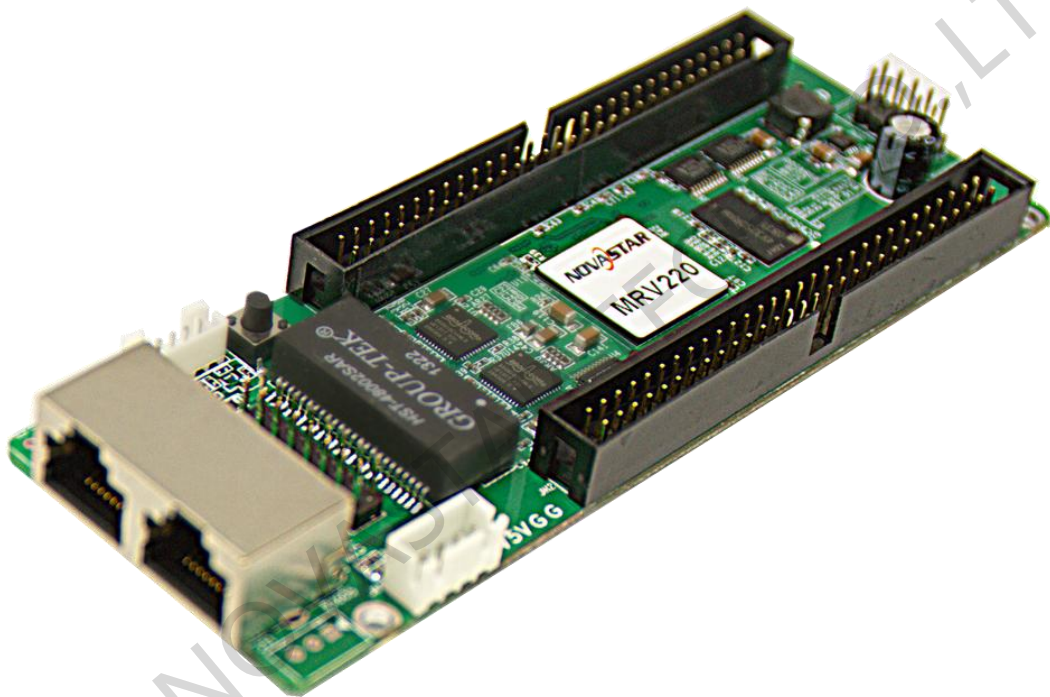


Nova M3 MRV220 Receiving Card

Specifications

V2.0.0 2013-11-6

1 Functions



MRV220 is the receiving card with 28-group data mode of Nova M3, Its characteristics as follows:

- 1) Single card outputs 24-group of RGB data;
- 2) Single card outputs 28-group of RGB data;
- 3) Single card support resolution 256x226;
- 4) Support configuration file read back;
- 5) Support temperature monitoring.

