MRV266
Receiving Card

V1.0.0　　NS110100737

Specifications

Change History

Document Version	Firmware Version	Release Date	Description
V1.0.0	V1.0.0.0	2019-03-15	First release

Introduction

The MRV266 is a general receiving card developed by NovaStar. A single MRV266 loads up to 512×256 pixels and supports up to 24 sets of parallel RGB data. It uses 6 HUB320 (26-pin) connectors, resulting in high stability and reliability, and therefore it is applicable to many applications.

On-site setup, operation, and maintenance were all taken into account when designing the hardware and software of the MRV266, allowing for an easier setup, more stable operation, and more efficient maintenance.

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 seam correction

  Working with NovaLCT, the receiving card supports quick adjustment of bright and dark lines caused by splicing of cabinets and modules. This function is easy to use and the adjustment can take effect immediately.

- 3D function

  Working with the independent controller which supports 3D function, users can enable the 3D function in NovaLCT or on operation panel of the controller, and set 3D parameters to allow for 3D display effects.

  Loading capacity:

  − 256×256 pixels (PWM IC)

  − 256×208 pixels (Common IC)

- Individual Gamma adjustment for RGB

  Working with NovaLCT (V5.2.0 or later) and the independent controller which supports this function, the receiving card supports individual adjustment of red Gamma, green Gamma and blue Gamma, which can effectively control image non-uniformity under low grayscale and white balance offset, allowing for a more realistic image.

Improvements to Maintainability

- Mapping function

After the Mapping function is enabled in NovaLCT, target cabinet will display the receiving card number and Ethernet port information, allowing users to easily obtain the location and wiring route of receiving cards.

- Setting of pre-stored image on receiving card

  In NovaLCT, a specified image can be set as the LED screen startup image or as the image to be displayed on LED screen when the Ethernet cable is disconnected or no video signal is available.

- Voltage and temperature monitoring

  The voltage and temperature of the receiving card can be monitored without using peripherals. The monitoring data can be checked in NovaLCT.

- Cabinet LCD

  The receiving card supports the general 5-pin LCD module of NovaStar. The LCD module can display temperature, voltage, single operating time and total operating time of the receiving card.

- Bit error rate monitoring

  The receiving card can work with NovaLCT (V5.2.0 or later) to monitor the network communication quality between sending device and receiving card, or between receiving cards, and record the number of errors to help troubleshoot network communication problems.

- Readback of firmware program

  In NovaLCT, the receiving card firmware program can be read back and saved to local computer.

- Readback of configuration parameters

  In NovaLCT, the receiving card configuration parameters can be read back and saved to local computer.

Improvements to Reliability

- Loop backup

  The receiving card can improve the reliability for cascading of receiving cards through main and backup redundant mechanism. If either main or backup cascading lines fail, the other will begin to work to ensure uninterrupted operation of the display.

- Dual backup of configuration parameters

  Two copies of receiving card configuration parameters can be saved in receiving card via NovaLCT and one copy serves as backup.

- Dual backup of program

  Two copies of application programs are saved in the receiving card at the factory to avoid the problem that the receiving card may get stuck due to program update exception.

