



BX-i6 Specification

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Brief introduction

Thank you for purchasing our LED control card. I hope you can fully experience the excellent performance of this product. The design of this LED control card complies with international and industry standards, but improper operation may still cause personal injury and property damage. In order to avoid potential hazards from the device and benefit as much as possible from your device, please follow the relevant instructions in this manual when installing and operating the product.

About software

No modification, decompilation, disassembly, decryption, or reverse engineering of the software installed on this product is allowed, and all of the above behaviors are illegal.

Feature

- ◆ Adopting high-density connector interfaces, dust-proof and shockproof, it has high stability and reliability.
- ◆ Small in size, suitable for various transparent screens.
- ◆ A single card supports parallel output of 32 nos of RGB signals.
- ◆ A single card can support up to 128 * 2048 pixels (depending on the driver chip and scanning method)
- ◆ Supports low brightness and high gray.
- ◆ Support calibration sequence.
- ◆ Support monitoring of box temperature, humidity, power voltage and other parameters, as well as fan control.
- ◆ Supports dual cards backup and dual power backup.
- ◆ Supports any scan type between 1~1/64 scan, and supports row decode such as 595.

Guiding

Safety guide

- ◆ The working voltage of this product is 5V, with a voltage range of 4V to 5.5V. Please strictly ensure the power quality of the BX-i6 .
- ◆ When users want to connect or unplug any signal or control cables, please make sure that all power cables have been unplugged beforehand.
- ◆ When you want to add hardware devices to this product or remove hardware devices from this product, please confirm all signal lines and electricity
- ◆ The source line has been unplugged beforehand.
- ◆ Before performing any hardware operations, please turn off the power to the LED control card and release the power on your body by touching the grounding surface
- ◆ Static electricity.
- ◆ Please use this product in a clean, dry, and ventilated environment. Do not use it in high temperature, humidity, or other environments.
- ◆ This product is an electronic product. Please stay away from ignition sources, water sources, and flammable and explosive hazardous materials.
- ◆ This product contains high-voltage components. Please do not open the chassis or repair this equipment on your own.
- ◆ If any abnormal conditions such as smoking or odor are found, please immediately turn off the power switch and contact the dealer.

Function Introduction

BX-i6 receiver card is a high-end receiver card with a small size and large load capacity, suitable for various specifications of full-color LED displays, and supports mainstream LED screen driver chips. Adopting high-density connector interfaces, dust-proof and shockproof, with high stability and reliability. Supports gigabit network playback mode, supports asynchronous player Y series products, and presents excellent display effects when paired with sending cards such as BX-VS/VSE/VHE/VSM. The new high refresh technology gives you an ultra high definition picture quality experience. The product structure is simple, easy to install, and can be easily operated to achieve optimal results without the need for training. The receiving card hardware system can be upgraded online to maximize user benefits.

Easy to install

Adopting industry unified interface standards, unified installation hole specifications, supporting external operation indicator lights and test button wiring; Supports LED display screens such as film and glass screens, with smaller usage space and simpler installation.

Flexible interface settings

Adopting a high-density connector interface, supporting E signals, with a maximum of 64 scans and up to 32 parallel or 64 serial outputs of RGB signals. Support data group exchange through any interface, exchange RGB color order, and facilitate customers to flexibly adjust module wiring.

Multiple split methods

Supports 2 pairs, 3 pairs, 4 pairs, and the width of the pairs can be different. For example, under 2 pairs: 128 points in the front and 64 points in the back; Under 3 pairs: 128 points in the front, 128 points in the middle, and 64 points in the back.

Variable data direction

The normal data flow is from right to left. According to the actual usage situation on site in default, the data flow can be set from left to right, from top to bottom, and from bottom to top. The specific usage corresponds to the arrangement direction of LED modules. It is recommended to use the right to left and top to bottom modes.

Support special sharp screens

Support displaying data row offset, and can flexibly adjust the row offset within the range of 0 to 511 points, depending on the specific load width. The maximum display offset can be set to 384 rows or offset based on the number of data paths, facilitating the configuration of irregular screens.

Multiple scan methods

In conjunction with the LedshowTV and Ledsuite software, it supports fast configuration of various straight and fold scanning methods such as 64 scan, 16 scan, 8 scan, and 4 scan; Supports decoding without lines such as 138,595,5958,5266,5366.

