NOVASTAR

Specifications

Receiving Card MRV330

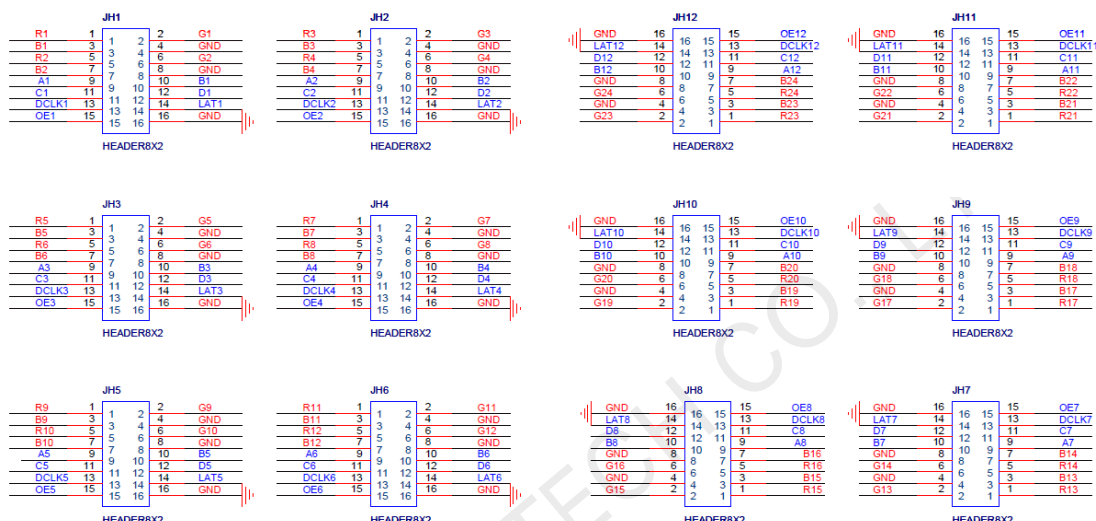Rev2.1.3   NS110100103

Overview

MRV330 is the 24-group data receiving Card of Nova M3 series which is without HUB.

Features

1) Integrated 12 standard HUB75 connectors and without the HUB structure；

2) Single card outputs 24-group of RGB data;

3) Single card supports resolution of 256x226;

4) Configuration file readback;

5) Temperature monitoring;

6) Ethernet cable communication status detection;

7) Power supply voltage detection;

8) High gray scale and high refresh rate;

9) Pixel-by-pixel brightness and chromaticity calibration. Brightness and chromaticity calibration coefficients for each LED;

10) Pre-store picture setting;

11) Monitor card connection;

12) Comply with EU RoHs standard;

13) Comply with EU CE-EMC standard.

Output Interface Definition

This receiving card has 12 16-Pin standards HUB75 outputs, and the definition is as follows:
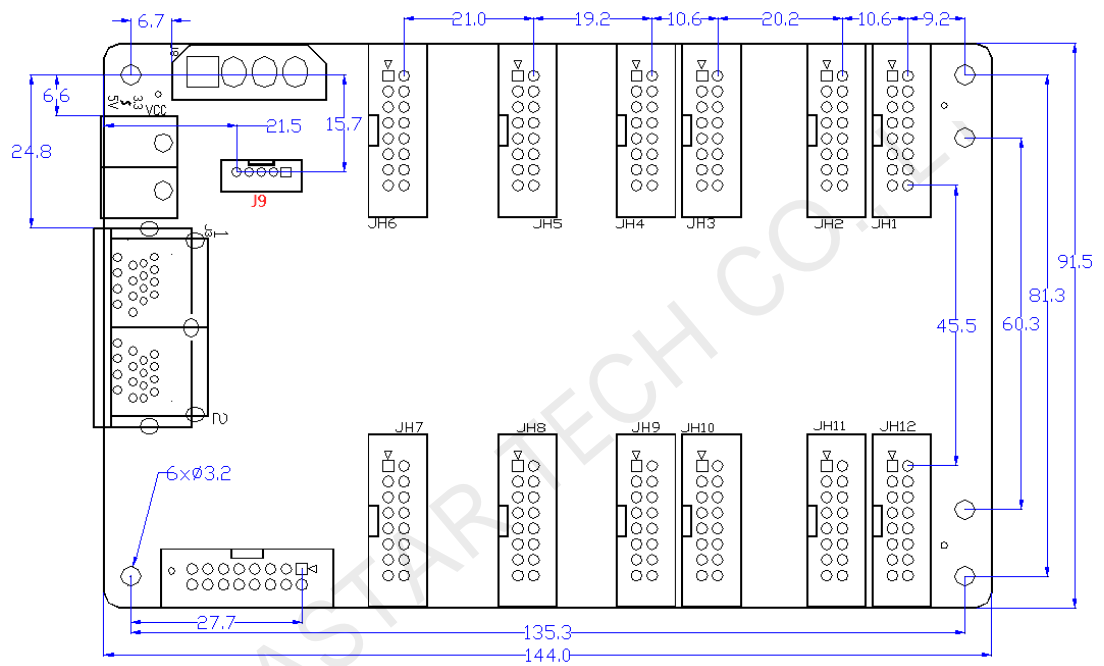
JH1
| R1 | 1 | 2 | G1 |
B1 3 4 GND
R2 5 6 G2
B2 7 8 GND
A1 9 10 B1
C1 11 12 D1
DCLK1 13 14 LAT1
OE1 15 16 GND
HEADER8X2

