

Mini903K

Version 2.3

Jan 2018

1. Features

Mini903K is a high-end and full-featured ultra-small size mini-receiver card. Compared with traditional receiver card, Mini903K uses high-density BTB connector. It is more flexible and it adapts to a variety of electronic circuit structure, achieving a card suitable for all applications, which will considerably reduce the types of purchasing receiver card.

The system, specific circuits and program design of Mini903K, can effectively reduce the electromagnetic radiation and effectively help products easily pass through the EMC test. Specific features are as follows:

1. It has all functions of 8th and 9th generation receiver cards and it is completely compatible with them;
2. Single card can support 32- group RGB data output mode;
3. Realizes high refresh and high gray level effect;
4. Supports general driver IC and PWM IC;

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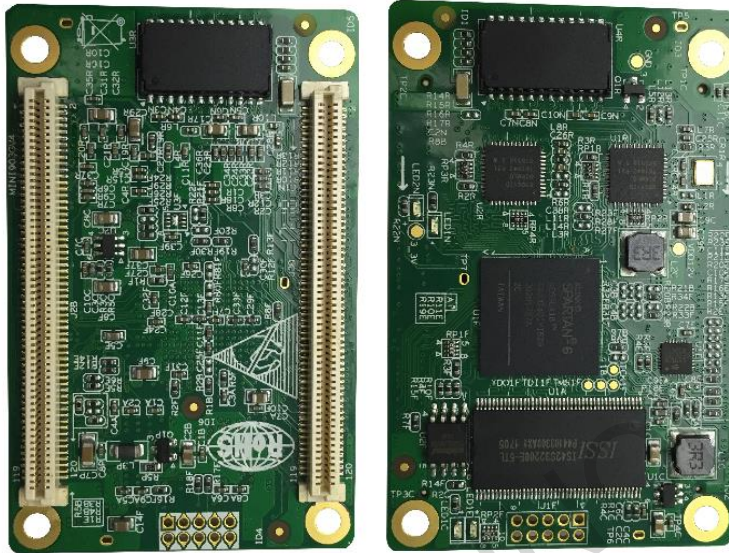
5. Supports any type of scan within 32 scan, and supports 595 and other serial decoding scan;
6. Supports brightness and color pixel-by-pixel calibration;
7. Maximum supports 512X512 pixels;
8. Supports 12-bit HDMI colors input (required the 9th generation sending card);
9. Supports single-card color space conversion;
10. Supports configuration file read back;
11. Supports faulty pixel detection(requires dedicated ICs);
12. Supports network cable BER test;
13. Supports flat-cable detection;
14. Supports hot backup with dual receiver cards, dual power supplier, etc;
15. Allows to save calibration data on flash drive IC on module;
16. Supports temperature and humidity monitor;
17. Supports smoke detection;
18. Supports voltage detection;
19. Supports door status(open/close) and fan speed detection;
20. Supports LCD monitor display function;