Match multiple chips

Supports conventional 16 bit serial shift constant current drive chips, PWM chips, etc., such as common drive chips from manufacturers such as Sun Moon Cheng, Juji, Mingwei, and Jichuang North.

High quality display screen

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.

Adjustable 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

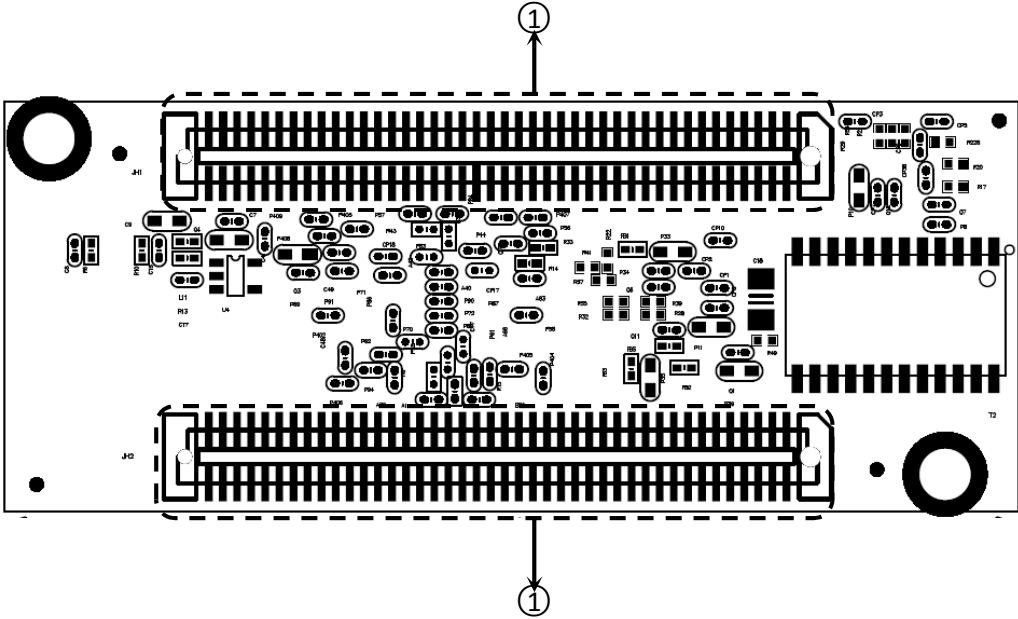
The receiving card supports configuration parameter read-back function, single point parameter setting and query read-back, and supports online upgrade, which is convenient for customer system upgrade and maintenance.

TECHNICAL PARAMETERS

SCREEN INDEX	
Parameter	Specification
Minimum control size	32 x 32
Maximum control size	128*2048 (Related to driver chips and scanning methods)
Number of data groups	32 parallel /64 serial
Row offset range	0-511Row offset range
Row offset height	Maximum height of 384 rows Or set in units of data paths
Cascade quantity	Number of single network cable level connection cards ≤1024
Grayscale level	≤65536 level
refresh frequency	Can support up to 5000Hz and varies with the load width. Please refer to the PC software prompts for details.
Application	Full color LED display screens of various specifications
Support chips	All mainstream LED display screen driver chips
Brightness adjustment	256 grade

Whole controller specifications	
Input power supply	4V ~ 5.5V ; Please strictly ensure the quality of the BX-i6 series power supply
power	≤5W
working temperature	-40℃ ~ 80℃
size	72mm×29mm

Interface diagram



Interface Description		
1	Output interface	High density connector (JH1、 JH2)

