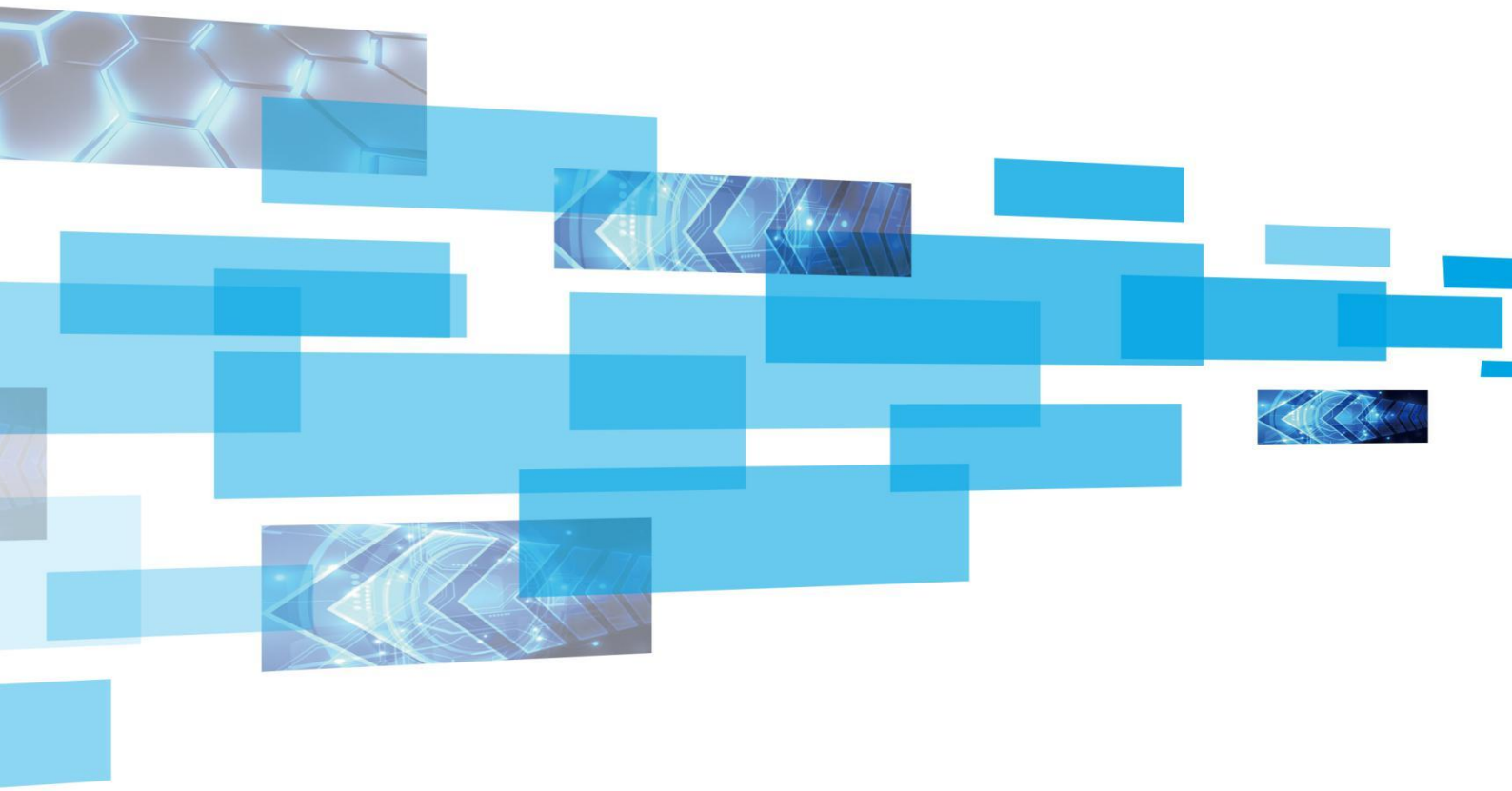
SYSOLUTION

Receiver D60-B1S



Product Specification

Version：Ver.1.0

Statement

Dear user friend, thanks for choosing SHENZHEN SYSOLUTION TECHNOLOGY CO.,LTD (hereinafter referred to as Xixun Technology) as your LED advertising equipment control system. The main purpose of this document is to help you quickly understand and use the product. We strive to be precise and reliable when writing the document, and the content may be modified or changed at any time without notice.

