

DMG12800C070_40WTC



System Hardware

Properties	Parameters
Motherboard Level	Commercial-grade
CPU	RK3566, Quad-core ARM Cortex-A55, 1.8GHz Processor
OS	Linux 4.19
FLASH	8Gbytes EMMC
RAM	2Gbytes LPDDR4

Display Parameters

Properties	Parameters	Description
Size	7.0 inch	-
LCD Type	IPS, TFT LCD	-
Viewing Angle	85° /85° /85° /85°	Wide viewing angle, high contrast, and good color reproduction
Active Area (AA)	94.20mm (W)*150.72mm (H)	-
Viewing Area(VA)	94.60mm (W)*151.12mm (H)	-
Resolution	800x1280	-
Backlight Service Life	>20000 Hrs	Backlight service life refers to the period the LED backlight operates under test conditions until brightness decreases to 50% of the initial level
Brightness	250nit	100-level brightness adjustment (Flickering may occur at 1%-30% of max brightness; not recommended for use in this range)

Note: Use dynamic screen saver to prevent afterimages from prolonged fixed page display.

Touch Parameter

Properties	Parameters
Touch Type	Capacitive touch panel
Structure	G+G structure with tempered glass surface

Power Supply

Properties	Min	Typ	Max	Unit
Power Voltage	9.0	12.0	36.0	V

Recommended power supply:12V 1A DC.

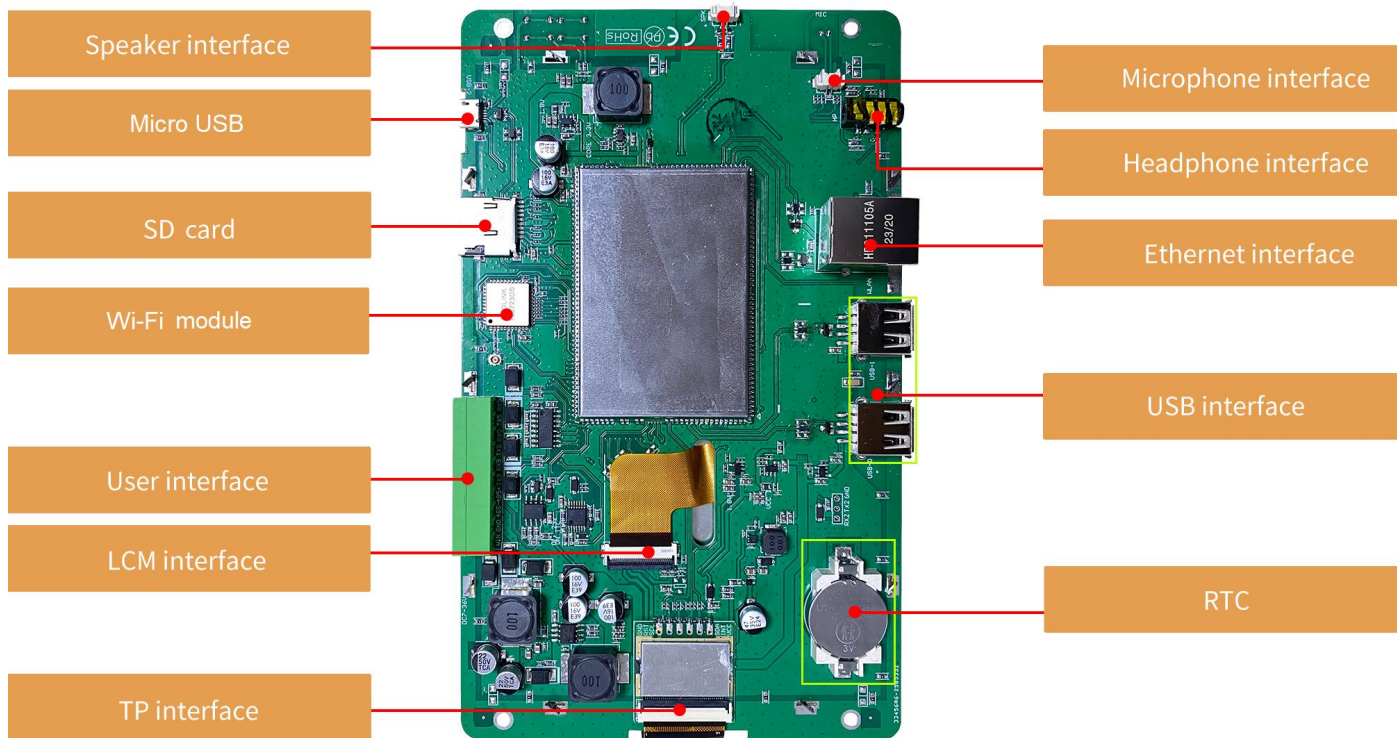
Environment & Reliability Test

Properties	Conditions	Min	Typ	Max	Unit
Working Temperature	60%RH at 12V voltage	-10	25	60	℃
Storage Temperature	-	-20	25	70	℃
Working Humidity	25℃	10%	60%	90%	RH
Conformal Coating	Y				
ESD	Air: ±8KV, Contact: ±6K				
RE	Class B				

Additional cooling required for operation above 65℃.

