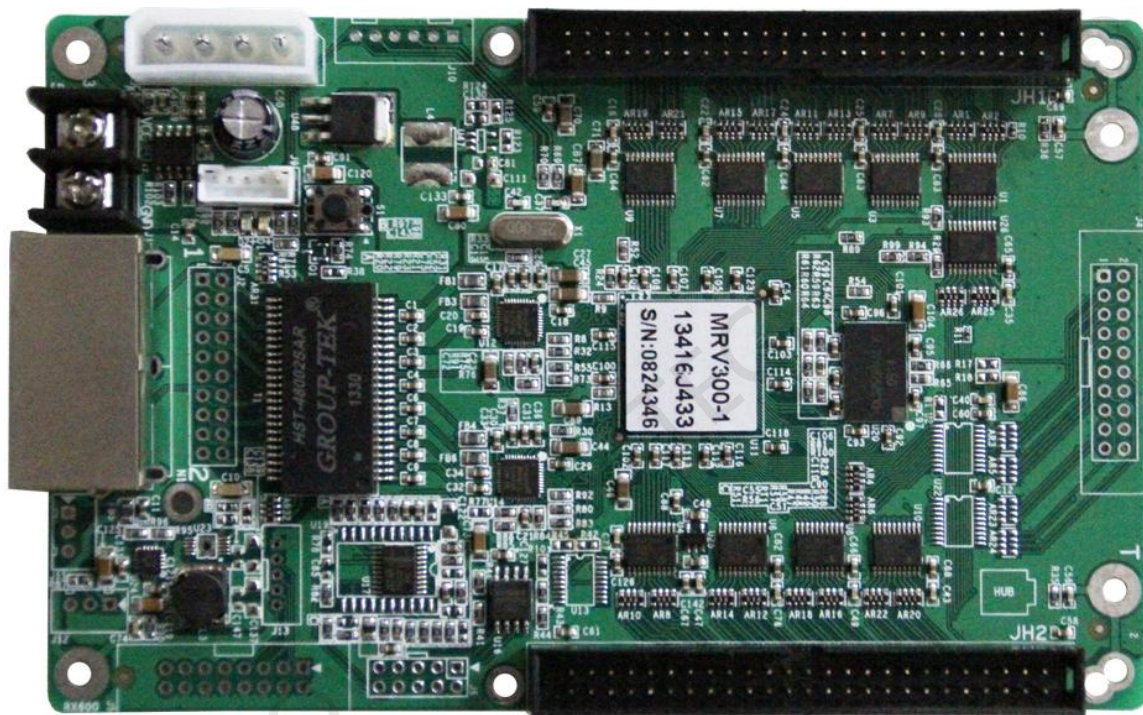


# Nova M3 MRV300 Receiving Card Specifications

V2.0.1 2013-11-14

## 1. Functions



Nova M3 MRV300 is the standard model of Nova receiving card. It has the following characteristics:

- 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;

