SYSOLUTION

FPGA Receiving Card

D60-12

Product specification

Version：Ver.1.2

Statement

Dear user friend, thanks for choosing Shanghai Xixun Electronic 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 Record

NO.	Version No.	Upadates	Revision Date
1	Ver.1.0	Initial issue	2022.11.09
2	Ver.1.1	Update with load	2024.08.01
3	Ver.1.2	New precautions	2025.03.27

The document is subject to change without prior notice.

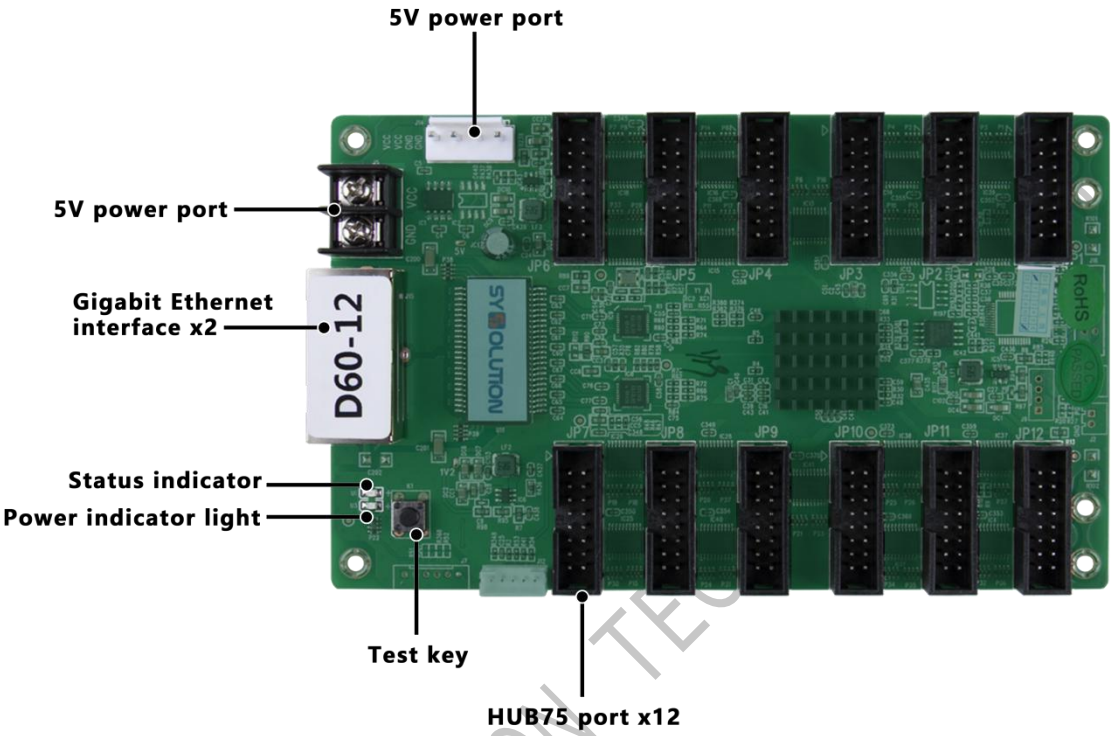
Product Introduction

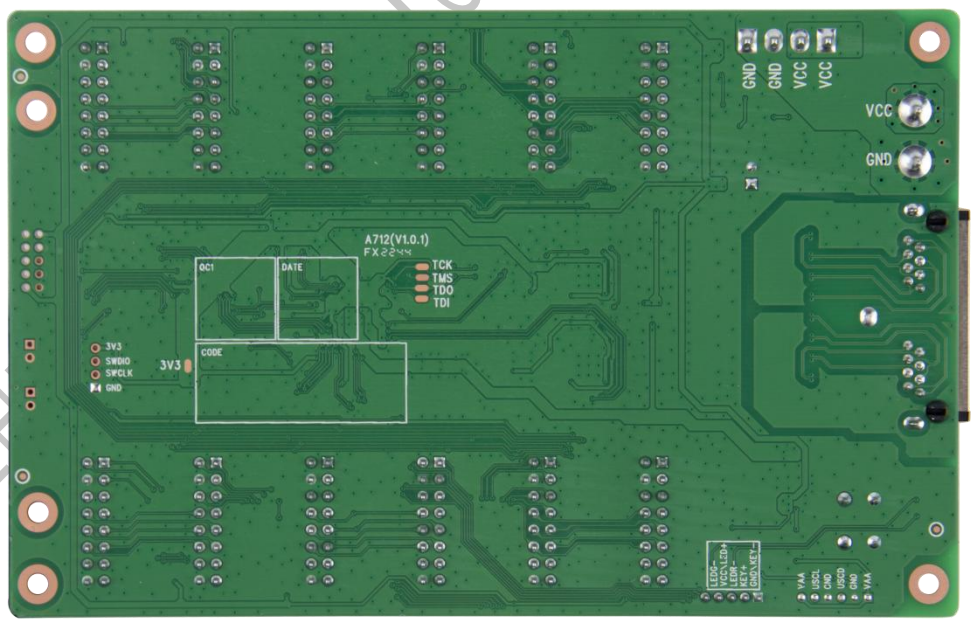
D60-12 is a standard receiving card launched by Xixun Technology. It adopts 12standard HUB75E interfaces and supports up to 24 groups of RGB parallel data. Load up to 250,000 pixels; It has strong processing capacity, super stable performance and high cost performance.

