C10

Receiving card

User Manual

Document version:： V2.0

CONTENT

1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	C10（V2.0）	June 23(th), 2025	First release

2 Product Introduction

C10 is an ultra-small size high-end receiving card independently developed and launched by Mooncell, with 512 pixels and a maximum of 1024 pixels Support 18-bit, pixel-by-pixel chromaticity correction, low delay, RGB independent Gamma adjustment, 90 multiple rotation of the screen, serial number detection of the receiving card, configuration parameter readback and other functions to improve the screen display effect and user experience;

The output of the board adopts universal plug-in interface with 2.0mm spacing. The size of C10 is only (85 mm x 12 mm), which is the smallest external dimension that can be realized in the industry. It can save design space, simplify the structural design of the screen and reduce the design difficulty, and with high cost performance. With the help of this system, customers can realize unprecedented innovative design.

3 Product Characteristics

3.1 Improve the display effect

- Low delay

  Reduce the delay of the video source at the receiving card end, and the delay is as low as 1 frame (for
- RGB independent Gamma adjustment

  With the independent master control and software supporting RGB independent Gamma adjustment, the problems such as uneven low gray and white balance drift of the display screen are effectively controlled by adjusting "red", "green" and "blue" respectively, making the picture more realistic.
- 90 multiple rotation of the picture.

  With the help of AutoLED software, the picture is displayed in multiples of 90 (0, 90, 180, 270).

- Picture scaling

  With the help of AutoLED software, the pixels loaded on the receiving card can be scaled multiple times, and the display screen can be enlarged and reduced.

3.2 Improve maintainability

- Data interface customization

  With AutoLED software, the output data of the receiving card can be detected and edited.

- Complex structure box

  In the advanced layout of AutoLED software, boxes can be arranged and constructed at will quickly.

- Construct complex large screen

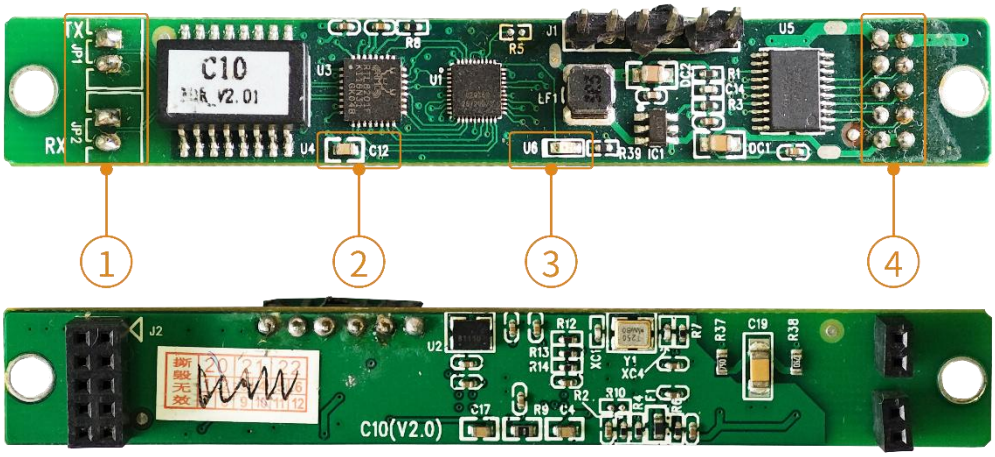
  In the complex display screen connection of AutoLED software, boxes can be arranged and constructed at will quickly.

- Loop backup

  The network port is connected through the loop of the main and standby network cables to increase the reliability of the serial connection of the receiving cards. When one of the main and standby series lines fails, the other one can ensure the normal display of the screen.

- Small size and thickness save space for the increasingly narrow box and light bar.
- Strong LED driver chip compatibility, supporting all conventional chip drivers.
- Support security upgrade
- Support the arbitrary offset of single card position and the rotation of single card display content to realize special-shaped screen.
- Reduce the number of cables and connectors and simplify the structural design of LED screen. Signal transmission only needs 2-core super-category 5 twisted pair, which can combine the display screen signal and power supply wiring into one design, and the peripheral cascade connection line is changed from the traditional two-in and two-out to one-in and one-out.
- Integrated network transformer simplifies the design and improves the electromagnetic compatibility, which is helpful for users to successfully pass EMC certification.

