



# Specifications

Monitoring Card MON300

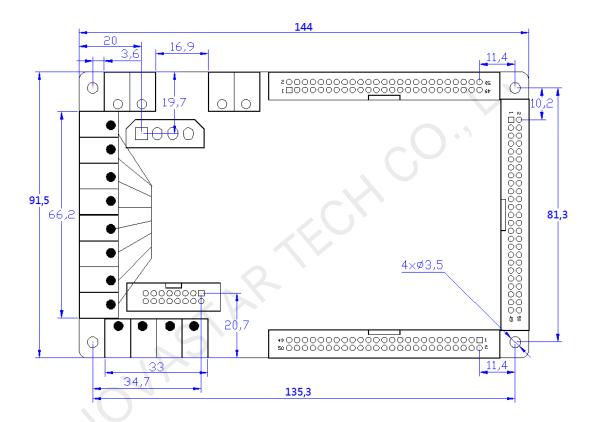
#### **Features**

Nova MON300 is a monitoring card designed specifically for engineering projects and projects with high requirements of safety. It has the following features:

- 1) Used together with receiving card MRV320;
- Supporting open and short circuit detection (drive IC support required);
- 3) Supporting flat cable fault detection;
- Supporting cabinet humidity detection (no need to purchase extra module);
- 5) Supporting cabinet temperature detection (no need to purchase extra module);
- 6) Supporting 8-way power supply voltage detection;
- 7) Support 4-way fan speed detection;
- 8) Cabinet door open/close status detection supported;
- Monitoring card HUB is required for LED status inspection or flat cable detection.

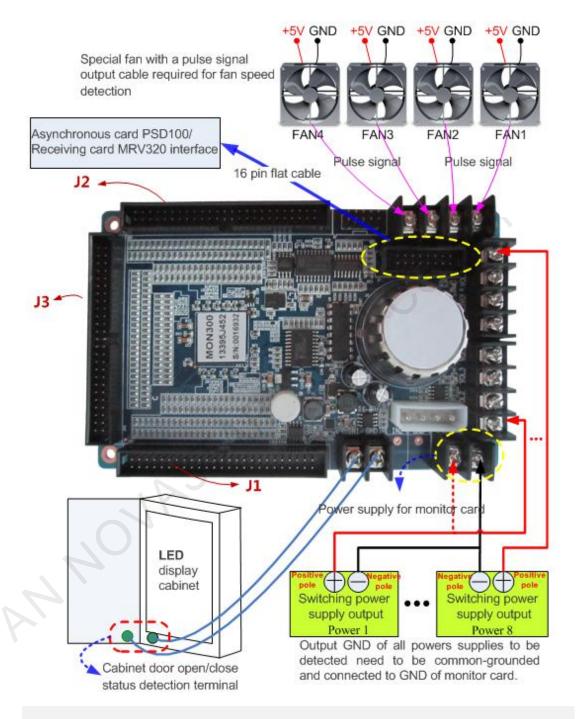
## **Dimensions**

Thickness of the board is about 1.6mm. The overall thickness (board thickness + thickness of the components on front and back side) is about 22.5mm.



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.

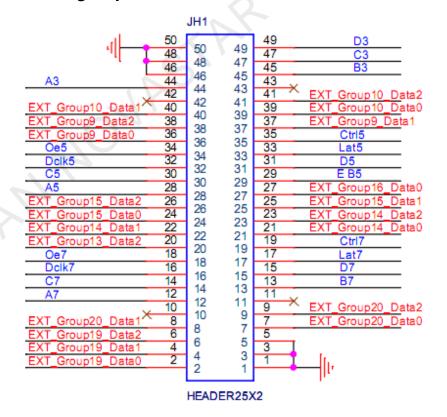
# Interface Definition (Please design HUB according to below definitions)