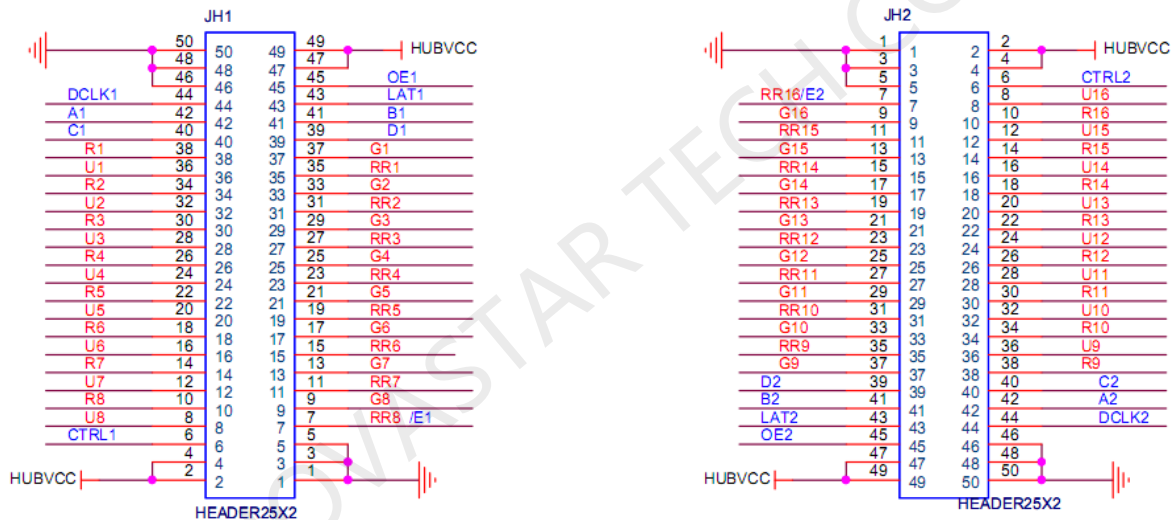
- 6) Support program copy;
- 7) Support temperature monitoring.
- 8) Support Ethernet cable communication status detection;
- 9) Support power supply voltage detection;
- 10) Support pixel by pixel brightness and chromaticity calibration.  
Brightness and chromaticity calibration coefficients for each 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, two 50P 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

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



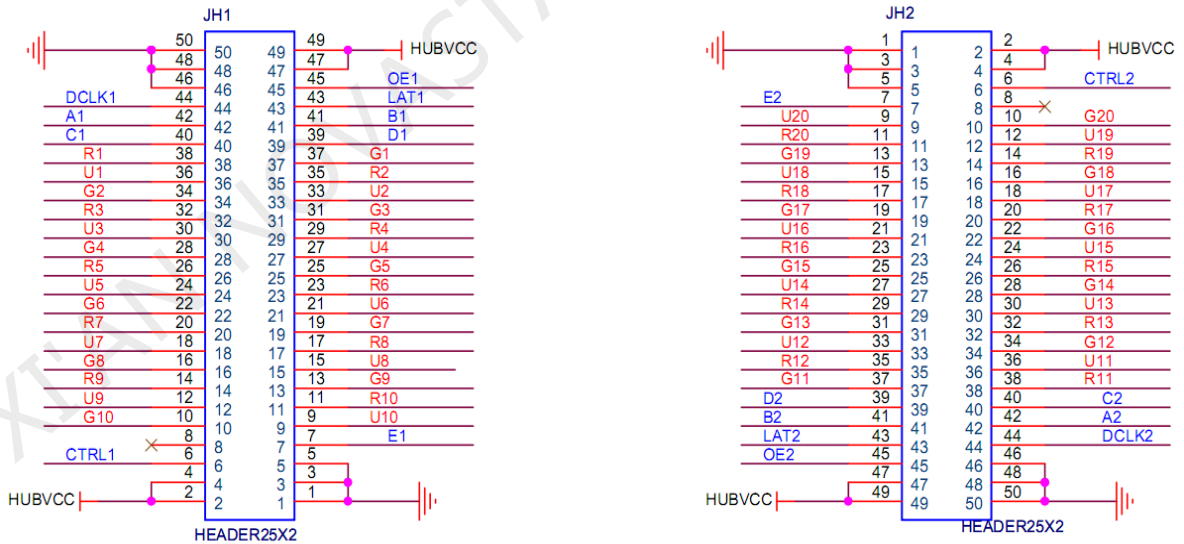
Virtual R signal in the last data group of each 50pin hub is decoding signal E at 1/32 scan mode.