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2. Appearance Introduction



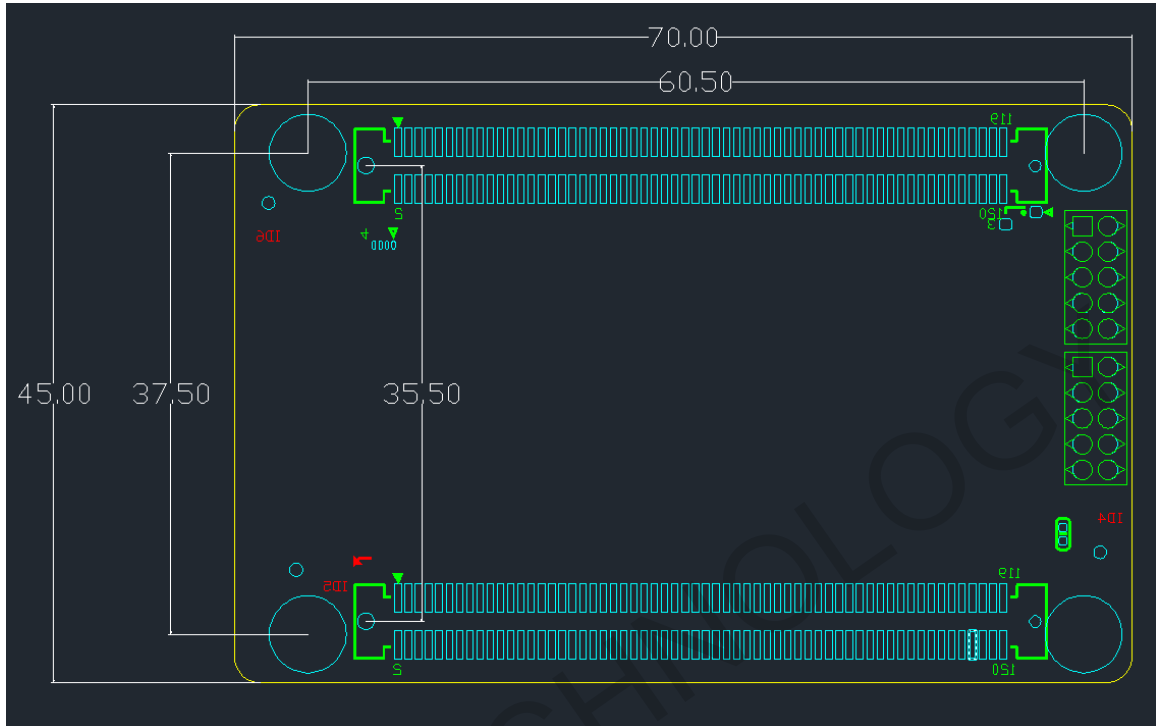
Picture 1 Mini903K Picture

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3. Dimensions



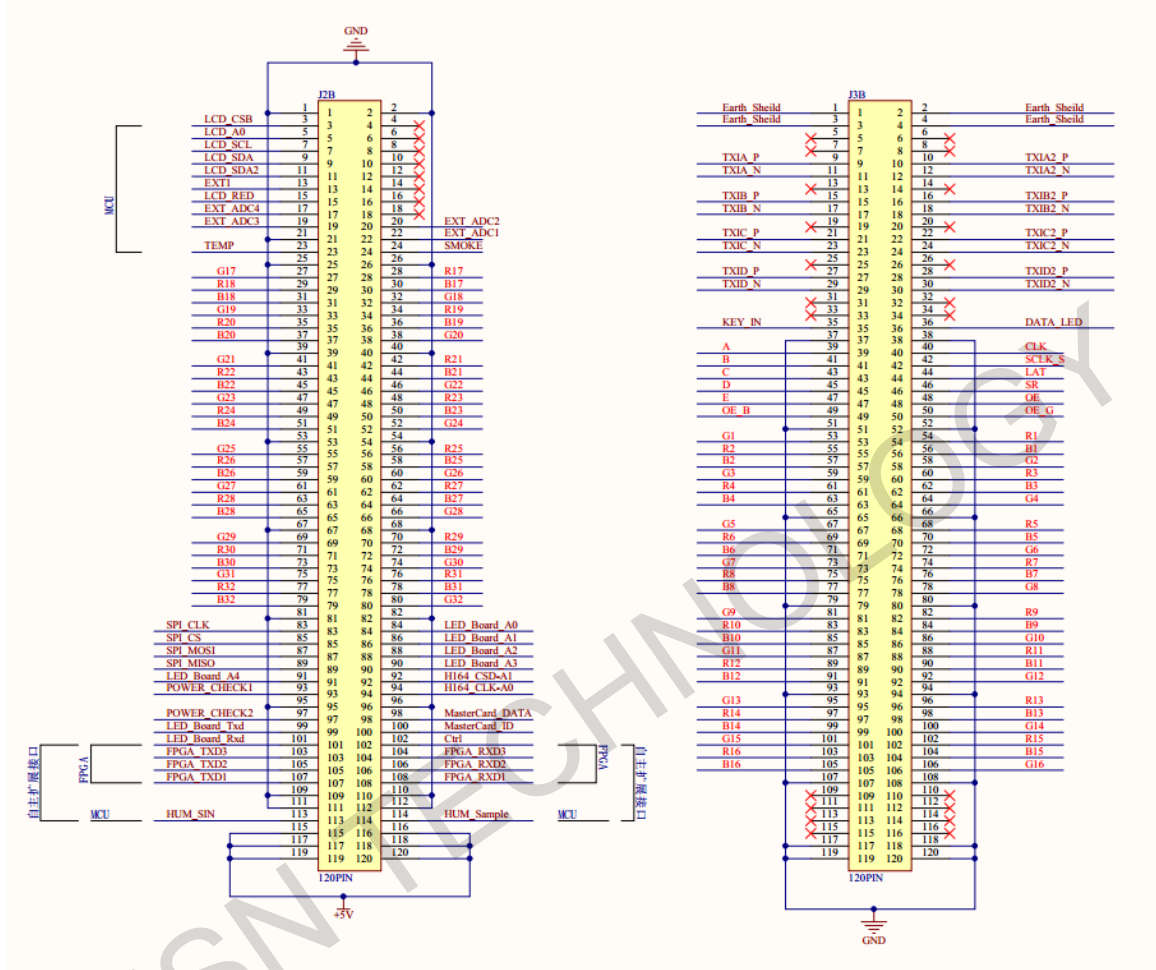
Picture 2 Mini903K Hole dimension drawings (mm)

