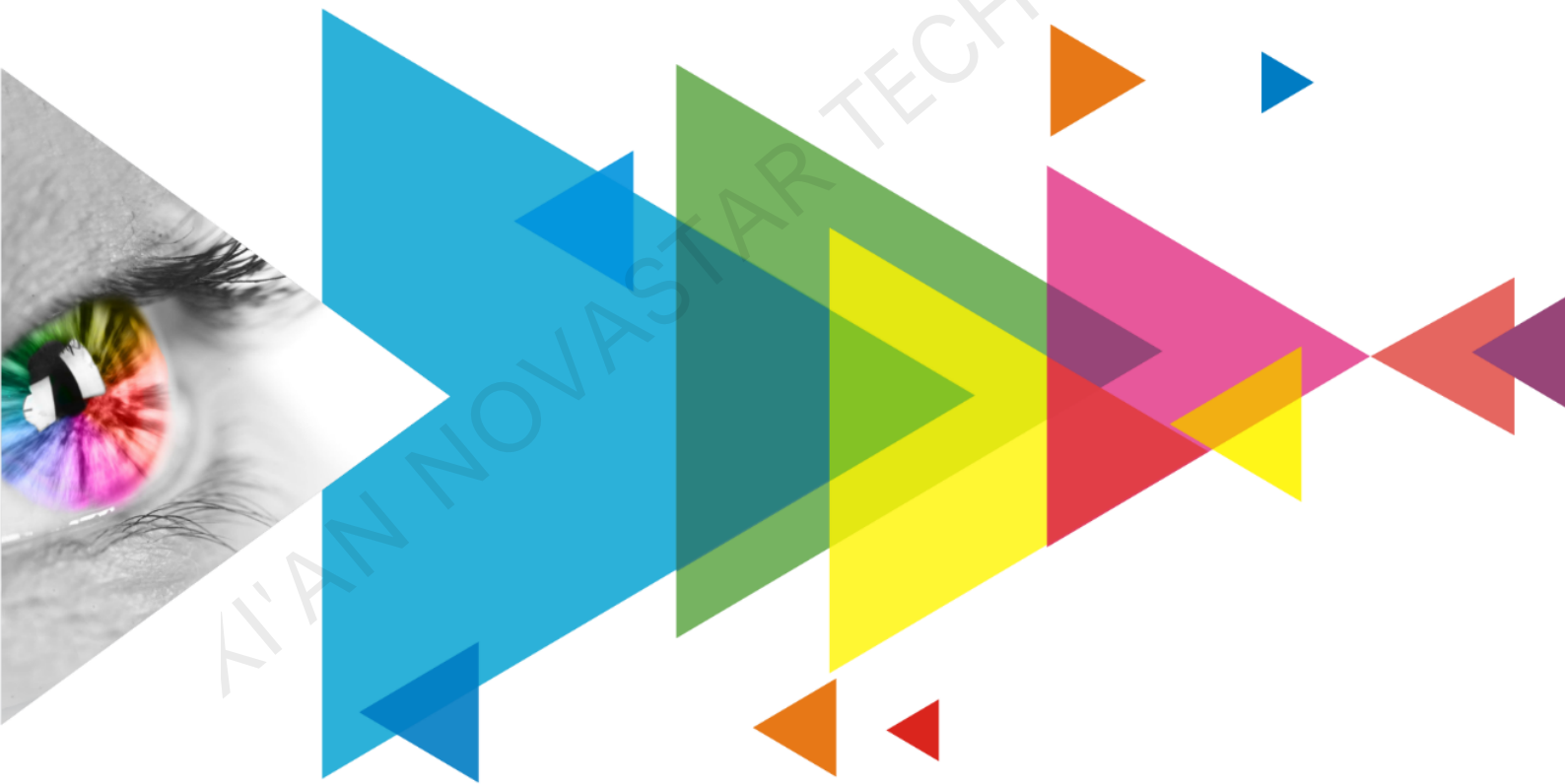
Specifications

Change History

Document Version	Release Date	Description
V1.0.1	2019-09-18	• Optimized the product introduction. • Optimized the feature description. • Optimized the legends in the appearance diagram. • Optimized the indicator description. • Optimized the dimensions diagram.
V1.0.0	2019-08-01	First release

Introduction

The MRV208 is a general receiving card developed by NovaStar. A single MRV208 loads up to 256×256 pixels. Supporting various functions such as pixel level brightness and chroma calibration, quick adjustment of dark or bright lines, and 3D, the MRV208 can greatly improve the display effect and user experience.

