



# 「LR-M8」 LED Receiving Card

Datasheet

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## Foreword

Thank you very much for purchasing our product. Please read this specification sheet carefully before operation.

All pictures in this specification are for reference only, the actual product may vary.

This specification may not correspond exactly to the product or its accessories you purchased. Our company reserves the right to modify any information in this specification at any time, and will regularly update this specification in accordance with product upgrade. Updated content will be added to the new version of this specification without prior notice, please understand.

### Icon conventions

	illustrate	Necessary tips, supplements and explanations to help you understand the content described in the specification more clearly.
	Notice	Matters that must be paid attention to and followed during operation will remind you to use the equipment in a more convenient and efficient way.
	Warning	There may be potentially dangerous situations and you are warned to use the equipment safely.

## Introduction

The LR series M8 LED receiving card is a display driving device for LED screens. The load capacity of a single card is 512 x512 pixels, with 120pin high-density connector, supports up to 32 channels of RGB parallel data or 64 channels of serial data, it is more reliable and easier to install.

The receiving card can adapt to different types and sizes of LED screens. Its excellent image processing capabilities can achieve perfect display on LED screens.

## Features

### Display Performance Enhancement

- Double layer correction: The receiving card can store and process two sets of correction parameters for different brightness levels. It can automatically switch the appropriate correction parameters according to the display content of the screen.
- Thermal compensation: By using a high-precision calibration system to collect thermal distribution data of the LED cabinet, and generating exclusive thermal compensation data for each pixel through self-developed algorithms, it can solve the display abnormalities caused by uneven thermal distribution.
- Brightness-chroma calibration: Supports integrated Brightness -chroma calibration, enabling ultra-high precision point-by-point adjustment to eliminate chromatic aberration and ensure full-screen uniformity.
- NBIT22: Enhance the grayscale display of the LED screen by 64 times compared to the original effect, enrich low gray image details, smooth grayscale transitions, and finer display effects.
- Grayscale calibration: Applying our unique PWM grayscale adjustment algorithm, from low gray to high gray, each level of gray can be presented delicately and transition smoothly.
- Edge brightness adjustment: When LED cabinets and modules are combined, uneven brightness will occur along with edges. Through simple settings and adjustments, the brightness/darkness difference between edge can be eliminated and the screen brightness can be kept consistent.
- Independent Gamma adjustment: Supports independent Gamma adjustment of R, G, and B on the LED screen, allowing for more precise color temperature adjustment and wider color gamut display.
- Color management: Unified color gamut conversion of video signals of different formats and standards, so that the LED screen can perfectly display the true colors of various video sources.
- HDR: Paired with a sending card that supports HDR function, it realistically restores the brightness range of the image, making the picture more realistic.
- 3D function: Working with sending controller that supports 3D function will achieve 3D effect.

### Intuitive operation

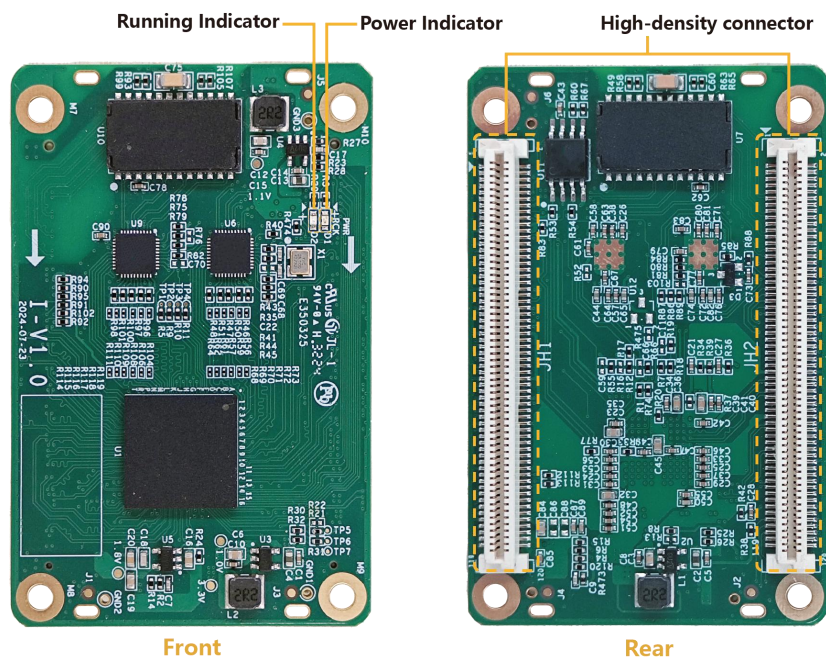
- Image Rotation: Supports rotating the image by multiples of 90°
- Pre-saved screen: Default screen will be displayed on power-on and power-off to avoid black screen due to malfunction.

