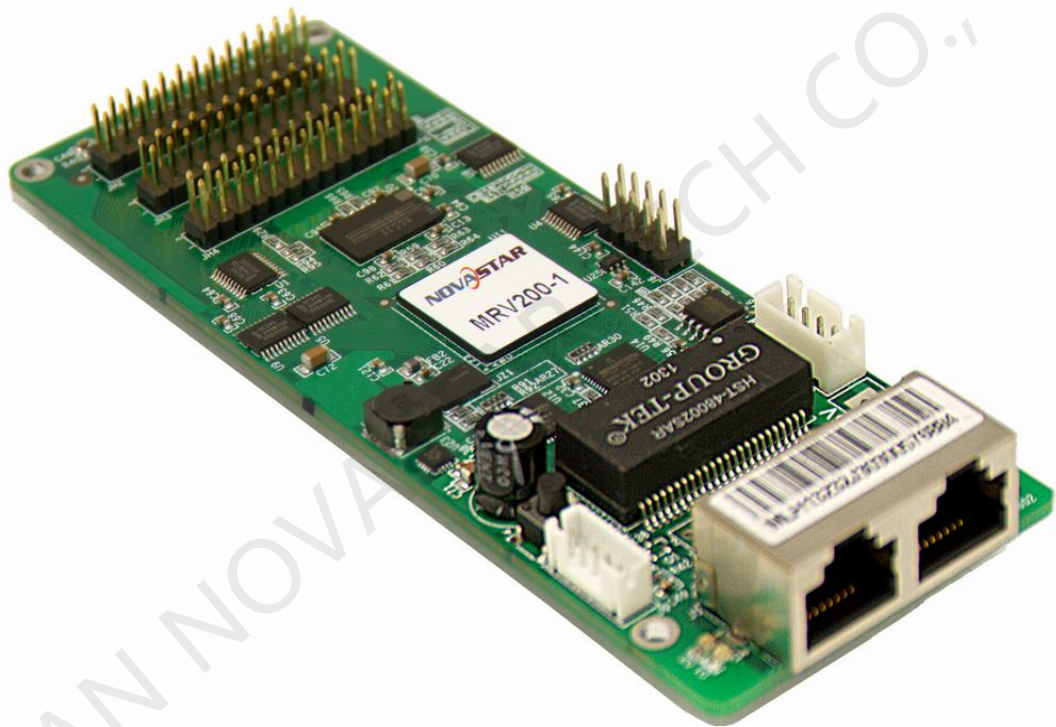


# Nova M3 MRV200 Receiving Card Specifications

V2.0.0 2013-11-6

## 1. Functions



Nova M3 MRV200 is the mini-version of Nova M3 receiving card. It has small size and powerful functions. It retains all the functions and features of MRV300 receiving card, more suitable to LED curtain and die-cast aluminum cabinet. Its characteristics as follows:

- 1) Single card outputs 16-group of RGBR 'data;
- 2) Single card outputs 20-group of RGB data;

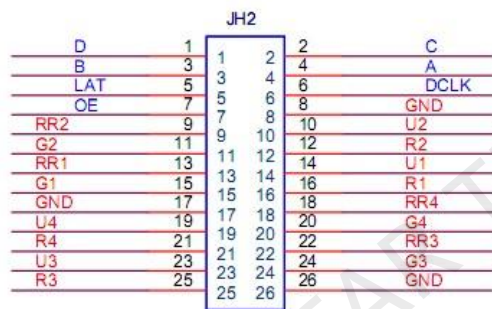
- 3) Single card outputs 64-group of serial data;
- 4) Single card support resolution 256x220;
- 5) Support configuration file readback;
- 6) Support program copy;
- 7) Support temperature monitoring.
- 8) Support Ethernet cable communication status detection;
- 9) Support power supply voltage detection;
- 10) Support pixel by pixel brightness and chromaticity calibration.  
Brightness and chromaticity calibration coefficients for each LED;
- 11) Support pre-store picture setting;
- 12) Comply with EU RoHs standard;
- 13) Comply with EU CE-EMC standard.

