
Radxa Display 8 HD

8-inch HD Touchscreen Module

Revision 1.2

2023-08-28



Contents

1	Revision Control Table	2
2	Overview	3
3	Specification	3
4	MIPI DSI Pin Description	4
5	Gravity Sensor	5
5.1	Pin Description	5
6	Mechanical Specification	7
7	Availability	8
8	Support	8

1 Revision Control Table

Version	Date	Changes from previous version
1.0	10/05/2023	First Version
1.1	22/08/2023	Update Information
1.2	28/08/2023	Add Gsensor Information

2 Overview



Radxa Display 8 HD is a color active matrix LCD module with touch panel designed specifically for Radxa Single Board Computers. This 8.0 inch display lets you create interactive projects such as tablets, industrial HMI, information dashboards and so on. With a single cable for power, display and touch, and enabled software on-screen keyboard, the Radxa Display 8 HD gives you full human computer interface without the need to connect a keyboard or mouse. Additionally, a built-in sensor on the display can be used for automatically portrait or landscape rotation.

3 Specification

- 8.0 inch LCD, 800 x 1280, 16.7M colors resolution
- 5-Point capacitive touch panel
- Built-in Gravity Sensor for rotation
- Active area: 107.64(H) x 172.224(V) mm

- Pixel Pitch: 0.04485(W) x 3 x 0.13455(H)
- Pixels arrangement: RGB vertical stripe
- Display color: 16.7M
- Display Mode: Normally Black
- Viewing Direction: All angle viewing
- Luminance (cd/m²): 300 type cd/m²
- Contrast Ratio: 1000(typical)
- Surface Treatment: Anti-glare
- Interface: MIPI
- Backlight: White LED
- Input voltage: 1.8 V
- Operation Temperature: -20 ~ 60
- Storage Temperature: -30 ~ 60

4 MIPI DSI Pin Description

PIN	Name	Description	PIN	Name	Description
1	NC	No connection	21	MIPI_3P	+MIPI differential data input
2	VDD	Power Voltage for digital circuit 3.3V	22	GND	Ground
3	VCCIO	Power Voltage for digital circuit 1.8V ¹	23	GND	Ground
4	INT1	INT 1	24	TP_RESET	External interrupt to the Host Reset
5	Reset	Global Reset Pin 1.8V ²	25	TP_VCC	Power Voltage for digital circuit 3.3V
6	INT2	INT 2	26	TP_INT	External Low is active
7	GND	Ground	27	TP_SDA	I2C data input and output
8	MIPI_0N	-MIPI differential data input	28	TP_SCL	I2C clock input
9	MIPI_0P	+MIPI differential data input	29	GND	Ground
10	GND	Ground	30	GND	Ground
11	MIPI_1N	-MIPI differential data input	31	VDD	Power Voltage for digital circuit 3.3V
12	MIPI_1P	+MIPI differential data input	32	VDD	Power Voltage for digital circuit 3.3V
13	GND	Ground	33	GND	Ground
14	MIPI_CKN	-MIPI differential clock input	34	GND	Ground
15	MIPI_CKP	+MIPI differential clock input	35	LED-	Power for LED backlight (Cathode)
16	GND	Ground	36	LED-	Power for LED backlight (Cathode)
17	MIPI_2N	-MIPI differential data input	37	NC	No connection
18	MIPI_2P	+MIPI differential data input	38	NC	No connection
19	GND	Ground	39	LED+	Power for LED backlight (Anode)
20	MIPI_3N	-MIPI differential data input	40	LED+	Power for LED backlight (Anode)

¹The 3 PIN and 5 PIN should be the same as 1.8v or 3.3v

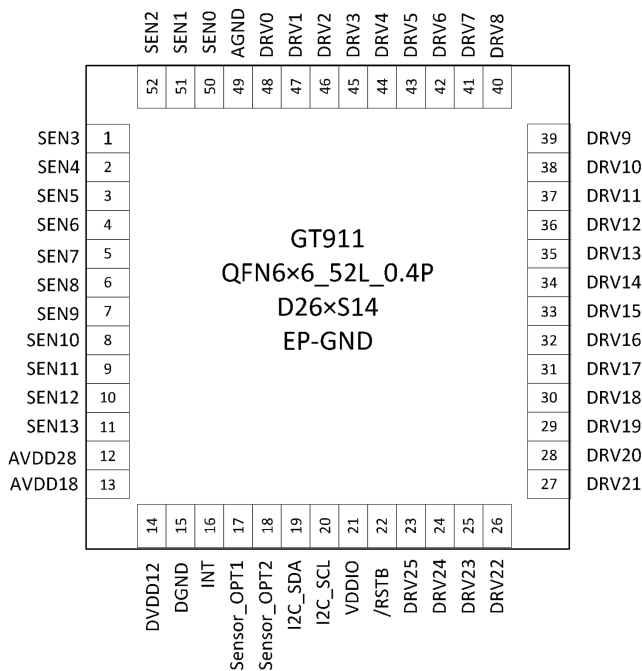
²The 3 PIN and 5 PIN should be the same as 1.8v or 3.3v