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Update

No.	Version	Update	Revision date
1	Ver.1.0	Initial	2024.08.16

Note: The content of the document is subject to change without notice.

Introduction

D60-B1S is a small-sized high-end receiver card with 8192 uploading pixels, which is independently developed by Sysolution; it has powerful processing capability, ultra-stable performance and high cost-effective to gain users' favor quickly. The size of D60-B1S is only 70 mm x 24 mm, which is the smallest size in the industry that can be realized, and it can save the space of design and reduce the external cables of the screen, simplifying the screen structure design and reducing the design difficulty can help customers realize unprecedented innovative design; solving the screen space constraints, screen protection problems, after-sales service problems, and price problems, which will further provide a competitive advantage for differentiated product design.

Features:

1. Adopt small size and thickness to save space for the increasingly narrow box space and light bar space;

2. The board output adopts universal 2.0mm pitch plug-in interface, which has high stability and reliability;

3. Adopting a new generation of image processing kernel, the display effect is greatly enhanced;

4. Single card output serial RGB data 24 groups, parallel 8 groups, support 4 clock expansion;

5. Support up to 8192 points, arbitrary settings;

6. Ultra-small size design (70 mm x 24 mm), to solve the space design problems;

7. Powerful LED driver chip compatibility, support for all chip drivers;

8. Support security upgrade;

9. Support brightness correction, chromaticity correction

10. Support single card position arbitrary offset, single card display content rotation, to realize shaped screen;

11. Reduce the number of cables and connectors, simplify the LED display structure design. Signal transmission requires only 2-core super Category 5 twisted-pair cable, which allows the display signal and power wiring into one design, peripheral cascade connecting lines from the traditional two into two out to one into one out;

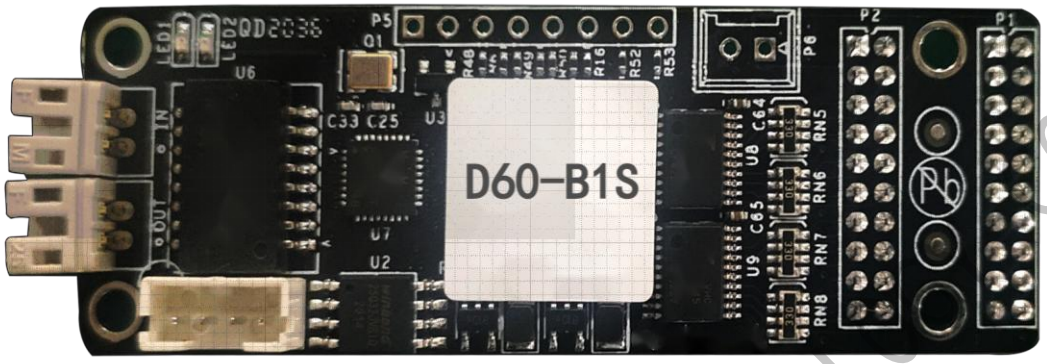
12. The light board of the display can be integrated with the receiver card modular design, only need to disassemble and replace the module individually when there is a failure, so that after-sales maintenance becomes simple and reduce the maintenance cost of the later stage;

13. The use of fully enclosed design, simplify the design, improve electromagnetic compatibility, and help the user's products successfully pass EMC certification;

Application

It can be widely used in light bar screen, film screen, glass screen, grid screen, lighting screen and other applications with strict space requirements.

Image



Load capacity

Serial (RGB)/Parallel	Maximum Load (pixels)	Luminance Correction Load (pixels)	Chroma Correction Load (pixels)
24 groups of serial data	8192 dots	8192 dots	4096 dots
8 parallel data groups	64X128	64X128	64X64

Number of cascade cards	Supported Scan Lines	Clock extension	
≤1000PCS	1-4 Scan	Supports 4 groups of clock extensions	

Function

Display effects

18Bit+	Enabling 18Bit+ on the software,which makes the LED display grayscale upgrade by 4 times, effectively deal with the grayscale loss of LED display due to the brightness reduction, solving the problem of pockmarks caused by the correction of low-gray, and make the image of low-gray more delicate.
Low delay	Reduced delay of the video source at the receiver card side, with delays as low as 1 frame (for lamp boards using driver ICs with built-in RAM)
RGB Independent Gamma Adjustment	With the independent master control and software that support RGB independent gamma adjustment, through the "Red Gamma", "Green Gamma", "Blue Gamma" respectively for By adjusting "Red Gamma", "Green Gamma" and "Blue Gamma" respectively, it can effectively control the problems such as uneven low gray and white balance drift of the display, making the picture more realistic.
Supports a variety of display effect programs	Work with LedSet 4.0 software to achieve refresh priority and grayscale priority effects.

