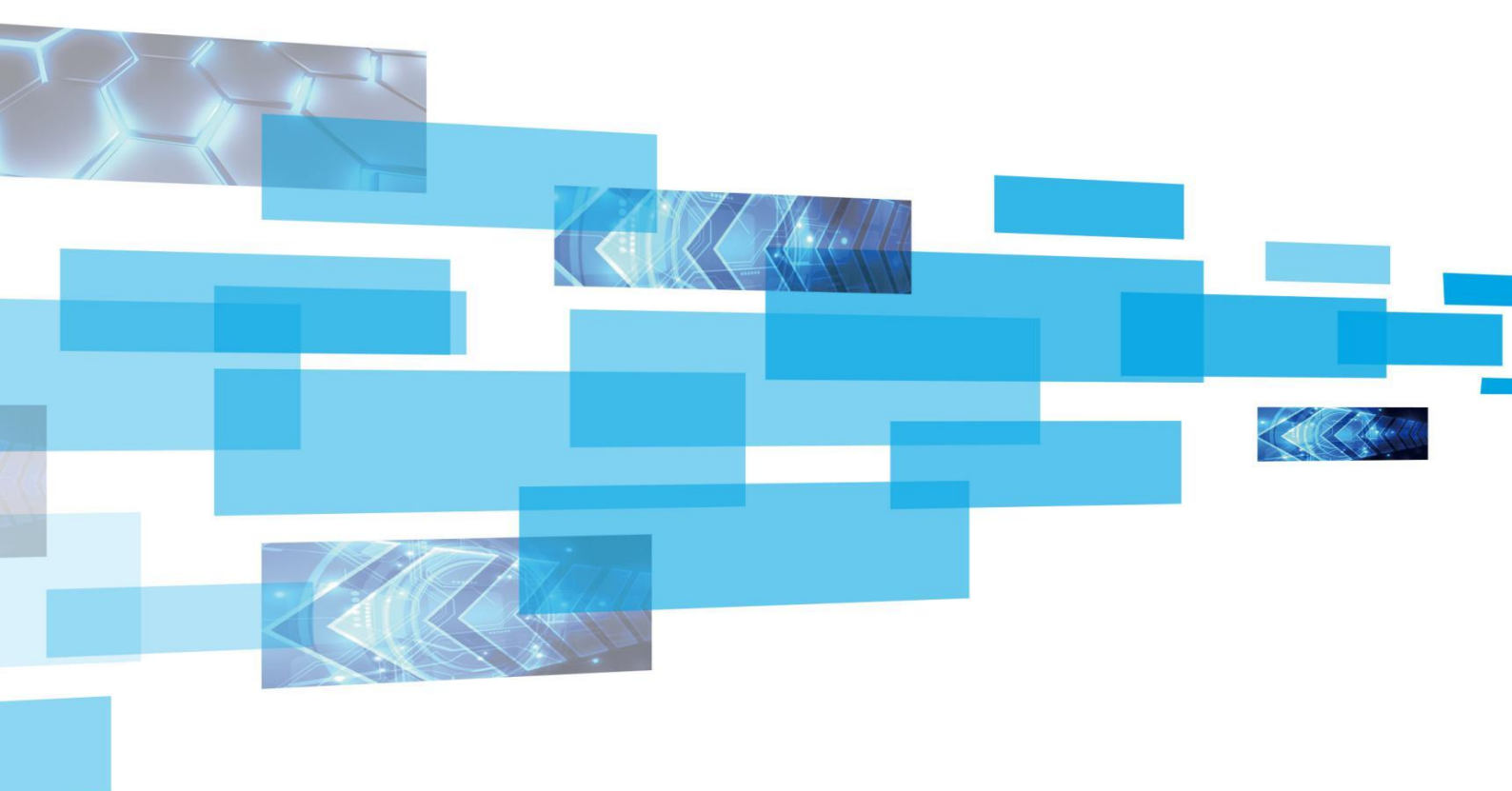# SYSOLUTION

Receiving Card D60-12A

Product specification

Version： Ver.1.0

Statement

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Update Record

NO.	Version No.	Upadates	Revision Date
1	Ver.1.0	initial issue	2023.08.11

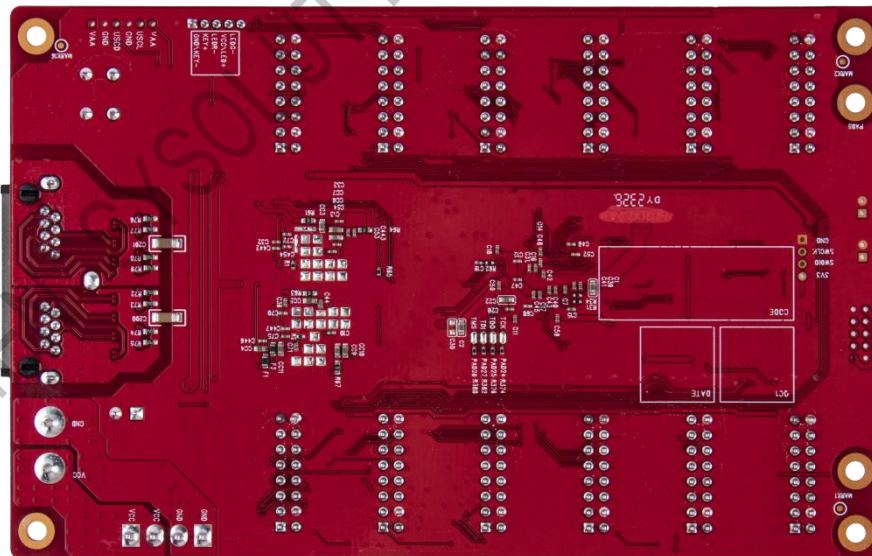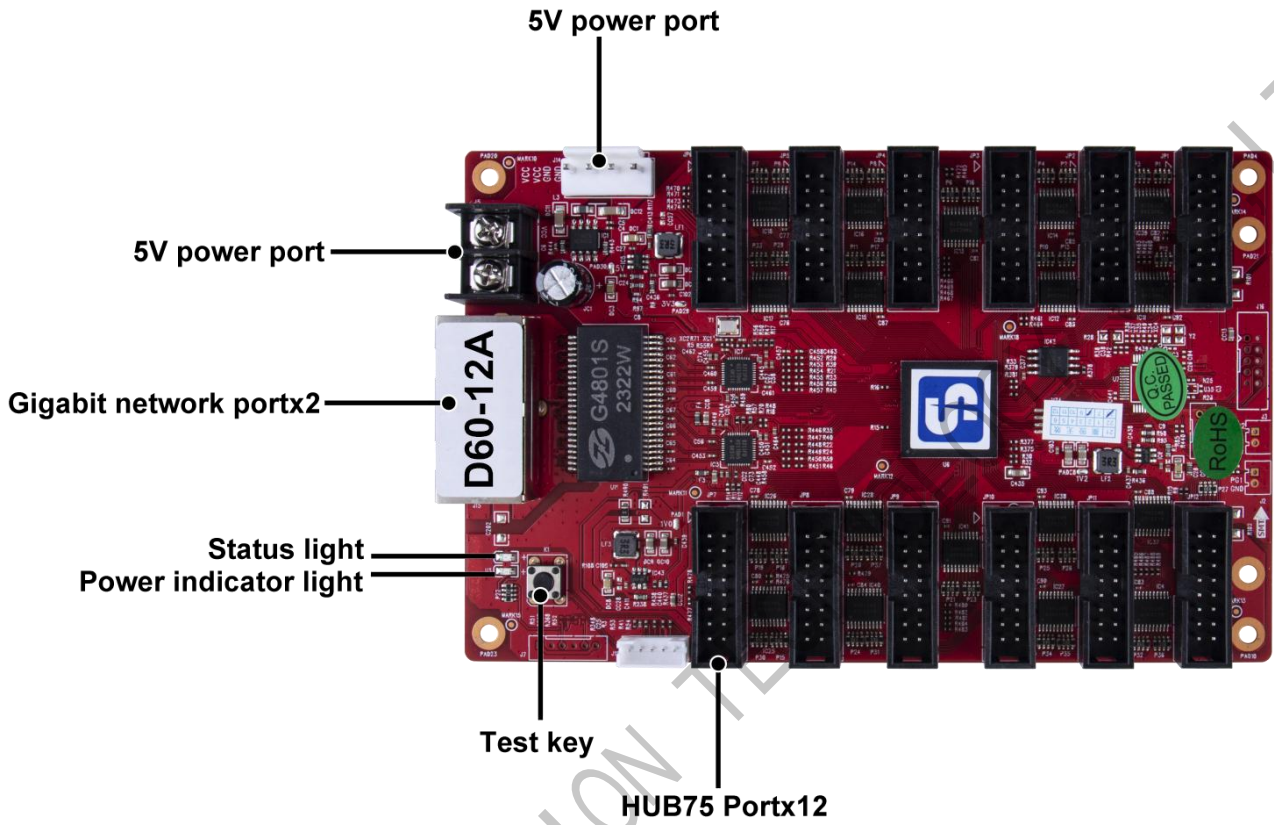The document is subject to change without prior notice.

Product Introduction

D60-12A is a standard receiving card launched by Sysolution Technology. It adopts 12 standard HUB75E interfaces and supports up to 24 groups of RGB parallel data. Load up to 512X256 pixels; It has strong processing capacity, super stable performance and high cost performance.

