BX-i5 receiving card specification

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Catalog

Brief Introduction

Thanks for choosing LED control card. The design ofthe control card is according to the international and industrial standard, but if the operations are incorrect, it will probably bring you personal injury and financial harm. As to avoid these and win more from your equipment, please obey the specifications of this file.

About Software

Cannot do any modification, decompilation, disassembling, decoding or reverse engineering on our software, it's illegal.

Characteristics

- Adopted DDR2 sodimm interface , easy to be integrated into the adapter and display board to realize the high integration of display module.
- Small size, suitable for all kinds of transparent screens.
- Single card supports 32 nos of RGB signals.
- Single card can support Max:128 * 2048 pixels.
- Support low brightness and high grayscale.
- Support calibration sequence.
- Support monitoring cabinet temperature, humidity, power supply voltage and other parameters .
- Support dual card backup and dual power backup.
- Support any kinds of scan mode from static to 1/64
- Support arbitrary point selection, which can easily realize creative displays such as special-shaped screen and spherical screen.
- Support Onbon full range of sending devices.

Guiding

<u>Safety Note</u>

➢ Input voltage is 5V, voltage range is from 4V-5.5V, please make sure the quality of the power supply of BX-i5 series.

➢ Please make sure that all the power supply cables are plugged off when you want to connect or plug off any signal or controlling cables.

➢ Please make sure that all the power supply cables and signal cables are plugged off when you need to put in or take off the hardware equipment.

➢ Please take off the power supply of LED video processor before you do any hardware operations, and ESD by touching the ground.

➢ Please make sure the environment is clean, dry and ventilated when you use this product, also, do not put this product to a high temperature and wet environment.

➢ This product is electronic products, please keep away from fire, water source and flammable&combustible products.

➢ There′s high pressure components in this products, please donot open the box and repair it by yourself.

➢ Turn off the power supply immediately when you find smoking, peculiar.

Function Introduction

BX-I5 is a high-end receiving card with small size and large load. It is suitable for full-color display of various specifications and supports mainstream driver chips.Adopts high-density connector interface, dust proof and shockproof, with high stability and reliability.Small size, suitable for all kinds of transparent screen and film screen.32 nos RGB singal parallel output ;Single card can maximum support 128 * 2048 pixels （related to driver chip and scanning mode)

Simple install

Adopt the standard interface, standard hole specifications. Support connecting indicator light and test button from outside; It supports film screen and glass screen, which has smaller space and easier installation

Flexible interface setting

Adopted DDR2 SODIMM interface , supports E signal, support maximum 64 scan mode, Up to 32 nos RGB parallel   signals output or 64 nos serial signals output. Support exchange the data from any interface, RGB colors will exchange in orders.

Split mode

Support 2 split modes, 3 split modes and 4 split modes, for width, can be different. Example: 2split modes: first one is 128 pixels, another one is 64 pixels; 3 split modes: first one is 128 pixels, middle one is 128 pixels, last one is 64 pixels.

Data flow direction can be changed

Default is from right to left. According to your requirements, you can set as 〝left to right" "top to bottom〞〝 bottom to top".

Support special-shaped screens.

Support excursion of display data (from range 0-511 pixels). And maximum, users can set 384 in height for excursion.

Support many scan modes

Match with LedshowTV software, and support 64, 32, 16, 8, 4 scan modes; Support without 138, and support 595, RT958 etc. By smart scan function, can support static screen, 2 to 32 scan modes.

Compatible with many chips

Support normal chip, PWM chip. Better effects Adopt high refreshment technology, support high refreshment and high gray scale.

Clock adjustment

Support adjustment from 10.42MHz to 31.25MHz. Satisfy cascade characteristics of different modules, has better effect. On the promise of refresh rate, will increase the width.

