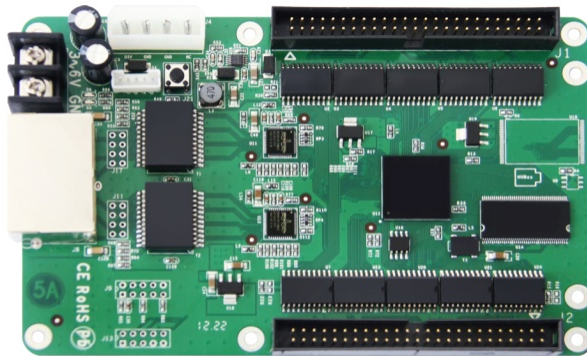


5A Receiving Card

Overview

5A receiving card, as the core product of the 5A series, is the most important product of conventional synchronous control system. It is versatile, and widely used in a variety of display projects.



Features

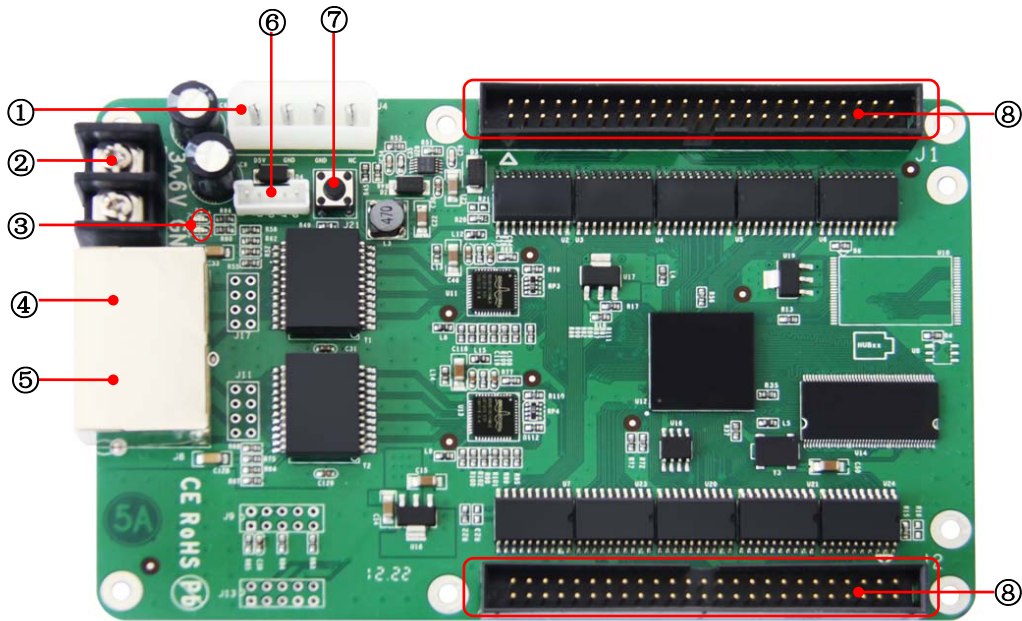
- Superior display quality: high refresh rate, high color depth, and high brightness with the conventional chips.
- Supports all types of display module of the mainstream products (5A means any row, any column, any scan, any chips, and any shape).
- The use of more advanced algorithms, so that the receiving card to maximize the use of resources in order to improve display quality.
- Supports for high-precision pixel-by-pixel calibration in the Brightness and the chromaticity.
- Support for large area display.
- Professional design and strict testing to ensure high quality and reliable.
- Supports all conventional sending card of ColorLight, such as T7 sending card, Q7 HD transmitter, Gigabit NIC, DMB, etc.

