



BX-i3 SPEICIFICATION

Version : V1.0 Release date : 2020.06.30

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Instruction

Thank you for purchasing our LED control card. Hope you can enjoy the excellent performance of this product. The LED control card is designed to meet international and industry standards, but if not properly operated, it may cause personal injury and property damage. In order to avoid possible hazards of the equipment and to benefit from your equipment as much as possible, please follow the instructions in this manual when installing and operating the product.

About software

It is not allowed to change, decompilation, disassemble, decrypt or reverse engineer the software installed on this product. All the above acts are illegal.

Features

- ◆ Simple structure and convenient installation ;
- ◆ Gigabit receiving card mode, matching sending card/sending box mode, matching YQ player mode;
- ◆ Full color high refresh technology, more rich display effect, support high refresh and high gray level
- ◆ Support general chip, PWM chip and other mainstream LED display driver chip;
- ◆ support any scan type within 64 scan, support 595 and other serial decoding scan;
- ◆ 24nos RGB display , cluster with 4 nos 26 PIN standard interface ,no need use HUB
- ◆ Support read-back configuration file;
- ◆ Support network line communication status detection;

GUIDING

Safety notification

- ◆ This product rated working voltage 5V, voltage range 4V ~ 5.5V, please strictly guarantee the BX-i3 series power quality.
- ◆ When you want to connect or unplug any signal cord or control cord, make sure all power cords are unplugged beforehand.
- ◆ When you want to add hardware devices to the product or remove hardware devices from the product, please confirm all signal lines and electricity
- ◆ The source line has been removed beforehand.
- ◆ Before any hardware operation, please turn off the LED control card power and release the LED control card by touching the ground surface
- ◆ Static electricity.
- ◆ Please use the product in a clean, dry and ventilated environment. Do not use the product in a high temperature or humidity environment.
- ◆ This product is an electronic product, please keep away from fire, water and inflammable and explosive dangerous goods.
- ◆ This product contains high pressure components. Please do not open the case or repair the equipment by yourself.
- ◆ Please turn off the power switch immediately and contact the dealer if you find any

FUNCTIONS

BX-I3 receiving card is suitable for all specifications of full-color LED display, supporting the mainstream LED screen driver chip. 4 nos 26 pin interfaces on board, 24nos RGB data, refresh rate up to 5000Hz. Support Gigabit network playback mode, support asynchronous player YQ series products, with BX-VS/VSM and other sending card to present the best display effect.

The new high refresh technology allows you to have ultra HD picture quality experience. Product structure is simple, easy to install, Easy operation is to achieve the best results, no need training. BX-I3 receiving card hardware system can be upgraded online to maximize user benefits.

Easy installation

Unified interface standard, the unified specification of the installation hole, support the connection of the external operation indicator lamp and the test button; 2nos double Gigabit network port, support arbitrary exchange of input and output, convenient installation cascade. 4 nos 26PIN interface on board

Flexible interface

On board 4-channel 26 PIN interface, support E signal, maximum 64sweep, 24RGB signal output. Support any interface display data group exchange, RGB color sequence exchange, convenient customers flexible adjustment module line.

More folio modes

Support 2 folio, 3 folio, 4 folio, folio width can be different. For example, 2 folio: 128 points in front, 64 points behind; Folio: 128 points in front, 128 points in the middle and 64 points

Behind.

Variable data trends

Normal data flow from right to left by default. Data flow direction can be set as left to right, top to bottom and bottom to top according to the actual use of the customer site. Specific use, and LED module alignment direction corresponding. Right-to-left and top-down modes are recommended.

Support irregular screen

Support display data line offset, can be flexibly adjusted within the range of 0 to 511 points, depending on the specific load width, the maximum can be set 384 line height display offset or data path as the unit of offset, convenient configuration for irregular screen.

More scan mode

Match with LedshowTV software, support 64 scan, 32 scan, 16 scan, 8 scan, 4 scan and other kinds of straight and folding scanning fast configuration; Support no 138 line decoding, 595 line decoding, RT5958 line decoding and so on. Through intelligent scan function, support static screen, any scan mode from 2 scan to 64 scan

Compatible with more chips

Support conventional 16 bit serial shift constant current driver chip, PWM chip, such as: common sun and moon, accumulation, micro, set up the north and other manufacturers of driver chip

Superior display effect

Adopt new high brush technology, support high refresh high grayscale display effect, Can support 256, 512, 1024, 2048, 4096, 8192, 16384, 32768, 65536 grayscale display. Flexible display mode selection, suitable for outdoor, indoor various applications. work with LedshowTV software, through adjusting the display refresh rate, display mode and display ratio and other parameters, further improve the display quality, to meet customer shooting effect.

