



KPB12 Specification

Pandora Series

Version: v3.1

Release Date: May 2025

Revision History

Version	Summary of the revisions	Revised by	Revision Date
V 1.0	Initial release	Liao Yanjian	2022.9.2
V 1.1	Modify some parameters, add network interface, change injection molding appearance	Liao Yanjian	2022.11.2
V 2.0	Update motherboard image	Liao Yanjian	2023.2.10
V 3.0	Updated the motherboard image and modified some parameters	Liao Yanjian	2024.5.30
V 3.1	Add authentication and modify document format	Liao Yanjian	2025.05.26

Product Overview

The KPB12 All-in-One Card from Kystar is a new-generation LED multimedia playback card that integrates a sending card, receiving card, and playback terminal into one device. Compared to traditional synchronous playback solutions, it eliminates the need for a separate computer, making control more convenient at any time. With a built-in receiving card, it can connect directly to the LED display. It supports smooth scrolling text at 60Hz frame rate, as well as remote power control.

It is widely used in advertising display fields such as lamp pole screens, storefront displays, and vehicle-mounted LED screens.



Product Certification

FCC, CQC, CE, RoHS

If the product has no relevant certification in any country or region, please contact us immediately for confirmation or processing. Otherwise, if any legal risks are caused, the customer shall bear them by himself or our

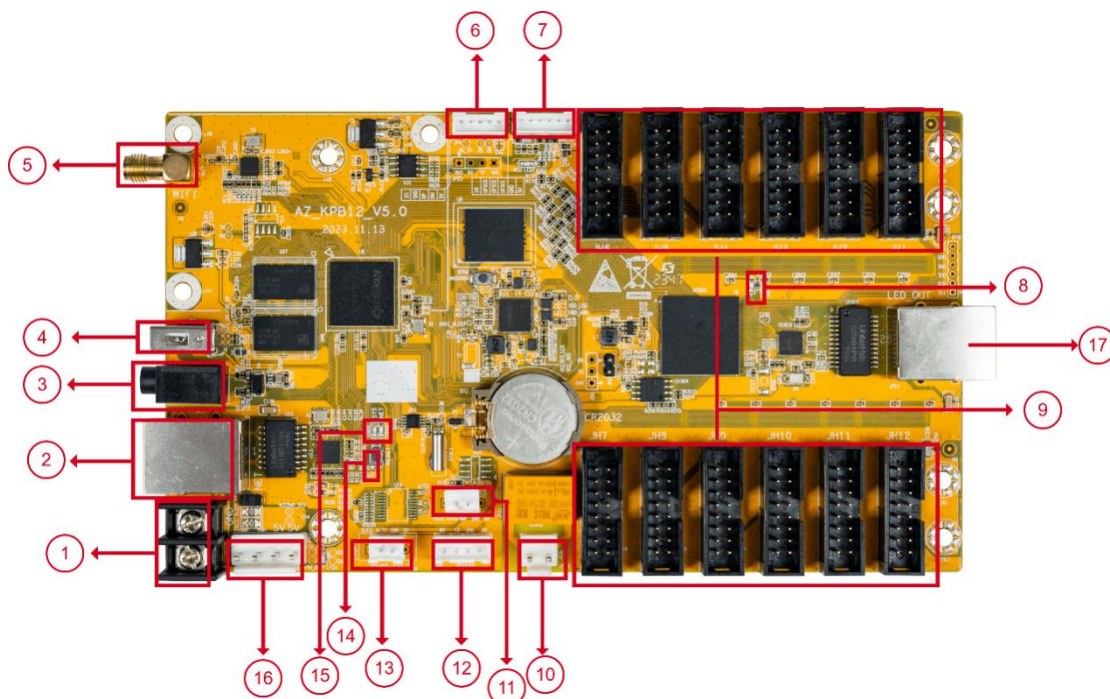
company shall have the right to seek compensation.

Features

- Integrates 12 Hub-75E interfaces, supports 200,000 pixels per card, supports cascaded receiving cards, and supports up to 650,000 pixels ;
- Supports discounted playback, with a maximum width of 16384 and a maximum height of 8192 pixels;
- WIFI, Ethernet port, U disk, 4G and other communication methods;
- Built-in 8GB (4GB available to users) storage, supports USB flash drive expansion, plug and play;
- 3.5mm audio output, audio and video synchronous output;
- Supports high-definition video hardware decoding, 60Hz frame rate output and smooth text;
- Standard configuration: 1 set of relay controller to remotely control the power supply;
- Optional 4G module, supports Kares cloud publishing system cluster control;
- Onboard brightness sensor interface, automatically adjusts screen brightness according to ambient brightness;
- Supports secondary development and can meet the needs of various scenarios;
- Supports Kares cloud platform, cluster hierarchical management and multi-role program release;
- The simple APP allows you to fully control program editing and management, allowing you to enjoy the big screen at your fingertips.
- The new Web PE adopts B/S architecture LAN control software, which is feature-rich and easy to learn and use;