Interface Definition

32 nos parallel data interface

JH1				JH2			
1	GND	GND	2	ETH_SHEILD	ETH_SHEILD	2	
3	EXT_LCD_CS	NC	4	ETH_SHEILD	ETH_SHEILD	4	
5	EXT_LCD_RS	NC	6	NC	NC	6	
7	EXT_LCD_SCL	NC	8	NC	NC	8	
9	EXT_LCD_SDA	NC	10	PORT1_T0+	PORT2_T0+	10	
11	EXT_LCD_BL0	NC	12	PORT1_T0-	PORT2_T0-	12	
13	EXT_LCD_BL1	NC	14	NC	NC	14	
15	EXT_KEY	NC	16	PORT1_T1+	PORT2_T1+	16	
17	RFU1	NC	18	PORT1_T1-	PORT2_T1-	18	
19	RFU2	NC	20	NC	NC	20	
21	GND	NC	22	PORT1_T2+	PORT2_T2+	22	
23	NC	NC	24	PORT1_T2-	PORT2_T2-	24	
25	GND	GND	26	NC	NC	26	
27	27	28	28	PORT1_T3+	PORT2_T3+	28	
29	29	30	30	PORT1_T3-	PORT2_T3-	30	
31	31	32	32	NC	NC	32	
33	33	34	34	NC	NC	34	
35	35	36	36	TEST_INPUT_KEY	STA_LED	36	
37	37	38	38	GND	GND	38	
39	GND	GND	40	A	DCLK	40	
41	41	42	42	B	DCLK_2	42	
43	43	44	44	C	LAT	44	
45	45	46	46	D	CTRL	46	
47	47	48	48	E	OE_RED	48	
49	49	50	50	OE_BLUE	OE_GREEN	50	
51	51	52	52	GND	GND	52	
53	GND	GND	54	53	54	54	
55	55	56	56	55	56	56	
57	57	58	58	57	58	58	
59	59	60	60	59	60	60	
61	61	62	62	61	62	62	
63	63	64	64	63	64	64	
65	65	66	66	65	GND	66	
67	GND	GND	68	67	68	68	
69	69	70	70	69	70	70	
71	71	72	72	71	72	72	
73	73	74	74	73	74	74	
75	75	76	76	75	76	76	
77	77	78	78	77	78	78	
79	79	80	80	79	GND	80	
81	GND	GND	82	81	82	82	
83	RFU4	RFU3	84	83	84	84	
85	RFU6	RFU5	86	85	86	86	
87	RFU8	RFU7	88	87	88	88	
89	RFU10	RFU9	90	89	90	90	
91	RFU12	RFU11	92	91	92	92	
93	RFU14	RFU13	94	93	GND	94	
95	GND	GND	96	95	96	96	
97	RFU16	RFU15	98	97	98	98	
99	RFU18	RFU17	100	99	100	100	
101	NC	NC	102	101	102	102	
103	NC	NC	104	103	104	104	
105	NC	NC	106	105	106	106	
107	NC	NC	108	107	GND	108	
109	GND	GND	110	109	NC	110	
111	GND	GND	112	111	NC	112	
113	NC	NC	114	113	NC	114	
115	VCC5_0	VCC5_0	116	115	NC	116	
117	VCC5_0	VCC5_0	118	117	GND	118	
119	VCC5_0	VCC5_0	120	119	GND	120	

JH1							
		GND	1	2	GND		
LCD	LCD's CSsignal	EXT_LCD_CS	3	4	NC		
	LCD's RSsignal	EXT_LCD_RS	5	6	NC		
	LCD's clock signal	EXT_LCD_SCL	7	8	NC		
	LCD's data signal	EXT_LCD_SDA	9	10	NC		
	LCD's Backlight signal1	EXT_LCD_BL0	11	12	NC		
	LCD's Backlight signal2	EXT_LCD_BL1	13	14	NC		
	LCD control key	EXT_KEY	15	16	NC		

JH1							
	/	RFU1	17	18	NC		
	/	RFU2	19	20	NC		
		GND	21	22	NC		
		NC	23	24	NC		
		GND	25	26	GND		
	/	GPIO_GD16	27	28	GPIO_RD16	/	
	/	GPIO_RD17	29	30	GPIO_BD16	/	
	/	GPIO_BD17	31	32	GPIO_GD17	/	
	/	GPIO_GD18	33	34	GPIO_RD18	/	
	/	GPIO_RD19	35	36	GPIO_BD18	/	
	/	GPIO_BD19	37	38	GPIO_GD19	/	
		GND	39	40	GND		
	/	GPIO_GD20	41	42	GPIO_RD20	/	
	/	GPIO_RD21	43	44	GPIO_BD20	/	
	/	GPIO_BD21	45	46	GPIO_GD21	/	
	/	GPIO_GD22	47	48	GPIO_RD22	/	
	/	GPIO_RD23	49	50	GPIO_BD22	/	
	/	GPIO_BD23	51	52	GPIO_GD23	/	
		GND	53	54	GND		
	/	GPIO_GD24	55	56	GPIO_RD24	/	
	/	GPIO_RD25	57	58	GPIO_BD24	/	
	/	GPIO_BD25	59	60	GPIO_GD25	/	
	/	GPIO_GD26	61	62	GPIO_RD26	/	
	/	GPIO_RD27	63	64	GPIO_BD26	/	
	/	GPIO_BD27	65	66	GPIO_GD27	/	
		GND	67	68	GND		
	/	GPIO_GD28	69	70	GPIO_RD28	/	
	/	GPIO_RD29	71	72	GPIO_BD28	/	