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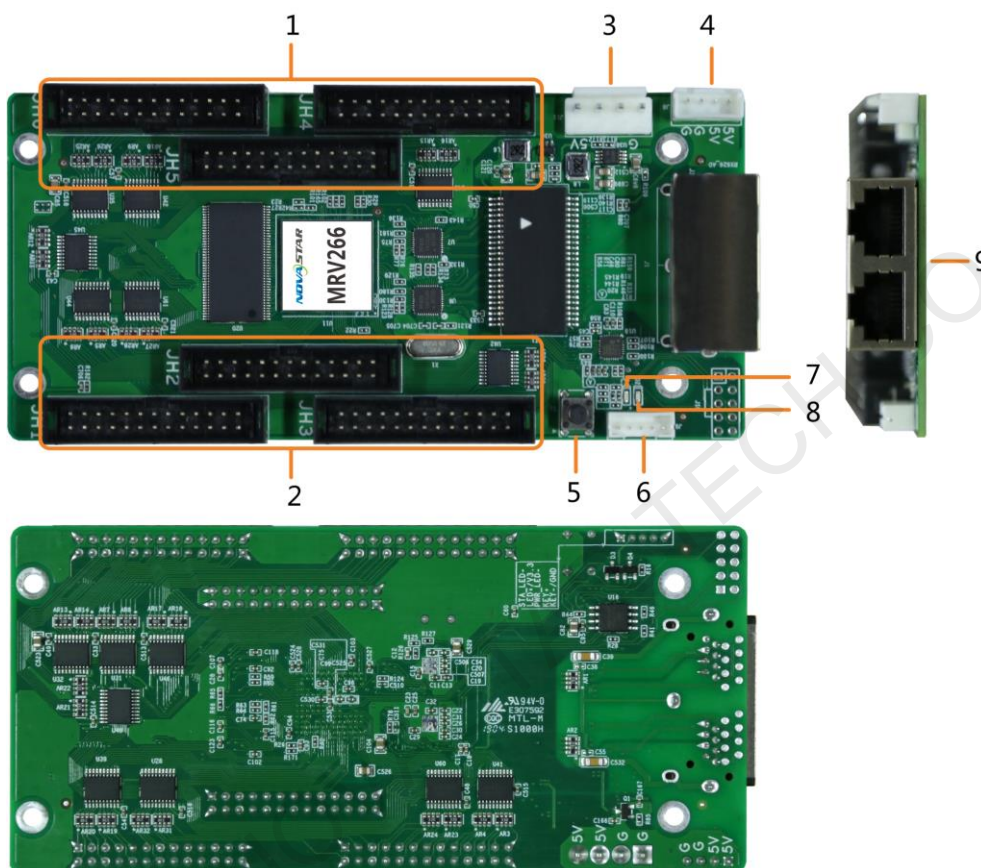
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

No.	1/2	3/4	5	6
Type	HUB320 connector	Power connector	Self-test button	5-pin LCD connector
No.	7	8	9	
Type	Status indicator	Power indicator	Gigabit Ethernet port	

Indicator Status

| Indicator	Status	Description
Status indicator (Green)	Flashing every other 1s	Receiving card is functioning normally. Ethernet cable connection is normal, and video source input is available.
	Flashing every other 3s	Receiving card is functioning normally, but Ethernet cable connection is abnormal.

Indicator	Status	Description
	Flashing 3 times every other 1s	Receiving card is functioning normally. Ethernet cable connection is normal, but no video source input is available.
	Flashing every other 0.5s	Program loading fails in normal operating state, currently loading backup operating program.
	Flashing 8 times every other 1s	Sending card's backup Ethernet port is now active. Receiving card is functioning normally.
Power indicator (Red)	Always on	It is always on after the power is supplied.