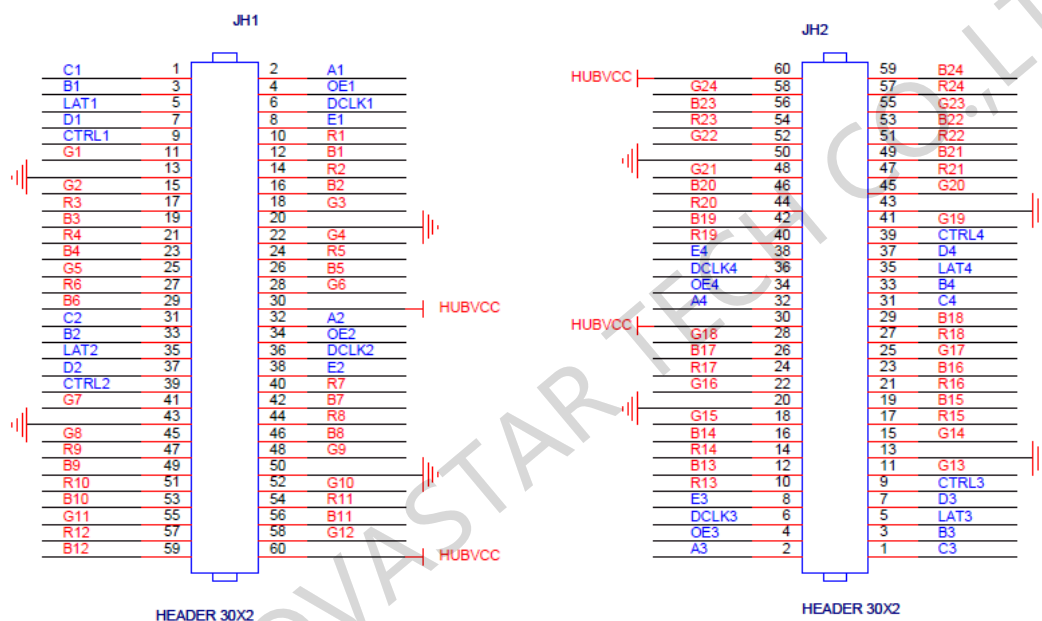
- 6) Support Ethernet cable communication status detection;
- 7) Support power supply voltage detection;
- 8) Support high gray-scale high-refresh the high and low brightness mode refresh.
- 9) Support pixel by pixel brightness and chromaticity calibration.
Brightness and chromaticity calibration coefficients for each LED;
- 10) Each of port has VCC PIN, the module can power supply to the control system;
- 11) Comply with EU CE-EMC standard.
- 12) Comply with RoHS standard.

2 Output interface definition

Under all the two different working modes of it, two 60P interfaces can output different data; interface is defined as follows:

1) 24-group data mode

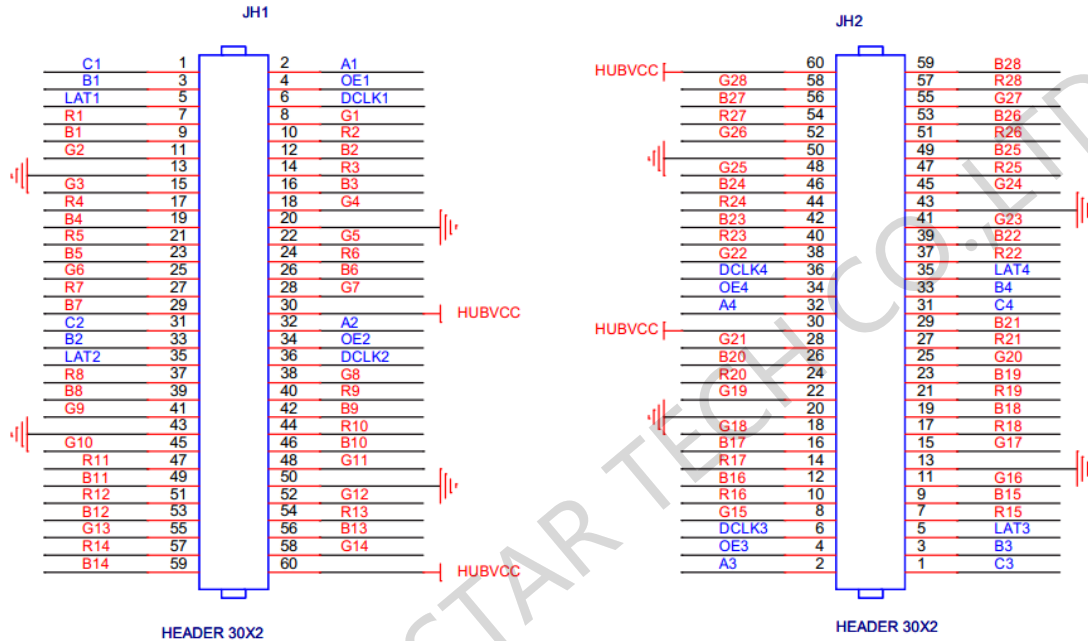
Support 24 sets of parallel data ,defined as follows:



1	C	A	2
3	B	OE	4
5	LAT	CLK	6
7	D	E	8
9	CTRL	R1	10
11	G1	B1	12
13	GND	R2	14
15	G2	B2	16
17	R3	G3	18
19	B3	GND	20
21	R4	G4	22
23	B4	R5	24
25	G5	B5	26
27	R6	G6	28
29	B6	VCC	30