Blanking adjustment

Adjust the blanking, as to adjust the virtual light.
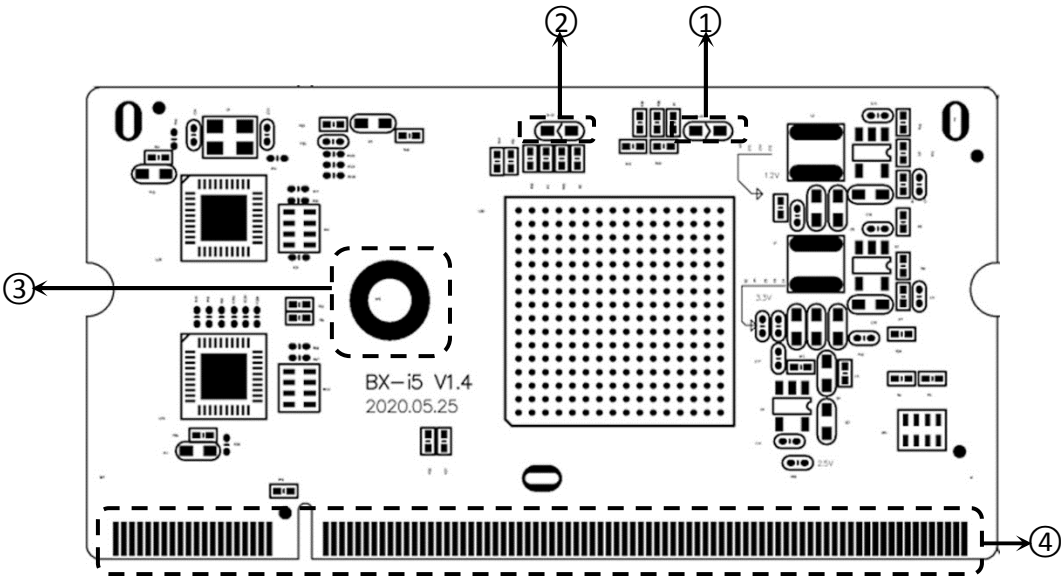
Maintenance Receiving card

Supports read back function of configuration parameters; Support update online; It is convenient for customers to update and maintain.

Specification

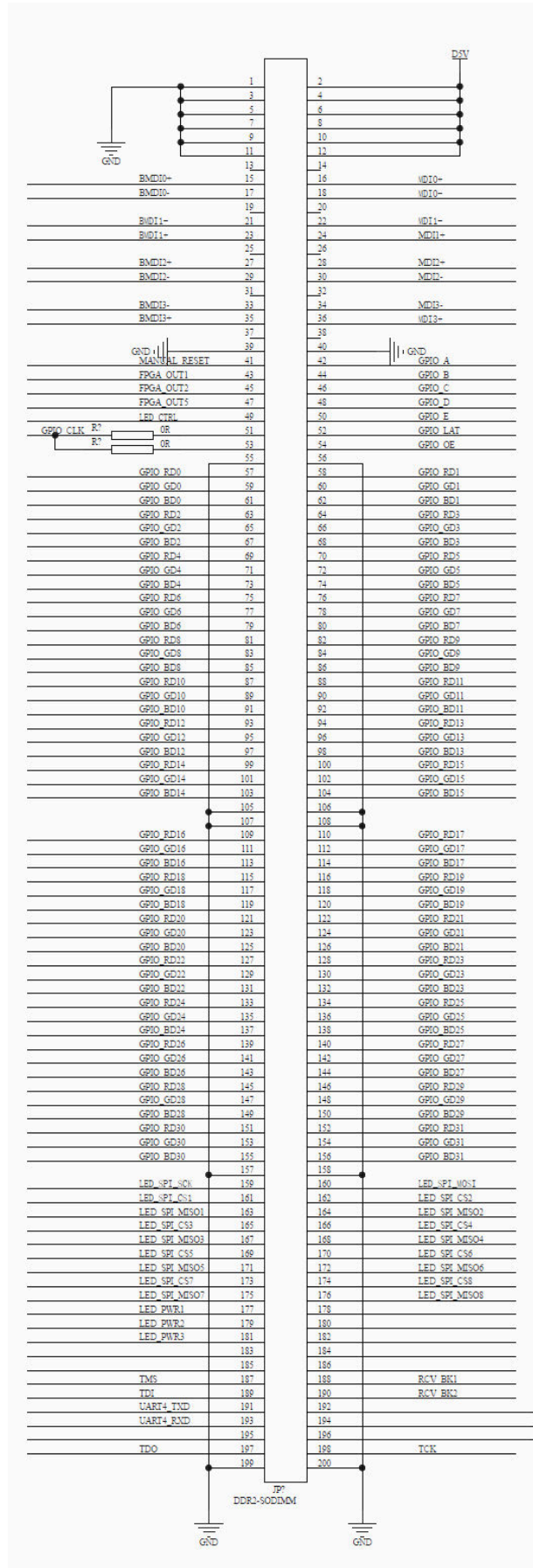| Screen index	
Parameter	Specification
Minimum control pixels	32 x 32
Maximum control pixels	128*2048（Related to driving chip and scan mode）
Nos of data groups	32 nos of parallel / 64 nos of serial signals
Row offset range	0-511 pixels
Row offset height	maximum 384 row height or the number of data channels set in units
Numbers of cascades	single network cable≤1024
Gray level	≤65536 grade
Refresh frequency	Supports up to 5000Hz, which varies with the load width. See the PC software prompt for details.
Adaptation range	Full color LED display of various specifications
Support IC	Almost all mainstream LED display driver chips
Brightness adjustment	256 grade