● Peripherals and Interfaces

Properties	Description
User Interface	10Pin_3.81mm Horizontal socket
COM	RS232*2(COM5 & COM8), RS485*1, RS232/TTL*1(COM0, RS232 default)
Ethernet	10/100Mbps
USB	USB 2.0*2(HOST), Mrico USB*1(OTG)
SD Card	Max 64G
RTC	Accuracy: $\pm 20\text{ppm}$ @25°C
Speaker	2Pin_1.25mm interface*1
Microphone	2Pin_1.25mm interface*1
Headphone	3.5mm spacing interface*1
Camera	USB 2.0
Wi-Fi	IEEE 802.11Bb/g/n, 2.4GHz, Wi-Fi 4
Bluetooth Version	BT4.2



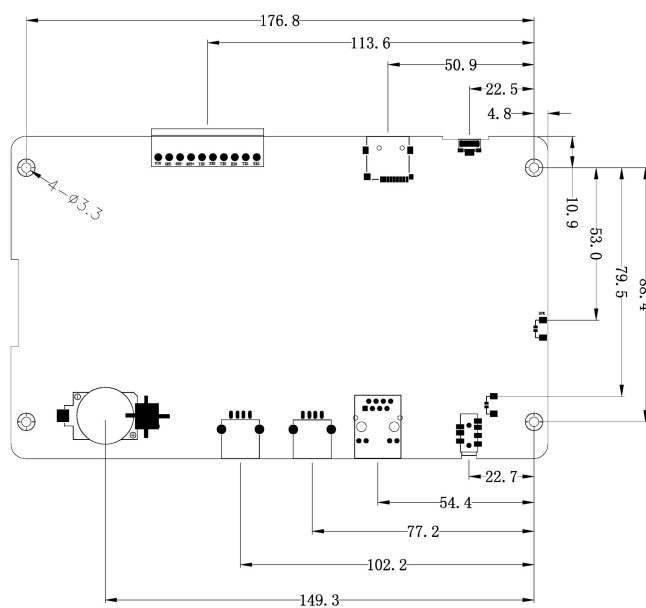
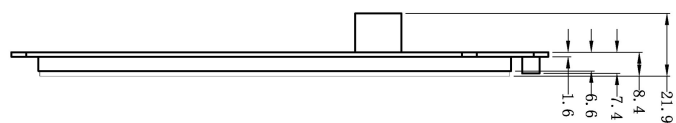
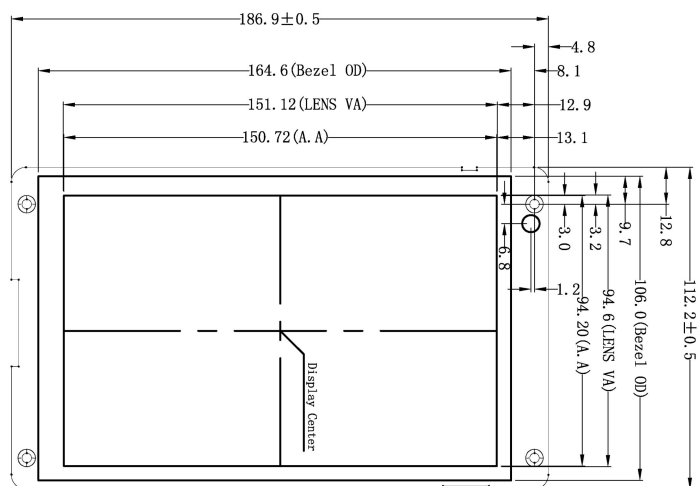
Development Platform

Development	
QT	QTCreator2.7.2 and above

Packing Capacity & Dimension


Dimension				
Dimension	112.2(W) * 186.9(H) * 21.9(T)mm			
Net Weight	305g			
Packing Capacity				
Model	Size	Layer	Quantity/Layer	Quantity(Pcs)
Carton1:	220mm(L) * 160mm(W) * 47mm (H)	-	-	-
Carton2:	250mm(L) * 200mm(W) * 80mm (H)	2	1	2
Carton3:	320mm(L) * 270mm(W) * 80mm (H)	2	2	4
Carton4:	450mm(L) * 350mm(W) * 300mm(H)	1	20	20
Carton5:	600mm(L) * 450mm(W) * 300mm(H)	1	34	34

Definition	Pin#	IO	Description
VIN	1	P	Power Input
GND	2	P	GND
485-	3	B	RS485-
485+	4	A	RS485+
TX9	5	0	UART 9 Output
RX9	6	I	UART 9 Input
TX0	7	0	UART 0 Output
RX0	8	I	UART 0 Input
TX5	9	0	UART 5 Output
RX5	10	I	UART 5 Input



Location hole is used as position reference.

Unmarked Tolerance is $\pm 0.3\text{mm}$

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Model										
Drawing	A 4	Drawn	DWIN	Date						
Scale	1 : 1	Review		Date						
Unit	MM	Approval		Date						

Revision Records

Rev.	Revise Date	Content	Editor
00	2023-02-24	First edition	YML
01	2024-01-29	Update appearance, ESD and temperature range	YML
02	2025-01-02	Modify the voltage value range, add development	Chen
03	2025-03-12	Add the description of Bluetooth	Chen
04	2025-06-16	Update the rang of temperature & Update the description of Wi-Fi module	Chen

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