



RAYSTAR

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## RFH70VA7-1IW-LHS

### SPECIFICATION

#### General Specifications

- Size: 7.0 inch
- Dot Matrix: 1024 x RGB x 600(TFT) dots
- Module dimension: 165.0(W) x 99.8(H) x 26.3(D) mm
- Active area: 154.2144 x 85.92 mm
- Dot pitch: 0.1506 x 0.1432 mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- Aspect Ratio: 16:9
- Backlight Type: LED, Normally White
- Controller IC: TFP401 or equivalent
- RTP Interface: USB
- Touch Panel: Resistive Touch Panel, RTP
- TFT Interface: HDMI (only for DVI)
- Surface: Anti-Glare

\*Color tone slight changed by temperature and driving voltage.

# Interface

## LCM PIN Definition (CON6)

Pin	Symbol	Function
1	NC	No connection
2	5V	Raspberry Pi:Power 5V
3	GPIO02	Raspberry Pi:GPIO02
4	5V	Raspberry Pi:Power 5V
5	GPIO03	Raspberry Pi:GPIO03
6	GND	Raspberry Pi:GND
7	GPIO04	Raspberry Pi:GPIO04
8	GPIO14	Raspberry Pi:GPIO14
9	GND	Raspberry Pi:GND
10	GPIO15	Raspberry Pi:GPIO15
11	GPIO17	Raspberry Pi:GPIO17
12	GPIO18	Raspberry Pi:GPIO18 (Backlight Enable)
13	GPIO27	Raspberry Pi:GPIO27
14	GND	Raspberry Pi:GND
15	GPIO22	Raspberry Pi:GPIO22
16	GPIO23	Raspberry Pi:GPIO23
17	NC	No connection
18	GPIO24	Raspberry Pi:GPIO24
19	GPIO10	Raspberry Pi:GPIO10
20	GND	Raspberry Pi:GND
21	GPIO09	Raspberry Pi:GPIO09
22	GPIO25	Raspberry Pi:GPIO25
23	GPIO11	Raspberry Pi:GPIO11
24	GPIO08	Raspberry Pi:GPIO08
25	GND	Raspberry Pi:GND
26	GPIO07	Raspberry Pi:GPIO07
27	ID_SD	Raspberry Pi:ID_SD
28	ID_SC	Raspberry Pi:ID_SC
29	GPIO05	Raspberry Pi:GPIO05
30	GND	Raspberry Pi:GND
31	GPIO06	Raspberry Pi:GPIO06

32	GPIO12	Raspberry Pi:GPIO12
33	GPIO13	Raspberry Pi:GPIO13
34	GND	Raspberry Pi:GND
35	GPIO19	Raspberry Pi:GPIO19
36	GPIO16	Raspberry Pi:GPIO16
37	GPIO26	Raspberry Pi:GPIO26
38	GPIO20	Raspberry Pi:GPIO20
39	GND	Raspberry Pi:GND
40	GPIO21	Raspberry Pi:GPIO21

#### LCM PIN Definition (CON5)

Pin	Symbol	Function
1	3.3V	TFT Module Power limit can only output 3.3V,100mA
2	5V	Raspberry Pi:Power 5V
3	GPIO02	Raspberry Pi:GPIO02
4	5V	Raspberry Pi:Power 5V
5	GPIO03	Raspberry Pi:GPIO03
6	GND	Raspberry Pi:GND
7	GPIO04	Raspberry Pi:GPIO04
8	GPIO14	Raspberry Pi:GPIO14
9	GND	Raspberry Pi:GND
10	GPIO15	Raspberry Pi:GPIO15
11	GPIO17	Raspberry Pi:GPIO17
12	GPIO18	Raspberry Pi:GPIO18 (Backlight Enable)
13	GPIO27	Raspberry Pi:GPIO27
14	GND	Raspberry Pi:GND
15	GPIO22	Raspberry Pi:GPIO22
16	GPIO23	Raspberry Pi:GPIO23
17	3.3V	TFT Module Power limit can only output 3.3V,100mA
18	GPIO24	Raspberry Pi:GPIO24
19	GPIO10	Raspberry Pi:GPIO10
20	GND	Raspberry Pi:GND
21	GPIO09	Raspberry Pi:GPIO09
22	GPIO25	Raspberry Pi:GPIO25

23	GPIO11	Raspberry Pi:GPIO11
24	GPIO08	Raspberry Pi:GPIO08
25	GND	Raspberry Pi:GND
26	GPIO07	Raspberry Pi:GPIO07
27	ID_SD	Raspberry Pi:ID_SD
28	ID_SC	Raspberry Pi:ID_SC
29	GPIO05	Raspberry Pi:GPIO05
30	GND	Raspberry Pi:GND
31	GPIO06	Raspberry Pi:GPIO06
32	GPIO12	Raspberry Pi:GPIO12
33	GPIO13	Raspberry Pi:GPIO13
34	GND	Raspberry Pi:GND
35	GPIO19	Raspberry Pi:GPIO19
36	GPIO16	Raspberry Pi:GPIO16
37	GPIO26	Raspberry Pi:GPIO26
38	GPIO20	Raspberry Pi:GPIO20
39	GND	Raspberry Pi:GND
40	GPIO21	Raspberry Pi:GPIO21