Dimensions
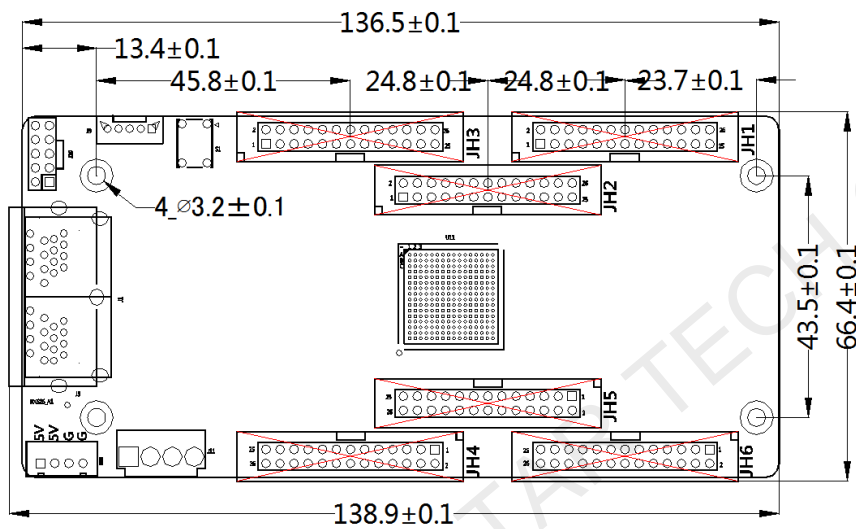
Unit: mm

Pins
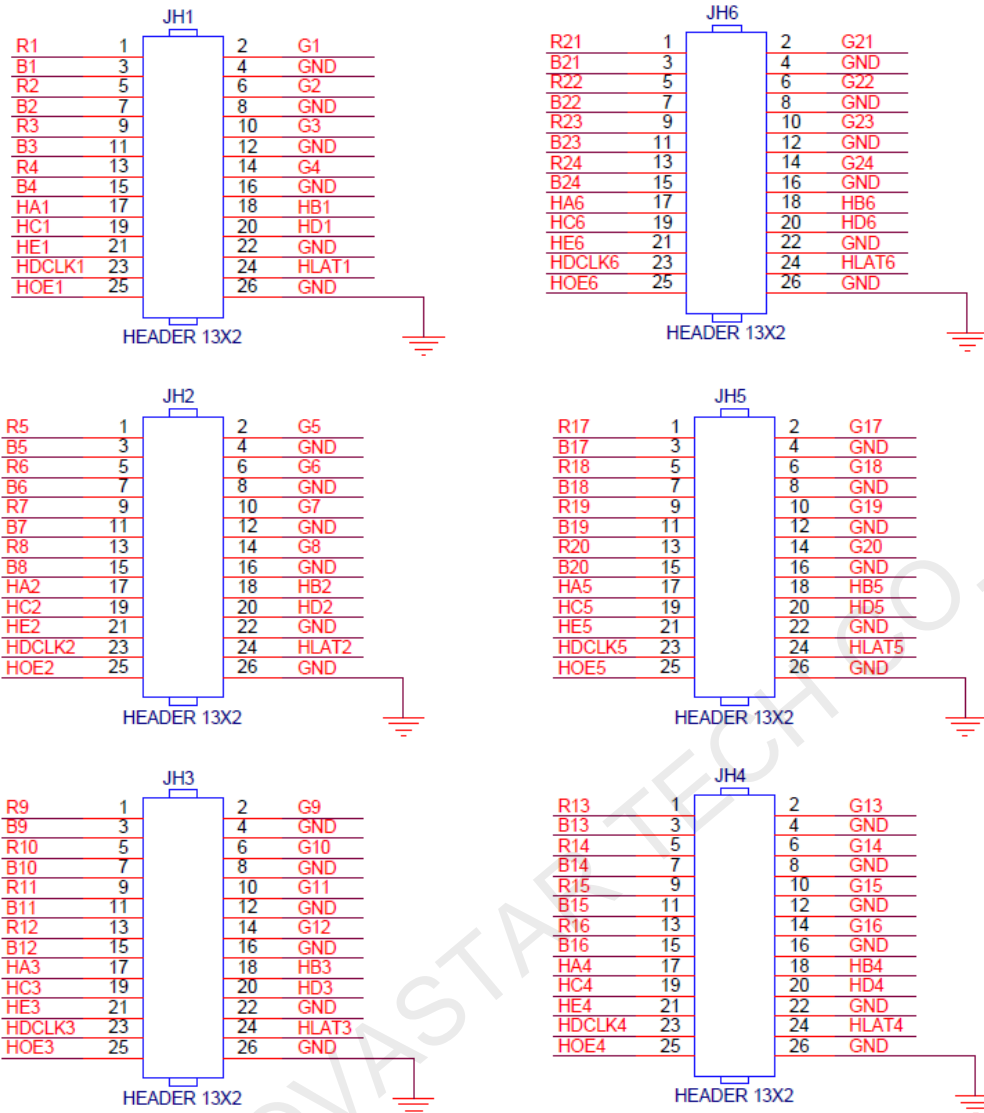
Pin Definition					
/	R	1	2	G	/
/	B	3	4	GND	Ground
/	R	5	6	G	/
/	B	7	8	GND	Ground
/	R	9	10	G	/
/	B	11	12	GND	Ground
/	R	13	14	G	/
/	B	15	16	GND	Ground
Line decoding signal	HA	17	18	HB	Line decoding signal
Line decoding signal	HC	19	20	HD	Line decoding signal

Pin Definition					
Line decoding signal	HE	21	22	GND	Ground
Shift clock	DCLK	23	24	LAT	Latch signal
Display enable	OE	25	26	GND	Ground

Specifications

Maximum Loading Capacity	PWM IC: 512×256 pixels Common IC: 384×256 pixels	
Electrical Specifications	Input voltage	DC 3.3 V–5.0 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
Physical Specifications	Dimensions	138.9 mm × 66.4 mm × 17.2 mm
	Net weight	68.0 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	650.0mm × 500.0mm × 200.0mm
Certifications	RoHS	

Trademark

NOVASTAR is a trademark of NovaStar Tech Co., Ltd.

Statement

You are welcome to use the product of Xi'an NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar). 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 contact info given in document. We will do our best to solve any issues, as well as evaluate and implement any suggestions.

Official website
www.novastar.tech

Technical support
support@novastar.tech