5 Gravity Sensor

The Radxa Display 8 HD is not only equipped with a premium Full High-Definition (FHD) display, but also features an integrated high-performance GT911 Gravity Sensor, enhancing the user experience with smoother and more intelligent interactions.

GT911 provides a standard I2C communication interface, facilitating communication with the main CPU through the SCL and SDA lines. Within the system, GT911 consistently operates as a slave device, with all communication actions being initiated by the primary CPU. To ensure the stability of communication, it is advisable to configure the communication speed at 400Kbps or lower. GT911 offers two sets of I2C slave addresses, namely **0xBA/0xBB** and **0x28/0x29**, which can be chosen as needed.

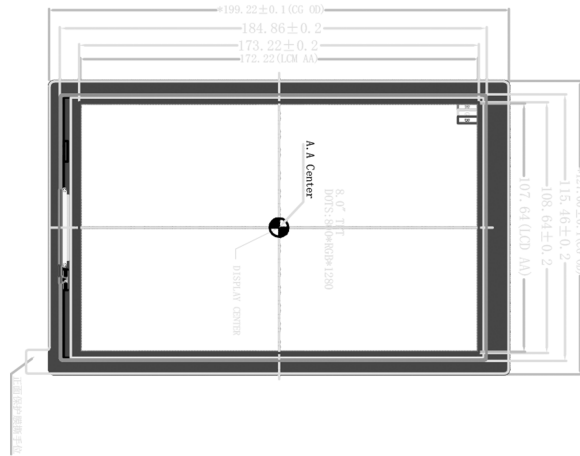
5.1 Pin Description



PIN	Name	Description	Note
1 ~ 11	SENS3 ~ SENS13	Touch Analog Signal Input	During the use of the HotKnot feature, it also serves as a driver signal output.
12	AVDD28	Analogue Power Positive	Connect a 2.2uF filter capacitor.
13	AVDD18	-	Connect a 2.2uF filter capacitor.
14	DVDD12	-	Connect a 2.2uF filter capacitor.
15	DGND	Digital Signal Ground	-

PIN	Name	Description	Note
16	INT	Interruption Signal	-
17	Sensor_OPT1	Module identification Port	-
18	Sensor_OPT2	Module identification Port	External pull-down required
19	I2C_SDA	I2C Data Signals	-
20	I2C_SCL	I2C Clock Signal	-
21	VDDIO	GPIO level control	Connect to 2.2uF Filter Capacitor, Overhang: 1.8V, Connect to AVDD: AVDD
22	/RSTB	System reset pin	Requires external 10K pull-up, pull-down reset
23 ~ 48	DRV25 ~ DRV0	Drive signal output	-
49	AGND	Analogue Power Ground	-
50 ~ 52	SENS0 ~ SENS2	Touch Analog Signal Input	During the use of the HotKnot feature, it also serves as a driver signal output.

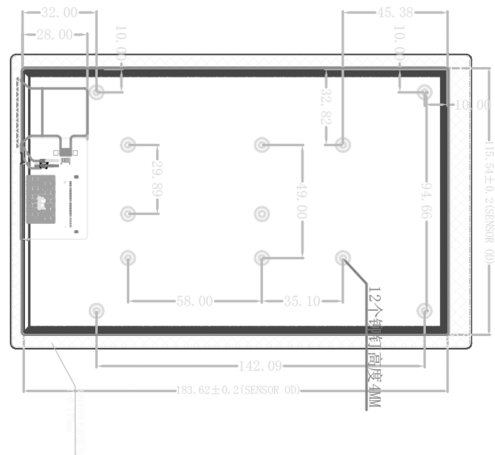
6 Mechanical Specification



Front



Side



Back

7 Availability

Radxa guarantees availability of the Radxa Display 8 HD until at least September 2029.

8 Support

For support, please see the support documentation section of the [Radxa website](#) website and post questions on the [Radxa Forum](#).