Application scenarios

It can be widely used in the high-end display field with high requirements, and has significant advantages in the application scenarios such as LED screen rental, TV live broadcast, LED screen for large-scale activities, and high-end engineering channel projects.

Product Picture

5V power port

5V power port

Gigabit network portx2

D60-12A

Status light

Power indicator light

Test key

HUB75 Portx12

Load Capacity

Three lines parallelism (RGB)	Data interface/number	Drive	Maximum loading (Pixels)	Brightness correction loading (pixels)	Chromaticity correction loading (pixels)
24 groups	HUB75E/12	Normal	512*256	512*256	256*320
		PWM	512*256	512*256	256*320

Number of cascade cards	Support scan line		
≤1000PCS	1-64 Scan		

Function Definition

Function	Description
Improved Display Effect	1. 18Bit+: Enabling 18Bit+ on the software can make the LED display gray scale increase 4 times. It can effectively deal with the problem of gray scale loss of LED display due to brightness reduction, solve the problem of pockmarks caused by correction of low gray, and make the image more delicate in low gray. 2. HDR: Supports both HDR10 and HLG video source standards; with the large band-carrying independent master control, inputting HDR10-standard or HLG-standard video sources can achieve a larger brightness dynamic range and color space, which greatly enhances the display picture quality and makes the picture more delicate and realistic. 3. Low Latency: Reduces the latency of the video source at the receiver card end, with delays as low as 1 frame (for light boards that use driver

ICs with built-in RAM)

4. Quickly adjust the light and dark lines: Quickly adjust the light and dark lines on the software, quickly solve the light and dark lines of the display caused by the box and module splicing, the adjustment process takes effect instantly, simple and easy to use.

5. 3D function: the receiver card parameters set the frame rate 120HZ, with the independent master control that supports 3D function, turn on the 3D function in the software or the operation panel of the independent master control, and set the 3D parameters to make the screen display 3D effect.

6. RGB Independent Gamma Adjustment: With the independent master control and software supporting RGB independent gamma adjustment, it can effectively control the problems such as low gray uniformity and white balance drift of the display screen by adjusting "Red Gamma", "Green Gamma" and "Blue Gamma" respectively, so as to make the picture

more realistic. 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.

7. Support by lighting chrominance correction:with the correction software, the brightness and chrominance of each light point on the large screen can be corrected, effectively eliminating color difference, so that the brightness and chrominance of the display can reach a high degree of consistency, and improve the picture quality of.

8. Support multiple display effects schemes： With LedSet4.0 software to achieve refresh priority and grayscale priority effects.

9. Support screen rotation by 90° multiple： With the LedSet4.0 software to realize, it can rotate the screen of the receiving card by 90° multiple.

10. Support screen zoom function： With LedSet4.0 software, the receiving card pixel scan be scaled by multiples, and the screen can be enlarged and

	reduced.
Improved Operability	1. Support receiving card serial number detection：Cooperate with the network debugging function of LedSet4.0 software, the receiving card number and network port information will be displayed on the target box, and the user can obtain the location number and connection line of The receiving card. 2. upport data interface customization ： With LedSet 4.0 software, the output data of the receiving card can be detected and edited. 3. Supports the construction of complex box：With the advanced layout of LedSet4.0 software, you can quickly arrange and structure the box modules. 4. Supports the construction of complex large screens：In the complex display connection with LedSet4.0 software, the boxes can be quickly arranged and structured arbitrarily
Improved Hardware Stability	1. Network port hot backup ： Network ports increase the reliability of serial connection of the receiving card through the loop connection of

	the main and standby network cables. When one of the main and standby series lines fails, the other can ensure the normal display of the Screen. 2. Support hardware reset function：The receiving card can restart the online hardware by itself after the hardware online upgrade is completed.
Intelligent Software Upgrade	1. Support receiving card configuration parameter readback：Can read back the current receiving card configuration parameters on LedSet 4.0. 2. Support network cable bit error rate detection：On LedSet 4.0, the quality of the network cable communication signal connected to the system hardware can be monitored in real time to quickly judge the quality of the network cable and troubleshoot. 3. Communication monitoring function：Monitor the working status of the receiving card in real time on LedSet 4.0.

Output Interface Definition

24 parallel data interface definitions

JP1——JP12 Data Interface Definition

Instruction	Description	Pin	Pin	Description	Instruction
RGB Data output	R	1	2	G	RGB Data output
	B	3	4	GND	Ground
	R	5	6	G	RGB Data output
	B	7	8	E	Line decoding signal
Line decoding signal	A	9	10	B	
	C	11	12	D	
Shift clock output	CLK	13	14	LAT	Latch signal output
Display enable (remarks1)	OE	15	16	GND	ground

Note 1: Pin 15 is the display enable pin. When PWM chip is used, it is GCLK signal.