Whole type Specification	
Input voltage	4V~5.5V； Please strictly guarantee the power quality of bx-i5 series
Power	≤5W
Working temperature	-40℃~80℃
Dimension	67.6mm✂35mm

Interface diagram

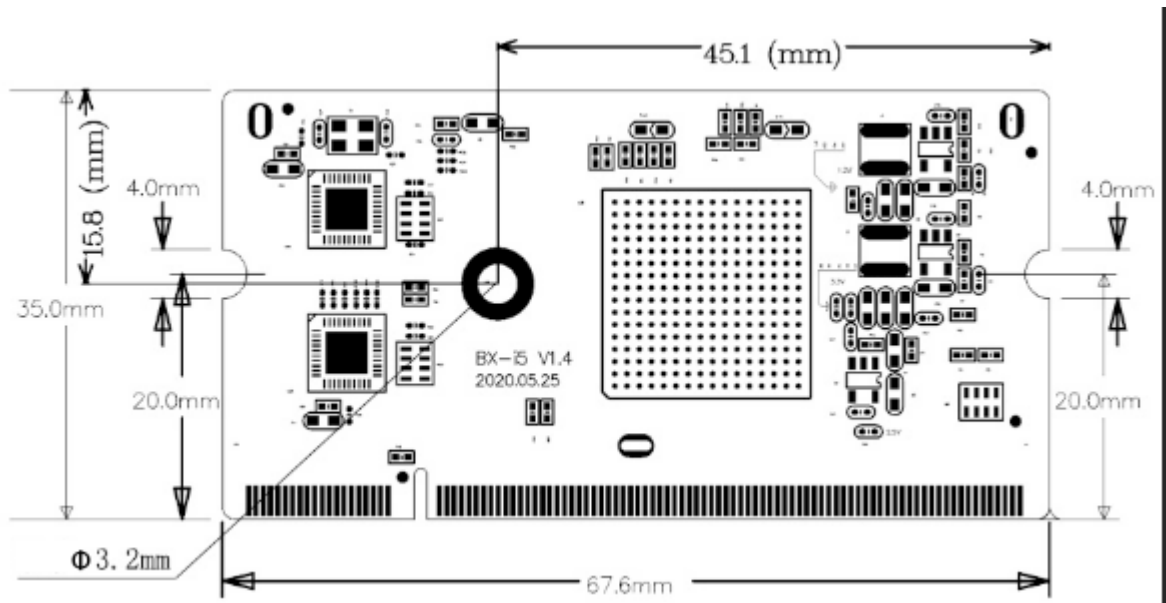| Interface diagram			
Number	**definition**	**Function**	**备注**
1	Power indicator	If the red light is always on, the power supply is normal	
2	Signal indicator	The green light indicates that the data signal transmission is normal.	
3	Fixed hole position	It is used to reinforce the receiving card and improve the anti vibration ability	
4	Goldfinger interface	It is used to connect with the display adapter board or unit board. See the detailed description for the specific use method and interface definition	In this figure, the left guide contact piece on the front is the first pin

Interface definition

instructions	Pin definition	引脚序号		Pin definition	instructions
Grounding	GND	1	2	D5V	System power supply
	GND	3	4	D5V	
	GND	5	6	D5V	
	GND	7	8	D5V	
	GND	9	10	D5V	
	GND	11	12	D5V	
unoccupied	NC	13	14	NC	unoccupied
Network port signal pin	BMDI0+	15	16	MDI0+	Network port signal pin
	BMDI0-	17	18	MDI0-	
	NC	19	20	NC	
	BMDI1+	21	22	MDI1+	
	BMDI1-	23	24	MDI1-	
	NC	25	26	NC	
	BMDI2+	27	28	MDI2+	
	BMDI2-	29	30	MDI2-	
	NC	31	32	NC	
	BMDI3+	33	34	MDI3+	
	BMDI3-	35	36	MDI3-	
unoccupied	NC	37	38	NC	unoccupied
Grounding	GND	39	40	GND	Grounding
Test /work indicator	MANUAL_RESET	41	42	GPIO_A	Display control : 1、ABCDE is Line selection signal; 2LED_LAT is signal latch; 3、LED_OE is Independent clock
Temperature monitor	FPGA_OUT1	43	44	GPIO_B	
Humidity monitoring	FPGA_OUT2	45	46	GPIO_C	
Fan output	FPGA_OUT5	47	48	GPIO_D	
Blanking	LED_CTRL	49	50	GPIO_E	
Serial clock	GPIO_CLK	51	52	GPIO_LAT	
	GPIO_CLK	53	54	GPIO_OE	
Grounding	GND	55	56	GND	Grounding
RGB Output	GPIO_RD0	57	58	GPIO_RD1	RGB Output
	GPIO_GD0	59	60	GPIO_GD1	
	GPIO_BD0	61	62	GPIO_BD1	
	GPIO_RD2	63	64	GPIO_RD3	
	GPIO_GD2	65	66	GPIO_GD3	