	/	GPIO_BD29	73	74	GPIO_GD29	/	
	/	GPIO_GD30	75	76	GPIO_RD30	/	
	/	GPIO_RD31	77	78	GPIO_BD30	/	
	/	GPIO_BD31	79	80	GPIO_GD31	/	
		GND	81	82	GND		
	/	RFU4	83	84	RFU3	/	
	/	RFU6	85	86	RFU5	/	
	/	RFU8	87	88	RFU7	/	
	/	RFU10	89	90	RFU9	/	
	/	RFU12	91	92	RFU11	/	
	/	RFU14	93	94	RFU13	/	
		GND	95	96	GND		
	/	RFU16	97	98	RFU15	/	
	/	RFU18	99	100	RFU17	/	
		NC	101	102	NC		
		NC	103	104	NC		
		NC	105	106	NC		
		NC	107	108	NC		
		GND	109	110	GND		
		GND	111	112	GND		
		NC	113	114	NC		
Note 1		VCC	115	116	VCC		Note 1
		VCC	117	118	VCC		
		VCC	119	120	VCC		

JH2							
	case ground	ETH_SHEILD	1	2	ETH_SHEILD	case ground	
	case ground	ETH_SHEILD	3	4	ETH_SHEILD	case ground	

JH2							
		NC	5	6	NC		
		NC	7	8	NC		
Gigabit Ethernet port	/	PORT1_T0+	9	10	PORT2_T0+	/	Gigabit Ethernet port
	/	PORT1_T0-	11	12	PORT2_T0-	/	
		NC	13	14	NC		
	/	PORT1_T1+	15	16	PORT2_T1+	/	
	/	PORT1_T1-	17	18	PORT2_T1-	/	
		NC	19	20	NC		
	/	PORT1_T2+	21	22	PORT2_T2+	/	
	/	PORT1_T2-	23	24	PORT2_T2-	/	

		NC	25	26	NC		
	/	PORT1_T3+	27	28	PORT2_T3+	/	
	/	PORT1_T3-	29	30	PORT2_T3-	/	
		NC	31	32	NC		
		NC	33	34	NC		
Note 3	Test button	TEST_INPUT_KEY	35	36	STA_LED-	indicator light	Note 2
		GND	37	38	GND		
	Row decode signal	GPIO_A	39	40	DCLK	The first nos shift clock output	
		GPIO_B	41	42	DCLK_2	The second nos shift clock output	
		GPIO_C	43	44	LAT	Latch signal output	
		GPIO_D	45	46	CTRL	Afterglow control signal	
		GPIO_E	47	48	OE_RED	display enable	
	display enable	OE_BLUE	49	50	OE_GREEN	display enable	
		GND	51	52	GND		
	/	GPIO_GD0	53	54	GPIO_RD0	/	
	/	GPIO_RD1	55	56	GPIO_BD0	/	
	/	GPIO_BD1	57	58	GPIO_GD1	/	
	/	GPIO_GD2	59	60	GPIO_RD2	/	
	/	GPIO_RD3	61	62	GPIO_BD2	/	
	/	GPIO_BD3	63	64	GPIO_GB3	/	
		GND	65	66	GND		
	/	GPIO_GD4	67	68	GPIO_RD4	/	
	/	GPIO_RD5	69	70	GPIO_BD4	/	
	/	GPIO_BD5	71	72	GPIO_GD5	/	
	/	GPIO_GD6	73	74	GPIO_RD6	/	
	/	GPIO_RD7	75	76	GPIO_BD6	/	
	/	GPIO_BD7	77	78	GPIO_GD7	/	
		GND	79	80	GND		
	/	GPIO_GD8	81	82	GPIO_RD8	/	
	/	GPIO_RD9	83	84	GPIO_BD8	/	
	/	GPIO_BD9	85	86	GPIO_GD9	/	
	/	GPIO_GD10	87	88	GPIO_RD10	/	
	/	GPIO_RD11	89	90	GPIO_BD10	/	
	/	GPIO_BD11	91	92	GPIO_GD11	/	
		GND	93	94	GND		
	/	GPIO_GD12	95	96	GPIO_RD12	/	
	/	GPIO_RD13	97	98	GPIO_BD12	/	
	/	GPIO_BD13	99	100	GPIO_GD13	/	