4 Product Appearance

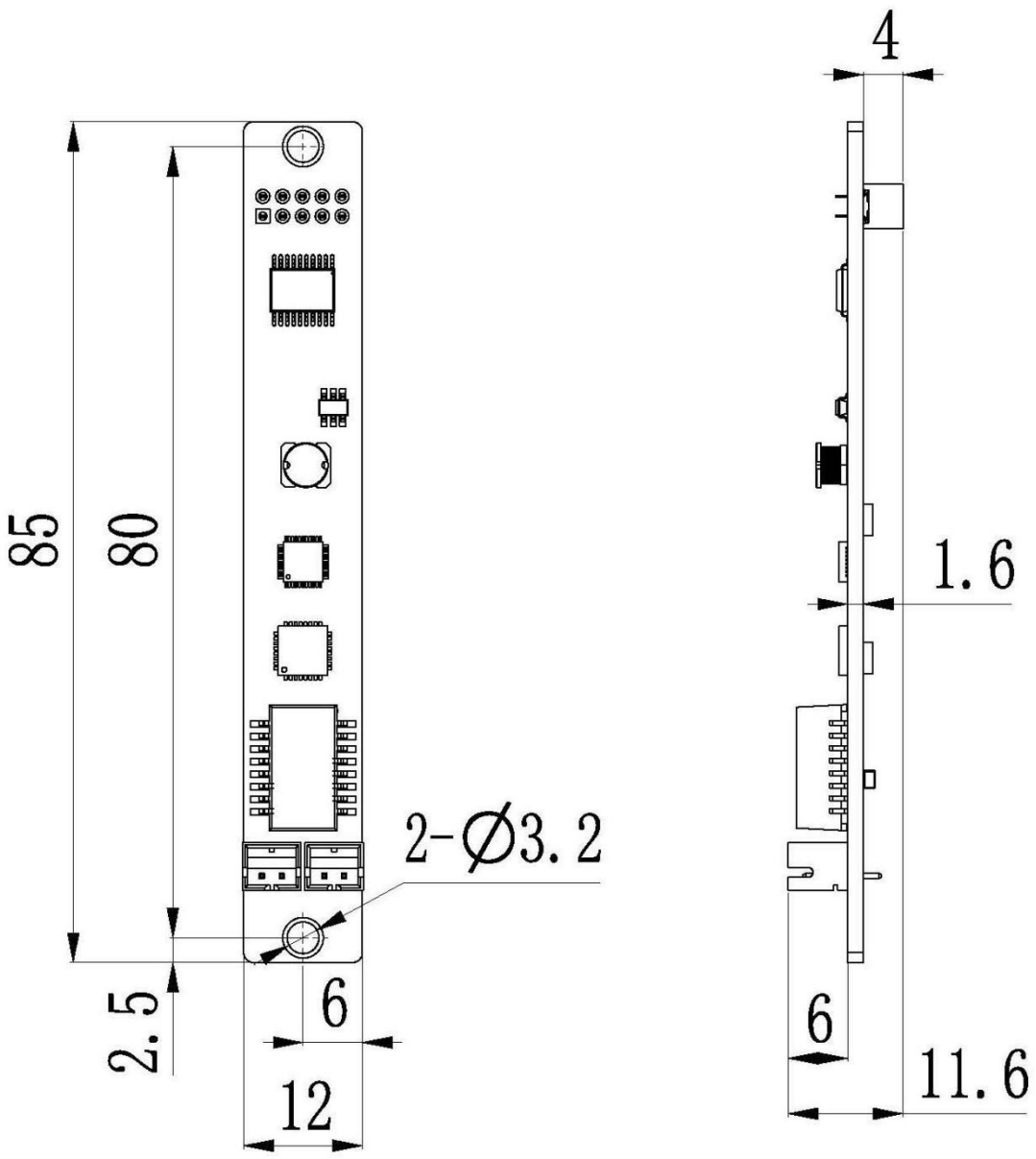


* Product photos are for reference only, please refer to the products actually purchased.

4.1 Data Interface Description

#	Interface Name	Interface Description	
1	JP1	The 100-megabit signal is input to the TX interface, and the signal interface is input from the splitter SH100.	
	JP2	The 100-megabit signal is output to the RX interface and cascaded to the next receiving card.	
2	Status Indicator U4	Uniform slow flash	The receiving card works normally, the network cable is connected normally, and no DVI signal is input.
		Uniform flash	The receiving card works normally, the network cable is connected normally, and there is DVI signal input.
		Constant extinction	No gigabit network signal
		Flash 3 times at intervals	The receiving card works normally, the network cable loop is connected, and there is DVI signal input.
3	Power Indicator U6	The red light is always on, which means the power supply is normal.	
4	J2	Signal interface for output to display screen, with 5V interface for power supply.	

4.2 Product Dimensions



Tolerance: 0.3 Unit: mm

4.3 Definition of Output Interface

JP2 Data Interface Definition

Illustration	Definition	Pin	Pin	Definition	Illustration
Ground Connection	GND	1	2	GND	Ground Connection
Latch signal	LE	3	4	OE	Display enable
Serial data	DATA	5	6	CLK	Serial clock
Line decoded signal	B	7	8	A	Line decoded signal
5V	VCC	9	10	VCC	5V

5 product parameters

5.1 Basic parameters

Serial (RGB)/ parallel	Maximum band load (pixels)	Brightness correction band (pixel)	Chroma correction band (pixel)
1 group	512		
Number of cascaded cards		Support scanning lines	
≤256PCS		1-4 sweep	

5.2 Specification Parameters

Electrical parameters	Input voltage	DC3.5~5.5V
	Rated current	0.6A
	Rated power	1W
Working environment	Working temperature	-20℃~70℃
	Working humidity	10%RH~90%RH has no condensation.
Storage environment	Temperature	-40℃~85℃
Board size	85mm×12mm	

Net weight	4.8g Description: Weight of single card
Outer packing size	490×340×120mm
Gross weight of product	1.6Kg Description: Including wire, accessories
Pack Mode	100PCS /box
Certificate Information	Comply with RoHS standards and CE-EMC standards.

* Current and power consumption may vary according to different factors such as product usage, environment and settings.

6 Precautions

- The installation process must be completed by professionals.
- Must be antistatic.
- Please pay attention to waterproof and dust removal.

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