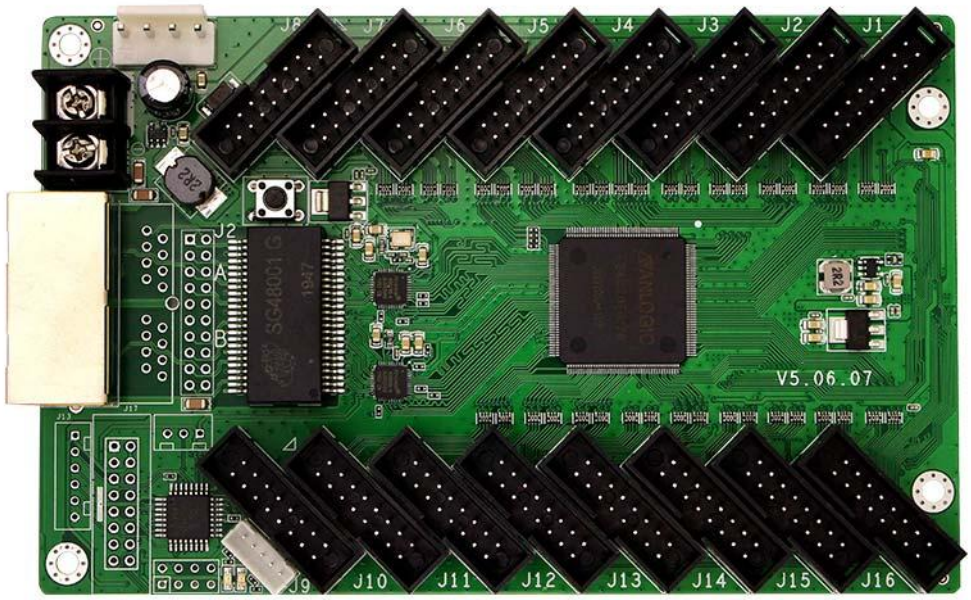
Full Color Receiver T16 Specification

I. Overview

The ZH-T16 full color receiver is a product carefully designed by ZH Software, to meet the rental market and engineering projects in LED industry. Taking new communication architecture, high refresh, high brightness, new grayscale scanning engine, nanosecond synchronization. Even under the poor communication status, it can still maintaining the smooth communication, which bringing users a more colorful and beautiful LED world!



II. Features

1. Integration of HUB75 interface, no need using hub adapter, more convenient;

2. Less connectors, less fault point, lower failure rate;

3. It supports conventional chips, which achieve high refresh, high gray, high brightness;

4. New grayscale engine, low grayscale, better performance;

5. More perfect detail processing, eliminating the detail problems caused by the

unit board design, such as dark line, low gray and red line, ghost, etc.

6. Supports all conventional chips, PWM chips and lighting chips;

7. Supports the static screen, and any scan type like 1/2~1/128 scans;

8. Support arbitrary tap point, support data migration, can easily load any kind of screen like: special-shaped screen, spherical screen, creative display screen;

9. Single card supports 32 sets of RGB signal output;

10. Supports super large loading area

11. Advanced design, high quality components, automated high and low temperature aging test, zero fault from factory.

12. Supports ultra-wide working voltage: DC 3.5v ~6V, can effectively reduce the impact of voltage fluctuations;

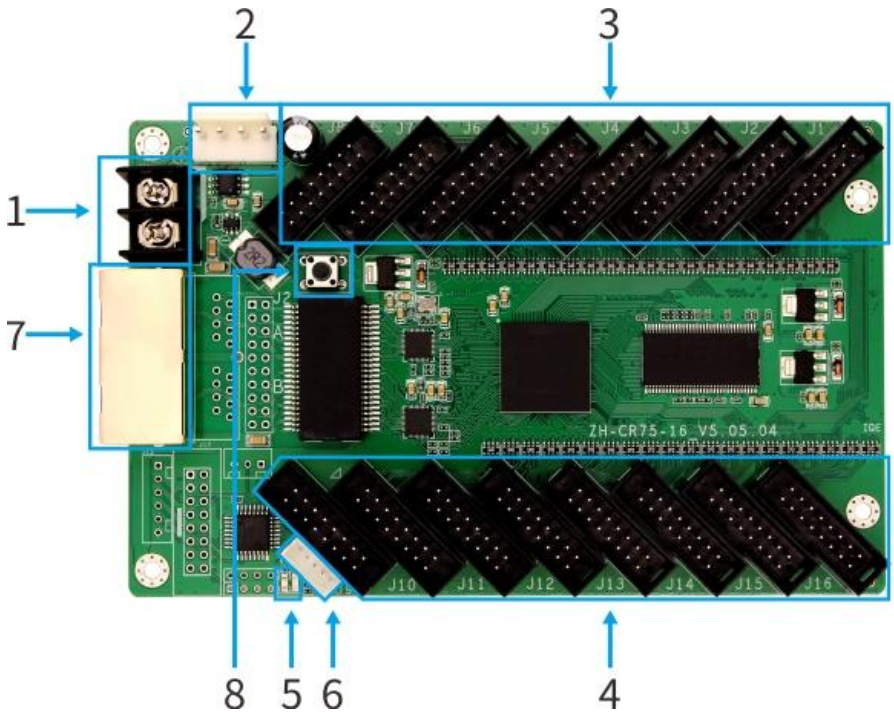
13. Support power reverse connection, which can protect circuit.