JH2
R3 1 2 G3
B3 3 4 GND
R4 5 6 G4
B4 7 8 GND
A2 9 10 B2
C2 11 12 D2
DCLK2 13 14 LAT2
OE2 15 16 GND
HEADER8X2

JH12
GND 16 15 OE12
LAT12 14 13 DCLK12
D12 12 11 C12
B12 10 9 A12
GND 8 7 B24
G24 6 5 R24
GND 4 3 B23
G23 2 1 R23
HEADER8X2

JH11
GND 16 15 OE11
LAT11 14 13 DCLK11
D11 12 11 C11
B11 10 9 A11
GND 8 7 B22
G22 6 5 R22
GND 4 3 B21
G21 2 1 R21
HEADER8X2

JH3
R5 1 2 G5
B5 3 4 GND
R6 5 6 G6
B6 7 8 GND
A3 9 10 B3
C3 11 12 D3
DCLK3 13 14 LAT3
OE3 15 16 GND
HEADER8X2

JH4
R7 1 2 G7
B7 3 4 GND
R8 5 6 G8
B8 7 8 GND
A4 9 10 B4
C4 11 12 D4
DCLK4 13 14 LAT4
OE4 15 16 GND
HEADER8X2

JH10
GND 16 15 OE10
LAT10 14 13 DCLK10
D10 12 11 C10
B10 10 9 A10
GND 8 7 B20
G20 6 5 R20
GND 4 3 B19
G19 2 1 R19
HEADER8X2

JH9
GND 16 15 OE9
LAT9 14 13 DCLK9
D9 12 11 C9
B9 10 9 A9
GND 8 7 B18
G18 6 5 R18
GND 4 3 B17
G17 2 1 R17
HEADER8X2

JH5
R9 1 2 G9
B9 3 4 GND
R10 5 6 G10
B10 7 8 GND
A5 9 10 B5
C5 11 12 D5
DCLK5 13 14 LAT5
OE5 15 16 GND
HEADER8X2

JH6
R11 1 2 G11
B11 3 4 GND
R12 5 6 G12
B12 7 8 GND
A6 9 10 B6
C6 11 12 D6
DCLK6 13 14 LAT6
OE6 15 16 GND
HEADER8X2

JH8
GND 16 15 OE8
LAT8 14 13 DCLK8
D8 12 11 C8
B8 10 9 A8
GND 8 7 B16
G16 6 5 R16
GND 4 3 B15
G15 2 1 R15
HEADER8X2

JH7
GND 16 15 OE7
LAT7 14 13 DCLK7
D7 12 11 C7
B7 10 9 A7
GND 8 7 B14
G14 6 5 R14
GND 4 3 B13
G13 2 1 R13
HEADER8X2

JH1				JH2				JH3			
1	R1	G1	2	1	R3	G3	2	1	R5	G5	2
3	B1	GND	4	3	B3	GND	4	3	B5	GND	4
5	R2	G2	6	5	R4	G4	6	5	R6	G6	6
7	B2	GND	8	7	B4	GND	8	7	B6	GND	8
9	A1	B1	10	9	A2	B2	10	9	A3	B3	10
11	C1	D1	12	11	C2	D2	12	11	C3	D3	12
13	CLK1	LAT1	14	13	CLK2	LAT2	14	13	CLK3	LAT3	14
15	OE1	GND	16	15	OE2	GND	16	15	OE3	GND	16
JH4				JH5				JH6			
1	R7	G7	2	1	R9	G9	2	1	R11	G11	2
3	B7	GND	4	3	B9	GND	4	3	B11	GND	4
5	R8	G8	6	5	R10	G10	6	5	R12	G12	6
7	B8	GND	8	7	B10	GND	8	7	B12	GND	8
9	A4	B4	10	9	A5	B5	10	9	A6	B6	10
11	C4	D4	12	11	C5	D5	12	11	C6	D6	12
13	CLK4	LAT4	14	13	CLK5	LAT5	14	13	CLK6	LAT6	14
15	OE4	GND	16	15	OE5	GND	16	15	OE6	GND	16
JH7				JH8				JH9			
1	R13	G13	2	1	R15	G15	2	1	R17	G17	2

