

# MRV336

## Receiving Card



Specifications

## Change History

| Document Version | Release Date | Description                                                                                                                                                                                                                                                                                                                                                               |
|------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V1.2.0           | 2024-05-28   | Updated load capacity information.                                                                                                                                                                                                                                                                                                                                        |
| V1.1.5           | 2022-08-31   | <ul style="list-style-type: none"> <li>Added the table of appearance description.</li> <li>Updated the input voltage.</li> <li>Updated the packing information.</li> </ul>                                                                                                                                                                                                |
| V1.1.4           | 2022-03-26   | <ul style="list-style-type: none"> <li>Added the certifications description.</li> <li>Added the dimensions diagram description.</li> <li>Updated the pins section.</li> </ul>                                                                                                                                                                                             |
| V1.1.3           | 2021-02-06   | <ul style="list-style-type: none"> <li>Updated the product introduction.</li> <li>Updated the certification information.</li> </ul>                                                                                                                                                                                                                                       |
| V1.1.2           | 2020-09-18   | <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>Optimized the pin description.</li> <li>Optimized the specifications table.</li> </ul> |

## Introduction

The MRV336 is a general receiving card developed by NovaStar. A single MRV336 supports resolutions up to 256×256@60Hz. Supporting various functions such as pixel level brightness and chroma calibration, the MRV336 can significantly improve the display effect and user experience.

The MRV336 uses 12 standard HUB75E connectors for communication, resulting in high stability. It supports up to 24 groups of parallel RGB data. Thanks to its EMC Class B compliant hardware design, the MRV336 has improved electromagnetic compatibility and is suitable for various on-site setups.

## Certifications

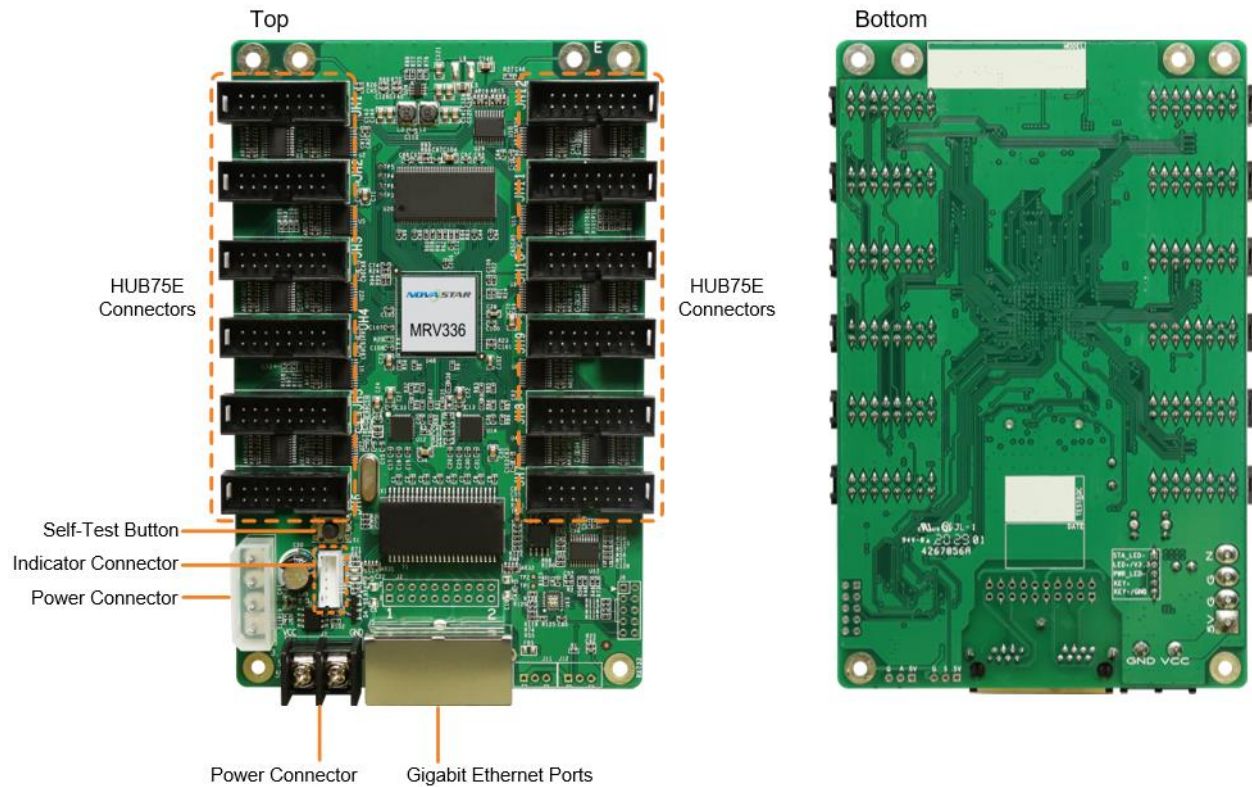
RoHS, EMC Class B

**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

- Support for 1/32 scan
- Pixel level brightness and chroma calibration
- Support for setting of a pre-stored image in receiving card
- Configuration parameter readback
- Temperature monitoring
- Ethernet cable communication status monitoring
- Power supply voltage monitoring

