Colorlight

5A-75B Receiving Card

## Specification

Colorlight (Shenzhen) Cloud Technology Co., Ltd.

5A-75B Receiving Card

Overview

5A-75B receiving card was a Colorlight's special introduced high cost-effect product that designed for customers to save cost, reduce points of fault and failure rate.

Based on 5A receiving card, 5A-75B integrates the most common HUB75 interfaces, which is more reliable and more economical on the premise that ensures high-quality display.
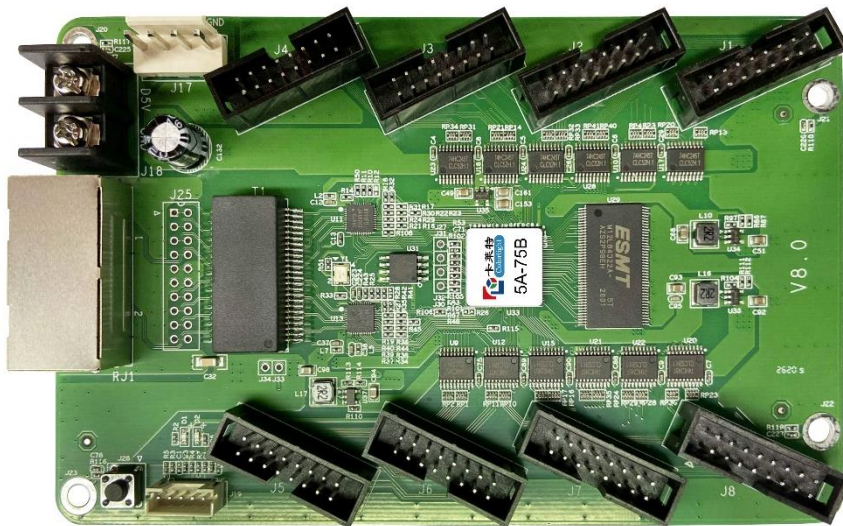
Features

- Integrated HUB75 interface, more convenient with less cost

- Reduces the plug connectors and malfunction, lower failure rate

- Superior display quality: high refresh rate, high grayscale, and high brightness with the conventional chips

- Perfect performance under lower grayscale status

- Better detail processing: partial dark at row, reddish at low gray, shadow problems can be solved

- Supports high-precision pixel level calibration in the brightness and the

chromaticity

- Supports conventional chips, PWM chips, Silan chips and lighting chips

- Supports up to 1/64 scan

- Supports any pumping point and data group offset to realize various freeform display, spherical display, creative display, etc.

- Supports any pumping row and pumping column

- Supports 16 groups of RGB signal outputs

- Large loading capacity

- Wide working voltage range with DC3.3~5.5V

- Compatible with all series of Colorlight's sending devices

Specifications

Control System Parameters	
Control Area	Full-color: conventional: 256×512 pixels, PWM:384×512 pixels, Silan:324×512 pixels
Calibration Area	Brightness calibration: conventional: 256×512 pixels, PWM:384×512 pixels, Silan:324×512 pixels Chromaticity calibration: conventional: 256×512 pixels, PWM: 384×512 pixels, Silan:324×512 pixels
Network Port Exchange	Supported, arbitrary use
Synchronization	Nanosecond synchronization between cards
Display Module Compatibility	
Chip Supports	Supports conventional chips, PWM chips, Silan chips, lighting chips and other mainstream chips
Scan Type	Supports up to 1/64 scan
Module Specifications Support	Supports 8192 pixels within any row, any column
Cable Direction	Supports route from left to right, from right to left, from top to bottom, from bottom to top.
Data Group	16 groups of RGB data
Data Folded	Supports 2 splits and 4 splits in the same direction, and 2 splits in the opposite direction

Data Exchange	16 groups of data for any exchange
Module Pumping Point	Supported
Module Pumping Row, Pumping Column	Supported
Data Serial Transmission	Supports RGB, R16G16B16, etc. in the form of serial
Compatible Device and Interface Type	
Communication Distance	UTP cable≤140m CAT6 cable≤170m Optic fiber: Single-Mode Fiber Converter≤20km Multi-Mode Fiber Converter≤550m (Use RP Repeater to extend unlimited)
Compatible with Transmission Equipment	Gigabit switch, fiber converter, optical switches
DC Power Interface	Wafer VH3.96mm-4P Barrier Terminal Block-8.25mm-2P
HUB Interface Type	HUB75
Physical Parameters	
Size	143.64mm×91.69mm
Input Voltage	DC 3.3V-5.5V
Rated Current	0.6A
Rated Power Consumption	3W
Storage and Transport Temperature	-50℃~125℃
Operating Temperature	-25℃~75℃
Body Static Resistance	2KV
Weight	100g

