



PRODUCT SPECIFICATION

Nine Elements Sensor

HD-Y1

V1.1

Version History:

Version	Release Date	Update Notes
V1.1	2026-8-21	1. Remove the incorrect power control connection schematic and optimize the layout; 2. Update the cascading mode.
V1.0	2020-07-17	First Official Release

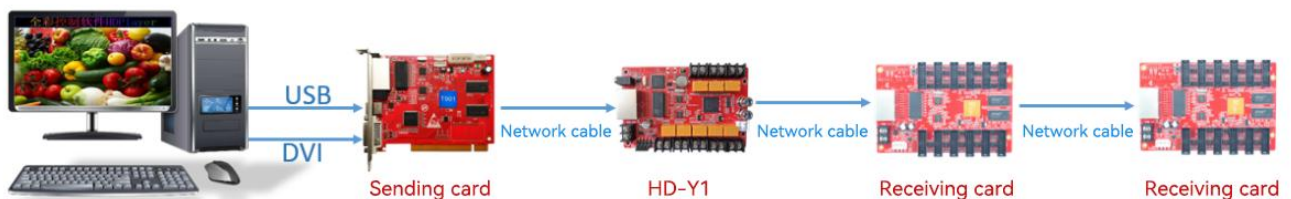
1. Features

Y1 is a multifunctional card with a variety of auxiliary features. Its specific features are as follows:

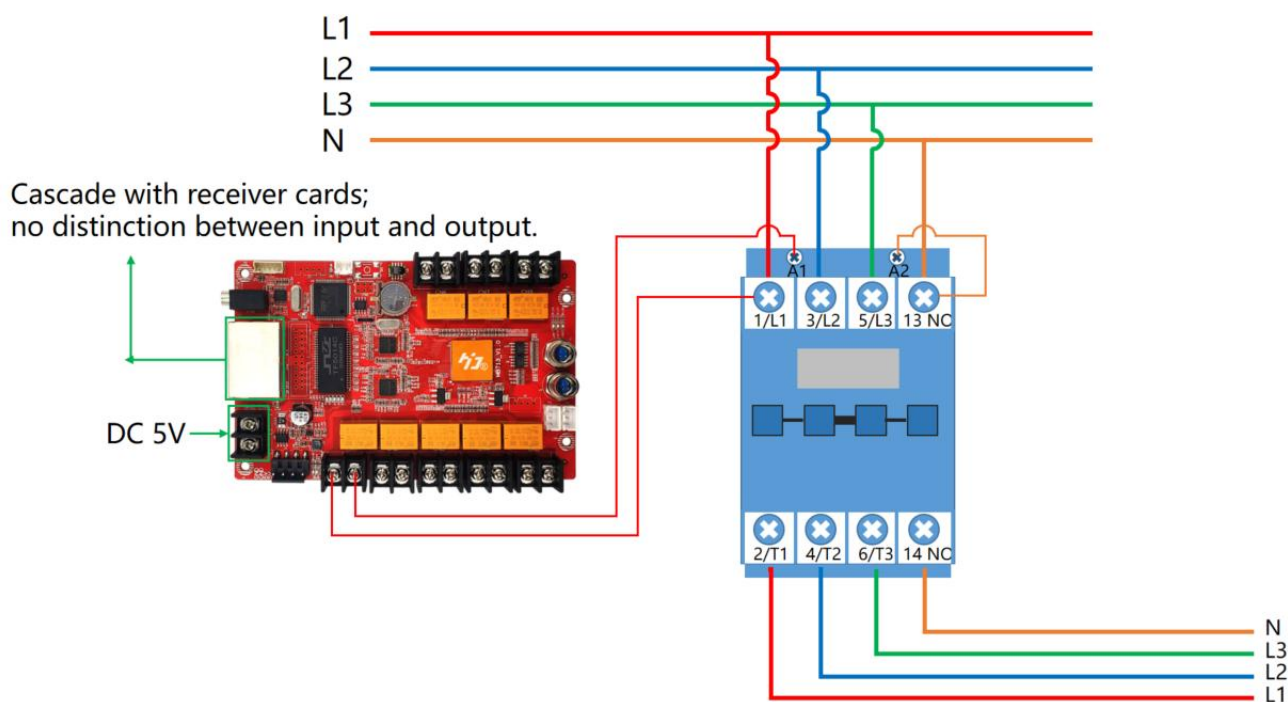
- Communicates via a Gigabit Ethernet port;
- Supports communication with the synchronous transmission card via a Gigabit Ethernet port and can be cascaded before, between, or after the receiving card;
- 1 audio output channel;
- On-board temperature and humidity module, supporting monitoring of temperature and humidity inside the enclosure;
- Supports external temperature/humidity or single-temperature modules;
- Supports 8-channel relay switching to control power supplies;
- Supports timed control of relay switching, serving as a replacement for a timer.

