



RAYSTAR

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RFC570X-AIW-DNG

General Specifications

- Size: 5.7 inch
- Dot Matrix: 320 x RGBx240(TFT) dots
- Module dimension: 126.00(W) x 101.55(H) x 7.79(D) mm
- Active area: 115.2 x 86.40 mm
- Dot pitch: 0.12 x 0.36 mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- Aspect Ratio: 4:3
- Drive IC: HX8218+HX8615
- Interface: 24-bit RGB
- Backlight Type: LED, Normally White
- PCAP FW Version: 0x07.0x00.0x00.0x00.0xA2.0x01.0x57.0x00
- PCAP IC: ILI2130
- PCAP Interface: I2C
- PCAP Resolution: 16384*16384
- Touch Panel: Projected Capacitive Touch Screen, PCAP
- Surface: Glare

Interface

LCM PIN Definition

Pin No.	Symbol	I/O	Description
1	IF1	I	Input data format control
2	IF2	I	Input data format control
3	POL	O	Polarity Signal connect to VCOM driving circuit.
4	RESET	I	Hardware reset.
5	SPENA	I	Chip select
6	SPCL	I	Serial Clock
7	SPDA	I/O	Serial Data
8	B0	I	Blue Data bit (LSB)
9	B1	I	Blue Data bit
10	B2	I	Blue Data bit
11	B3	I	Blue Data bit
12	B4	I	Blue Data bit
13	B5	I	Blue Data bit
14	B6	I	Blue Data bit
15	B7	I	Blue Data bit(MSB)
16	G0	I	Green Data bit(LSB)
17	G1	I	Green Data bit
18	G2	I	Green Data bit
19	G3	I	Green Data bit
20	G4	I	Green Data bit
21	G5	I	Green Data bit
22	G6	I	Green Data bit
23	G7	I	Green Data bit(MSB)
24	R0	I	Red Data bit(LSB)
25	R1	I	Red Data bit
26	R2	I	Red Data bit
27	R3	I	Red Data bit
28	R4	I	Red Data bit
29	R5	I	Red Data bit
30	R6	I	Red Data bit
31	R7	I	Red Data bit(MSB)
32	Hsync	I	Horizontal synchronous signal
33	Vsync	I	Vertical synchronous signal
34	Data CLK	I	Dot data clock
35	AVDD	I	4.5V~5.5V
36	AVDD	I	4.5V~5.5V
37	Vcc	I	3.2V~3.4V
38	Vcc	I	3.2V~3.4V
39	NPC	O	NTSC/PAL mode Auto detection result H:NTSC/L:PAL
40	VGL	I	Gate off power
41	VGL	I	Gate off power
42	UD	I	Up/Down scan setting. H: Reverse scan / L: Normal scan
43	VGH	I	Gate on power

44	LRC	I	Shift direction of device internal shift register control.
45	GND	I	GROUND
46	VCOM	I	VCOM driving input
47	VCOM	I	VCOM driving input
48	ENB	I	Data enable input. Normally pull low.
49	GND	I	GROUND
50	GND	I	GROUND

Backlight PIN Definition

Pin No.	Symbol	I/O	Description
1	VLED+	I	Red, LED_Anode
2	VLED-	I	Black, LED_Cathode

PCAP PIN Definition

Pin	Symbol	Function
1	VSS	Ground for analog circuit
2	VDDT	Power Supply : +3.3V
3	SCL	I2C clock input
4	NC	No connect
5	SDA	I2C data input and output
6	NC	No connect
7	/RST	External Reset, Low is active
8	NC	No connect
9	/INT	External interrupt to the host
10	VSS	Ground for analog circuit

TFT FPC

PIN NO.	SYMBOL	PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	IF1	21	G5	41	VGL
2	IF2	22	G6	42	UD
3	PDL	23	G7	43	VGH
4	RESET	24	R0	44	LRC
5	SPENA	25	R1	45	GND
6	SPCL	26	R2	46	VCOM
7	SPDA	27	R3	47	VCOM
8	B0	28	R4	48	ENB
9	B1	29	R5	49	GND
10	B2	30	R6	50	GND
11	B3	31	R7		
12	B4	32	Hsync		CN2
13	B5	33	Vsync		RED VLED+
14	B6	34	Data CLK		BLACK VLED-
15	B7	35	AVDD		
16	G0	36	AVDD		
17	G1	37	Vcc		
18	G2	38	Vcc		
19	G3	39	NPC		
20	G4	40	VGL		

CTP FPC

PIN NO.	SYMBOL
1	VSS
2	VDDT
3	SCL
4	NC
5	SDA
6	NC
7	/RST
8	NC
9	/INT
10	VSS

The non-specified tolerance of dimension is ±0.3mm.

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	°C
Storage Temperature	TST	-30	—	+80	°C

Electrical Characteristics

Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For LCM	VCC	—	3.2	3.3	3.4	V
	AVDD	—	4.5	5.0	5.5	
Supply CTP	VDDT	—	3.1	3.3	3.5	V
	I _{CTP}	—	—	56	84	mA
Input High Volt.	VIH	—	0.7 VCC	—	VCC	V
Input Low Volt.	VIL	—	0	—	0.3 VCC	V
LCD Driving Supply Voltage	VGH	Ta=25°C	15	16	17	V
	VGL		-6	-5	-4	
	VcomH		—	4.5	—	
	VcomL		—	-0.5	—	
Supply Current For LCM	IVCC	VCC=3.3V	—	30	45	mA

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current		-	140	-	mA
Power Consumption		1204	—	1470	mW
LED voltage	VBL+	8.6	9.5	10.5	V
LED Life Time		-	50,000	-	Hr