	/	GPIO_GD14	101	102	GPIO_RD14	/	
	/	GPIO_RD15	103	104	GPIO_BD14	/	
	/	GPIO_BD15	105	106	GPIO_GD15	/	
		GND	107	108	GND		
		NC	109	110	NC		
		NC	111	112	NC		
		NC	113	114	NC		
		NC	115	116	NC		
		GND	117	118	GND		
		GND	119	120	GND		

64 nos serial data interface

JH1							
		GND	1	2	GND		
LCD	LC' s' CS signal	EXT_LCD_CS	3	4	NC		
	LCD's RS signal	EXT_LCD_RS	5	6	NC		
	LCD's clock signal	EXT_LCD_SCL	7	8	NC		
	LCD's data signal	EXT_LCD_SDA	9	10	NC		
	LCD's Backlight signal1	EXT_LCD_BL0	11	12	NC		
	LCD's Backlight signal2	EXT_LCD_BL1	13	14	NC		
	LCD control key	EXT_KEY	15	16	NC		
	/	RFU1	17	18	NC		
	/	RFU2	19	20	NC		
		GND	21	22	NC		

JH1							
		NC	23	24	NC		
		GND	25	26	GND		
	/	Data50	27	28	Data49	/	
	/	Data52	29	30	Data51	/	
	/	Data54	31	32	Data53	/	
	/	Data56	33	34	Data55	/	
	/	Data58	35	36	Data57	/	
	/	Data60	37	38	Data59	/	
		GND	39	40	GND		
	/	Data62	41	42	Data61	/	
	/	Data64	43	44	Data63	/	
		NC	45	46	NC		
		NC	47	48	NC		
		NC	49	50	NC		

		NC	51	52	NC		
		GND	53	54	GND		
		NC	55	56	NC		
		NC	57	58	NC		
		NC	59	60	NC		
		NC	61	62	NC		
		NC	63	64	NC		
		NC	65	66	NC		
		GND	67	68	GND		
		NC	69	70	NC		
		NC	71	72	NC		
		NC	73	74	NC		
		NC	75	76	NC		
		NC	77	78	NC		
		NC	79	80	NC		
		GND	81	82	GND		
	/	RFU4	83	84	RFU3	/	
	/	RFU6	85	86	RFU5	/	
	/	RFU8	87	88	RFU7	/	
	/	RFU10	89	90	RFU9	/	
	/	RFU12	91	92	RFU11	/	
	/	RFU14	93	94	RFU13	/	
		GND	95	96	GND		
	/	RFU16	97	98	RFU15	/	
	/	RFU18	99	100	RFU17	/	
		NC	101	102	NC		
		NC	103	104	NC		
		NC	105	106	NC		
		NC	107	108	NC		
		GND	109	110	GND		
		GND	111	112	GND		
		NC	113	114	NC		
Note 1		VCC	115	116	VCC		Note 1
		VCC	117	118	VCC		
		VCC	119	120	VCC		

JH2							
Gigabit Ethernet port	case ground	ETH_SHEILD	1	2	ETH_SHEILD	case ground	Gigabit Ethernet port
	case ground	ETH_SHEILD	3	4	ETH_SHEILD	case ground	
		NC	5	6	NC		
		NC	7	8	NC		
	/	PORT1_T0+	9	10	PORT2_T0+	/	

JH2							
	/	Port1_T0-	11	12	Port2_T0-	/	
		NC	13	14	NC		
	/	Port1_T1+	15	16	Port2_T1+	/	
	/	Port1_T1-	17	18	Port2_T1-	/	
		NC	19	20	NC		
	/	Port1_T2+	21	22	Port2_T2+	/	
	/	Port1_T2-	23	24	Port2_T2-	/	
		NC	25	26	NC		
	/	Port1_T3+	27	28	Port2_T3+	/	
	/	Port1_T3-	29	30	Port2_T3-	/	
		NC	31	32	NC		
		NC	33	34	NC		
Note 3	test button	TEST_INPUT_KEY	35	36	STA_LED-	indicator light	Note 2
		GND	37	38	GND		
	Row decode signal	A	39	40	DCLK	The first nos shift clock output	
		B	41	42	DCLK_2	The second nos shift clock output	
		C	43	44	LAT	Latch signal output	
		D	45	46	CTRL	Afterglow control signal	
		E	47	48	OE_RED	display enable	
	display enable	OE_BLUE	49	50	OE_GREEN		
		GND	51	52	GND		
	/	Data2	53	54	Data1	/	
	/	Data4	55	56	Data3	/	
	/	Data6	57	58	Data5	/	
	/	Data8	59	60	Data7	/	