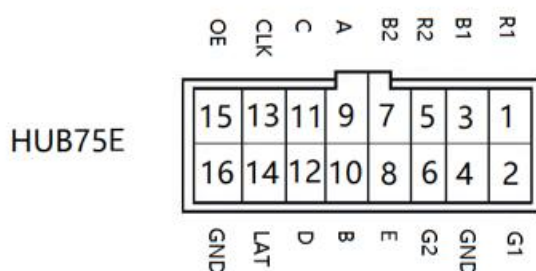
Parameter

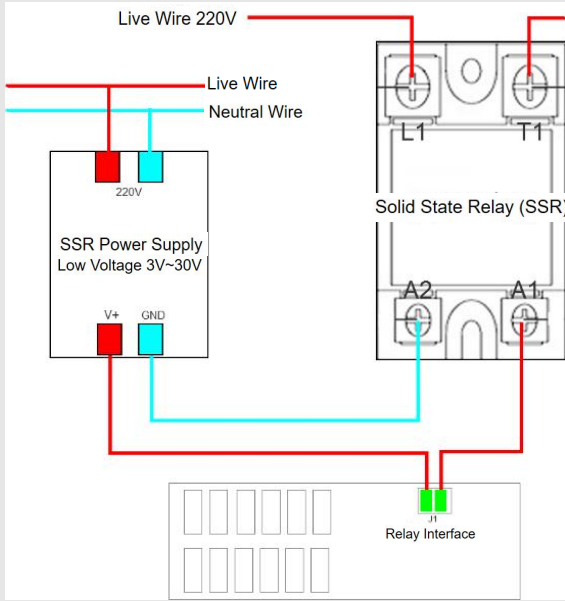
Interface Description



Interface Information

No.	Type	QTY	Specification
1	Power terminal	1	5V DC power input;
2	Input network port	1	Connect to the debugging computer for debugging or publishing programs; LAN/Internet connection port
3	Audio output interface	1	3.5mm audio output port
4	USB interface	1	USB2.0 * 1 , update programs via USB flash drive and expand storage space
5	WIFI	1	Wi- Fi antenna interface
6	4G/5G interface	1	Module interface, supports 4G/5G cards of the three major operators
7	Relay expansion	1	Can be connected to an external relay module to expand three relays

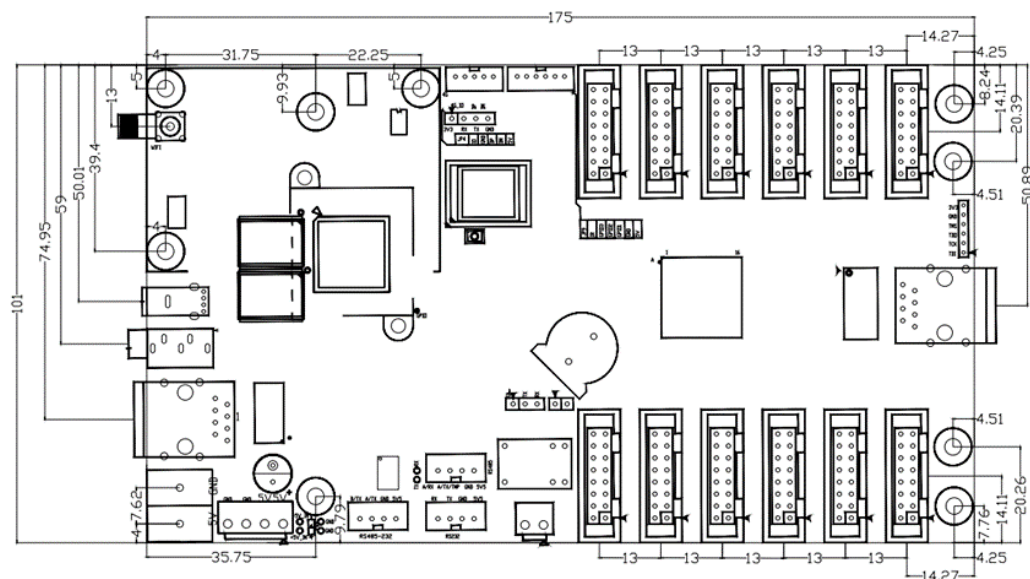
	interface		(relay module optional device)
8	Receiving card indicator light	1	<p>Steady on: Normal operation</p> <p>Flash: in program B</p> <p>Off: Abnormal operation</p>
9	HUB75E interface	12	<p>Connect to the module via cable</p> <p>HUB port definition</p> <div data-bbox="628 658 1165 927">  <p>HUB75E</p> </div>