Supports 90 ° rotation of the screen	Realized with LedSet 4.0 software, the receiver card screen can be rotated by a factor of 90°.
Supports point-by-point bright chromaticity correction	With the calibration software, the brightness and chromaticity of each light point of the large screen are corrected, effectively eliminating color difference so that the brightness and chromaticity of the display reaches a high degree of consistency, improving the picture quality of the display.

Operability

Support for data interface customization	Works with LedSet 4.0 software, receiver card output data can be detected and editable.
Supports the construction of complex boxes	In the advanced layout of LedSet 4.0 software, box modules can be quickly arranged and constructed arbitrarily.
Supports the construction of complex large screens	In the complex display connection of LedSet 4.0 software, the box can be quickly arranged and constructed arbitrarily.

Hardware Stability

Supports hot backup	Network port hot backup: The network port is connected through the main and backup network cable loop to increase the reliability of the serial connection of the receiver card. When one of the primary and backup serial lines fails, the other one can ensure the normal display of the screen.

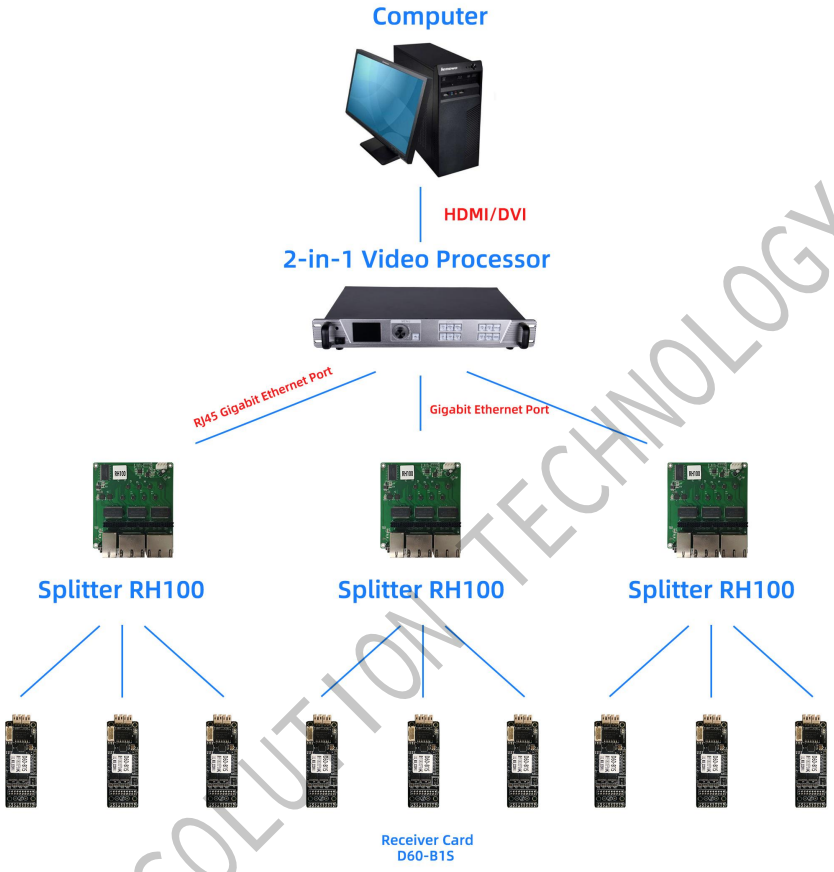
Hardware Introduction

Interface Description

No.	position	Description
1	P2	Output to display signal interface P1
2	P1	Output to signal connector P2 of the display
3	JP1	Signal input connector, signal input connector from splitter RH100