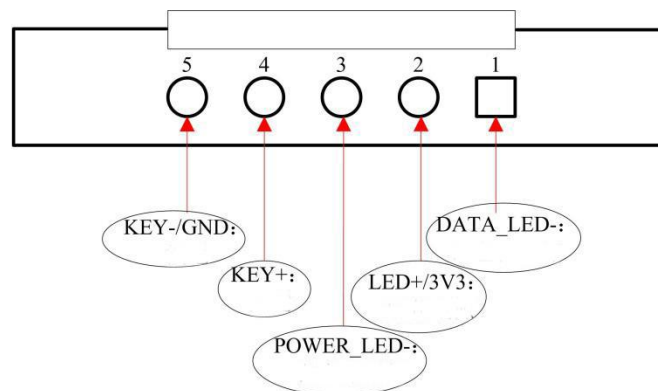| Monitoring Functions (in conjunction with multi-function card)	
Monitoring Functions	Real time monitoring environment information like temperature, humidity and smoke
Remote Control	Supports for relay switch to turn on/off the power supply of equipment remotely
Other Features	
Pixel Level Calibration	Supported
Loop Backup	Supported
Shaped Screen	Supports various freeform display like spherical display, creative display, etc. through data group offset.

Hardware
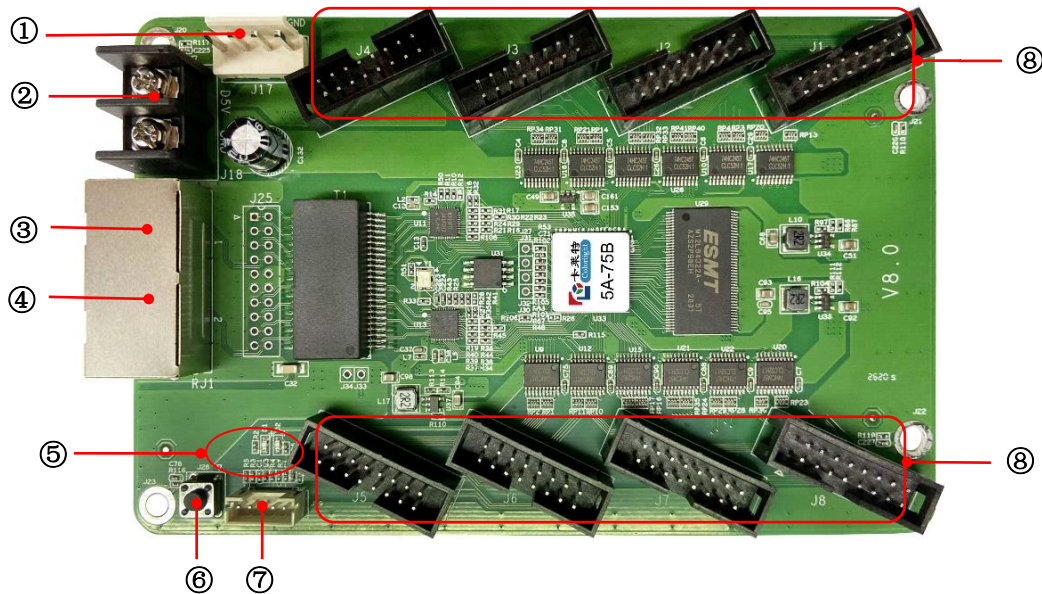
1. Interface

S/N	Name	Function			Remarks
1	Power 1	Connect DC 3.3~5.5V power supply for the receiving card			Only one is used.
2	Power 2	Connect DC 3.3~5.5V power supply for the receiving card			
3	Network port A	RJ45, for transmitting data signals			The dual network ports can achieve import/export at random, which can be identified in an intelligent way by the system.
4	Network port B	RJ45, for transmitting data signals			
5	Power indicator light	Red indicator light shows that the power supply is normal.			D1
	Signal indicator light	Flashes once per second	Receiving card: normal working, Network cable connection: normal		D2
		Flashes 10 times per second	Receiving card: normal working, Cabinet: Sorting & Highlight		
		Flashes 4	Receiving card: backing up		

6	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.	
		times per second	senders (loop backup status)	
7	External interfaces	For Indicator light and test button	
8	HUB pins	HUB75 Interface, J1~J8 connected to display modules	

| | | times per second | senders (loop backup status) | |

2. Definitions of HUB75

Data signal			Scanning signal			Control signal	
GD1	GND	GD2	E	B	D	LAT	GND
2	4	6	8	10	12	14	16
1	3	5	7	9	11	13	15
RD1	BD1	RD2	BD2	A	C	CLK	OE
Data signal			Scanning signal			Control signal	

3. Definition of External Interface

4. Dimensions

Unit: mm