2. Equipment Size

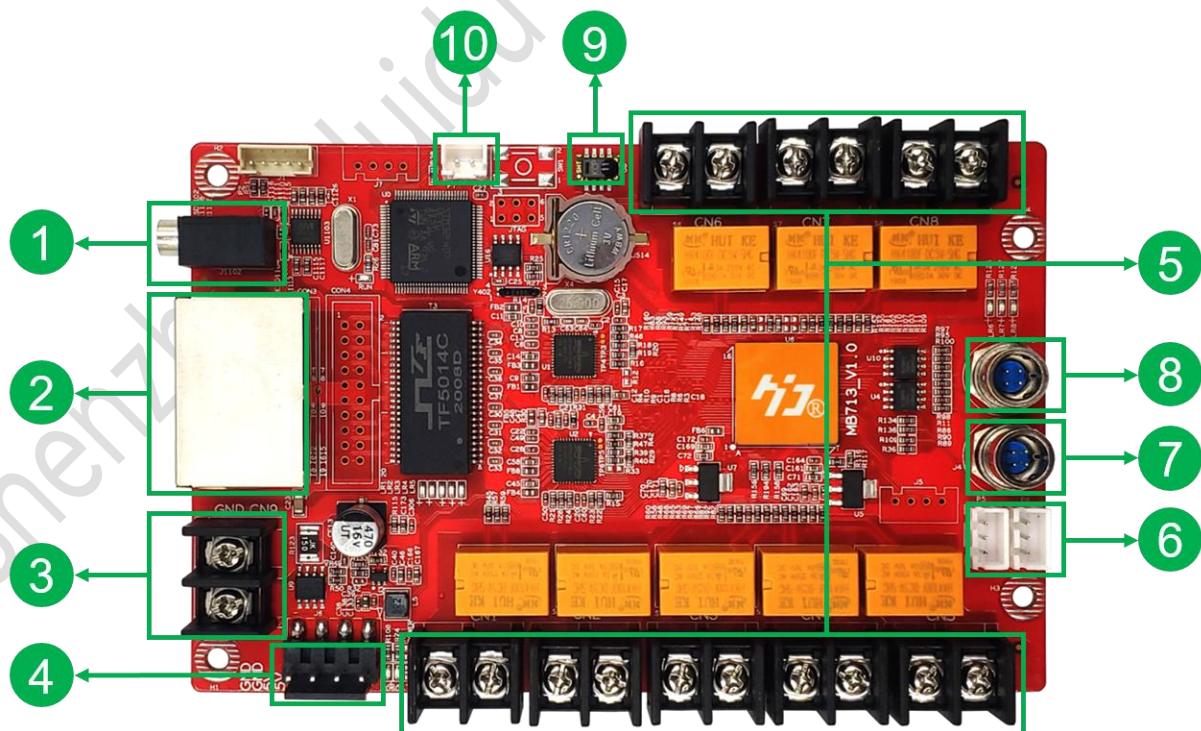
1) Connect between the first receiver card and the transmitter card, as shown in the figure below:



3. AC Control Connection Methods



4. Interface Description



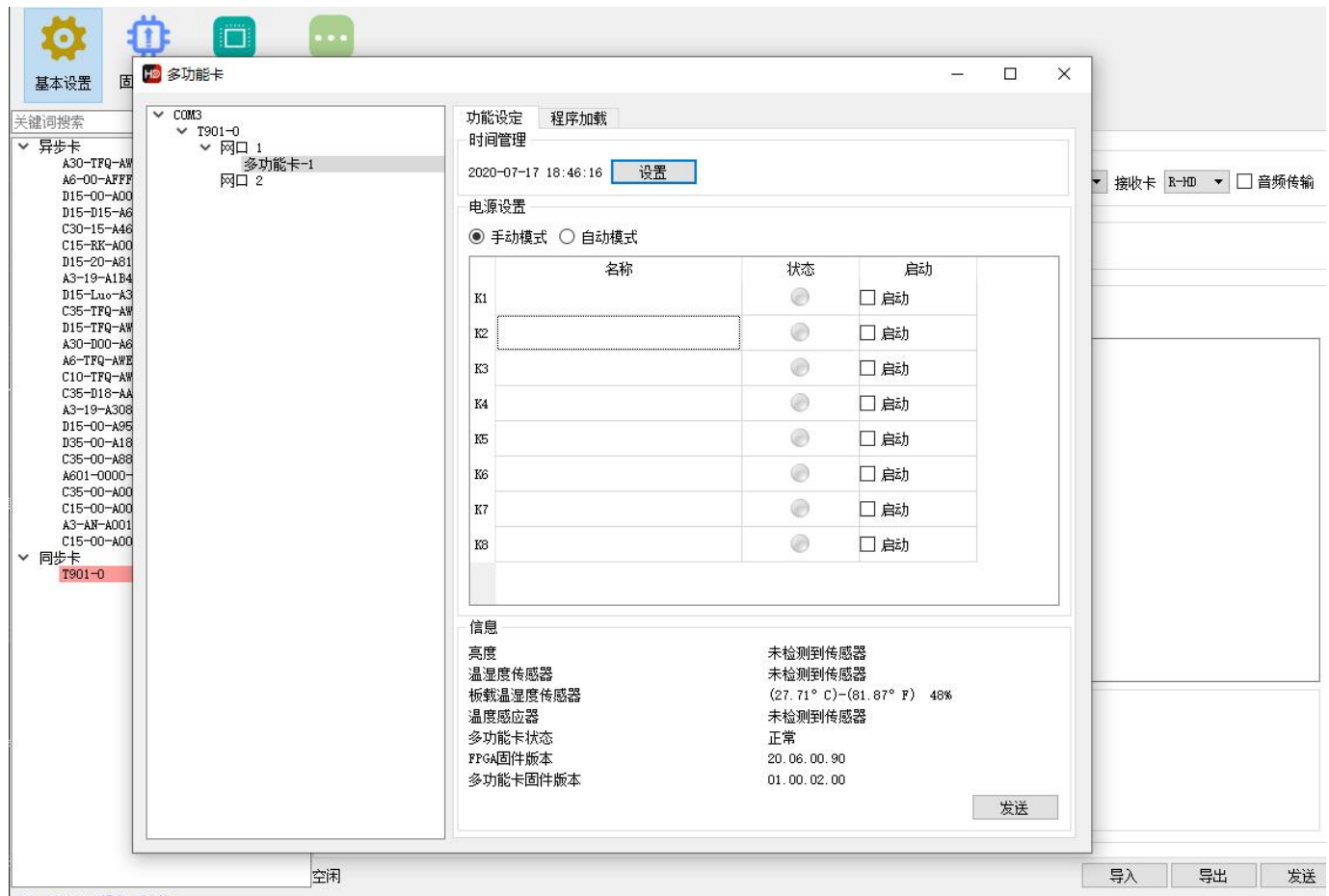
① Audio output port;

② Gigabit Ethernet port, used for cascading with transmitter and receiver cards; both ports are identical and interchangeable.