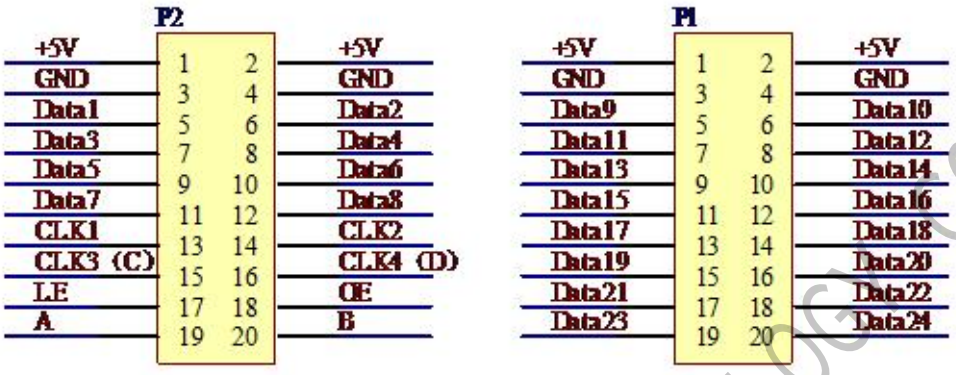
	JP2	Signal output interface, output to the next receiver card in a cascade of positions
4	D1	Power Indicator
	D2	Status Indicator
5	P3	External Key Indicator Interface

System Diagram



Output Port Definition

24-Group RGB Serial Data Interface Definition



P2 Interface Definition Description

Description	Definition	Pin	Pin	Definition	Description
	+5V	1	2	+5V	
	GND	3	4	GND	
RGB Serial Output Data	DATA1	5	6	DATA2	RGB Serial Output Data
	DATA3	7	8	DATA4	
	DATA5	9	10	DATA6	
	DATA7	11	12	DATA8	
Shift Clock 1	CLK1	13	14	CLK2	Shift Clock 2
Shift Clock 3/Decode Signal C	CLK3/C	15	16	CLK4/D	Shift Clock 4/Decode
Latch	LE	17	18	OE	Display Enable
Line decoding signal	A	19	20	B	Line decoding signal

Description

1、When using 5958 decoder driver, decoder signal A is used as DCLK signal of 5958, decoder signal B is used as BK signal of 5958, and decoder signal C is used as DIN signal of 5958.

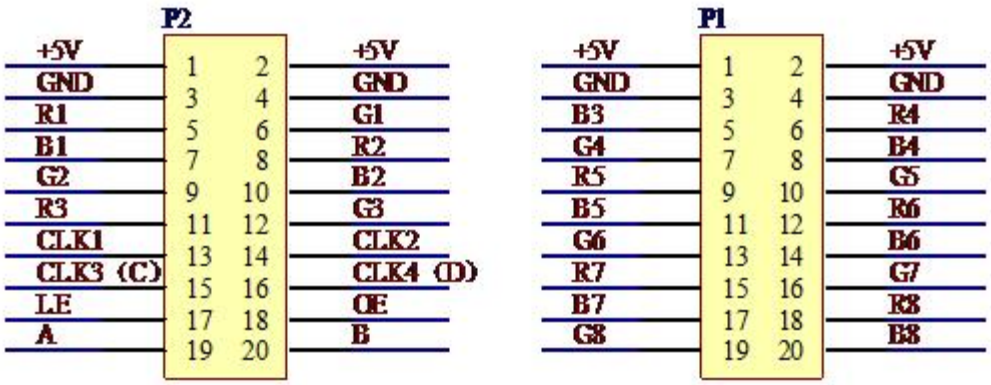
2, when using the expansion of 4 groups of clocks, the scanning signal can only be connected to the A, B signals; that is: the maximum support for the expansion of 4 groups of clocks, P2 pins 15, 16 for CLK3, CLK4; (default conventional program)

3, when the use of A, B, C, D scanning signals, the clock can only expand 2 groups; that is: when the scan is greater than 4 sweeps, P2 pin 15, 16 for the C, D signals (customized program)

P1 Interface Definition Description

Description	**Definition**	**Pin**	**Pin**	**Definition**	**Description**
	+5V	1	2	+5V	
	GND	3	4	GND	
RGB Serial Output Data	DATA9	5	6	DATA10	RGB Serial Output Data
	DATA11	7	8	DATA12	
	DATA13	9	10	DATA14	
	DATA15	11	12	DATA16	
	DATA17	13	14	DATA18	
	DATA19	15	16	DATA20	
	DATA21	17	18	DATA22	
	DATA23	19	20	DATA24	