## 2. Output interface definition

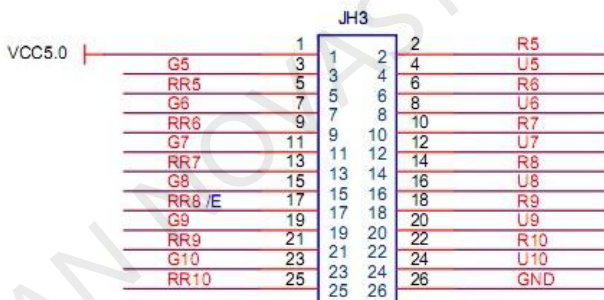
Under all the three different working modes of it, three 26P interface can output different data, and only one common program and software is required, no customized program necessary; interface is defined as follows:

### 1) 16-group data mode ( With virtual output )

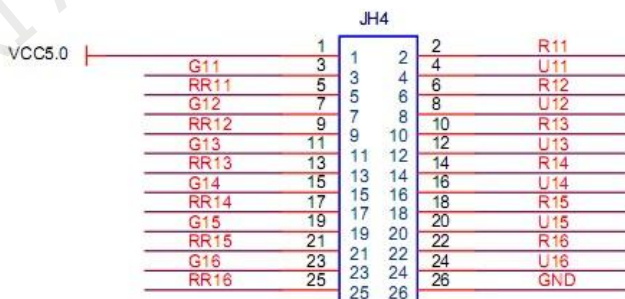
Support 16-group of RGBR 'parallel data, defined as follows:



IDC26\_SMD



IDC26\_SMD



IDC26\_SMD

Virtual red signal of the eighth group of data is exported as E signal of decoded signal under 32-scanning working mode

JH1 16P			
1	D	C	2
3	B	A	4
5	OE	CLK	6
7	LAT	RD1	8
9	GD1	BD1	10
11	RD2	GD2	12
13	BD2	GND	14
15	GND	GND	16

JH2 26P				JH3 26P				JH4 26P			
1	D	C	2	1	HUBVCC	J3_R1	2	1	HUBVCC	J6_R1	2
3	B	A	4	3	J3_G1	J3_B1	4	3	J6_G1	J6_B1	4
5	LAT	CLK	6	5	J3_R1R	J3_R2	6	5	J6_R1R	J6_R2	6
7	OE	GND	8	7	J3_G2	J3_B2	8	7	J6_G2	J6_B2	8
9	J1_R2R	J1_B2	10	9	J3_R2R	J4_R1	10	9	J6_R2R	J7_R1	10
11	J1_G2	J1_R2	12	11	J4_G1	J4_B1	12	11	J7_G1	J7_B1	12
13	J1_R1R	J1_B1	14	13	J4_R1R	J4_R2	14	13	J7_R1R	J7_R2	14
15	J1_G1	J1_R1	16	15	J4_G2	J4_B2	16	15	J7_G2	J7_B2	16
17	GND	J2_R2R	18	17	J4_R2R/E	J5_R1	18	17	J7_R2R	J8_R1	18
19	J2_B2	J2_G2	20	19	J5_G1	J5_B1	20	19	J8_G1	J8_B1	20
21	J2_R2	J2_R1R	22	21	J5_R1R	J5_R2	22	21	J8_R1R	J8_R2	22
23	J2_B1	J2_G1	24	23	J5_G2	J5_B2	24	23	J8_G2	J8_B2	24
25	J2_R1	GND	26	25	J5_R2R	GND	26	25	J8_R2R	GND	26

