KR7516 Specification

LED Receiving Card Series

Version: v1.0

Release Date: April 2025

Revision History

Version Number	Summary of the revisions	Revision Date	Revised by
V 1.1	Update function description and layout	2025/04/27	Zhang Yongjie
V 1.0	Initial release	2025/01/13	Zhang Yongjie

Product Overview

Kystar KR7516 receiving card is used in LED display as a receiving device for display data, which is used to convert the received data into a signal that can be recognized by the driver chip, and splice it into an image for display on the large screen. It supports color space, 22bit+, point-by-point color correction, fast seam repair, module batch correction, 3D display, RGB independent gamma adjustment, arbitrary angle rotation, spherical mapping and other functions to improve display effects and user experience.

KR7516 uses 16 standard HUB75E interfaces for communication design. Supports up to 32 sets of parallel data. Maximum load supported by a single card: PWM: 512x512; conventional: 512x320.

Product Certification

RoHS Certification

Note: If the product has no relevant certification in any country or region, please contact Kystar immediately for confirmation or processing.

Otherwise, if any legal risks are caused, the customer shall bear them by himself or Kystar shall have the right to seek compensation.

Features

Display Effect

- Support 8-bit video input.

- Supports image quality wizard.

  - Chromaticity space: Adjust the display standard color gamut or custom color gamut to meet customer color needs

  - Fine grayscale : calibrate the grayscale step by step to optimize grayscale jumps , color casts, speckles and other issues

  - 18/22bit: Improves grayscale display effect, showing more details and more delicate display

- Support point-by-point brightness and chromaticity correction function.

  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 correction function.

  Adjust brightness and color for a single box or module to improve display differences caused by batch problems

- Supports fast seam repair.

  Adjust the light and dark lines at the module/box 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 transmitter and 3D glasses to realize 3D display effect.

● Support RGB independent adjustment.

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 picture 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, easy to set various special-shaped screens.

You can follow the software prompts to set any special-shaped light panels , and easily configure and debug various special-shaped screens.

It is convenient and fast. In conjunction with the KBS series, it can realize the mapping processing of spherical screens.

- Supports display screen rotation at any angle.

Rotate the displayed image at any angle

- Support engineering lock.

Support timed lock function for 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 standby 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.

Built-in protection program at the factory to prevent the receiving card program from being lost and locked after the upgrade fails

- No power outage is required for upgrading.

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

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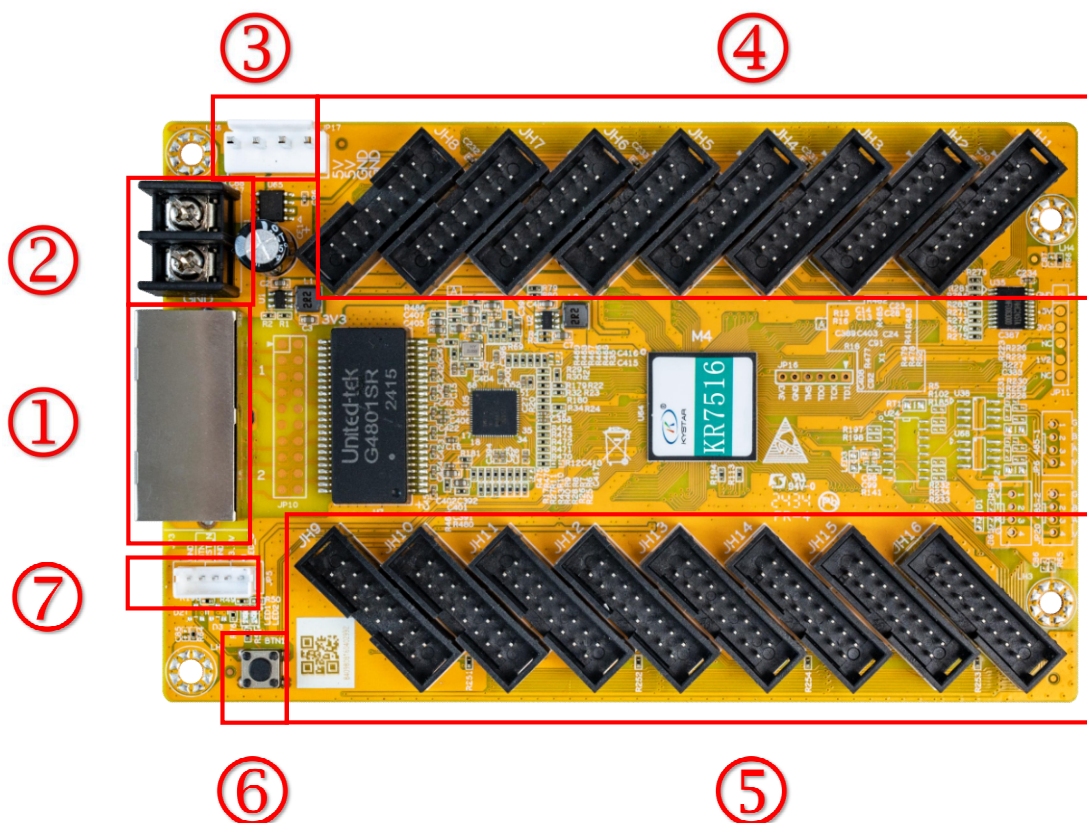
*The product images in this article are for reference only. Please refer to the actual product purchased.