Adjust clock

Support shift clock from 10.42MHz to 31.25MHz self-regulation, adjustable duty cycle, clock phase, etc. It can satisfy the cascading characteristics of different modules, eliminate the rising points generated when some modules are cascading, and increase the loading width as much as possible on the premise of guaranteeing the refresh rate.

Blanking adjustment

By adjusting the line blanking time, line breaking time, level 1 graying and other features, further eliminate the effect of LED screen's virtual brightness, and perfectly display the text content.

Easy maintenance

The receiving card supports configuration parameter read-back function, single point parameter setting and query read-back, and supports online upgrade, which is convenient for customer system upgrade and maintenance.

Recommend loading

The receiving card can achieve the best display effect and application experience under the control area of 256*256. The display effect of the receiving card is directly related to the length of the on-load module. In order to ensure the smooth screen adjustment, we generally recommend the following settings (refresh priority, gray level 4096).

Scan mode	Value (Recommend)	Max	Minimum refreshment rate (Recommend)
1/32	64	128	960
1/16	128	192	960
1/8	64	128	1440
1/4	64	128	1920

Notice :

- All the above scan mode refer to the straight line. If the scanning method of 1/4 with 8 lines of data, please refer to 1/8 values, If 1/4 scan with 16 lines of data, you should refer to the 1/16 values.
- If possible better to use the folio mode to improve the effect

USER MANUAL

Set parameters

➤ Display mode

Now, we have two modes, refreshment priority and brightness priority. Refreshment priority is for high refresh rate, and you will get good feedback by mobile phone or camera, but the brightness is lower. If you use brightness priority, you will get higher brightness but photo by mobile phone or camera may not so good. Usually, for indoor screen, brightness is not so important, so you can choose refreshment priority; But for outdoor screen, brightness is needed, in this situation, need to choose brightness priority

➤ Brightness mode

For brightness mode, there are 3 modes: lower, normal or high brightness. If the display mode is fixed, then, the higher the brightness is, the lower the refreshment will be. Or, on the same refreshment, the control width will be smaller. So, when the brightness is enough, you can choose lower brightness mode, as to obtain a better refresh rate and shooting effect.

➤ Gray grade

On the same refresh rate, if the control size is the same, then, the gray grade is higher, the effect will be better. But if the gray grade is higher, the control size will be smaller. So, we usually suggest to use 4096 gray scale, do not over than 16384.

➤ Refresh rate

It is not correct that the refresh magnification is higher, the effect will be better. If the refresh rate is enough, the refresh magnification is lower, the shoot effect will be better.

➤ Replacement clock

Replacement clock is also an important parameters. The higher the replacement clock is, the control size will be larger(on the same refresh rate). But some kinds of modules are not so good with quality, cannot use higher replacement clock, usually, there will be some special flashing on the screen.

➤ Gray from the first grade

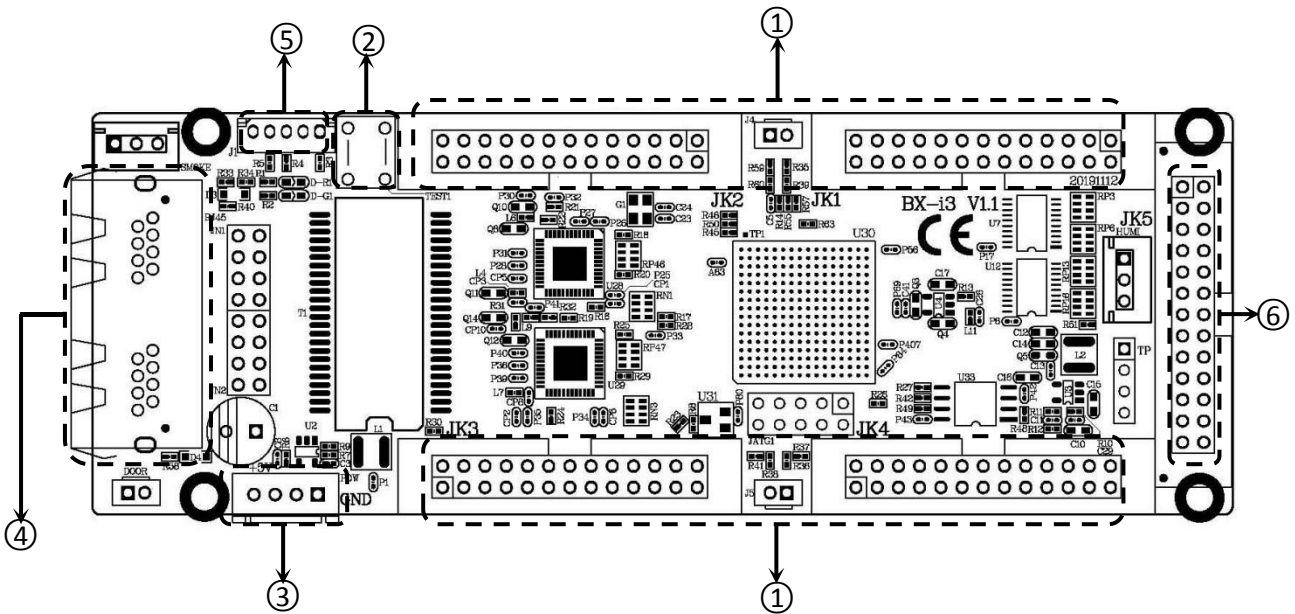
If users need better low gray effect, you can choose. But the effect will be not so good, it will be weird by your eyes. So, usually, we do not suggest.

