

# MRV328

## Receiving Card



Specifications

## Change History

Document Version	Release Date	Description
V1.2.4	2021-08-25	<ul style="list-style-type: none"> <li>Updated the description of features.</li> <li>Updated the appearance diagram.</li> <li>Added the certification related description.</li> </ul>
V1.2.3	2021-02-06	<ul style="list-style-type: none"> <li>Updated the product introduction.</li> <li>Updated the certification information.</li> </ul>
V1.2.2	2020-09-11	<ul style="list-style-type: none"> <li>Optimized the product introduction.</li> <li>Optimized the feature description.</li> <li>Optimized the legends in the appearance diagram.</li> <li>Optimized the indicator description.</li> <li>Optimized the dimensions diagram.</li> <li>Added the pin description.</li> </ul>

## Introduction

The MRV328 is a general receiving card that supports up to 1/32 scan. A single MRV328 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 MRV328 can significantly improve the display effect and user experience.

The MRV328 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 MRV328 has improved electromagnetic compatibility and is suitable for various on-site setups.

## Features

### Improvements to Display Effect

- Pixel level brightness and chroma calibration  
Working with NovaLCT and calibration platform (CalCube MiniLED V1.1.0 or later recommended), the receiving card supports brightness and chroma calibration on each LED, which can effectively remove color differences and chroma differences and greatly improve display brightness consistency 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 or cabinets can be adjusted to improve the visual experience. The adjustment is easy and takes effect immediately.
- 3D function  
Working with the sending card that supports 3D function, the receiving card supports 3D output.

### Improvements to Maintainability

- Quick uploading of calibration coefficients  
Upload the calibration coefficients quickly to the receiving cards to improve efficiency.

- Setting of a pre-stored image in receiving card  
The image displayed 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 connected to the cabinet can display the temperature, voltage, single run time and total run time of the receiving card.
- Bit error detection  
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 primary and backup line connections.

When a fault occurs at a location of the lines, the screen can still display the image normally.

- Dual program backup  
Two copies of firmware 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



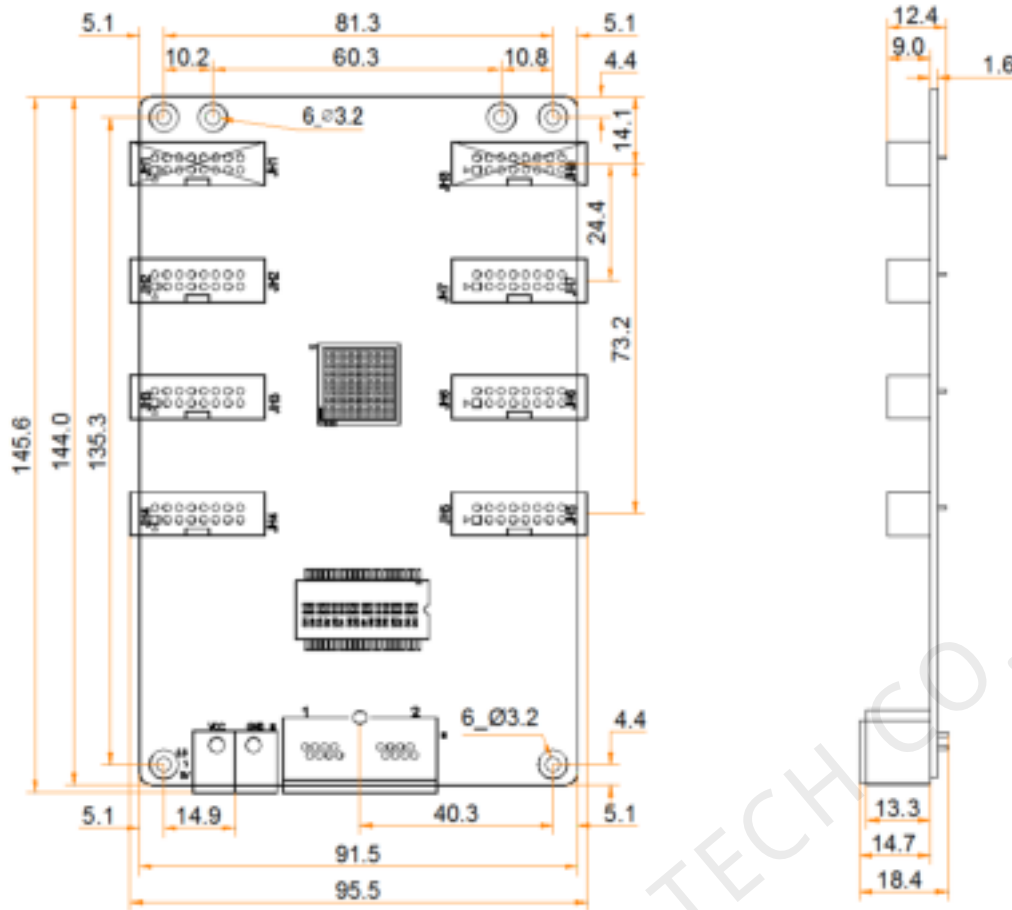
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