The MRV208 uses 8 standard HUB75E connectors for communication, resulting in high stability. It supports up to 16 groups of parallel RGB data. Thanks to its EMC compliant hardware design, the DH418 has improved electromagnetic compatibility and is suitable to various on-site setups.

Features

Improvements to Display Effect

- Pixel level brightness and chroma calibration
  Working with NovaLCT and NovaCLB, the receiving 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.

- Quick adjustment of dark or bright lines
  The dark or bright lines caused by splicing of modules and cabinets can be adjusted to improve the visual experience. The adjustment can be easily made and takes effect immediately.

- 3D function
  Working with the sending card that supports 3D function, the receiving card supports 3D image output.

Improvements to Maintainability

- Mapping function
  The cabinets can display the receiving card number and Ethernet port information, allowing users to easily obtain the locations and connection topology of receiving cards.

- Setting of a pre-stored image in receiving card
  The image displayed on the screen during startup, or displayed when the Ethernet cable is disconnected or there is no video signal can be customized.

- Temperature and voltage monitoring
  The receiving card temperature and voltage can be monitored without using peripherals.

- Cabinet LCD
  The LCD module of the cabinet can display the temperature, voltage, single run time and total run time of the receiving card.

- Bit error rate monitoring
  The Ethernet port communication quality of the receiving card can be monitored and the number of erroneous packets can be recorded to help troubleshoot network communication problems.

  NovaLCT V5.2.0 or later is required.

- Firmware program readback
  The receiving card firmware program can be read back and saved to the local computer.

  NovaLCT V5.2.0 or later is required.

- Configuration parameter readback
  The receiving card configuration parameters can be read back and saved to the local computer.

Improvements to Reliability

- Loop backup
  The receiving card and sending card form a loop via the main and backup line connections. If a fault occurs at a location of the lines, the screen can still display the image normally.

- Dual backup of configuration parameters

The receiving card configuration parameters are stored in the application area and factory area of the receiving card at the same time. Users usually use the configuration parameters in the application area. If necessary, users can restore the configuration parameters in the factory area to the application area.

- Dual backup of the application program
  Two copies of the application program are stored in the receiving card at the factory to avoid the problem that the receiving card may get stuck due to program update exception.

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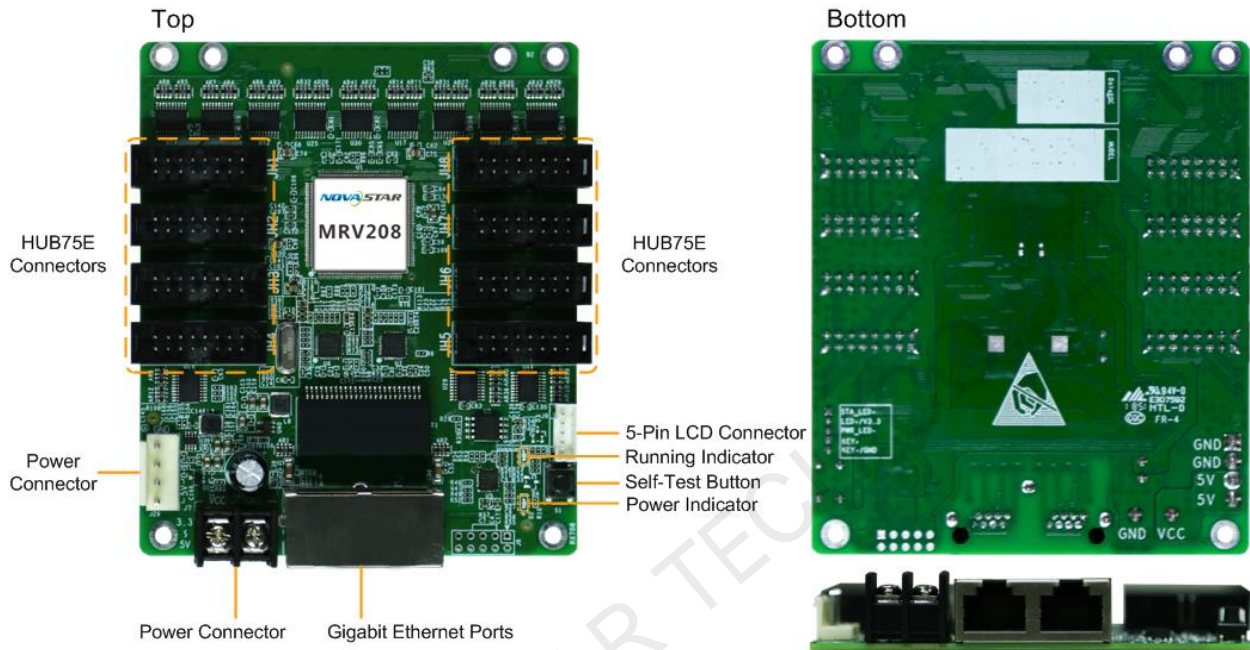
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Indicators