TECHNICAL PARAMETERS

SCREEN INDEX	
Minimum size	32 x 32
Control size	256*512
Total pixels	128*1024
Row offset range	0-511
Row offset height	Max 384, setup the row height or data unit
Cascade quantity	Single LAN cable cascade receiving cards≤1024
Gray level	≤65536 degree
Refresh rate	Support 5000Hz, will be changed with the control width.
Application	All kinds of full color LED screens
Chips	All kinds of full color LED chips
Interface	4 nos 26PIN interface , 24 nos RGB data
Brightness	256grade

Details	
Input power supply	4V ~ 5.5V; Please make sure the quality of power supply.
Power Dissipation	≤5W
Temperature	-40℃ ~ 80℃
Size	136.5mm \varnothing 47.9mm

INTERFACE DIAGRAM



Interface		
1	26PIN interface	26PIN interface (JK1 , JK2 , JK3 , JK4)
2	TEST/SELECT	Screen test button
3	Power	5Vpower interface ,DC volts, standard 5V ,support3V ~ 6V
4	1000M	Gigabit port ,connect with sending card
5	External interface	External interface between indicator light and test key
6	Output interface	26PIN interface (JK5) , same to J1

Interface Definition

26PIN interface definition is shown in the table below :

Normal mode(default operating mode)

J1/J5				J2				J3				J4			
1	A	B	2	1	A	B	2	1	A	B	2	1	A	B	2
3	OE	LAT	4	3	OE	LAT	4	3	OE	LAT	4	3	OE	LAT	4
5	CLK	VCC	6	5	CLK	VCC	6	5	CLK	VCC	6	5	CLK	VCC	6
7	C	D	8	7	C	D	8	7	C	D	8	7	C	D	8
9	R1	G1	10	9	R5	G5	10	9	R9	G9	10	9	R13	G13	10
11	R1'	B1	12	11	R5'	B5	12	11	R9'	B9	12	11	R13'	B13	12
13	GND	R2	14	13	GND	R6'	14	13	GND	R10	14	13	GND	R14	14
15	G2	R2'	16	15	G6	R6'	16	15	G10	R10'	16	15	G14	R14'	16
17	B2	R3	18	17	B6	R7	18	17	B10	R11	18	17	B14	R15	18
19	G3	GND	20	19	G7	GND	20	19	G11	GND	20	19	G15	GND	20
21	R3'	B3	22	21	R7'	B7	22	21	R11'	B11	22	21	R15'	B15	22
23	R4	G4	24	23	R8	G8	24	23	R12	G12	24	23	R16	G16	24
25	R4'	B4	26	25	R8'	B8	26	25	R12'	B12	26	25	R16'	B16	26

20 nos RGB data mode

J1/J5				J2				J3				J4			
1	A	B	2	1	A	B	2	1	A	B	2	1	A	B	2
3	OE	LAT	4	3	OE	LAT	4	3	OE	LAT	4	3	OE	LAT	4
5	CLK	VCC	6	5	CLK	VCC	6	5	CLK	VCC	6	5	CLK	VCC	6
7	C	D	8	7	C	D	8	7	C	D	8	7	C	D	8
9	E	R1	10	9	E	R6	10	9	E	R11	10	9	E	R16	10
11	G1	B1	12	11	G6	B6	12	11	G11	B11	12	11	G16	B16	12
13	GND	R2	14	13	GND	R7	14	13	GND	R12	14	13	GND	R17	14
15	G2	B2	16	15	G7	B7	16	15	G12	B12	16	15	G17	B17	16
17	R3	G3	18	17	R8	G8	18	17	R13	G13	18	17	R18	G18	18
19	B3	GND	20	19	B8	GND	20	19	B13	GND	20	19	B18	GND	20
21	R4	G4	22	21	R9	G9	22	21	R14	G14	22	21	R19	G19	22
23	B4	R5	24	23	B9	R10	24	23	B14	R15	24	23	B19	R20	24
25	G5	B5	26	25	G10	B10	26	25	G15	B15	26	25	G20	B20	26

24 nos RGB data mode

The interface only contains A and B scan signals. For screens with more than 4 scans, serial decoding is required. See decoding circuit for details.