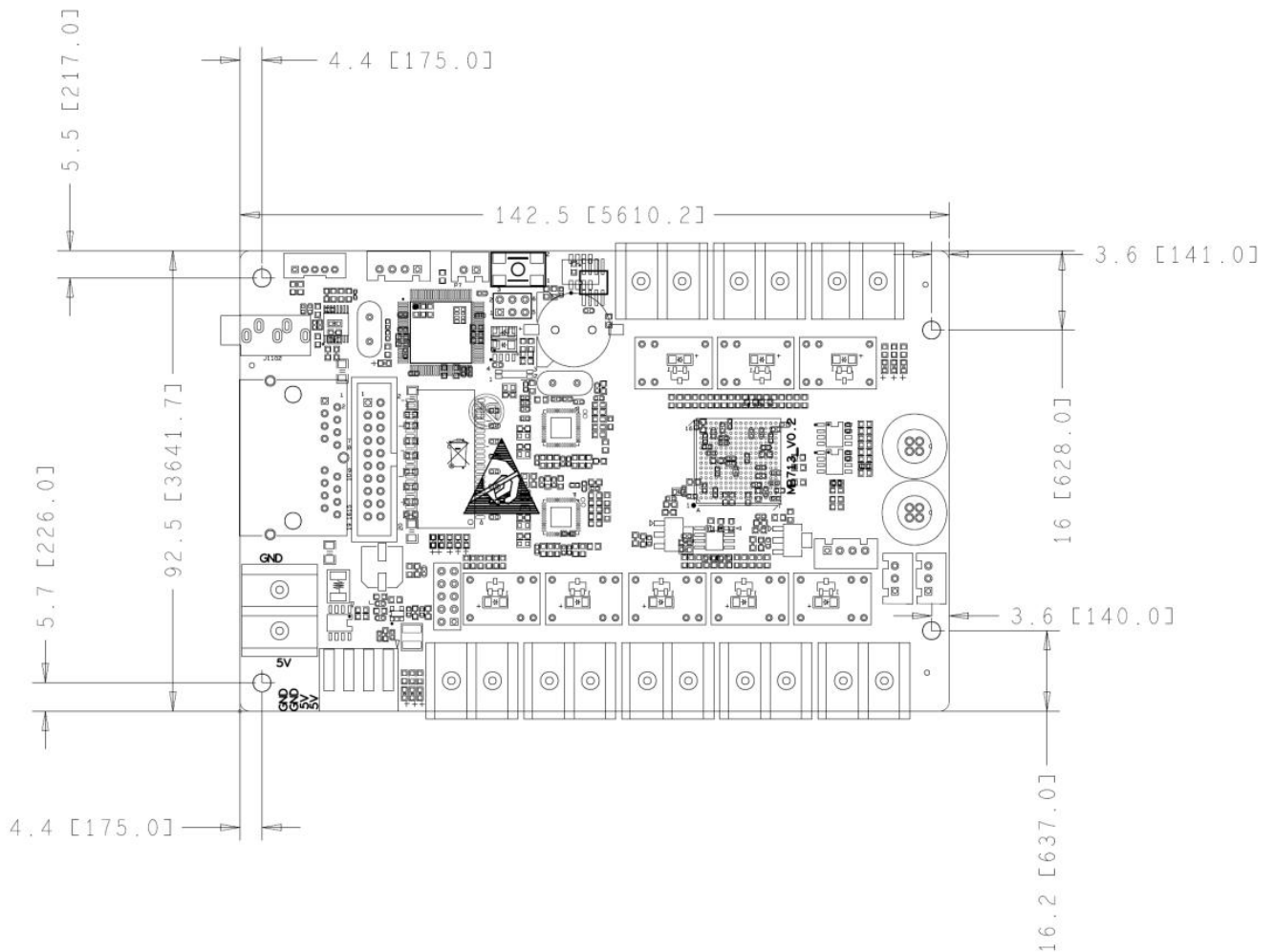
- ③ 5V DC power connector;
- ④ 5V DC power supply connector;
- ⑤ Contact make/break terminal (primary relay), controls the contactor relay (secondary relay);
- ⑥ P5, single-temperature (18B20) interface; P6, temperature/humidity (AM2301) interface;
- ⑦ Brightness sensor interface;
- ⑧ Reserved port, currently without function;
- ⑨ On-board temperature/humidity module;
- ⑩ Reserved port, currently without function.

5. Software Settings

Open the HDSet software, click “Functions” → “Multifunction Card” to configure the relevant settings.



6. Dimensional Diagram



7. Basic Specifications

Parameter Item	Parameter Value
Operating Voltage (V)	DC 4.2–5.5 V
Operating Temperature (°C)	–40°C–80°C
Operating Humidity (RH)	0%–95%
Storage Humidity (RH)	–40°C to 105°C
Power Management Control Voltage	≤250 V (AC)
Power Management Control Current	≤3 A (AC)
Certifications	RoHS

Notes:

1. To ensure long-term, stable system operation, please use the correct supply voltage;
2. Danger: Live electrical components. Do not operate unless you are a qualified professional.

Description:

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