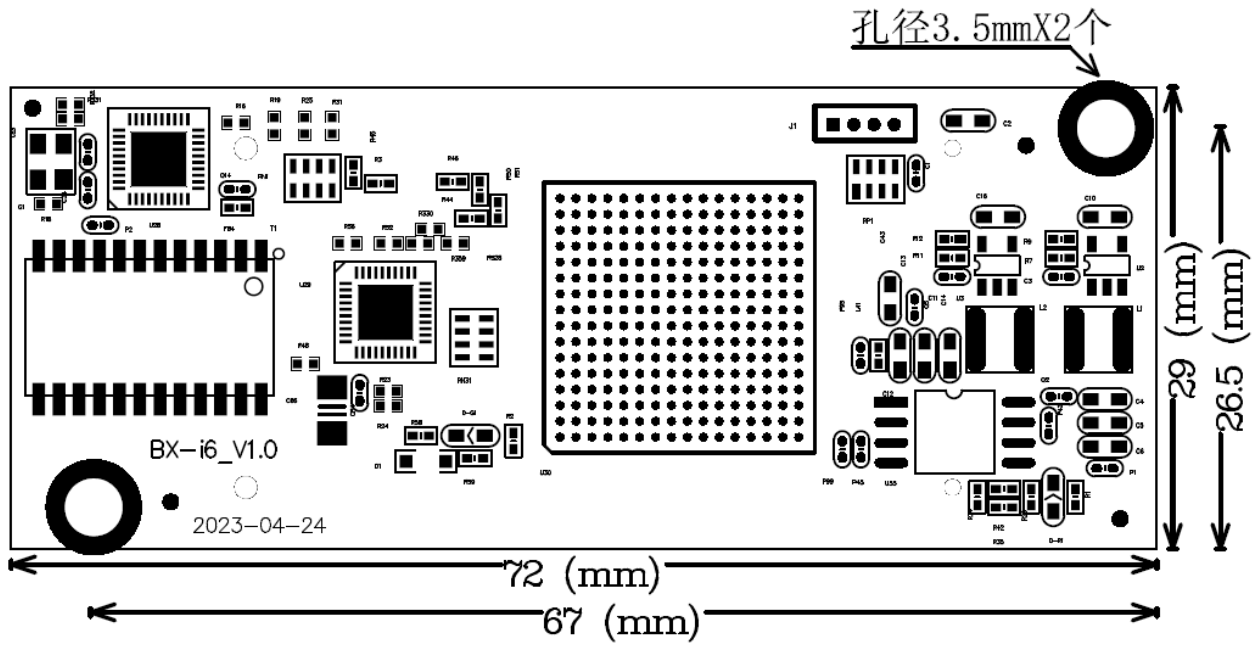
	/	Data10	61	62	Data9	/	
	/	Data12	63	64	Data11	/	
		GND	65	66	GND		
	/	Data14	67	68	Data13	/	
	/	Data16	69	70	Data15	/	
	/	Data18	71	72	Data17	/	
	/	Data20	73	74	Data19	/	
	/	Data22	75	76	Data21	/	
	/	Data24	77	78	Data23	/	
		GND	79	80	GND		
	/	Data26	81	82	Data25	/	
	/	Data28	83	84	Data27	/	
	/	Data30	85	86	Data29	/	
	/	Data32	87	88	Data31	/	
	/	Data34	89	90	Data33	/	
	/	Data36	91	92	Data35	/	
		GND	93	94	GND		
	/	Data38	95	96	Data37	/	
	/	Data40	97	98	Data39	/	
	/	Data42	99	100	Data41	/	
	/	Data44	101	102	Data43	/	
	/	Data46	103	104	Data45	/	
	/	Data48	105	106	Data47	/	
		GND	107	108	GND		
		NC	109	110	NC		
		NC	111	112	NC		
		NC	113	114	NC		
		NC	115	116	NC		
		GND	117	118	GND		
		GND	119	120	GND		

Note 1 : input power VCC recommended use 4V ~ 5.5V.

Note 2 : The running indicator light is effective at a low level.

Note 3 : The test button is effective at low levels.

Dimensional diagram



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ONBON APP