J16 Interface definition

Description	Pin	Pin	Description
+5V	1	2	GND
FLS_CS	3	4	FLS_DO
FLS_CLK	5	6	FLS_DI
PROGRAM_B	7	8	mCONF_DONE
GND	9	10	+5V

J12 Indicator interface definition

Pin	1	2	3	4	5
Definition	GND/KEY-	KEY+	LEDR-	VCC/LED+	LEDG-

J14 Power socket definition

Pin	1	2	3	4
Definition	VCC	VCC	GND	GND

Indicator Description

Indicator	Location	State	Description
Status indicator (green)	U1	Flashes evenly and slowly	The receiving card works normally, the network cable is connected normally, and there is no DVI signal input.
		Flashes evenly and quickly	The receiving card works normally, the network cable is connected normally, and there is a DVI signal input.
		Off	No Gigabit signal
		3 flashes quickly at intervals	The receiving card works normally, the network cable circuit is in connection, and there is a DVI signal input.
Status indicator (red)	U3	On	Normal power supply

Dimensions
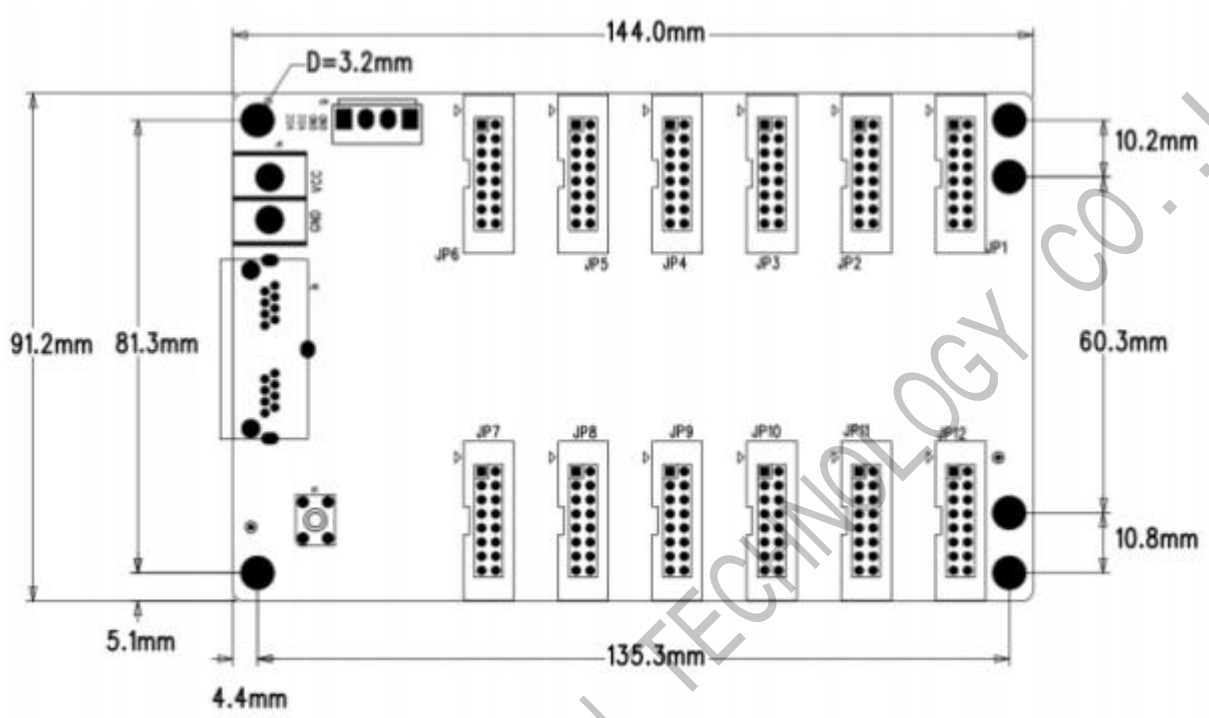
Unit：mm

Working Parameters

Electrical Parameters	Input voltage	DC3.5-5.5V
	Rated current	0.6A
	Rated power	3W
Working environment	Working temperature	-20℃-70℃
	Working humidity	10%RH-90%RH
Storage environment	Working temperature	-25℃～125℃
Board size	144.02mmX91.2mm	
Net weight	100.8g	
Certification Information	RoHS Compliant, CE-EMC Compliant	

Note

1．Must be used in accordance with this usage requirement.

2．Installation and commissioning must be done by professionals and must be anti-static.

3．Pay attention to waterproof and dust removal.