## Appearance



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

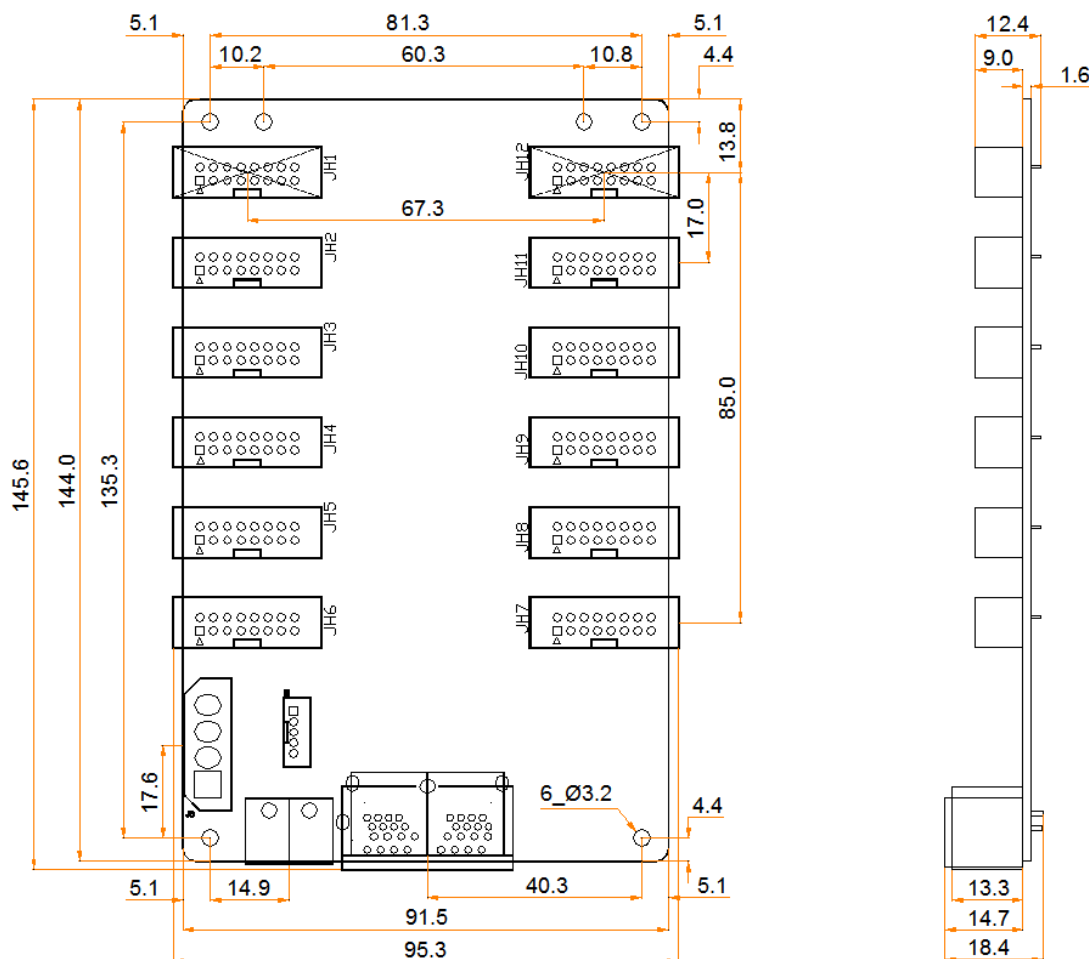
| Name                   | Description                                                                                                                                                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HUB75E Connectors      | Connect to the module.                                                                                                                                                                              |
| Power Connector        | Connect to the input power. Either of the connectors can be chosen.                                                                                                                                 |
| Gigabit Ethernet Ports | Connect to the sending card, and cascade other receiving cards. Each connector can be used as input or output.                                                                                      |
| Self-Test Button       | Set the test pattern.<br><br>After the Ethernet cable is disconnected, press the button twice, and the test pattern will be displayed on the screen. Press the button again to switch the pattern.  |
| Indicator Connector    | Definition of the indicator connector (J9): <ul style="list-style-type: none"> <li>• 1: STA_LED</li> <li>• 2: LED+/3.3V</li> <li>• 3: PWR_LED-</li> <li>• 4: KEY+</li> <li>• 5: KEY-/GND</li> </ul> |