| Indicator	Color	Status	Description
Running indicator	Green	Flashing once every 1s	The receiving card is functioning normally. Ethernet cable connection is normal, and video source input is available.
		Flashing once every 3s	Ethernet cable connection is abnormal.
		Flashing 3 times every 0.5s	Ethernet cable connection is normal, but no video source input is available.
		Flashing once every 0.2s	The receiving card failed to load the program in the application area and now is using the backup program.
		Flashing 8 times every 0.5s	A redundancy switchover occurred on the Ethernet port and the loop backup has taken effect.
Power indicator	Red	Always on	The power supply is normal.

Dimensions

The board thickness is not greater than 2.0 mm, and the total thickness (board thickness + thickness of components on the top and bottom sides) is not greater than 19.0 mm. Ground connection (GND) is enabled for mounting holes.
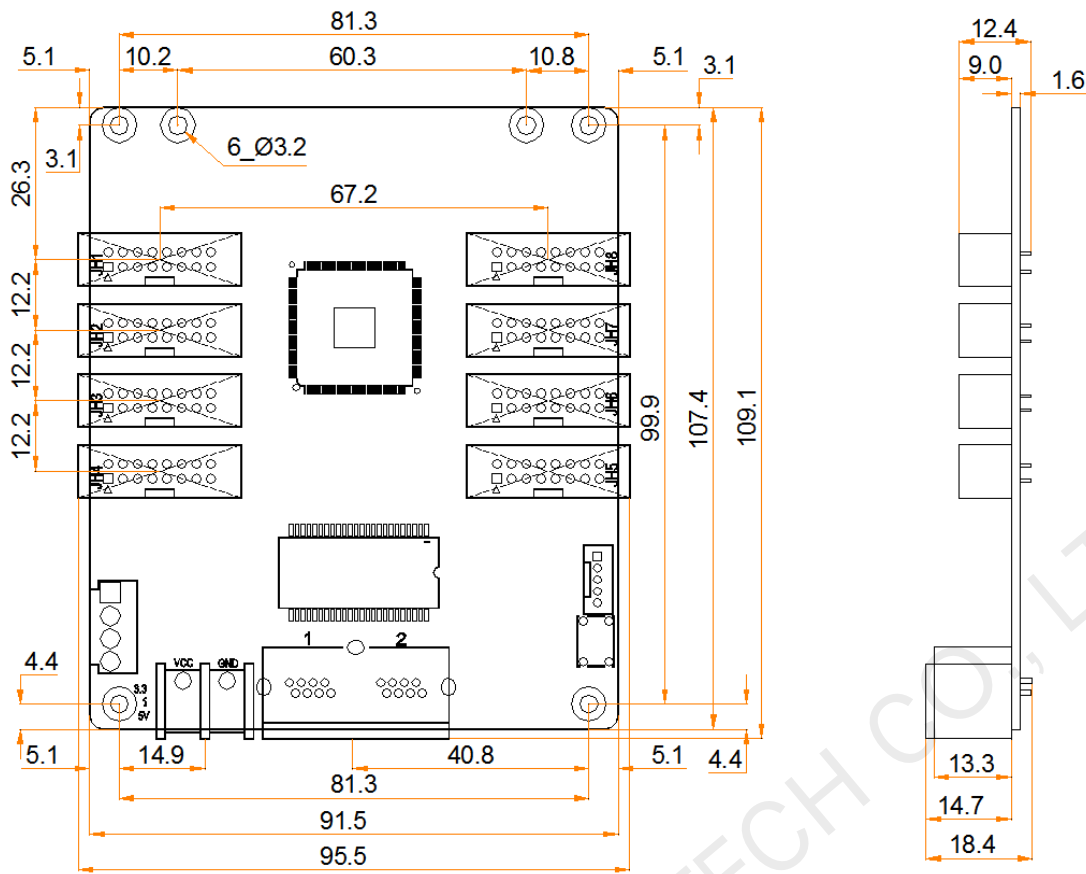
Tolerance: ±0.1   Unit: mm