1	GND	VCC	2
3	GND	VCC	4
5	GND	CTRL	6
7	R8R/E	B8	8
9	G8	R8	10
11	R7R	B7	12
13	G7	R7	14
15	R6R	B6	16
17	G6	R6	18

19	R5R	B5	20
21	G5	R5	22
23	R4R	B4	24
25	G4	R4	26
27	R3R	B3	28
29	G3	R3	30
31	R2R	B2	32
33	G2	R2	34
35	R1R	B1	36
37	G1	R1	38
39	D	C	40
41	B	A	42
43	LAT	CLK	44
45	OE	GND	46
47	VCC	GND	48
49	VCC	GND	50

**2) 20-group parallel data mode**

Support 20 sets of parallel data, defined as follows:

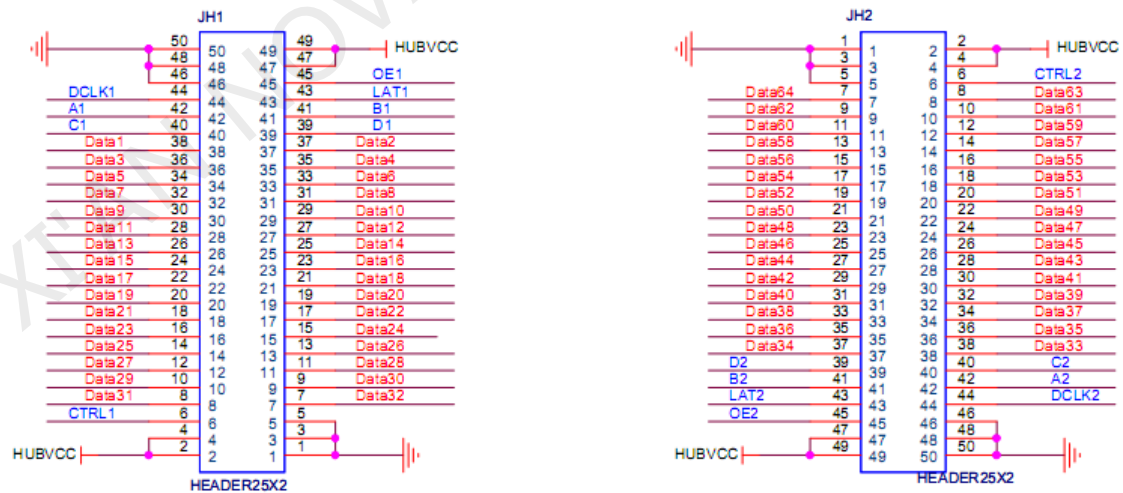


1	GND	VCC	2
3	GND	VCC	4
5	GND	CTRL	6
7	E	NC	8
9	B10	G10	10
11	R10	B9	12

13	G9	R9	14
15	B8	G8	16
17	R8	B7	18
19	G7	R7	20
21	B6	G6	22
23	R6	B5	24
25	G5	R5	26
27	B4	G4	28
29	R4	B3	30
31	G3	R3	32
33	B2	G2	34
35	R2	B1	36
37	G1	R1	38
39	D	C	40
41	B	A	42
43	LAT	CLK	44
45	OE	GND	46
47	VCC	GND	48
49	VCC	GND	50

**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)

1	GND	VCC	2
3	GND	VCC	4
5	GND	CTRL	6
7	Data32	Data31	8
9	Data30	Data29	10
11	Data28	Data27	12
13	Data26	Data25	14
15	Data24	Data23	16
17	Data22	Data21	18
19	Data20	Data19	20
21	Data18	Data17	22
23	Data16	Data15	24
25	Data14	Data13	26
27	Data12	Data11	28
29	Data10	Data9	30
31	Data8	Data7	32
33	Data6	Data5	34
35	Data4	Data3	36
37	Data2	Data1	38
39	D	C	40
41	B	A	42
43	LAT	DCLK	44
45	OE	GND	46
47	VCC	GND	48
49	VCC	GND	50

