

Mini903M

Version 2.3

Jan 2018

1. Features

Mini903M is a high-end and full-featured ultra-small size mini-receiver card. Compared with traditional receiver card, Mini903M 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 Mini903M, 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. Supports 64-group serial data output mode;
4. Realize high refresh and high gray level effect;

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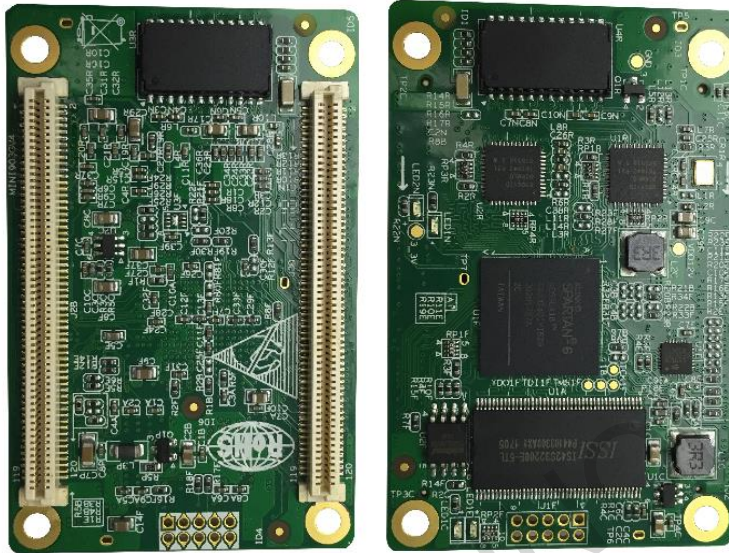
5. Supports general driver IC and PWM IC;
6. Supports any type of scan within 32 scan, and supports 595 and other serial decoding scan;
7. Supports brightness and color pixel-by-pixel calibration;
8. Maximum supports 512X512 pixels;
9. Supports 12-bit HDMI colors input (required the 9th generation sending card);
10. Use 18-bit signal processor, maximum supporting 18-bit (260,000) gray (each of red, green and blue);
11. Supports single-card color space conversion;
12. Supports configuration file read back;
13. Supports network cable BER test;
14. Supports hot backup with dual receiver cards, dual power supplier, etc;
15. RoHS compliant;
16. CE-EMC compliant.