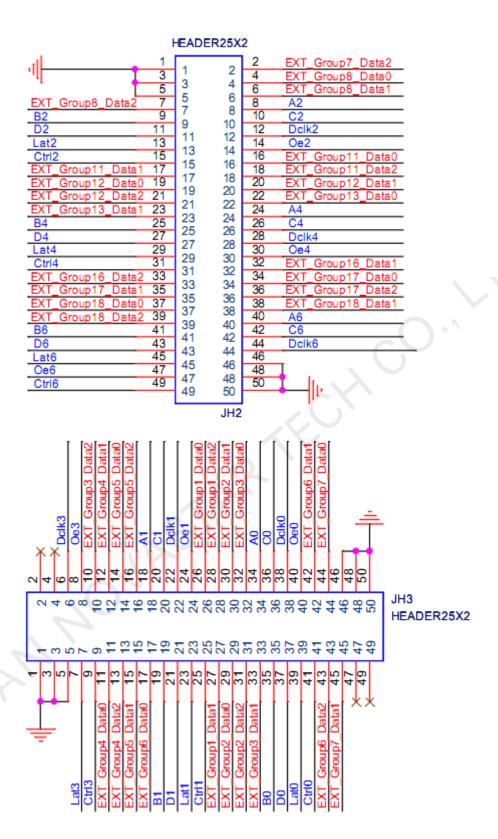
#### 1) **16-group data mode**

| 1   | EXT_Group15_Data/ EXT_Group15_Data/ EXT_Group15_Data/ EXT_Group16_Data/ EXT_Group16_Data/ EXT_A7  EXT_C7  EXT_Delk7  EXT_Oe7  EXT_Group11_Data/ EXT_Group11_Data/ EXT_Group12_Data/ EXT_Group12_Data/ |
|---|---|
| 1   | EXT_Group15_Data EXT_Group15_Data EXT_Group16_Data EXT_Group16_Data EXT_A7 EXT_C7 EXT_C7 EXT_Delk7 EXT_Oe7 EXT_Oe7 EXT_Oe7 EXT_Group11_Data EXT_Group11_Data  |
| S   | EXT_Group15_Data' EXT_Group16_Data' EXT_Group16_Data' EXT_A7 EXT_C7 EXT_Delk7 EXT_Delk7 EXT_Oe7 EXT_Group11_Data' EXT_Group11_Data'   |
| C_Group 15_Data3     7     7     8     8     10      Group 16_Data1     9     9     10     12     12      B7     13     11     12     14     16      D7     15     15     16     16     18      Lat7     17     17     18     18     18      Group 11_Data1     21     19     20     22     12      Group 12_Data1     25     23     24     26     18      Group 12_Data3     27     27     28     28     28      B5     29     29     30     30  | EXT_Group16_Data( EXT_Group16_Data( EXT_A7  EXT_C7  EXT_Delk7  EXT_Oe7  EXT_Oe7  EXT_Group11_Data( EXT_Group11_Data(  |
| Group15   Data5   7   8   8   10  | EXT_Group16_Data<br>EXT_A7<br>EXT_C7<br>EXT_Delk7<br>EXT_Oe7<br>EXT_Group11_Data<br>EXT_Group11_Data  |
| Group16 Data    9   9   10   10   10   10   10   10   | EXT_A7  EXT_C7  EXT_Delk7  EXT_Oe7  EXT_Group11_Data( EXT_Group11_Data(   |
| Group   16   Data   11   12   12   15   16   17   17   18   16   18   17   17   18   18   17   17   18   18   | EXT_C7 EXT_Delk7 EXT_Oe7 EXT_Group11_Data EXT_Group11_Data  |
| Image: Brown of the control of the | EXT_Delk7<br>EXT_Oe7<br>EXT_Group11_Data<br>EXT_Group11_Data  |
|   | EXT_Delk7<br>EXT_Oe7<br>EXT_Group11_Data<br>EXT_Group11_Data  |
| Lat 7   | EXT_Oe7<br>EXT_Group11_Data<br>EXT_Group11_Data   |
| T_Ctrl7   | EXT_Group11_Data<br>EXT_Group11_Data  |
| Group 11 Datal 21 21 22 22 24 24 25 26 27 28 28 27 28 30 30 30  | EXT_Group11_Data  |
| Group11 Data  21   21   22   24   1   |   |
| Croup11 Datas 23 24 24 1  | FXIT (Ground 12) Data(  |
| Group12_Data1   |   |
| T_Group 12_Data 3 27 28 28 17 28 29 30 30 17  | EXT_Group12_Data  |
| T_B5 29 20 30 B   | EXT_A5  |
|   | EXT_C5  |
| D5 31 25 30 32 F  | EXT_Delk5   |
|   |   |
|   | EXT_Oe5   |
| _Ctrl5 35 35 36 36 1  | EXT_Group7_Data0  |
| _Group/_Data1 3/ 27 20 38 1   | EXT_Group7_Data2  |
| * Gebrus / Data3   39     40  | EXT_Group8_Data0  |
| Groups Data1 41 39 40 42 1  | EXT_Group8_Data2  |
| Grove 8 Data 3 43 41 42 44 1  | EXT_A3  |
| B3 45 43 44 46  | CAT_AD  |
| - 15 16   |   |
| C_C3 47 47 48 48 48   |   |
| T_D3 49 49 50 50 I  | 11.   |
| +9 30   |   |
|   | EXT_Group6_Data0  |
|   | EXT Group6 Data0  |
| 1 2 2 4   | EXT_Group6_Data1  |
| 5 3 4 6   | EXT_Group6_Data2  |
| Grouph Data3 7 3 6 8  | EXT_A2  |
| <u> </u>  | EXT_C2  |
|   |   |
|   | EXT_Delk2   |
| Lat2   13   12 14   14   1  | EXT_Oe2   |
| Ctr12 15 15 16 16 1   | EXT_Group9_Data0  |
| George Data   | EXT_Group9_Data2  |
| Grava Data 3 10 1/ 18 20 1  | EXT_Group 10_Data   |
| Group 10 Data 1 21 19 20 22 1   | EXT_Group10_Data  |
| <del> </del>  | EXT_A4  |
|   |   |
| _B4 25 26 26 1  | EXT_C4  |
| _D4 4/ 27 28 28 I   | EXT_Delk4   |
| 1 3 4 4     30  | EXT_Oe4   |
| C+14 31 29 30 30 1  | EXT_Group13_Data  |
| Group 13 Data 1 33 31 34 34   | EXT_Group13_Data  |
|   | EXT_Group14_Data  |
|   |   |
| _Group14_Data1 3/ 27 20 38 1  | EXT_Group14_Data  |
| _Group14_Data8 39 20 40 1   | EXT_A6  |
| 86   40   40  | EXT_C6  |
| D6 43 41 42 44 1  | EXT_Delk6   |
| Tat6 45 43 44 46  |   |
|   |   |
|   | <del>-                                      </del>  |
| _Ctrl6 49 49 50 50  |   |
| Lat6 45 45 46 46 48 50 60 60 60 60 60 60 60 60 60 60 60 60 60   |   |

