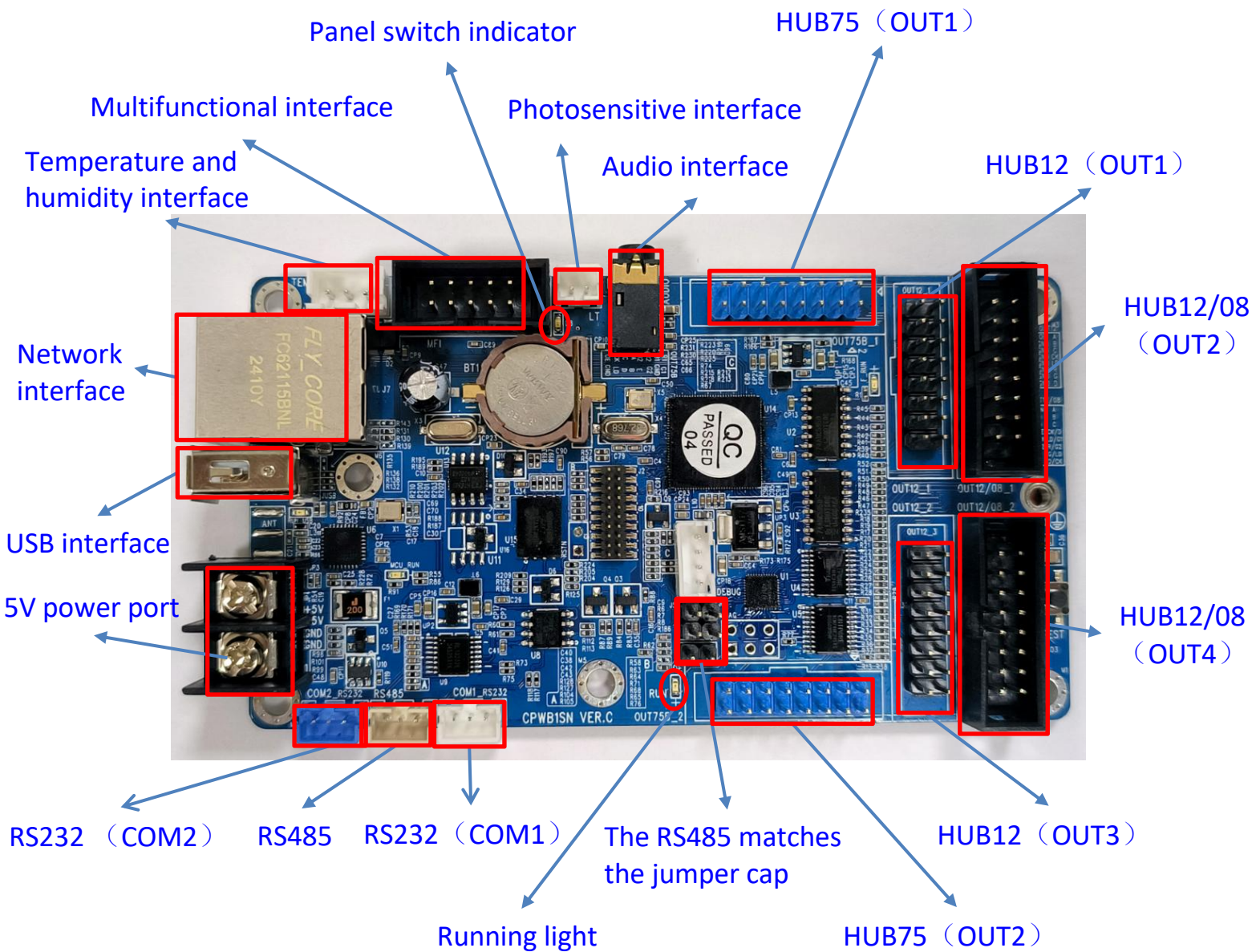


C-Power new 1 Series card hardware manual

catalogue

- 1、Control card picture 1
- 2、Controller Card Interfaces and Indicators2
 - ① Power Interface 2
 - ② Display Interface2
 - ③ Function Expansion Interface 2
 - ④ Communication Interface 3
- 3、Parameter Settings4
 - ① Methods and Steps for Setting Parameters 5
 - ② Detailed Description of Parameters5
 - a、Communication Parameters 5
 - b、Basic Display Parameters5
 - c、Scanning Parameters 6
 - d、Other Settings6
- 4、Dimension Diagrams 7

1、 Control card picture



2、Controller Card Interfaces and Indicators

① Power Interface

- +5V DC power supply

Operating Current: 300~600mA

Operating Environment: Complies with GB/T 2423.25 and GB/T 2423.26 standards

- Reverse Power Protection: Automatically protects the board when power is connected in reverse
- Soft Start: Prevents impact on the power plane of the board when powered on
- Overvoltage Protection: Automatically shuts down power input if the input voltage exceeds 6V
- Undervoltage Protection: Automatically shuts down power input if the input voltage is below 3.5V
- Short Circuit Auto-recovery: Automatically cuts off power through a self-recovering fuse if the 5V output is shorted, and resumes normal operation once the short is resolved

② Display Interface

[OUT1~OUT4]: Standard HUB12/08 interface output (When set to HUB12 interface via software, OUT1-OUT4 output as 12 interfaces. When set to HUB08 interface, OUT2 and OUT4 output as 08 interfaces)