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2. Appearance Introduction



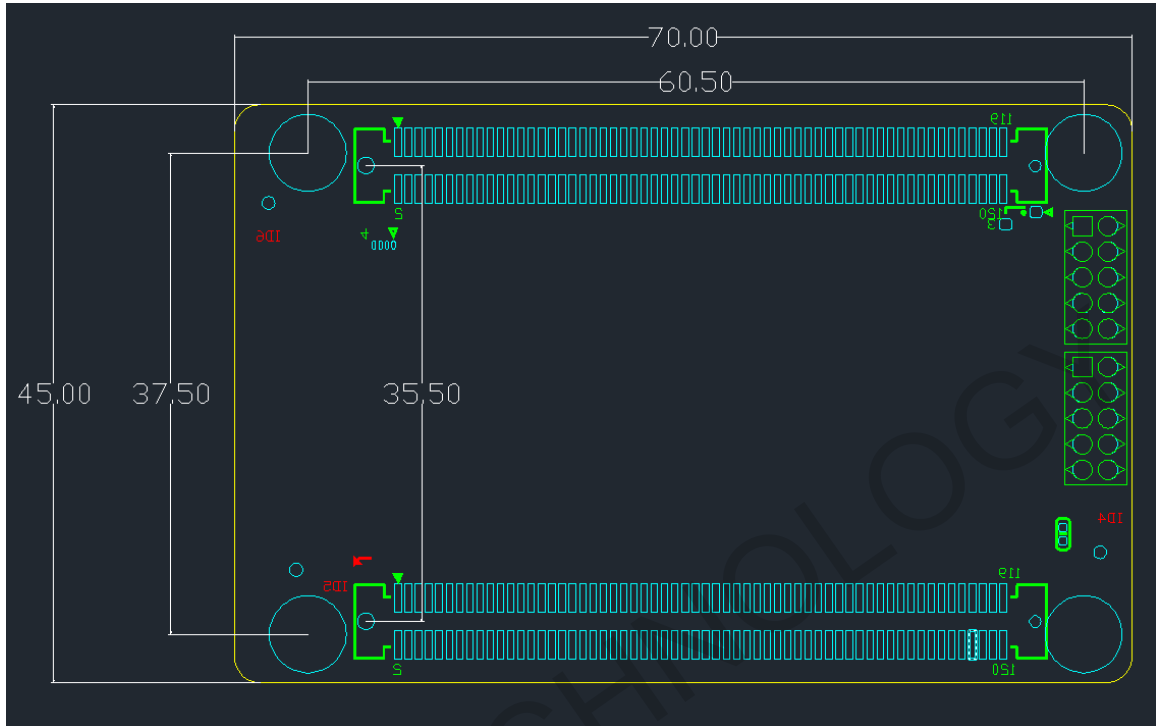
Picture 1 Mini903M Picture

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3. Dimensions



Picture 2 Mini903M Hole dimension drawings (mm)

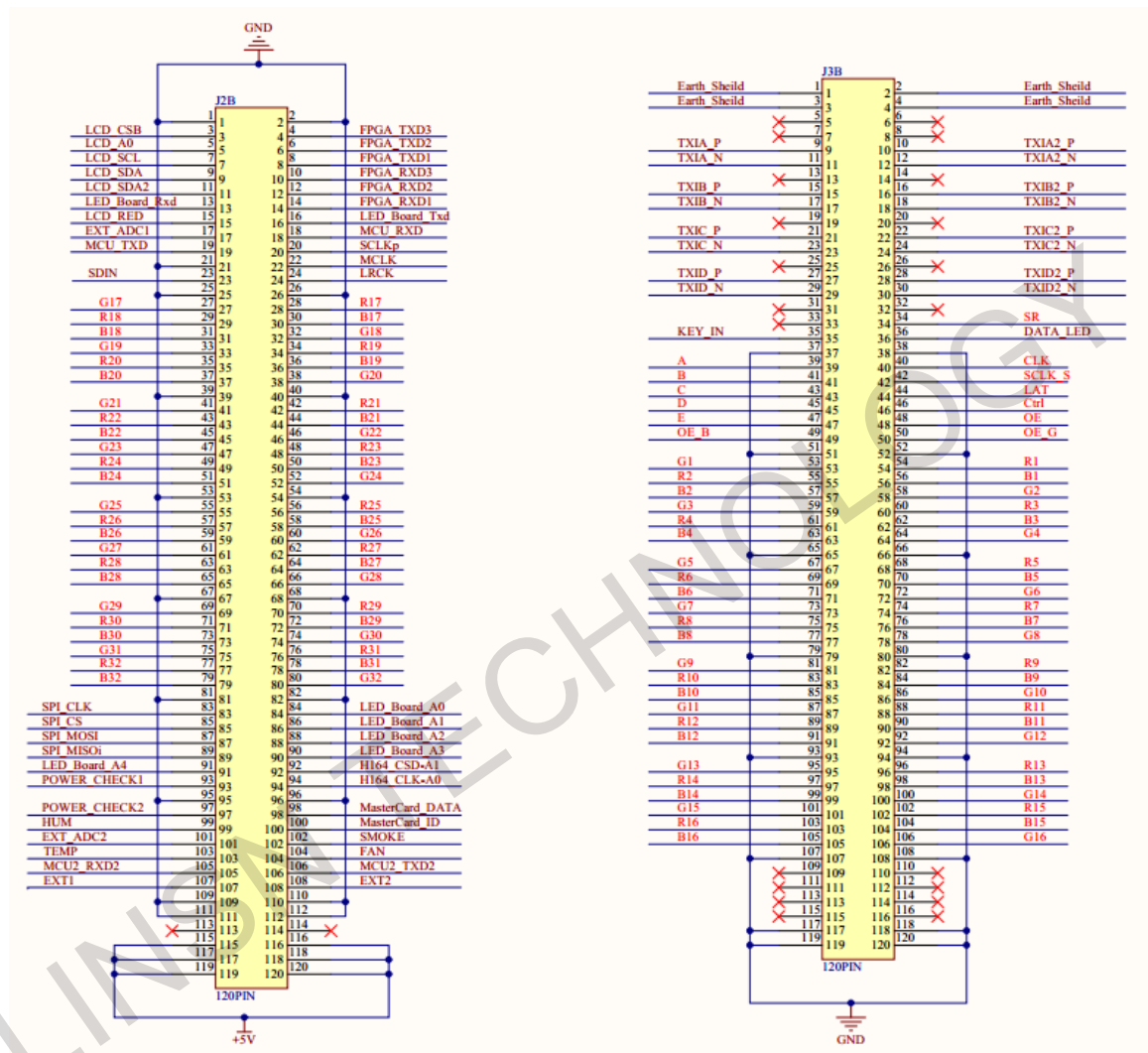
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4. Pin Description