### 3. Dimensions

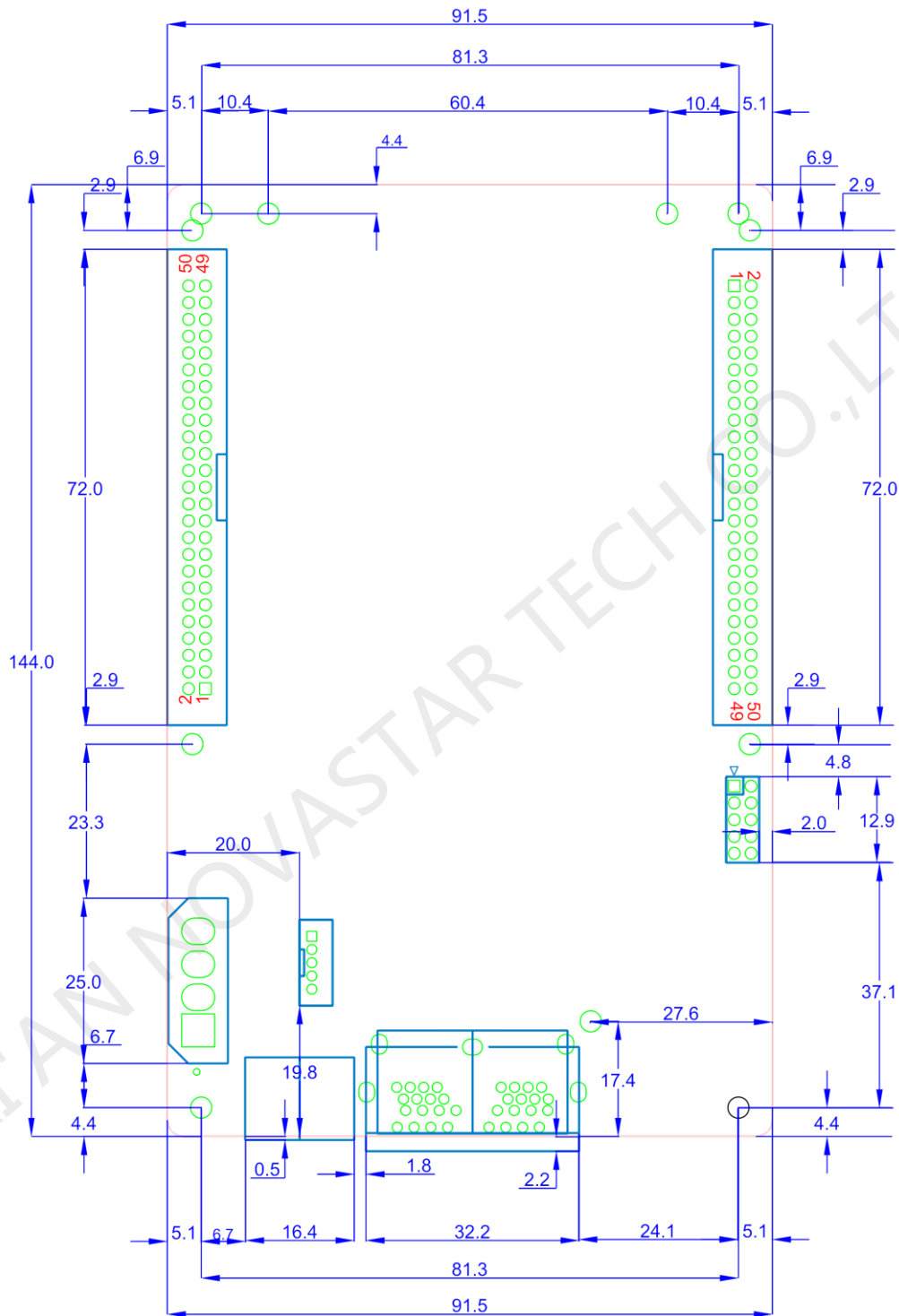


Fig. 1 MRV300 Dimensions

**J2 definition :**

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

**J9 definition :**

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

**J10 definition :**

1	2	3	4	5	6
KEY +	KEY -	PWR_LED+	PWR_LED-	STA_LED+	STA_LED-

**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
MRV300 - 1	Standard model, male connector on top
MRV300 - 2	Male connector on bottom
MRV300 - 3	Female connector on top
MRV300 - 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	0.55A	Minimum	0.45A
Rated power (W)	2.5	Maximum	3	Minimum	2
Limit temperature (°C)		Maximum	100.0	Minimum	-40.0
Temperature of working environment (°C)		Maximum	75.0	Minimum	-20.0
Humidity of working environment (%)		Maximum	95.0	Minimum	0.0