## 2) 20-group parallel data mode

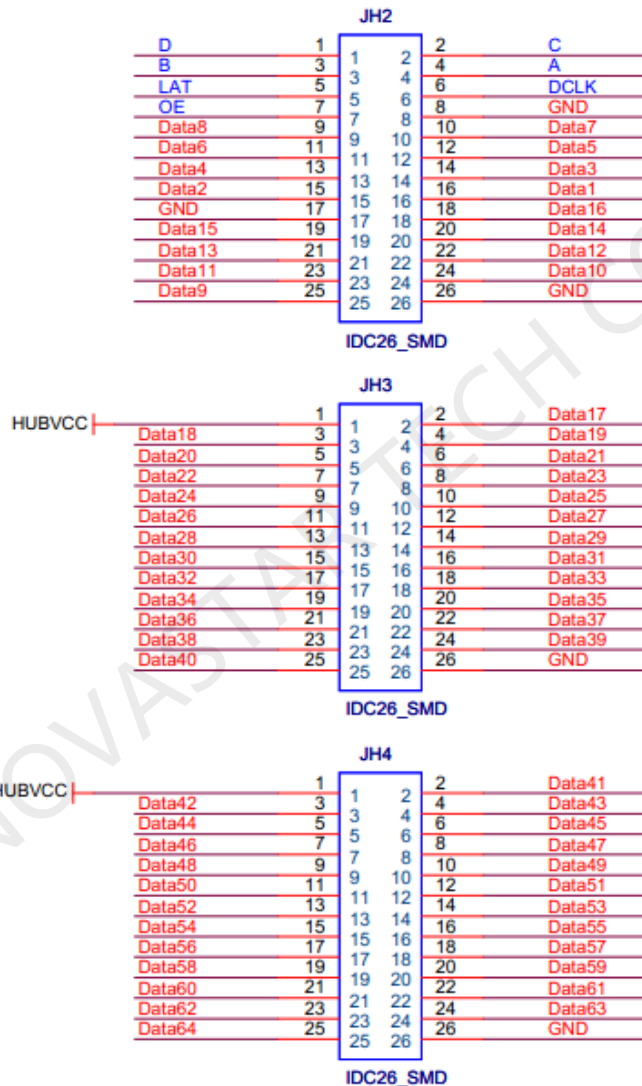
Support 20 sets of parallel data, defined as follows:

JH2 26P				JH3 26P				JH4 26P			
1	D	C	2	1	VCC	G6	2	1	VCC	B13	2
3	B	A	4	3	B6	R7	4	3	R14	G14	4
5	LAT	CLK	6	5	G7	B7	6	5	B14	R15	6
7	OE	GND	8	7	R8	G8	8	7	G15	B15	8
9	G3	R3	10	9	B8	R9	10	9	R16	G16	10
11	B2	G2	12	11	G9	B9	12	11	B16	R17	12
13	R2	B1	14	13	R10	G10	14	13	G17	B17	14
15	G1	R1	16	15	B10	NC	16	15	R18	G18	16
17	GND	R6	18	17	E	R11	18	17	B18	R19	18
19	B5	G5	20	19	G11	B11	20	19	G19	B19	20
21	R5	B4	22	21	R12	G12	22	21	R20	G20	22

23	G4	R4	24	23	B12	R13	24	23	B20	NC	24
25	B3	GND	26	25	G13	GND	26	25	NC	GND	26

### 3) 64-group serial data mode

Support 64 sets of serial data, defined as follows:



Under serial mode, there are 64 data cables totally. Each cable can drive one LED bar independently.

In case of horizontal LED bar, the default is, Data1 drives the first row from the top, and Data64 drives the 64th row. (front view)

In case of vertical LED bar, the default is, Data1 drives the first column of from the left, and Data64 drives the 64th column. (front view)