Picture3 high-density BTB connector

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Definition of the 32-group parallel RGB data output mode

Pinout for Connector1

	GND	1	2	GND
	NC	3	4	NC
	NC	5	6	NC
	NC	7	8	NC
	NC	9	10	NC
	NC	11	12	NC
	NC	13	14	NC
	NC	15	16	NC
	NC	17	18	NC
	NC	19	20	NC
	GND	21	22	NC
	SDIN	23	24	NC
	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

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	B26	59	60	G26
	G27	61	62	R27
	R28	63	64	B27
	B28	65	66	G28
	GND	67	68	GND
	G29	69	70	R29
	R30	71	72	B29
	B30	73	74	G30
	G31	75	76	R31
	R32	77	78	B31
	B32	79	80	G32
	GND	81	82	GND
	NC	83	84	NC
	NC	85	86	NC
	NC	87	88	NC
	NC	89	90	NC
	NC	91	92	NC
	NC	93	94	NC
	GND	95	96	GND
	NC	97	98	NC
	NC	99	100	NC
	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
	VCC	115	116	VCC
	VCC	117	118	VCC
	VCC	119	120	VCC

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Pinout for connector2:

	NC	1	2	NC	
	NC	3	4	NC	
	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	SR	
	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	Ctrl	
	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	

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	GND	65	66	GND	
	G5	67	68	R5	
	R6	69	70	B5	
	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	

Definition of the 64-group serial data output mode

Pinout for connector1

	GND	1	2	GND	
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	NC	3	4	NC
	NC	5	6	NC
	NC	7	8	NC
	NC	9	10	NC
	NC	11	12	NC
	NC	13	14	NC
	NC	15	16	NC
	NC	17	18	NC
	NC	19	20	NC
	GND	21	22	NC
	SDIN	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

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	NC	77	78	NC	
	NC	79	80	NC	
	GND	81	82	GND	
	NC	83	84	NC	
	NC	85	86	NC	
	NC	87	88	NC	
	NC	89	90	NC	
	NC	91	92	NC	
	NC	93	94	NC	
	GND	95	96	GND	
	NC	97	98	NC	
	NC	99	100	NC	
	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	
	VCC	115	116	VCC	
	VCC	117	118	VCC	
	VCC	119	120	VCC	

Pinout for connector2:

	NC	1	2	NC	
	NC	3	4	NC	
	NC	5	6	NC	
	NC	7	8	NC	
Gigabit Network	TXIA_P	9	10	TXIA2_P	Gigabit Network
	TXIA_N	11	12	TXIA2_N	
	NC	13	14	NC	
	TXIB_P	15	16	TXIB2_P	
	TXIB_N	17	18	TXIB2_N	

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port	NC	19	20	NC	port
	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	
	NC	49	50	NC	
	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	

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	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

5. Working Conditions

	Normal	Minimum value	Maximum 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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