KYSTAR®

R12 Specification

LED Receiving Card Series

Version: v1.1

Release Date: April 2025

Revision History

Version Number	Brief description of the revised content	Revision Date	Revisionist
V1.1	Update function description and layout	2025/04/15	Zhang Yongjie
V1.0	Initial release	2024/08/18	Zhang Yongjie

Product Overview

The Kystar R12 receiving card is used in LED displays as a display data receiver, converting the received data into signals recognizable by the driver chip and splicing them into images for display on a large screen. It supports functions such as point-by-point brightness and color correction, fast seam trimming, module batch calibration, 3D display, independent RGB gamma adjustment, and arbitrary angle rotation, enhancing display quality and user experience.

The R12 uses 12 standard HUB75E interfaces for communication, supporting up to 24 parallel data sets. The maximum load supported by a single card is: PWM: 512x512; conventional & video core: 512x320.

Product Certification

RoHS certification

Note: If the product does not have relevant certification in the country or region it is sold to, please contact Kystar immediately for confirmation or processing. Otherwise, if any legal risks are caused, the customer shall bear them by himself or Kystar has the right to seek compensation.

Features

Display effect

- Supports 8-bit video input.
- Supports point-by-point brightness and color correction function.

  Combined with Kystar's point-by-point correction technology, the brightness and color of each light point are corrected to solve the color difference problem and improve the consistency of the entire screen.
- Support module batch calibration function.

  Adjust brightness and color for a single box or module to improve display differences caused by batch problems
- Supports quick seam repair.

  Adjust the bright and dark lines at the module/cabinet joint to improve the brightness consistency of the display. Parameter adjustment takes effect in real time and is easy to operate.
- Supports 3D display effects (load reduced by half).

  Cooperate with 3D emitter and 3D glasses to achieve 3D display effect
- Supports independent adjustment of RGB.

  Independent adjustment of RGB gamma can effectively control low gray uniformity, inaccurate white balance and other issues, thereby improving display effects.

After-sales maintenance

- Supports Mapping function.

  The device number and other information can be displayed on the box to understand the wiring method

- Supports photo-taking and screen-connected function.

  You can complete the production of the display connection diagram by taking photos of the display and uploading them

- Supports pre-stored screen settings.

  Customize the display screen when power is on, network cable is disconnected, or there is no video source signal

- Supports real-time detection of network communication status.

  Assist in eliminating abnormalities in the communication link by detecting the number of error packets in data transmission at the receiving card network port

- Supports one-click reading back of configuration file information.

  Read back the configuration parameters of the receiving card and save them locally

- Supports arbitrary point extraction, making it easy to set various conventional and special-shaped screens.

  You can follow the software prompts to set any special-shaped light panels at random, and easily realize the configuration and debugging of various conventional special-shaped screens, which is convenient and fast.

- Supports display screen rotation at any angle.

  Rotate the displayed image at any angle

- Support engineering lock.

  Support timed lock function for the display screen

Product stability

- Support loop backup function.

  The receiving card and the sending card are connected to form a loop through the main and backup network cables. When a fault occurs somewhere in the link, it will not affect the screen display, thus improving the reliability of the project.

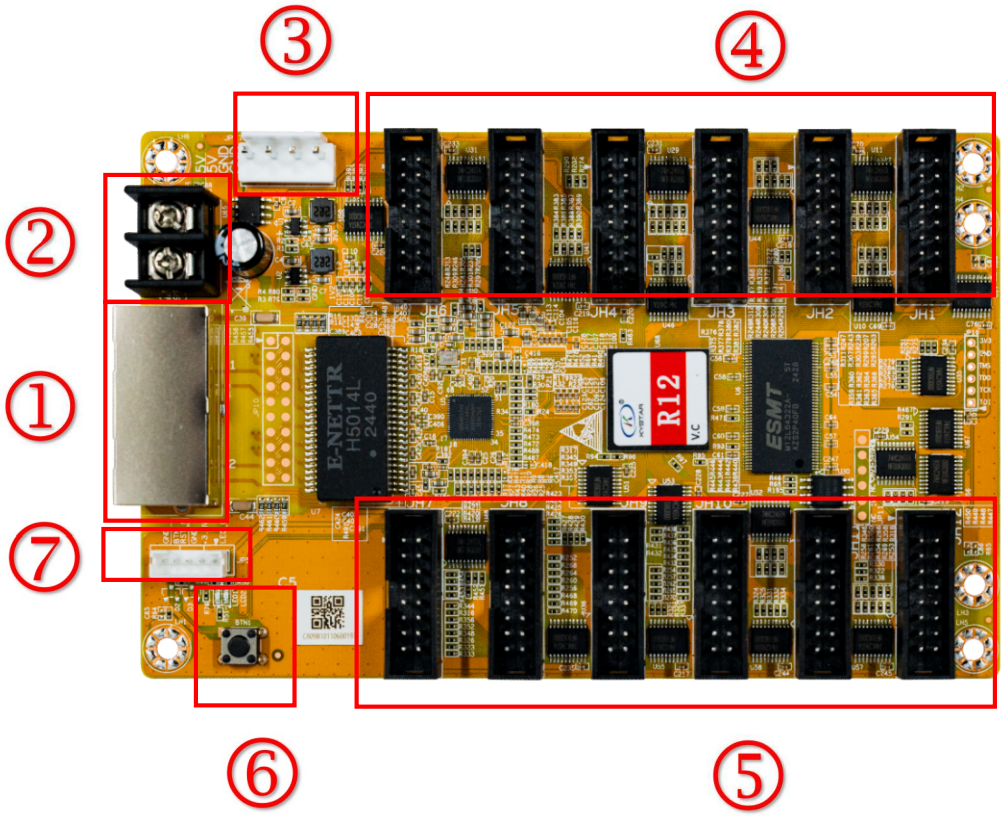
- Supports upgrade protection.