[OUT75_1~ OUT75_2]: Two standard HUB75 interface outputs

③ Function Expansion Interface

Standard 10PIN Expansion Function Interface

Pin Definitions:

Signal Name	Pin Number	Pin Number	Signal Name
Analog Signal Input	1	2	+5V Power Output
Multifunction Digital Signal1	3	4	+5V Power Output
Multifunction Digital Signal2	5	6	GND
Multifunction Digital Signal3	7	8	GND
Screen Power Switch Control	9	10	GND

Pin Functions:

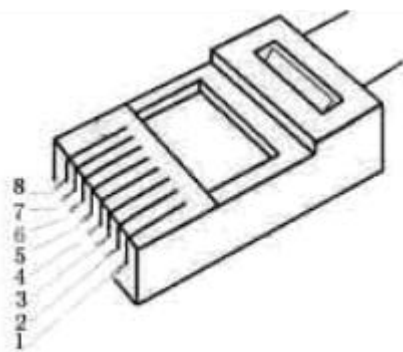
Pin Number	Signal Name	Function Description
1	Analog Signal Input	External analog signal input monitoring, default for light sensor input
3	Multifunction Digital Interface1	Input or output, default for remote control input
5	Multifunction Digital Interface2	Input or output, reserved
7	Multifunction Digital Interface3	Input or output
9	Screen Power Switch Control	Directly drive the external circuit, control on and off the screen body power supply. An external relay is required for this function, and D5 indicates the status of the output switch panel
2、4	+5V Power Output	Provides power to external accessories
6、8、10	GND	Ground connection for external accessories

④ Communication Interface

1) Network Interface

The controller card supports network communication with one standard TCP/IP network port. It can be directly connected to a computer network port or connected through a switch, LAN, or public network (Internet)

【Network Cable Connection】: Use a standard network cable (compliant with EIA/TIA568A/B international standards) to connect to a computer, or connect through a network switch or router to LAN or the public network



Wire Sequence	Wire Color
1	Orange-White
2	Orange
3	Green-White
4	Blue
5	Blue-White
6	Green
7	Brown-White
8	Brown

Figure1 568B Network Cable

2) USB Drive

The controller card supports program updates via USB drive with one standard USB interface

3) Serial Port

【Serial Port Connection Cable Description】

	Controller Card Signal Name	Controller Card Signal Name
1	TX1	2
2	RX1	3
3	GND	5

Table 1 RS232 Connection

	Controller Card Signal Name	485 Converter Interface
1	A	485+
2	B	485-
3	GND	GND

Table 2 RS485 Connection

3、Parameter Settings

C-Power control card supports most indoor and outdoor LED displays available on the market. Different application scenarios influence the choice of LED driver chips and PCB

design and layout, requiring parameter settings to match various LED displays. Different communication methods also require different settings

① **Methods and Steps for Setting Parameters**

Open the LedCenterM software menu and select "Tools" > "LedTool Setting Tool" to bring up the setting interface

② **Detailed Description of Parameters**

a、Communication Parameters

Serial Port Communication Parameters: Serial port number, baud rate

Network Communication Parameters: IP address, identification code, port number

Note: These parameters must match the software settings

b、Basic Display Parameters

Blanking: To avoid signal serial interference during row scanning, the display is turned off during row switching, known as "blanking." Different chips have different requirements for blanking actions

- Different chips have different requirements for shadow elimination, some LD signal front-end image elimination effect is good, some LD signal back-end image elimination effect is good
- Shadow elimination will occupy the normal display time of the screen and reduce the brightness of the screen
- Static screen body because there is no serial phenomenon, no need to eliminate the shadow

Column Adjustment: Direction of the entire display signal line. The signal line enters from the right side of the screen when viewed from the front is positive, from the left side is negative. Incorrect settings result in mirrored images

OE Signal Polarity: Polarity of the screen enable signal, related to circuit design. Correct settings ensure the highest brightness level (31) displays the brightest, the

lowest brightness level (0) displays the darkest or black screen. Incorrect settings result in reversed brightness control

Row Order Adjustment: To facilitate wiring, the row order on the PCB may not be in a normal 1-31 sequence. This parameter compensates for row order displacement

Output Interface Type: Control card selection of output HUB75, 12, 08, etc

c、Scanning Parameters

Refresh mode: There are 3 refresh modes, default refresh, standard refresh and High refresh. Among them, high refresh is the highest refresh frequency, and standard refresh is the lowest refresh rate.

Scanning Mode: Determined by the number of rows multiplexed during display. The scanning mode cannot exceed the size of the unit module. For example, a unit module with 16 rows may use 1/16, 1/8, 1/4, 1/2 scan modes, or static; a unit module with 8 rows may use 1/8, 1/4, 1/2 but not 1/16 scan mode

Unit Module Size: This "module" refers to the area controlled by a set of signal lines, generally only counting height, width can be cascaded. For example, a 1/16 scan screen with a signal line controlling 16 rows height has a unit module size of 16 rows. If the actual LED module has only one set of signal lines for input and output, the "unit module size" equals the LED module height; if the LED module input has two or more sets of signal lines, the "unit module size" must be divided accordingly

d、Other Settings

Automatic Screen Switching and Brightness Control: Set automatic tasks for the display, customers can also set "On/Off Screen" and "Brightness Adjustment" in LedCenterM software