	GPIO_BD2	67	68	GPIO_BD3	
	GPIO_RD4	69	70	GPIO_RD5	
	GPIO_GD4	71	72	GPIO_GD5	
	GPIO_BD4	73	74	GPIO_BD5	
	GPIO_RD6	75	76	GPIO_RD7	
	GPIO_GD6	77	78	GPIO_GD7	
	GPIO_BD6	79	80	GPIO_BD7	
	GPIO_RD8	81	82	GPIO_RD9	
	GPIO_GD8	83	84	GPIO_GD9	
	GPIO_BD8	85	86	GPIO_BD9	
	GPIO_RD10	87	88	GPIO_RD11	
	GPIO_GD10	89	90	GPIO_GD11	
	GPIO_BD10	91	92	GPIO_BD11	
	GPIO_RD12	93	94	GPIO_RD13	
	GPIO_GD12	95	96	GPIO_GD13	
	GPIO_BD12	97	98	GPIO_BD13	
	GPIO_RD14	99	100	GPIO_RD15	
	GPIO_GD14	101	102	GPIO_GD15	
	GPIO_BD14	103	104	GPIO_BD15	
Grounding	GND	105	106	GND	Grounding
	GND	107	108	GND	
RGB Output	GPIO_RD16	109	110	GPIO_RD17	RGB Output
	GPIO_GD16	111	112	GPIO_GD17	
	GPIO_BD16	113	114	GPIO_BD17	
	GPIO_RD18	115	116	GPIO_RD19	
	GPIO_GD18	117	118	GPIO_GD19	
	GPIO_BD18	119	120	GPIO_BD19	
	GPIO_RD20	121	122	GPIO_RD21	
	GPIO_GD20	123	124	GPIO_GD21	
	GPIO_BD20	125	126	GPIO_BD21	
	GPIO_RD22	127	128	GPIO_RD23	
	GPIO_GD22	129	130	GPIO_GD23	
	GPIO_BD22	131	132	GPIO_BD23	
	GPIO_RD24	133	134	GPIO_RD25	
	GPIO_GD24	135	136	GPIO_GD25	
	GPIO_BD24	137	138	GPIO_BD25	
	GPIO_RD26	139	140	GPIO_RD27	
	GPIO_GD26	141	142	GPIO_GD27	

	GPIO_BD26	143	144	GPIO_BD27	
	GPIO_RD28	145	146	GPIO_RD29	
	GPIO_GD28	147	148	GPIO_GD29	
	GPIO_BD28	149	150	GPIO_BD29	
	GPIO_RD30	151	152	GPIO_RD31	
	GPIO_GD30	153	154	GPIO_GD31	
	GPIO_BD30	155	156	GPIO_BD31	
Grounding	GND	157	158	GND	Grounding
Smart module	LED_SPI_SCK	159	160	LED_SPI_MOSI	Smart module
	LED_SPI_CS1	161	162	LED_SPI_CS2	
	LED_SPI_MISO1	163	164	LED_SPI_MISO2	
	LED_SPI_CS3	165	166	LED_SPI_CS4	
	LED_SPI_MISO3	167	168	LED_SPI_MISO4	
	LED_SPI_CS5	169	170	LED_SPI_CS6	
	LED_SPI_MISO5	171	172	LED_SPI_MISO6	
	LED_SPI_CS7	173	174	LED_SPI_CS8	
	LED_SPI_MISO7	175	176	LED_SPI_MISO8	
Power monitoring	LED_PWR1	177	178	NC	reserved
	LED_PWR2	179	180	NC	
	LED_PWR3	181	182	NC	
reserved	NC	183	184	NC	
	NC	185	186	NC	
	NC	187	188	RCV_BK1	Dual card backup
	NC	189	190	RCV_BK2	
LCD interface	UART4_TXD	191	192	LED_RED	LED Tricolor indicator
	UART4_RXD	193	194	LED_GREEN	
reserved	NC	195	196	LED_BLUE	
	NC	197	198	NC	reserved
Grounding	GND	199	200	GND	Grounding

Dimension diagram

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Public Wechat　　　　ONBON APP