  The factory built-in protection program prevents the receiving card program from being lost and locked after the upgrade fails.

- No power outage is required for upgrades.

  After the firmware upgrade, the program can be updated without powering off.

Parameter

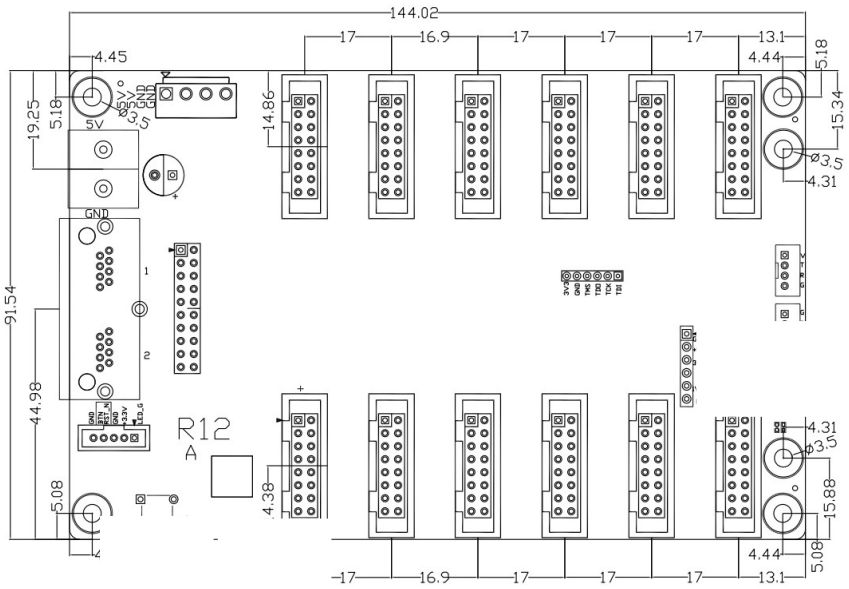


*The product images in this article are for reference only. Please refer to the actual product purchased.

Sn.	Functional Description
①	Two Gigabit network ports, no distinction between input and output
②	The terminal block provides 5V voltage, 5V and GND
③	4P straight plug connector, providing 5V voltage, 5V and GND
④	16P cable ports JP1 to JP6 (from right to left)
⑤	16P cable port JP7 to JP12 (from left to right)
⑥	LED signal status indicator, test button
⑦	JP5 extended indicator light and test button

Indicator status description	
LED1	The power indicator light is red. If it is always on, it means the power supply is normal. If it is off, it means there is no power.
LED2	The device operation indicator light is green, flashing when there is a signal input, and off or always on when there is no signal.

Size



Unit: mm , tolerance ±0.3mm

Specification

Specification	
Rated voltage	DC 3.8V-5.5V
Rated current	0.6A
Rated power	3.0W
Operating temperature	-10℃- 70℃
Operating humidity	0% - 95%, non-condensing
Storage temperature	-40℃- 85℃
Storage humidity	0% - 95%, non-condensing
Single card specifications	144x91.5x9.3x19mm
Packaging specifications	Single card blister packaging, 50 cards per box
Full box weight	5.6Kg
Carton size	535x200x170mm

Port Definition

The 12 16P (JH1-JH12) output ports are defined as follows: JH1-JH12								
Pins	1	3	5	7	9	11	13	15
Definition	R1	B1	R2	B2	A	C	CLK	OE
Pins	2	4	6	8	10	12	14	16
Definition	G1	GND	G2	E	B	D	LAT	GND

JP5 Definition					
Pins	1	2	3	4	5
Definition	LED_G	+3.3V	GND	BTN/RST_A	GND

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Beijing KystarTechnology Co., Ltd.

A professional provider of comprehensive solutions and
operation services for ultra-high-definition video display and control.

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