- Intelligent connection: With this feature, the receiving cards can get rid of the fixed installation sequence and can be arranged arbitrarily. The connection diagram will be clearly displayed in the system. Implementation and maintenance can be conducted much easier.
- Queuing function: Display the sending card number, sending card network port number, receiving card number, and receiving card network port number on the cabinet to obtain all screen layout information.
- Intelligent module: In conjunction with the intelligent module, it can achieve correction coefficient and module parameter storage, module operation status monitoring, lamp board ID management, and LED defect detection.

### **Long-term stable operation**

- LVDS transmission: Adopting LVDS (Low Voltage Differential Signaling) transmission mode, it can reduce the number of data lines used from the Hub to the light board, extend the transmission distance, and improve the signal transmission quality.
- Device Monitoring: Supports monitoring of the receiving card's temperature, voltage, and communication status, as well as abnormal alerts, enabling intelligent device operation and maintenance.
- Automatic calibration: When replacing the LED video wall module, the receiving card can automatically apply the calibration coefficient without reconfiguration, which is simple and fast.
- Correction coefficient backup: The correction coefficients are stored in both the factory area and the application area of the receiving card, and the correction coefficients from the application area are used by default. If necessary, the correction coefficients from the factory area can be restored to the application area.
- Loopout backup: The receiving card supports hot back up through network cable loop out.
- Firmware backup: Supports firmware program backup to ensure upgrade security and prevent issues caused by receiving card upgrade exceptions.
- Program readback: Read back the firmware program and configuration parameters of the receiving card and save them locally to avoid repeated operations.

