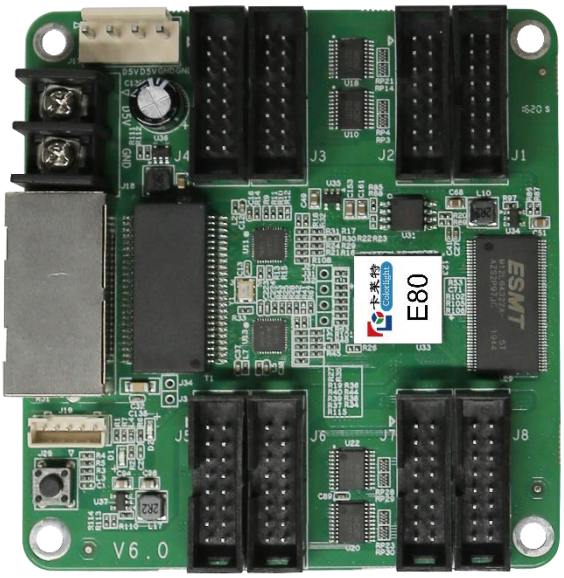
Colorlight



E80 Receiving Card

Specification

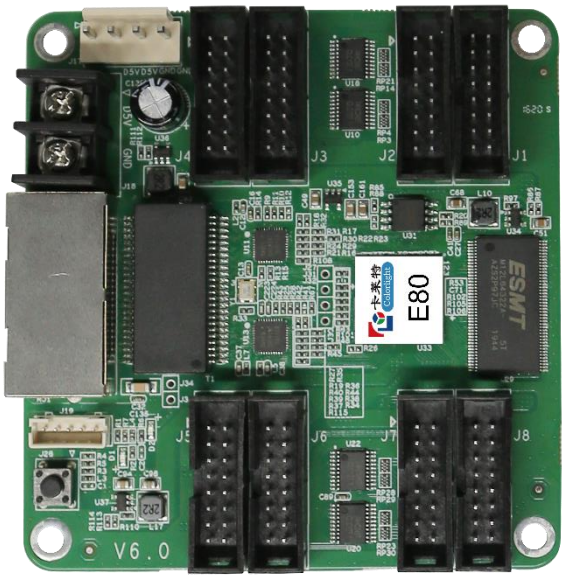
Colorlight (Shenzhen) Cloud Technology Co., Ltd.

E80 Receiving Card

Overview

E80 receiving card is a specially introduced high cost-effect product of Colorlight, which is designed for customers to save cost, reduce points of fault and failure rate.

Based on the technical advantages of conventional receiving cards, E80 integrates the most common HUB75 interfaces, which is more reliable and more economical on the premise of ensuring 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 DC 3.8V~5.5V
- Compatible with all series of Colorlight sending devices

Specifications

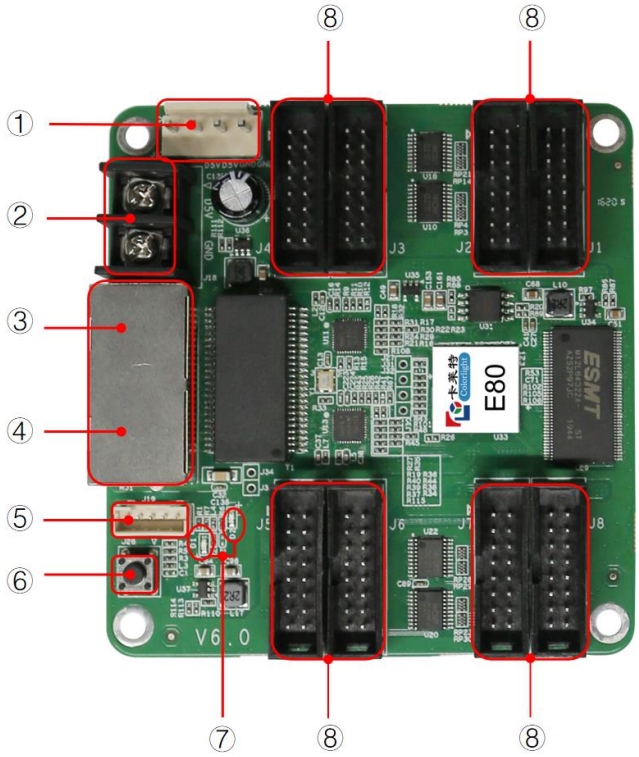
Control System Parameters	
Control Area	Full-color: PWM chips:384×512 pixels, conventional chips: 256×512 pixels, Silan chips: 324×512 pixels The column can be extended to 1024 pixels for special applications.
Calibration Area	PWM chips: 384×512 pixels, conventional chips: 256×512 pixels, Silan chips: 324×512 pixels
Cascade Control Area	65536×65536 pixels
Network Port Exchange	Support, arbitrary use
Synchronization	Nanosecond synchronization between cards
Display Effect	
Serial Frequency	0.2MHz-41.7MHz
Gray Level	Maximum 65536 levels
Minimum Unit of OE Values	8ns, 8ns multiples steps
Gray Scale Compensation	Each level grayscale compensates separately
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 2~8 any discount
Data Exchange	16 groups of data for any exchange
Module Pumping Point	Supports any pumping point
Module Pumping Row, Pumping Column	Supports any pumping row and pumping column
Data Serial Transmission	Supports R1G1B1, R16G16B16, etc. in the form of serial
Compatible Device and Interface Type	
Communication Distance	UTP cable≤140m CAT6 cable≤170m Optic fiber transmission distance unrestricted
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	85.9×91.69mm
Input voltage	DC 3.8V~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	57.5g
Pixel Level Calibration	
Brightness Calibration	Supported
Chromaticity Calibration	Supported
Other Features	
Redundant Backup	Supports loop backup and dual sender backup
Shaped Screen	Supports data group offset to realize various freeform display, spherical display, creative display, etc.

Hardware

1. Interface



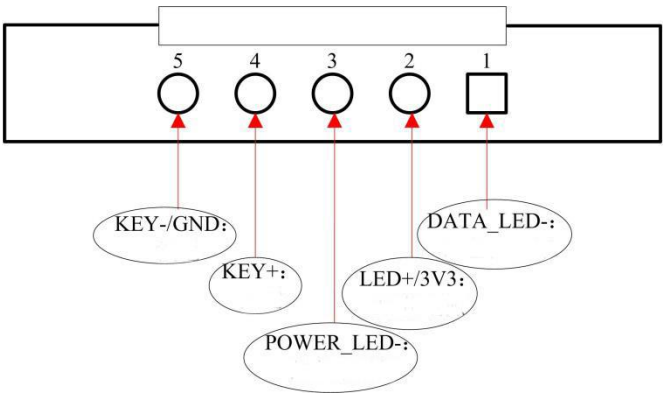
S/N	Name	Function	Remarks
1	Power 1	Connect to DC 3.8V~5.5V power supply for the receiving card	Only one is used.
2	Power 2	Connect to DC 3.8V~5.5V power supply for the receiving card	
3	Network port A	RJ45，for transmitting data signals	The dual network ports can achieve import/export at random, which can be identified in an intelligent way by the system.
4	Network port B	RJ45，for transmitting data signals	
5	External interface	For indicator light and test button	
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.	

7	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 times per second	Receiving card: backing up senders (loop backup status)	
8	HUB pins	HUB75 Interface, J1~J8 connected to display modules		

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