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4. Pin Description



Picture3 high-density BTB connector

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Definition for connector1:

LCD Module	GND	1	2	GND
	LCD_CSB	3	4	NC
	LCD_A0	5	6	NC
	LCD_SCL	7	8	NC
	LCD_SDA	9	10	NC
	LCD_ADA2	11	12	NC
	EXT1	13	14	NC
	LCD_RED	15	16	NC
	EXT_ADC1	17	18	NC
	MCU_TXD	19	20	EXT_ADC2
	GND	21	22	EXT_ADC1
	TEMP	23	24	SMOKE
	GND	25	26	GND
	G17	27	28	R17
	R18	29	30	B17
	B18	31	32	G18
	G19	33	34	R19
	R20	35	36	B19
	B20	37	38	G20
	GND	39	40	GND
	G21	41	42	R21
	R22	43	44	B21
	B22	45	46	G22
	G23	47	48	R23
	R24	49	50	B23
	B24	51	52	G24
	GND	53	54	GND
	G25	55	56	R25
	R26	57	58	B25
	B26	59	60	G26
	G27	61	62	R27
	R28	63	64	B27
	B28	65	66	G28
	GND	67	68	GND
	G29	69	70	R29

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	R30	71	72	B29	
	B30	73	74	G30	
	G31	75	76	R31	
	R32	77	78	B31	
	B32	79	80	G32	
	GND	81	82	GND	
Smart module	SPI_CLK	83	84	LED_Board_A0	Smart module
	SPI_CS	85	86	LED_Board_A1	
	SPI_MOSI	87	88	LED_Board_A2	
	SPI_MOSO	89	90	LED_Board_A3	
	LED_Board_A4	91	92	H164_CSD_A1	
	POWER_CHECK1	93	94	H164_CSD_A0	
	GND	95	96	GND	
	POWER_CHECK2	97	98	MasterCard_DATA	
	LED_Board_Txd	99	100	MasterCard_ID	
	LED_Board_Rxd	101	102	Ctrl	
	FPGA_TXD3	103	104	FPGA_RXD3	
	FPGA_TXD2	105	106	FPGA_RXD2	
	FPGA_TXD1	107	108	FPGA_RXD1	
	GND	109	110	GND	
	GND	111	112	GND	
	HUM_SIN	113	114	HUM_Sample	
	VCC	115	116	VCC	
	VCC	117	118	VCC	
	VCC	119	120	VCC	

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Definition for connector2:

	Eth_Sheild	1	2	Eth_Sheild	
	Eth_Sheild	3	4	Eth_Sheild	
	NC	5	6	NC	
	NC	7	8	NC	
Gigabit Network Port	TXIA_P	9	10	TXIA2_P	Gigabit Network Port
	TXIA_N	11	12	TXIA2_N	
	NC	13	14	NC	
	TXIB_P	15	16	TXIB2_P	
	TXIB_N	17	18	TXIB2_N	
	NC	19	20	NC	
	TXIC_P	21	22	TXIC2_P	
	TXIC_N	23	24	TXIC2_N	
	NC	25	26	NC	
	TXID_P	27	28	TXID2_P	
TXID_N	29	30	TXID2_N		
	NC	31	32	NC	
	NC	33	34	NC	
	KEY_IN	35	36	DATA_LED-	
	GND	37	38	GND	
	A	39	40	CLK	
	B	41	42	SCLK_S	
	C	43	44	LAT	
	D	45	46	SR	
	E	47	48	OE	
	OE_B	49	50	OE_G	
	GND	51	52	GND	
	G1	53	54	R1	
	R2	55	56	B1	
	B2	57	58	G2	
	G3	59	60	R3	
	R4	61	62	B3	
	B4	63	64	G4	
	GND	65	66	GND	
	G5	67	68	R5	
	R6	69	70	B5	

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B6	71	72	G6
G7	73	74	R7
R8	75	76	B7
B8	77	78	G8
GND	79	80	GND
G9	81	82	R9
R10	83	84	B9
B10	85	86	G10
G11	87	88	R11
R12	89	90	B11
B12	91	92	G12
GND	93	94	GND
G13	95	96	R13
R14	97	98	B13
B14	99	100	G14
G15	101	102	R15
R16	103	104	B15
B16	105	106	G16
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

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5. Working Conditions

	Normal	Mini. value	Max. value	Unit
Rated Power	4	3.3	4.8	W
Rated voltage	5	4.5	5.5	V
Rated current	0.8	0.73	0.87	A
Working temperature		-20	70	°C
Working humidity		0	95	%

END

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