## Appearance

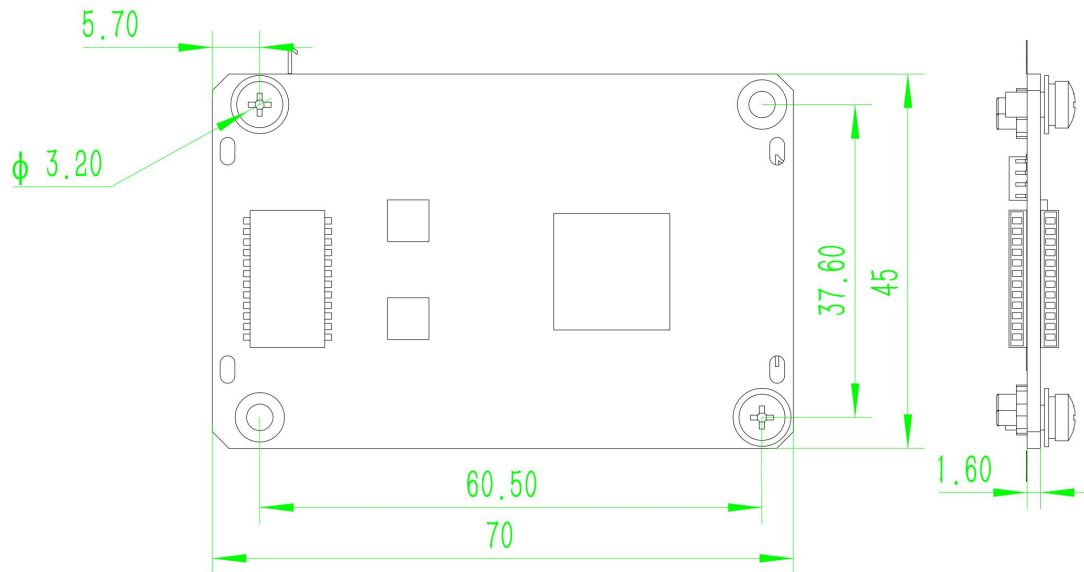


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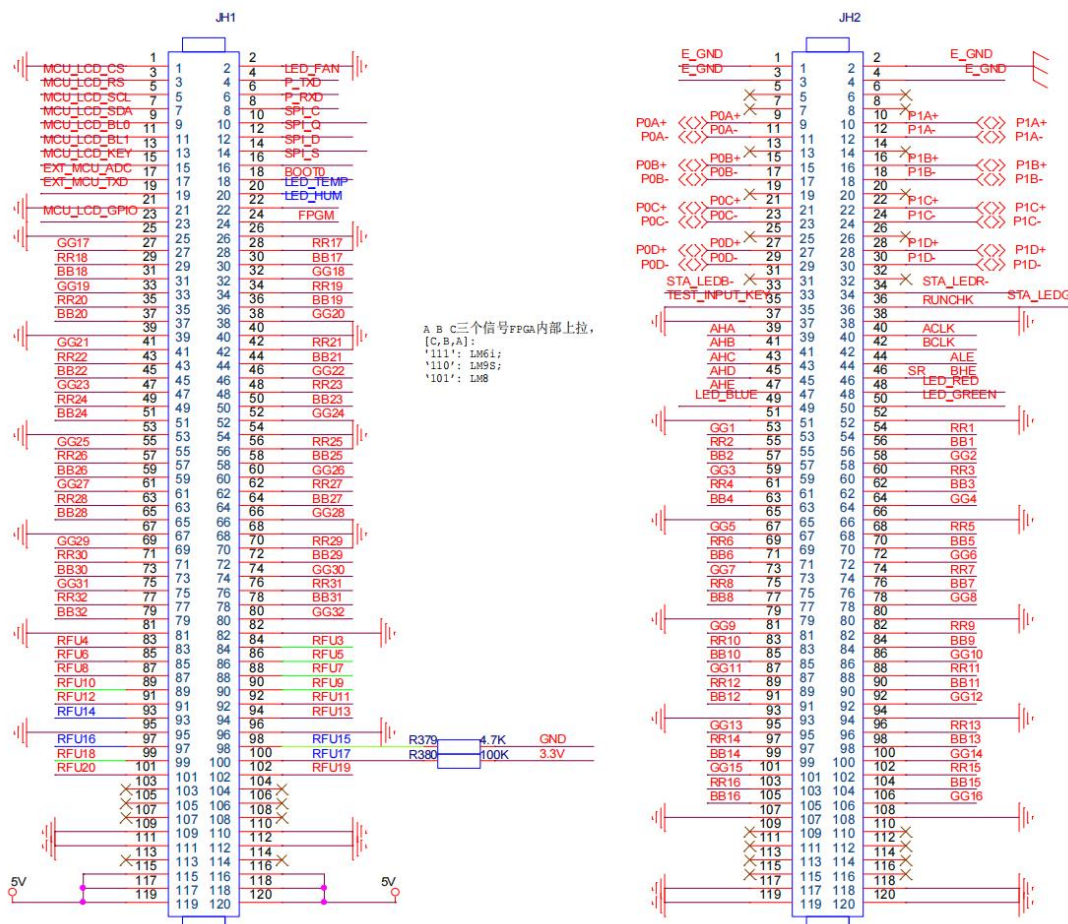
## Indicator

Indicator	Color	Status	Description
Power	Red	Steady on	Power input is normal
Running	Green	Steady on	no signal
		Flash once every 1.5s	The network cable connection is working well, port A input
		Flashes 2 times in 1.5s	The network cable connection is working well, port B input
		Flashes 3 times in 1.5 s	The network cable connection is working well, and ports A and B are in hot backup status.
		Continuous flash	Backup program working

## Product Size



## Data Interface Diagram



## Input & Output DC Characters

Signal Name	VIL (V)		VIH (V)		VOL (V)	VOH (V)
	Min	Max	Min	Max	Max	Min
RGB 1-32	/	/	/	/	0.4	2.9
SPI-CLK/CS/SDO	-0.2	0.6	2.5	3.4	/	/

## Specifications

Specification	Description	
Maximum load	512 x 512 pixels	
Electrical	Input voltage	DC 3.8V ~ 5.5V
	Rated current	0.5A
	Rated power consumption	2.5W
Physical	Dimension	70mm x 45mm (Length x Width)
	Net weight	16g (single card weight)
Packaging	Board packaging method	6 card slot pallet packaging
	Board packaging size	196mm x 176mm x 10mm
	Outer packaging method	Pallet packaging boards, up to 20 pallets per box, 120 cards in total
	Packing box size	620mm x 580mm x 140mm