## 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 is now 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

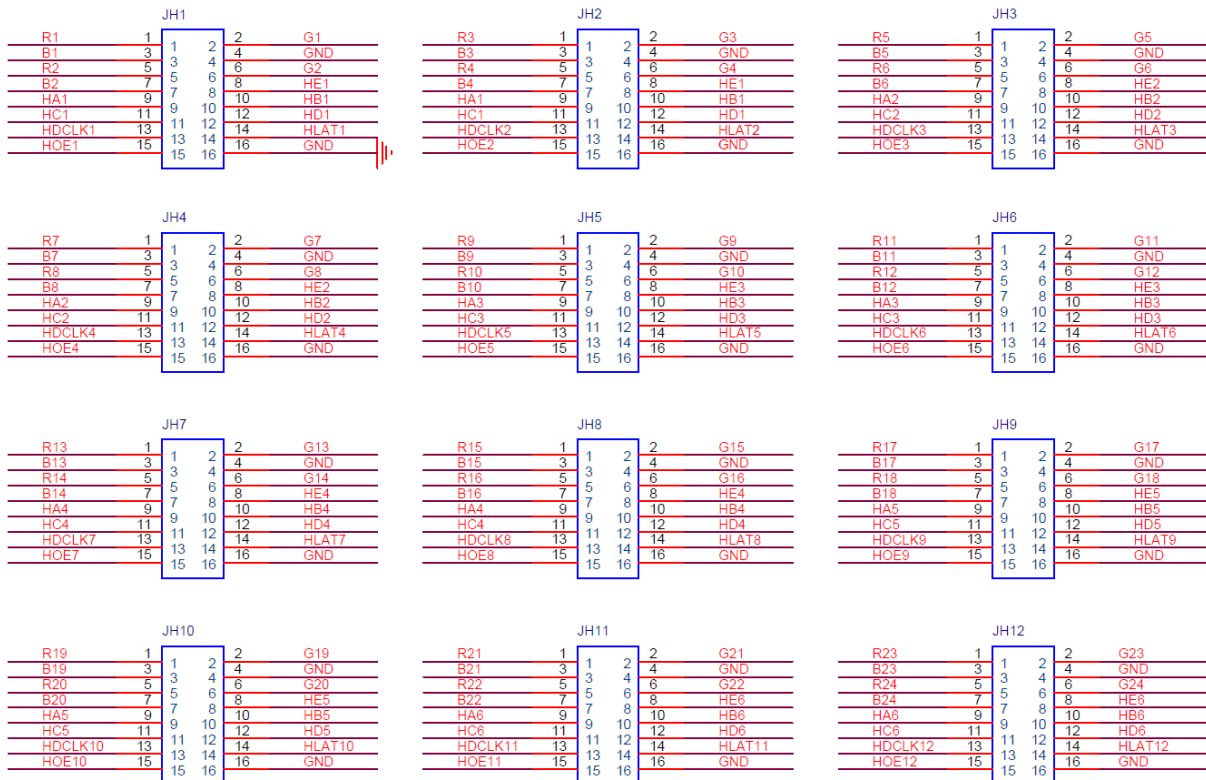
The board thickness is not greater than 2.0 mm, and the total thickness (board thickness + thickness of components on the top and bottom sides) is not greater than 19.0 mm. Ground connection (GND) is enabled for mounting holes.



Tolerance:  $\pm 0.3$  Unit: mm

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

## Pins



| Pin Definitions (Take JH1 as an example) |        |    |    |       |                      |
|------------------------------------------|--------|----|----|-------|----------------------|
| /                                        | R1     | 1  | 2  | G1    | /                    |
| /                                        | B1     | 3  | 4  | GND   | Ground               |
| /                                        | R2     | 5  | 6  | G2    | /                    |
| /                                        | B2     | 7  | 8  | HE1   | Line decoding signal |
| Line decoding signal                     | HA1    | 9  | 10 | HB1   | Line decoding signal |
| Line decoding signal                     | HC1    | 11 | 12 | HD1   | Line decoding signal |
| Shift clock                              | HDCLK1 | 13 | 14 | HLAT1 | Latch signal         |
| Display enable signal                    | HOE1   | 15 | 16 | GND   | Ground               |

## Specifications

|                           |                         |                                                                 |
|---------------------------|-------------------------|-----------------------------------------------------------------|
| Maximum Resolution        | 256×256@60Hz            |                                                                 |
| Electrical Specifications | Input voltage           | DC 3.8 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 × 95.3 mm × 18.4 mm                                    |
| Packing                   | Packing specifications  | An antistatic bag and anti-collision foam are provided for each |

|             |                        |                                                                |
|-------------|------------------------|----------------------------------------------------------------|
| Information |                        | receiving card. Each packing box contains 100 receiving cards. |
|             | Packing box dimensions | 625.0 mm × 180.0 mm × 470.0 mm                                 |

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

**Copyright © 2024 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](http://www.novastar.tech)  
| [www.novastar.tech](http://www.novastar.tech)

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