8-Group RGB Parallel Data Interface Definition



P2 Interface Definition Description

Description	Definition	Pin	Pin	Definition	Description
	+5V	1	2	+5V	
	GND	3	4	GND	
RGB Parallel Output Data	R1	5	6	G1	RGB Parallel Output Data
	B1	7	8	R2	
	G2	9	10	B2	
	R3	11	12	G3	
Shift Clock 1	CLK1	13	14	CLK2	Shift Clock 2
Shift Clock 3/Decode Signal C	CLK3/C	15	16	CLK4/D	Shift Clock 4/Decode Signal D
Latch	LE	17	18	OE	Display Enable
Line decoding	A	19	20	B	Line decoding

Description

1、When using 5958 decoder driver, decoder signal A is used as DCLK signal of 5958, decoder signal B is used as BK signal of 5958, and decoder signal C is used as DIN signal of 5958.

2, when using the expansion of 4 groups of clocks, the scanning signal can only be connected to the A, B signals; that is: the maximum support for the expansion of 4 groups of clocks, P2 pins 15, 16 for CLK3, CLK4; (default conventional program)

3, when the use of A, B, C, D scanning signals, the clock can only expand 2 groups; that is: when the scan is greater than 4 sweeps, P2 pin 15, 16 for the C, D signals (customized program)

P1 Interface Definition Description

Description	**Definition**	**Pin**	**Pin**	**Definition**	**Description**
	+5V	1	2	+5V	
	GND	3	4	GND	
RGB Parallel Output Data	B3	5	6	R4	RGB Parallel Output Data
	G4	7	8	B4	
	R5	9	10	G5	
	B5	11	12	R6	
	G6	13	14	B6	
	R7	15	16	G7	
	B7	17	18	R8	
	G8	19	20	B8	

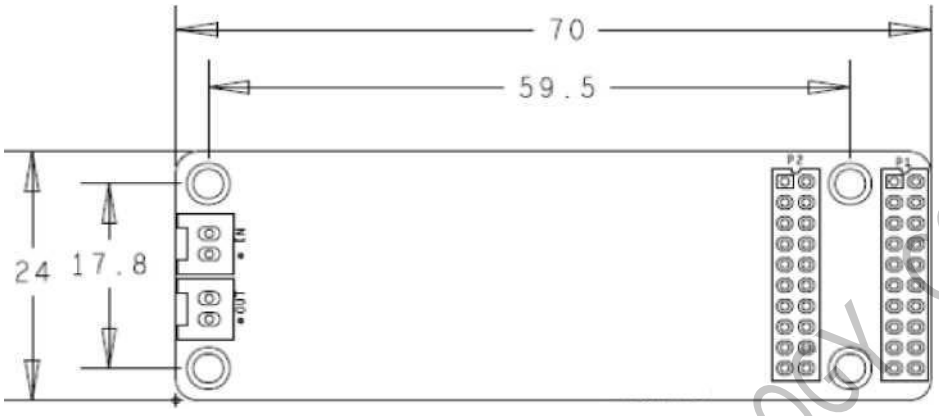
P3 Indicator Interface Definition

Pin	1	2	3	4
Definition	SWITCH	LED STATE	GND	3.3V

Indicator Description

Indicator	Position	Status	Description
Status Indicator (green)	D1	Slow flash evenly	Receiver card works normally, network cable connection is normal, no DVI signal input
		Fast flashing evenly	The receiver card works normally, the network cable is connected normally, and there is a DVI signal input.
		Constant black	No network signal
		Interval 4S blinks 2 times.	Receiver card goes into boot
Power indicator (red)	D2	Constant brightness	Normal power supply of the receiver card is always on

Dimension



unit：mm

Working parameters

Electrical Parameters	Input Voltage	DC3.5-5.5V
	Rated Current	0.4A
	Rated Power	2W
Working Environment	Operating Temperature	-40℃ ~80℃
	Working Humidity	10%RH-90%RH
Storage Environment	Working Temperature	-25℃~125℃
Board Size	70mm X 24mm	
Net Weight	10g Description: Single card weight	
Package Size	490*340*120mm	
Gross Weight	2kg Description: Includes cables, accessories (split weight)	
Packaging	100 sheets/box	
Certification Information	RoHS compliant, CE-EMC compliant	

Cautions

1. The installation process must be completed by specialized personnel.

2. Must be anti-static.

Please pay attention to waterproof, dust removal