Serial Number	Functional Description
①	Two Gigabit Ethernet 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 port JP1 to JP8 (from right to left)
⑤	16P cable port JP9 to JP16 (from left to right)

⑥	LED signal status indicator, test button
⑦	JP5 extended indicator light and test button

Indicator Light 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
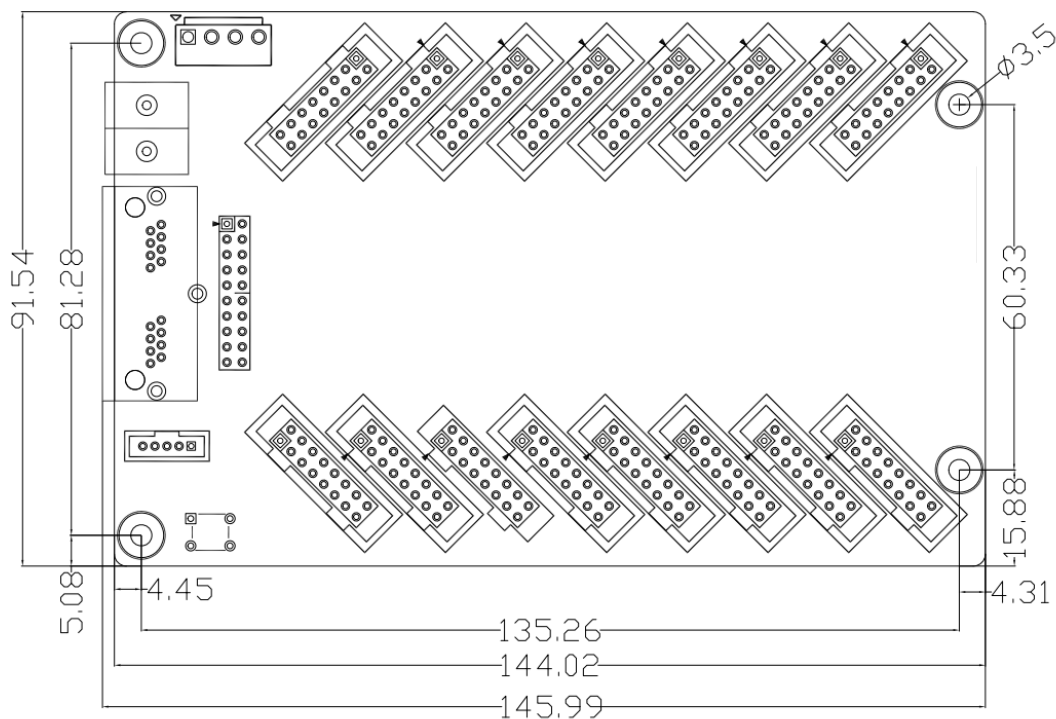
Unit: mm , tolerance ± 0.3mm

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	146x91.5x9.3x19mm
Packaging Specifications	Single card blister packaging, 50 cards per box
Full box weight	6.05Kg
Carton size	535x200x170mm

Port Definition

The sixteen 16P (JH1-JH16) output ports are defined as follows:								
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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