JH2 26P				JH3 26P				JH4 26P			
1	D	C	2	1	HUBVCC	Data17	2	1	HUBVCC	Data41	2
3	B	A	4	3	Data18	Data19	4	3	Data42	Data43	4
5	LAT	CLK	6	5	Data20	Data21	6	5	Data44	Data45	6
7	OE	GND	8	7	Data22	Data23	8	7	Data46	Data47	8
9	Data8	Data7	10	9	Data24	Data25	10	9	Data48	Data49	10
11	Data6	Data5	12	11	Data26	Data27	12	11	Data50	Data51	12
13	Data4	Data3	14	13	Data28	Data29	14	13	Data52	Data53	14
15	Data2	Data1	16	15	Data30	Data31	16	15	Data54	Data55	16
17	GND	Data16	18	17	Data32	Data33	18	17	Data56	Data57	18
19	Data15	Data14	20	19	Data34	Data35	20	19	Data58	Data59	20
21	Data13	Data12	22	21	Data36	Data37	22	21	Data60	Data61	22
23	Data11	Data10	24	23	Data38	Data39	24	23	Data62	Data63	24
25	Data9	GND	26	25	Data40	GND	26	25	Data64	GND	26

### 3. Dimensions

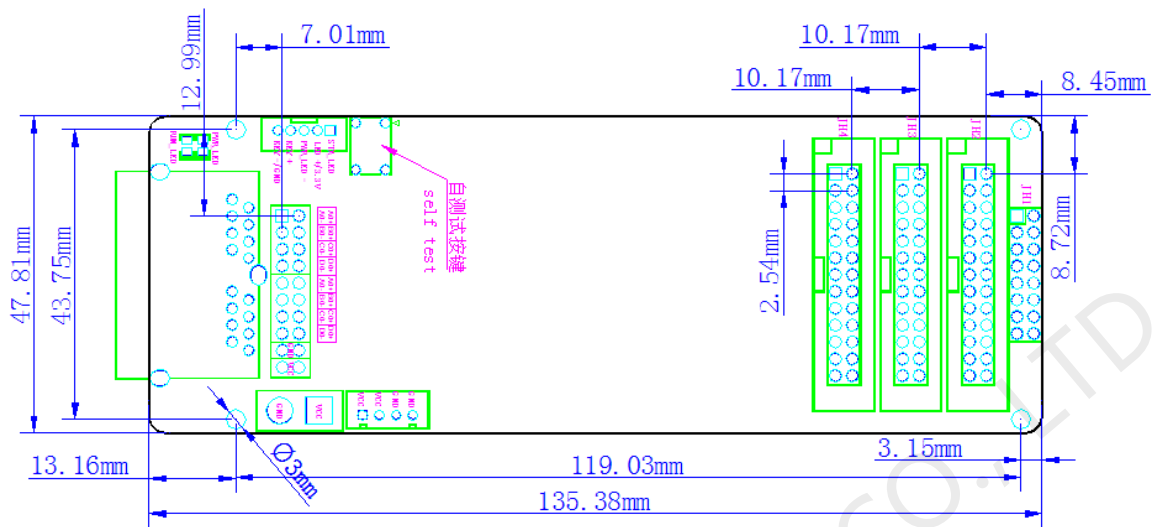


Fig. 1 MRV200 Dimensions

#### J2 definition :

2	4	6	8	10	12	14	16	18	20
A0+	B0+	C0+	D0+	A0+	B0+	C0+	D0+	GND	VCC
1	3	5	7	9	11	13	15	17	19
A0-	B0-	C0-	D0-	A0-	B0-	C0-	D0-	GND	VCC

#### J9 definition :

1	2	3	4	5
STA_LED	LED +/3.3V	PWR_LED -	KEY +	KEY -/GND

## 4. Specific Model List

To meet the needs of different customers, Nova provides more specific models of the products, including standard products in stock, other models need to be customized;

Model	Specification
MRV200 - 1	Standard model, male connector on top
MRV200 - 2	Male connector on bottom
MRV200 - 3	Female connector on top
MRV200 - 4	Female connector on bottom



## 5. Working conditions

Rated voltage (V)	5.0	Maximum	5.5	Minimum	3.3
Limit voltage (V)		Maximum	6	Minimum	3
Rated current (A)	0.5				
Rated power (W)	2.5	Maximum	2.8	Minimum	1.3
Limit temperature (°C)		Maximum	85.0	Minimum	-40.0
Temperature of working environment (°C)		Maximum	75.0	Minimum	-20.0
Humidity of working environment (%)		Maximum	95.0	Minimum	0.0