1 0	Relay control interface	1	<p>Relay power interface, can control external power switch</p> <p>DC: Maximum voltage 30V, maximum current 3A</p> <p>AC: Maximum voltage 250V, maximum current 3A</p> <p>Note: It is recommended to use direct current. It is not recommended to directly control alternating current with a relay. If you need to control alternating current, it is recommended to use the wiring method shown below.</p> 
1 1	TEMP	1	AD temperature sensor interface
1 2	TTL	1	TTL interface, can be connected to external GPS module
1 3	LIGHT	1	AD brightness sensor interface
1 4	R ESET	1	Long press for 5 to 10 seconds and release within 30 minutes to take effect.
1 5	Indicator Lights	2	<p>SYS operation status indicator</p> <p>The system and app start up normally, and sys is always on;</p> <p>When the player app is abnormal, sys flashes once per second</p> <p>During the system upgrade process, sys flashes quickly, 4 times per second</p>

			<p>NET connection status indicator</p> <p>The NET light is on when the client is connected, otherwise it is off;</p> <p>When connected to the cloud platform, NET flashes once per second;</p> <p>Upload program, NET flashes quickly, 4 times per second</p>
1 6	Foolproof power interface	1	<p>5V DC power interface, with foolproof design , and 1 5V DC terminal function</p> <p>Can be the same</p>
1 7	Gigabit Ethernet	1	Output to the next level receiving card

* Due to hardware upgrades, interface differences will not be notified separately. The actual product will prevail.

Size



Unit: mm

Specification

External interface type	
Gigabit output network port*1	Output signal to receiving card
Audio output port *1	1/8" (3.5mm) TRS plug output
USB2.0*1	Storage expansion possible (U disk or SD card, maximum 128G)
100M input network port *1	Access to LAN , cluster control
WIFI	WiFi AP + STA dual WiFi mode , can be used as a hotspot for mobile phones and computers to connect
LIGHT	External brightness sensor to control screen brightness according to

	ambient brightness (L600 module needs to be purchased separately)
TEMP	External temperature sensor to obtain ambient temperature and humidity (W600 module needs to be purchased separately)
Relay	Can be used to control an external power switch (J3 00 module needs to be purchased separately)
4G/5G	Access to WAN (L610 module needs to be purchased separately)
GPS	Precise positioning, precise timing, and multi-screen synchronization (PM650 module needs to be purchased separately)

Performance parameters

Hardware performance	1.6GHz, quad-core CPU, 3D GPU 1GB@600MHz DDR3 high-speed memory Support 1080p@60fps hard decoding playback Support 1080p@30fps hardware encoding
Storage Space	Built-in 8GB storage (4G available to users)
Load size	Comes with 12 HUB75E interfaces , the whole machine carries 65W points, the widest is 3840, the highest is 2000
Wi- Fi connection distance	20 meters (unobstructed)

Support multimedia formats

Video Format	AVI, WMV, MPG, RM/RMVB, VOB, MP4, FLV and other common video formats; Supports multiple videos playing simultaneously
Audio Format	MPEG-1 Layer III, AAC, etc.
Image Format	Support bmp, jpg, png , etc.
Text form	Single-line text, static text, multi-line scrolling text, office, etc.
Clock	Real-time clock, multi-region clock display and management

OSD	Supports 32-bit true color OSD, can be displayed at any position, supports video/graphics mixing, and can overlay graphics on video.
Machine Specifications	
Dimensions	175 x 101mm (W x H)
Packing size	212x160x40mm (L×W×H)
Net weight	151g
Gross weight	260g
Supported receiving cards	Kystar full range of receiving cards
Input adapter power	DC 5V/2A power supply
Rated Power	8 W
Operating temperature	-40 °C ~ 80 °C
Operating humidity (%)	5% ~ 95%
Protection level	IP20 Please pay attention to waterproofing, do not immerse the product in water , do not drip water into the product, etc.

Note:

- 1) To ensure the time storage of the control card during normal operation, please make sure that the battery on the control card is normal and not loose.
- 2) To ensure long-term stable operation of the system, please try to use a standard 5V voltage (2A and above current) power supply.

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