TFT DISPLAY SPECIFICATION



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RFH70AD5-AWH-LNG

General Specifications

- Size: 7.0 inch
- Dot Matrix: 1024 x RGB x 600(TFT) dots
- Module dimension: 202.0(W) x 135.5(H) x 8.4(D) mm
- Active area: 154.2144 x 85.92 mm
- Pixel pitch: 0.1506x 0.1432 mm
- LCD type: TFT, Normally Black, Transmissive
- View Angle: 80/80/80/80
- TFT Driver IC: JD9165BA
- Backlight Type: LED, Normally White
- TFT Interface: LVDS
- PCAP IC: GT911
- PCAP Interface: I2C
- PCAP FW Version: 67
- PCAP Resolution: 1024*600
- Touch Panel: Projected Capacitive Touch Panel, PCAP
- Surface: Glare

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Interface

LCM PIN Definition

Pin No.	Symbol	Function
1	VCOM	Common Voltage
2	VDD	Digital circuit
3	VDD	Digital circuit
4	NC	No connection
5	RESET	Global reset pin
6	STBYB	Standby mode, Normally pulled high STBYB = “1”, normal operation STBYB = “0”, timing controller, source driver will turn off, all output are High-Z
7	GND	Ground
8	RXIN0-	Negative LVDS differential data input
9	RXIN0+	Positive LVDS differential data input
10	GND	Ground
11	RXIN1-	Negative LVDS differential data input
12	RXIN1+	Positive LVDS differential data input
13	GND	Ground
14	RXIN2-	Negative LVDS differential data input
15	RXIN2+	Positive LVDS differential data input
16	GND	Ground
17	RXCLKIN-	Negative LVDS differential clock input
18	RXCLKIN+	Positive LVDS differential clock input
19	GND	Ground
20	RXIN3-	Negative LVDS differential data input
21	RXIN3+	Positive LVDS differential data input
22	GND	Ground
23	NC	No connection
24	NC	No connection
25	GND	Ground
26	NC	No connection
27	NC	No connection
28	SELB	6bit/8bit mode select H:6bit / L:8bit

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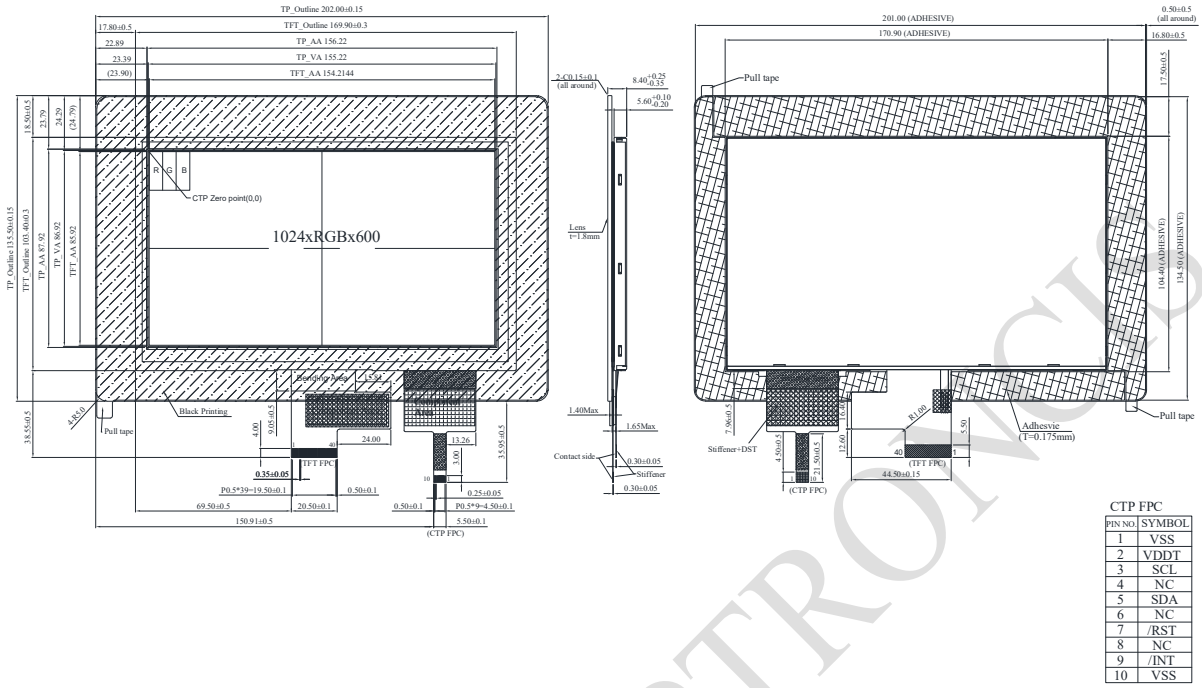
29	AVDD	Power for Analog Circuit
30	GND	Ground
31	VLED-	LED_ Cathode
32	VLED-	LED_ Cathode
33	L/R	Horizontal inversion
34	U/D	Vertical inversion
35	VGL	Negative power for TFT
36	NC	No connection
37	NC	No connection
38	VGH	Positive power for TFT
39	VLED+	LED_ Anode
40	VLED+	LED_ Anode

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

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Contour Drawing



TFT FPC

PIN NO	SYMBOL
1	VCOM
2	VDD
3	VDD
4	NC
5	RESET
6	STBYB
7	GND
8	RXIN0-
9	RXIN0+
10	GND
11	RXIN1-
12	RXIN1+
13	GND
14	RXIN2-
15	RXIN2+
16	GND
17	RXCLKIN-
18	RXCLKIN+
19	GND
20	RXIN3-
21	RXIN3+
22	GND
23	NC
24	NC
25	GND
26	NC
27	NC
28	SELB
29	AVDD
30	GND
31	VLED-
32	VLED-
33	L/R
34	U/D
35	VGL
36	NC
37	NC
38	VGH
39	VLED+
40	VLED+

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	-30	—	+85	℃
Storage Temperature	TST	-30	—	+85	℃

Electrical Characteristics

Operating Conditions

Typical Operation Conditions

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Power voltage	VDD	3.0	3.3	3.6	V	
Analog Power	AVDD	-	11	-	V	
TFT Gate ON Voltage	VGH	19.5	20	20	V	
TFT Gate OFF Voltage	VGL	-8.5	-8	-7.5	V	
TFT Common Voltage	Vcom	-	4.9	-	V	
Power Current	IDD	-	18	27	mA	VDD=3.3V
Analog Power Current	IAVDD	-	20.94	-	mA	AVDD=11V
TFT Gate ON Current	IVGH	-	1.5	-	mA	VGH=20V
TFT Gate OFF Current	IVGL	-	1.5	-	mA	VGL=-8V
TFT Common Current	IVCOM	-	1	-	uA	VCOM=4.9V
Supply PCAP	VDDT	3.1	3.3	3.5	V	
	I_{CTP}	—	16	24	mA	

LED Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	—	—	240	—	mA
LED voltage	VLED+	16.2	19.2	21.0	V
LED Life Time	—	50,000	—	—	Hr

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