## Indicators

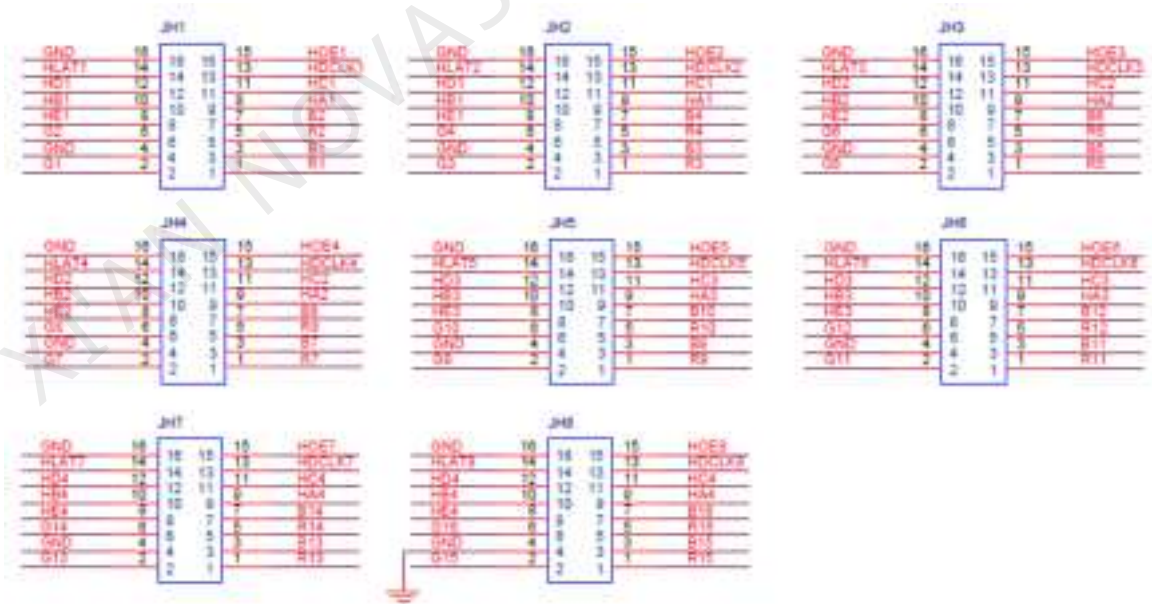
Indicator	Color	Status	Description
Running indicator	Green	Flashing once every 0.5s	The receiving card is functioning normally. Ethernet cable connection is normal, and video source input is available.
		Flashing once every 3s	Ethernet cable connection is abnormal.
		Flashing 3 times every 1s	Ethernet 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 is now using the backup program.
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:  $\pm 0.3$  Unit: mm

## Pins



Pin Definitions					
Ground	GND	16	15	HOE	Display enable
Latch signal	HLAT	14	13	HDCLK	Shift clock
Line decoding signal	HD	12	11	HC	Line decoding signal
	HB	10	9	HA	
	HE	8	7	B	/
/	G	6	5	R	/
Ground	GND	4	3	B	/

Pin Definitions					
/	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	145.6 mm × 95.5 mm × 18.4 mm
	Net weight	85.5 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  Note: If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please apply for the certifications yourself or contact NovaStar to apply for them.	

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

**Copyright © 2021 Xi'an NovaStar Tech Co., Ltd. All Rights Reserved.**

No part of this document may be copied, reproduced, extracted or transmitted in any form or by any means without the prior written consent of Xi'an NovaStar Tech Co., Ltd.

**Trademark**



is a trademark of Xi'an NovaStar Tech Co., Ltd.

**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.

Official website  
[www.novastar.tech](http://www.novastar.tech)

Technical support  
[support@novastar.tech](mailto:support@novastar.tech)