III. Parameters

Network port function	Not partition the input and output, can interchangeably using
Synchronization between cards	Nanosecond synchronization between cards
Display effect	Refresh rate conventional chip. Static: refresh rate can reach 16000Hz 1/8 scan: refresh rate can reach 10000Hz; serial frequency 4.1MHz-31.25MHz
Gray level	256 ~ 65536; gray scale is adjustable
Gray compensation	Compensation according to the refresh scan mode
OE control	OE control accurate to 8 nanoseconds, make low gray control more accurate
Chips	All mainstream LED driver chips such as conventional chips, PWM chips, and lighting chips; The PWM chip supports hundreds of different specifications of chips such as MBI, MY, and SUM series

Scan mode	Regular scan mode and high refresh photo mode
Scan type	Any scan type between static and 1/128 scans
Data set	32 sets of full color data
Multiple output	Support 1~8 output
Data exchange	Support 32 sets of data exchange freely
Module check point	Support any kind of check point
Gigabit communication	Support sending card and Gigabit network card to send
PCB Size	Height: 144.01mm， Width: 91mm
Input voltage	DC 3.5V~6V
Rated Current	0.8A
Rated power consumption	4W
Working temperature	-20℃ to 75℃

IV. Hardware Introduction:



中航 LED 控制系统 LED CONTROL SYSTEM

1. Interface Function Table:

NO.	Name	Function	Notes
1	Power input 1	Connect DC 3.3~6V power, supply power to receiving card	Choose one of them
2	Power input 2	Connect DC 3.3~6V power, supply power to receiving card	
3、4	HUB port	HUB75 port， J1~J12 link with display unit board	
5	Power Indicator	Indicate power status	Red
	Signal indicator	Indication signal transmission status	Green
6	External interface	External interface of indicator and test button	
7	Network port A	RJ45，transport network signals	Double network port, free to enter and exit, the system Intelligent recognition
	Network port B	RJ45，transport network signals	
8	Test button	Own test program, it can realize four kinds of monochrome display of red, green, blue and white, horizontal scanning, vertical sweep, etc.	

2. Indicator Meanings：

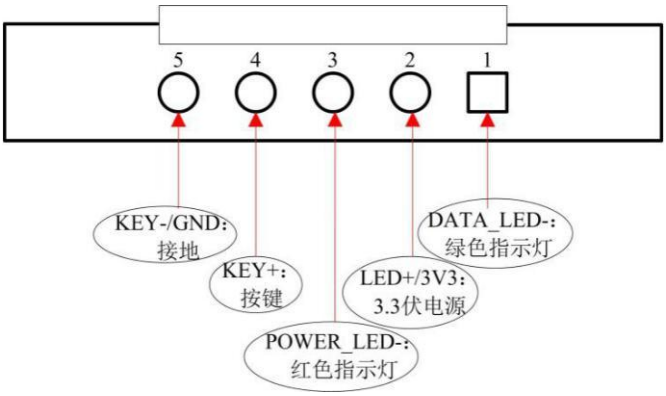
Red indicator: When light on means power is on.
Green indicator: When fast flashing, means the data signal transmission is normal.

3. HUB 75E Definition：

Data signal				Scan signal		Control signal	
GD1	blank	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				Scan signal		Control signal	

Note: PCB board HUB75 port own E scan signal, supports display screen of 32 scan.

4. External pin definition：



V. Hardware Size Diagram: (Unit:mm)