Specifications

System Parameters	
Sending device	T7 Sending Card , Gigabit NIC, Q7 HD Sender, DMB, etc.
Control area of single card	256*256 pixels. For special applications the column can be extended to 1024 pixels.
Total quantity can be cascaded	65536 Pcs
Ethernet port exchange	Support. Two Ethernet ports can be freely used as input or output.
Synchronization between cards	Nanosecond synchronization between the Receiving cards.
Display Quality	
Refresh rate for conventional chip	Static display: 64*64, 4000Hz-12000Hz 1/8 scan display: 128*128, 500Hz-6000Hz
Clock frequency	0.2MHz-41.7MHz
Color depth	16 bit / 65536
Minimum unit of OE	8ns
Display module compatibility	
Chips support	Conventional chips, PWM chips, lighting chips and other mainstream chips.
PWM chips support	Support hundreds of different specifications of the PWM chip, such as MBI5042.
Scanning type	Support static to 1/32 scan
Module type	Support all LED display module (Any row, any column, any chips, any scanning, and any pumping point)
Cable direction type	Support route from left to right, from right to left, from top to bottom, from bottom to top.
Data groups	16-group of RGBR' data 20-group of RGB data 64-group of serial data
Data serial transmission	Support the serial form of RGB, R8G8B8, R16G16B16, etc.
Data folded	Support data folded, to improve refresh rate.
Data exchange	Support data exchanging freely.
Module pumping point	Support any pumping point

Data expansion	Support the D signal as a clock extension, the 16-group RGBR' can be extended to 32-group RGBR'.
Output Interface	
Transmission distance	UTP cable: Maximum 140M CAT6 cable: Maximum 170M Fiber Converter : distance unrestricted
Transmission equipment	Support Gigabit switch, Fiber Converter
HUB type	Support all types
Physical/Electrical	
Size	143* 93mm
Power input	DC 3.3V-6V supply voltage
Power consumption	3W
Storage temperature	-50°C to 125°C
Operating temperature	-25°C to 85°C
Antistatic property	2KV
Weight	100g
Special function	
Environment monitoring	Support the temperature, humidity, smoke monitoring.(Multifunction Card needed)
Remote power control	Support switching power supply remotely.(Multifunction Card needed)
Brightness and chromaticity calibration	Support pixel by pixel brightness and chromaticity calibration. Brightness and chromaticity coefficients for each LED
Double backup (hot backup)	Support
Shaped screen	Supported by the data offset to achieve arbitrary shaped screen. Support spherical screen, diamond screen, cube screen, screen, and other various shaped irregular shape display screen.

Hardware



1、Interface

S/N	Name	Function	Remarks
1	Power 1	Connect DC 3.3-6V power supply for the receiving card	Only one is used.
2	Power 2	Connect DC 3.3-6V power supply for the receiving card	
3	Indicator	Indicate power and signal working status	Red lamp for power supply, and green for data signal
4	Ethernet port A	RJ45 , For transmitting data signals	The Ethernet port A and B can achieve import/export at random, which can be identified in an intelligent way.
5	Ethernet port B	RJ45 , For transmitting data signals	
6	External interfaces	For Indicator lamp and test button	
7	Test button	The attached test procedures can achieve four kinds of monochrome display (red, green, blue and white), as well as horizontal, vertical and other display scan modes.	
8	50P pins	Connected to HUB boards of displays	

2、Indicator lamp functions

Red lamp: ON for power available

Green lamp: ON/OFF quick flash (about 5-10 times/second) indicates that the data signal transmission is normal.

3、Definitions of 50P pins

Full Color	Function	Note
2, 4, 47, 49	VCC 5V	Power
1, 3, 5, 46, 48, 50	GND	Ground
10, 14, 18, 22, 26, 30, 34, 38	R	Data signal
8, 12, 16, 20, 24, 28, 32, 36	B	
9, 13, 17, 21, 25, 29, 33, 37	G	
7, 11, 15, 19, 23, 27, 31, 35	RP (red virtual pixel)	
45	OE	Control signal
43	LAT	
44	CLK	
42	A	Scan signal
41	B	
40	C	
39	D	
6	Expansion port	

4、 Figure for receiving card size and hole position