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





Load Capacity

Three parallel lines (RGB)	Data interface/quantity	Maximum load (Pixels)	Recommended with load (Pixels)	
			Module model	Load
24 group	HUB75E/12 个	250,000	P3 and above	2W12H
				128x768
		512x512	P2.5-P2-P1.86-P1.538	1W12H or 2W6H
				128x768 or 256x384 (Take P2.5 as an example)
			P1.25	1W8H
				256x1024

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

Function Definition

Function	Instructions
Improved Display Effect	1. 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 the display. 2. Support multiple display effects schemes: With LedSet4.0 software to achieve refresh priority and grayscale priority effects. 3. 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. 4. Support screen zoom function: With LedSet4.0 software, the receiving card pixelscan 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, thereceiving card number and network portinformation will be displayed on the target box, and the user can obtain the location number andconnection line of thereceiving card. 2. Support data interface customization : With LedSet 3.0 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 andstructure 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 connectionof 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 3.0. 2. Support network cable bit error rate detection：On LedSet 3.0, 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 3.0.

Output Interface Definition

24 parallel data interface definitions

JP1——JP12 Data Interface Definition

Description	Definition	Pin	Pin	Definition	Description
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	HE	Line decoding signal
Line decoding signal	HA	9	10	HB	
	HC	11	12	HD	
Shift clock output	CLK	13	14	LAT	Latch signal output
Display enabl(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

Definition	**Pin**	**Pin**	**Definition**
+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-

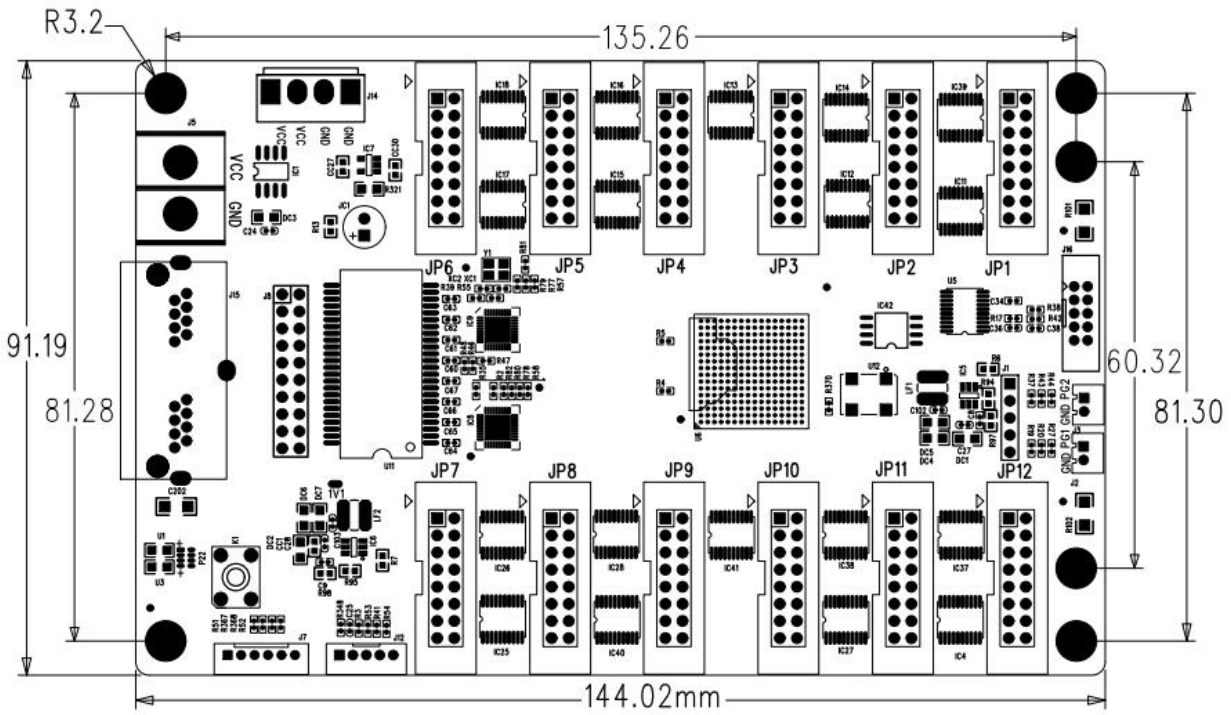
J14 Power socket definition

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 a 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	144.02mmX91.19mm	
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.
4. Please use a Category 5e network cable to connect the D60-12. Currently, the transmission rate of the network interface chip of the LED control system is compatible with that of the Category 5e network cable. Although the Category 6A network cable has stronger performance, for the LED control system, its performance is excessive. And it is prone to compatibility issues due to different specifications, such as unstable transmission rate and signal loss.