2) 28-group data mode

Support 28 sets of parallel data, Serial data decoding is required for scan mode above 1/8 scan (Serial data decoding circuit in the appendix) , defined as follows:



1	C	A	2
3	B	OE	4
5	LAT	CLK	6
7	R1	G1	8
9	B1	R2	10
11	G2	B2	12
13	GND	R3	14
15	G3	B3	16
17	R4	G4	18
19	B4	GND	20
21	R5	G5	22
23	B5	R6	24
25	G6	B6	26
27	R7	G7	28
29	B7	VCC	30

3 Dimensions

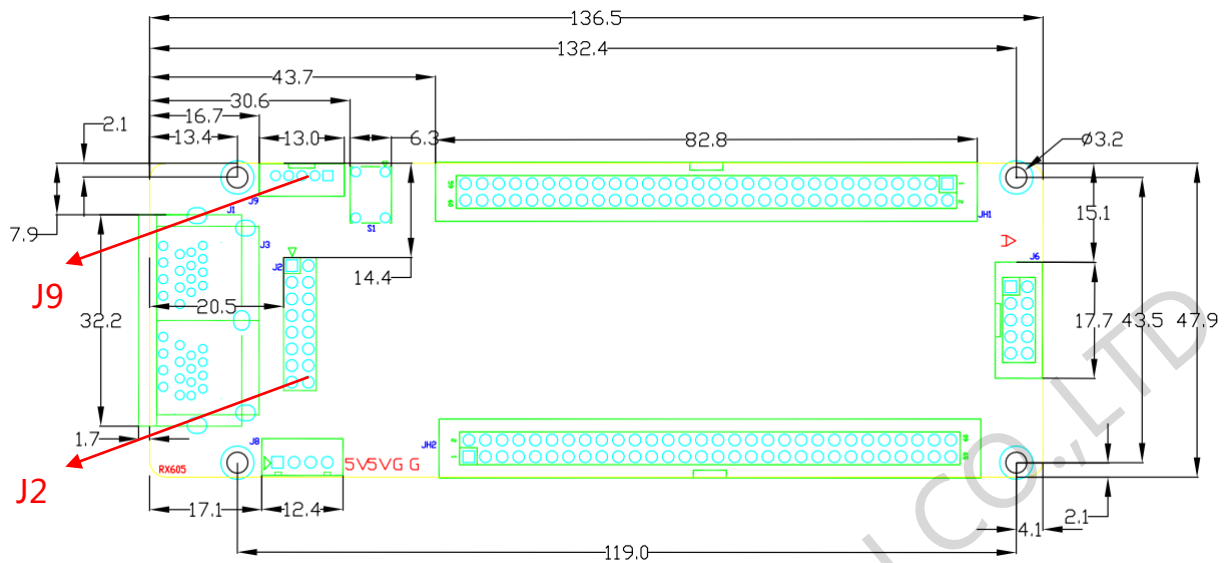


Fig. 1 MRV220 Dimensions

J2 definition (Male connector behind RJ45 port)

2	4	6	8	10	12	14	16
A0+	B0+	C0+	D0+	A0+	B0+	C0+	D0+
1	3	5	7	9	11	13	15
A0-	B0-	C0-	D0-	A0-	B0-	C0-	D0-

J9 definition (Indicator Socket)

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
MRV220 - 1	Standard model, male connector on top
MRV220 - 2	Male connector on bottom
MRV220 - 3	Female connector on top
MRV220 - 4	Female connector on bottom

5 Working conditions

Rated voltage (V)	5.0	Maximum	5.5	Minimum	3.3
Rated current (A)	0.5	Maximum	0.6	Minimum	0.4
Rated power (W)	2.5	Maximum	3	Minimum	2
Temperature of working environment (°C)		Maximum	60.0	Minimum	-20.0
Humidity of working environment (%)		Maximum	90.0	Minimum	10.0

6 Appendix

Serial data decoding circuit :