Pins
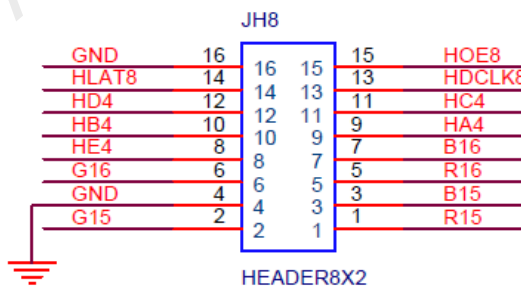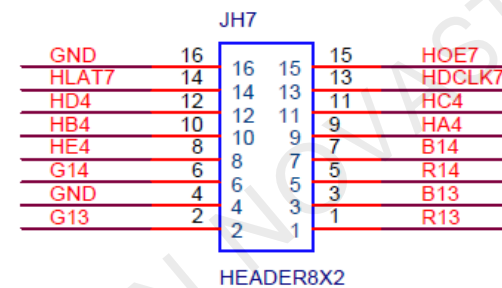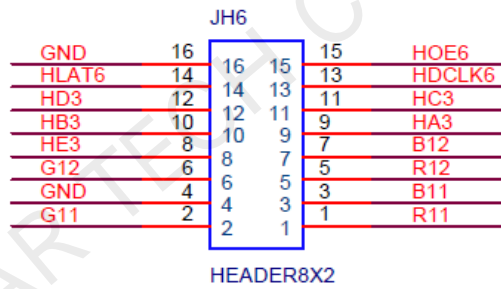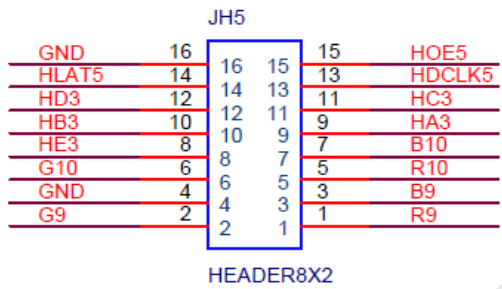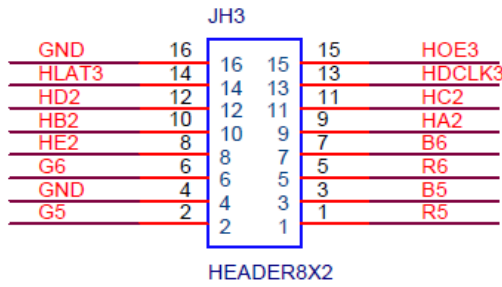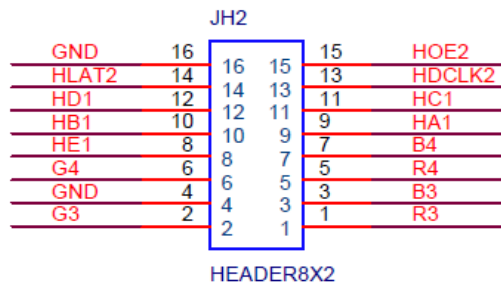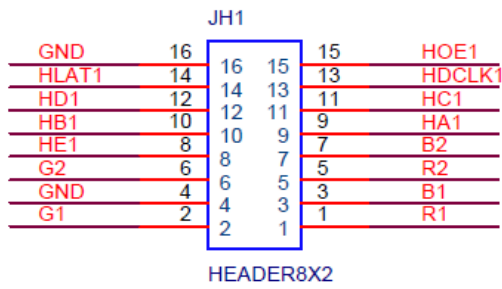
Pin Definitions					
Ground	GND	16	15	OE	Display enable signal
Latch signal	LAT	14	13	DCLK	Shift clock
Line decoding signal	HD	12	11	HC	Line decoding signal
Line decoding signal	HB	10	9	HA	Line decoding signal
Line decoding signal	HE	8	7	B	/
/	G	6	5	R	/
Ground	GND	4	3	B	/
/	G	2	1	R	/

Specifications

Maximum Loading Capacity	256 × 256 pixels	
Electrical Specifications	Input voltage	DC 3.3 V to 5.5 V
	Rated current	0.5 A

	Rated power consumption	2.5 W
Operating Environment	Temperature	–20°C to +70°C
	Humidity	10% RH to 90% RH, non-condensing
Storage Environment	Temperature	–25°C to +125°C
	Humidity	0% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	95.5 mm × 109.1 mm × 18.4 mm
	Net weight	72.4 g
Packing Information	Packing specifications	An antistatic bag and anti-collision foam are provided for each receiving card. Each packing box contains 100 receiving cards.
	Packing box dimensions	650.0 mm × 500.0 mm × 200.0 mm
Certifications	RoHS, EMC Class A	

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

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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