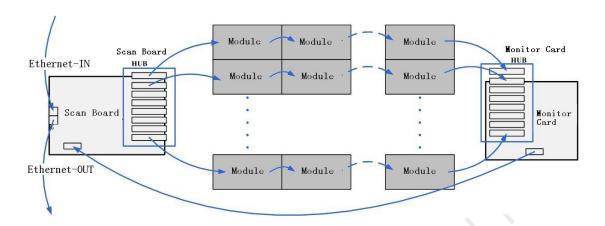
|                  |    | md      |                |    |                  |
|------------------|----|---------|----------------|----|------------------|
|                  |    | JP3     |                |    |                  |
|                  | 1  | 1       | 2              | 2  |                  |
|                  | 3  | - 3     | 4              | 4  |                  |
|                  | 5  | - 5     | 6              | 6  | EXT_Delk3        |
| EXT_Lat3         | 7  | 7       | 8              | 8  | EXT_Oe3          |
| EXT_Ctrl3        | 9  | و _     | 10             | 10 | EXT_Group3_Data0 |
| EXT_Group3_Data1 | 11 | 11      | 12             | 12 | EXT_Group3_Data2 |
| EXT_Group3_Data3 | 13 | 13      | 14             | 14 | EXT_Group4_Data0 |
| EXT_Group4_Data1 | 15 | 15      | 16             | 16 | EXT_Group4_Data2 |
| EXT_Group4_Data3 | 17 | 17      | 18             | 18 | EXT_A1           |
| EXT_B1           | 19 | 19      | 20             | 20 | EXT_C1           |
| EXT_D1           | 21 | 21      | 22             | 22 | EXT_Delk1        |
| EXT_Lat1         | 23 |         |                | 24 | EXT_Oel          |
| EXT_Ctrll        | 25 | 23      | 24             | 26 | EXT_Group1_Data0 |
| EXT_Groupl_Datal | 27 | 25      | 26             | 28 | EXT_Group1_Data2 |
| EXT Group1 Data3 | 29 | 27      | 28             | 30 | EXT_Group2_Data0 |
| EXT_Group2_Data1 | 31 | 29      | 30             | 32 | EXT_Group2_Data2 |
| EXT_Group2_Data3 | 33 | 31      | 32             | 34 | EXT_A0           |
| EXT B0           | 35 | 33      | 34             | 36 | EXT CO           |
| EXT_D0           | 37 | 35      | 36             | 38 | EXT Delk0        |
| EXT Lat0         | 39 | 37      | 38             | 40 | EXT Oe0          |
| EXT Ctrl0        | 41 | 39      | 40             | 42 | EXT_Group5_Data0 |
| EXT Group5 Data1 | 43 | 41      | 42             | 44 | EXT_Group5_Data2 |
| EXT_Group5_Data3 | 45 | 43      | 44             | 46 |                  |
|                  | 47 | 45      | 46             | 48 |                  |
|                  | 49 | 47      | 48             | 50 |                  |
|                  |    | 49      | 50             | 1  |                  |
|                  |    | 50PIN(± | <del>‡</del> ) |    |                  |
|                  |    |         | 7/             |    |                  |

