
Radxa Display 8 HD

8-inch HD Touchscreen Module

Revision 1.1

2023-08-22



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1 Revision Control Table

Version	Date	Changes from previous version
1.0	10/05/2023	First Version
1.1	22/08/2023	Update 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. It has the following features:

- 8.0 inch LCD
- 800 x 1280, 16.7M colors resolution
- Full angle viewing LCD
- 5-Point capacitive touch panel
- Support PWM brightness control
- Support Color enhancement
- Built-in g-sensor for portrait/landscape rotation

3 LCD

3.1 Features

- 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 to 60°C
- Storage Temperature: -30 to 60°C

4 Touch

The Radxa Display 8 HD touch panel is powered by GT911, a new-generation 5-point capacitive touch solution designed for 7" to 8" panels, consists of up to 26 transmitter electrodes and 14 receiver electrodes to provide higher touch accuracy. GT911 supports up to 5 concurrent touches with real-time tracking of accurate position and motion trajectory as well as touch area. Furthermore, it is able to report such information to the host as required.

4.1 Features

- Built-in capacitive sensing circuit and high-performance MPU
 - Report rate: 100Hz
 - Outputs touch coordinates in real time
 - Unified software applicable to capacitive touch screens of various sizes
- Capacitive touch sensor

- Channels: 26 (Tx channels) * 14 (Rx channels)
- Cover Lens thickness supported: 0.55mm \leq Glass \leq 2mm, 0.5mm \leq PMMA \leq 1.2mm,
- Adaptive frequency hopping
- Supports OGS full lamination
- Environmental adaptability
 - Self-calibration during initialization
 - Automatic drift compensation
- Response time
 - Green mode: <48ms
 - Sleep mode: <200ms
 - Initialization: <200ms

5 Pinout

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

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](#).