Note1: The 3.3V supply current is limited; please pay special attention to use

## USB

Pin	Symbol	Function
1	5V	Power Supply (5V)
2	D-	Data line -
3	D+	Data line +
4	NC	No connection
5	GND	Power Ground

## POWER JACK

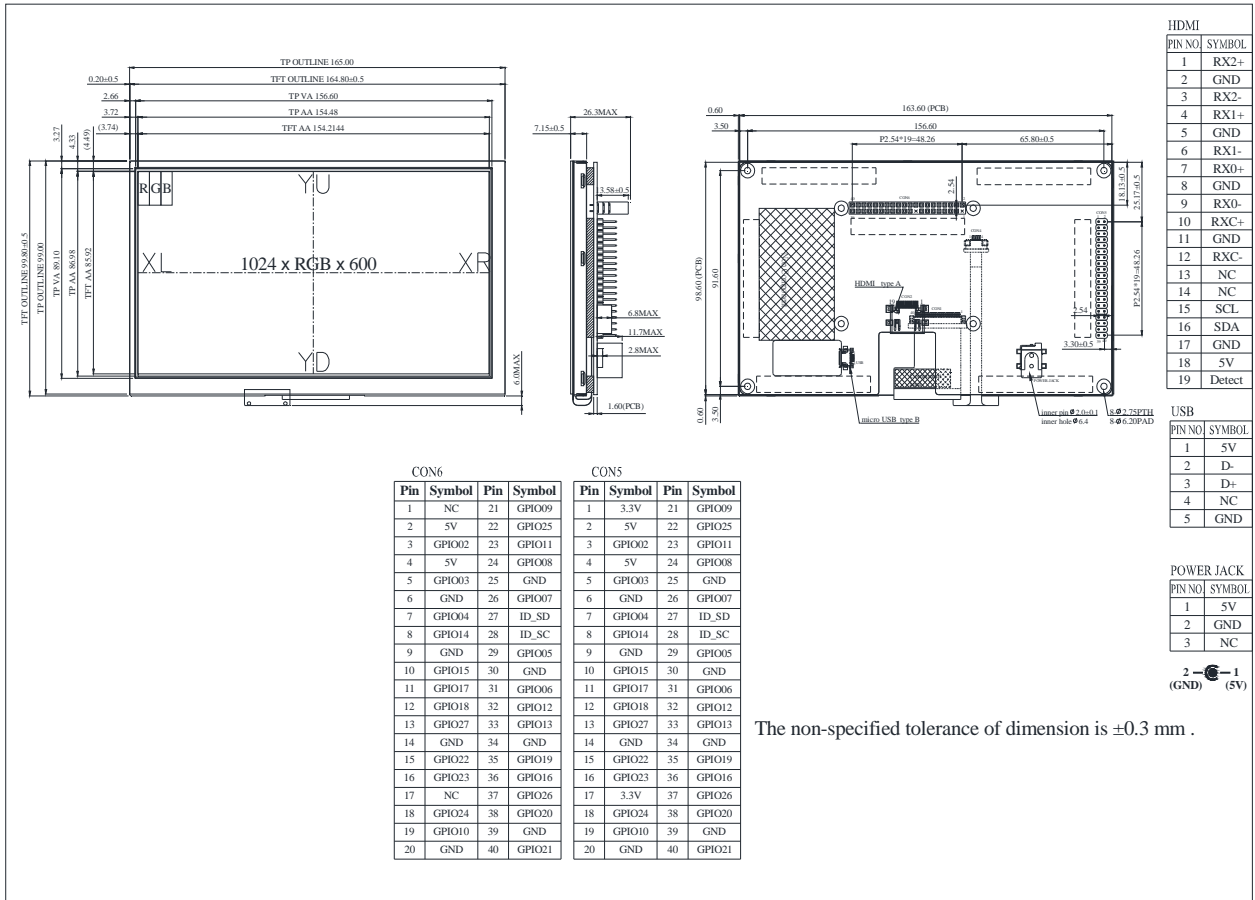
Pin No.	Symbol	I/O	Function
1	5V	P	Power Supply (5V)
2	GND	P	Ground
3	NC		No connection

## HDMI

Pin No.	Symbol	I/O	Function
1	Rx2+	I	+LVDS Differential Data Input
2	GND	P	Ground
3	Rx2-	I	-LVDS Differential Data Input
4	Rx1+	I	+LVDS Differential Data Input
5	GND	P	Ground
6	Rx1-	I	-LVDS Differential Data Input
7	Rx0+	I	+LVDS Differential Data Input
8	GND	P	Ground
9	Rx0-	I	-LVDS Differential Data Input
10	RxC+	I	+LVDS Differential Clock Input
11	GND	P	Ground
12	RxC-	I	-LVDS Differential Clock Input
13-14	NC	-	No connection
15	SCL	I/O	DDC(Data Display Channel) Clock
16	SDA	I/O	DDC(Data Display Channel) Data
17	GND	P	Ground
18	5V	P	Power Supply
19	Detect	I/O	Hot plug detect

I: input, O: output, P: Power

# Contour Drawing



The non-specified tolerance of dimension is  $\pm 0.3$  mm .

## 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	VDD	—	4.9	5	5.1	V
Supply Current For LCM	IDD	—	—	870	1200	mA
LED life time	—	—	—	50,000	—	Hr