3	B13	GND	4	3	B15	GND	4	3	B17	GND	4
5	R14	G14	6	5	R16	G16	6	5	R18	G18	6
7	B14	GND	8	7	B16	GND	8	7	B18	GND	8
9	A7	B7	10	9	A8	B8	10	9	A9	B9	10
11	C7	D7	12	11	C8	D8	12	11	C9	D9	12
13	CLK7	LAT7	14	13	CLK8	LAT8	14	13	CLK9	LAT9	14
15	OE7	GND	16	15	OE8	GND	16	15	OE9	GND	16

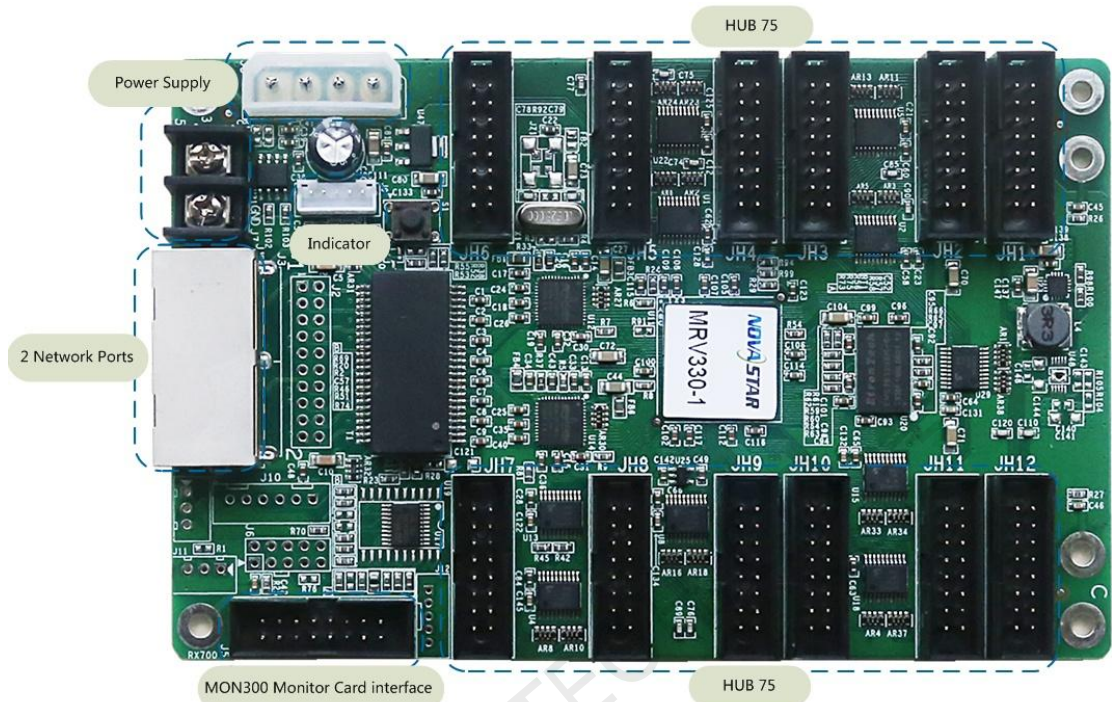| JH10				JH11				JH12			
1	R19	G19	2	1	R21	G21	2	1	R23	G23	2
3	B19	GND	4	3	B21	GND	4	3	B23	GND	4
5	R20	G20	6	5	R22	G22	6	5	R24	G24	6
7	B20	GND	8	7	B22	GND	8	7	B24	GND	8
9	A10	B10	10	9	A11	B11	10	9	A12	B12	10
11	C6	D6	12	11	C11	D11	12	11	C12	D12	12
13	CLK10	LAT10	14	13	CLK11	LAT11	14	13	CLK12	LAT12	14
15	OE10	GND	16	15	OE11	GND	16	15	OE12	GND	16

Dimensions

Thickness of the board is about 1.6mm. The overall thickness (board thickness + thickness of the components on front and back side) is about 18.5mm.

Unit: mm.

Appearance

Note: Pictures used in this manual are **C** version of the board card. The functions of different versions are basically the same. There are only a few small differences in their appearance.

J9 definition（Indicator Light Socket）

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

Specifications

	MIN	TYP	MAX	UNIT
Rated voltage	3.3	5.0	5.5	V
Rated current	0.33	0.50	0.55	A
Temperature of working environment	-20.0~70.0			℃
Humidity of working environment	10.0~90.0			%

Appendix

Serial data decoding circuit :