J1/J5				J2				J3				J4			
1	A	B	2	1	A	B	2	1	A	B	2	1	A	B	2
3	OE	LAT	4	3	OE	LAT	4	3	OE	LAT	4	3	OE	LAT	4
5	CLK	VCC	6	5	CLK	VCC	6	5	CLK	VCC	6	5	CLK	VCC	6
7	R1	G1	8	7	R7	G7	8	7	R13	G13	8	7	R19	G19	8
9	B1	R2	10	9	B7	R8	10	9	B13	R14	10	9	B19	R20	10
11	G2	B2	12	11	G8	B8	12	11	G14	B14	12	11	G20	B20	12
13	GND	R3	14	13	GND	R9	14	13	GND	R15	14	13	GND	R21	14
15	G3	B3	16	15	G9	B9	16	15	G15	B15	16	15	G21	B21	16
17	R4	G4	18	17	R10	G10	18	17	R16	G16	18	17	R22	G22	18
19	B4	GND	20	19	B10	GND	20	19	B16	GND	20	19	B22	GND	20
21	R5	G5	22	21	R11	G11	22	21	R17	G17	22	21	R23	G23	22
23	B5	R6	24	23	B11	R12	24	23	B17	R18	24	23	B23	R24	24
25	G6	B6	26	25	G12	B12	26	25	G18	B18	26	25	G24	B24	26

16 nos serial data mode

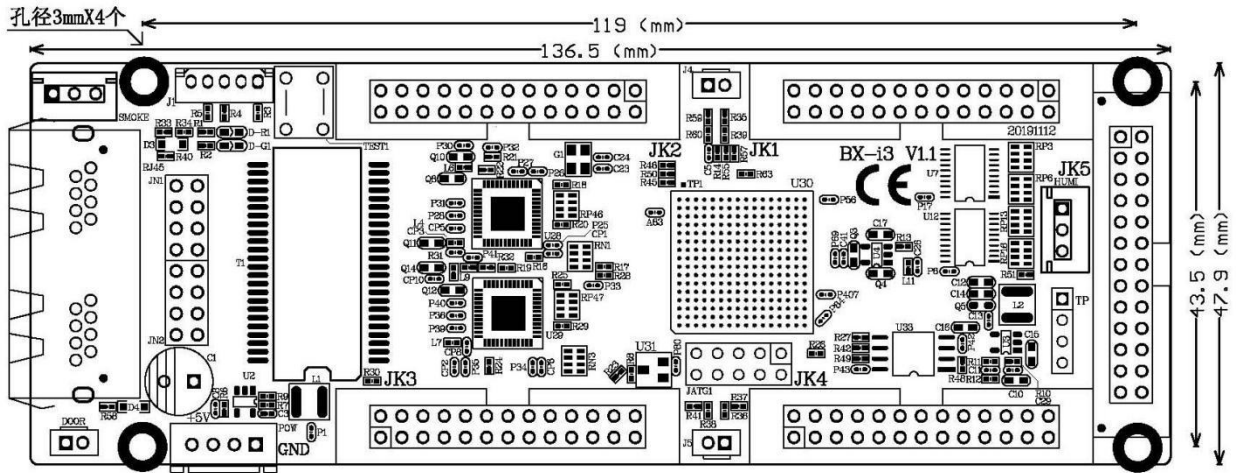
Only j1 and J5 are valid, and the output data is the same. Users can choose one of them.

Specific interface definitions are as follows:

J1/J5			
1	A	B	2
3	OE	LAT	4
5	CLK	VCC	6
7	C	D	8
9	R1	R2	10
11	R3	R4	12
13	GND	R5	14
15	R6	R7	16
17	R8	R9	18
19	R10	GND	20
21	R11	R12	22
23	R13	R14	24

25	R15	R16	26
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DEMENSION



FAQ

- ◆ Gigabit or Sending card

If need better shoot effect, choose sending card mode.

- ◆ Is there any affect for shooting by environment?

Usually, the environment brightness is the biggest fact for shoot. Cause the time of the camera shutter is according the the environment brightness.

In indoor, the brightness is lower, so, the shutter will be slower, usually, 1/60 - 1/200

seconds. In this situation, if the refresh rate is about 1000, the shoot effect will be better.

But if in outside, the brightness is higher, the shutter time will be faster, usually, faster than 1/800 seconds. In this situation, the refresh rate should be about 3000.

So, for same screen, the shoot effect in night is better then in day. And that is the reason why outdoor screen needs a higher refresh rate.

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ONBON APP