#### 2) 20-group data mode

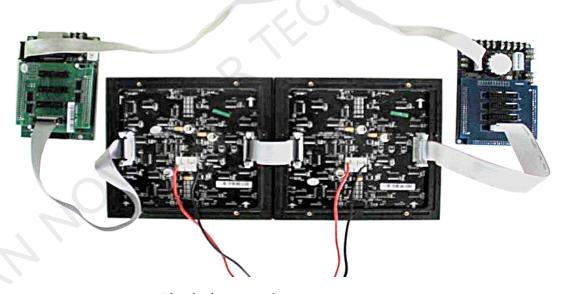




# **Connection**



### Connection diagram



Physical connection

# **Specifications**

|   | MIN                     |                | TYP  |  | MAX                                  |      |  |  |  |
|---|-------------------------|----------------|------|--|--------------------------------------|------|--|--|--|
| Rated voltage (V)                               | 4.5                     |                | 5.0  |  | 5.5                                  |      |  |  |  |
| Rated current (A)                               | 0.12                    |                | 0.1  | 0.15   |                                      | 0.20 |  |  |  |
| Working environment temperature (°C)            | -20°C~60°C              |                |      |  |                                      |      |  |  |  |
| Working environment humidity (%)                | 0%~95%                  |                |      |  |                                      |      |  |  |  |
| Working<br>environment range of<br>smoke sensor | Environment temperature | I -20°C∼60°C I |      |  | otice: When working mperature of the |      |  |  |  |
|   | Environment<br>humidity | 0%4            | ~60% | system card is higher<br>than 60°C and the<br>relative humidity is |                                      |      |  |  |  |
| Performance testing parameters                  |                         |                |      |  |                                      |      |  |  |  |
| Humidity (%)                                    | MIN                     |                | 1    | N  | MAX                                  | 99   |  |  |  |
| Smoke   | FW HW<0.7Mev            |                |      |  |                                      |      |  |  |  |
| Voltage   | MIN                     | 0              | N    | ЛАX  | 12                                   |      |  |  |  |

**Note**: Please DO NOT paint the surface of monitoring card with three-proofing lacquer, otherwise humidity monitoring function of the card may be disabled.

