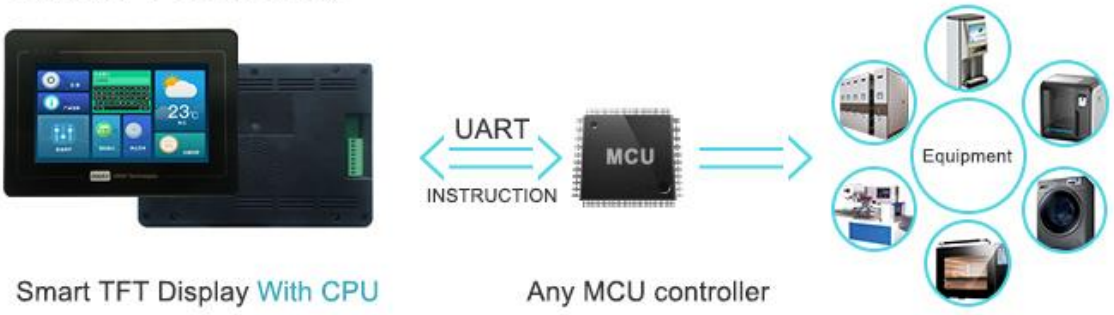
Integrated LCD with CPU

Working Principle

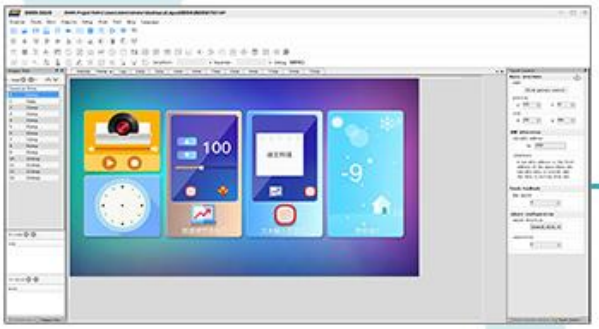
Control TFT Touch Display



Smart TFT Display With CPU

Any MCU controller

Operation



Design excellent GUI by professional design tools (e.g Photoshop) and configured by DGUS software to realize wonderful effect ,such as button ,text ,animation ,progress car ,curve and so on .

Connect with customer's MCU through RS232/RS485/TTL level directly

Human-computer interaction supported by 5 instructions easily

Function

序号 No.	名称 Name	说明 Description
1	T5L1 芯片 T5L1 ASIC	迪文自主研发，2019 年量产，1MBytes 片内 Nor Flash，其中 512KBytes 用于存储用户数据库，擦写次数>100,000 次 Developed by DWIN. Mass production in 2019,1MBytes Nor Flash on the chip, 512KBytes used to store the user database. Rewrite cycle: over 100,000 times
2	液晶屏接口 LCM interface	FCC50_0.5mm，RGB 接口 FCC50_0.5mm, RGB interface
3	电阻触摸屏接口 RTP interface	FCC4Pin_1.0mm 接口 FCC4Pin_1.0mm interface
4	用户接口 User interface	用于供电和串口通讯，8Pin_3.81mm 座子。串口下载速率(典型值)：12KByte/s 8Pin_3.81mm socket for power supply and serial communication. Download rate(typical value): 12KByte/s
5	Flash	16MBytes NOR Flash，存放字库、图片、音乐文件，擦写次数>100,000 次 16MBytes NOR Flash, for fonts, pictures and audio files. Rewrite cycle: over 100,000 times
6	扩展 Flash 接口 Expand Flash	可以扩展到 64Mbytes NOR Flash Expandable to 64Mbytes NOR Flash
7	扬声器 Speaker	板载扬声器，功率：2W Onboard speaker. Power: 2W
8	RTC	法拉电容供电，精度：±20ppm @25℃。掉电后可维持 7 天正常工作 Super-capacitor for power supply. Accuracy: ±20ppm @25℃. It can work normally for 7 days after power failure

Product Specification

LCD Type	TN, TFT LCD
Viewing Angle	Normal viewing angle, 70°/70°/50°/70° (L/R/U/D)
Resolution	800×480 pixels (support 0°/90°/180°/270°)
Color	24-bit 8R8G8B
Active Area (A.A.)	154.20mm (W) ×85.88mm (H)
View Area (V.A.)	155.1mm (W) ×86.9mm (H)
Backlight Mode	LED
Backlight Service Life	>30000 hours (Time of the brightness decaying to 50% on the condition of continuous working with the maximum brightness)
Brightness	230nit
Brightness Control	0~100 grade (When the brightness is adjusted to 1%~30% of the maximum brightness, flickering may occur and is not recommended to use in this range)
Note: You can use dynamic screen saver wallpapers to avoid after images caused by fixed page display for a long time.	

Touch parameters

Type	Four-wire RTP (Resistive touch panel)
Structure	ITO film + ITO glass
Touch Mode	Support point touch and drag
Surface Hardness	3H
Light Transmittance	Over 80%
Life	Over 1,000,000 times touch

Serial interface parameters

Mode	UART2: RS232 UART4: RS232（Only available after OS configuration) UART5: RS485（Only available after OS configuration)				
Voltage Level UART 2,UART 4	Test Condition	Min	Typ	Max	Unit
	Output 1	-	-5.0	-3.0	V
	Output 0	3.0	5.0	-	V
	Input 1	-15.0	-5.0	-	V
	Input 0	-	5.0	15.0	V
Baud Rate UART 2,UART 4	3150~3225600bps, typical value of 115200bps				
Voltage Level UART 5	Test Condition	Min	Typ	Max	Unit
	Output 1	2.5	5.0	-	V
	Output 0	-	-0.5	-2.5	V
	Output 1	0	2.5	-	V
	Output 0	-	-2.5	-0.2	V
Baud Rate UART 5	3150~3225600bps, typical value of 115200bps				
Data Format	UART2: N81 UART4: N81/E81/O81/N82 4 modes (OS configuration) UART5: N81/E81/O81/N82 4 modes (OS configuration)				
Interface Cable	8Pin_3.81mm Socket				

Electrical specifications

Rated Power	<5W	
Operating Voltage	7~36V, typical value of 12V	
Operating Current	300mA	VCC=12V, max backlight
	130mA	VCC=12V, backlight off
Recommended power supply: 12V 1A DC		

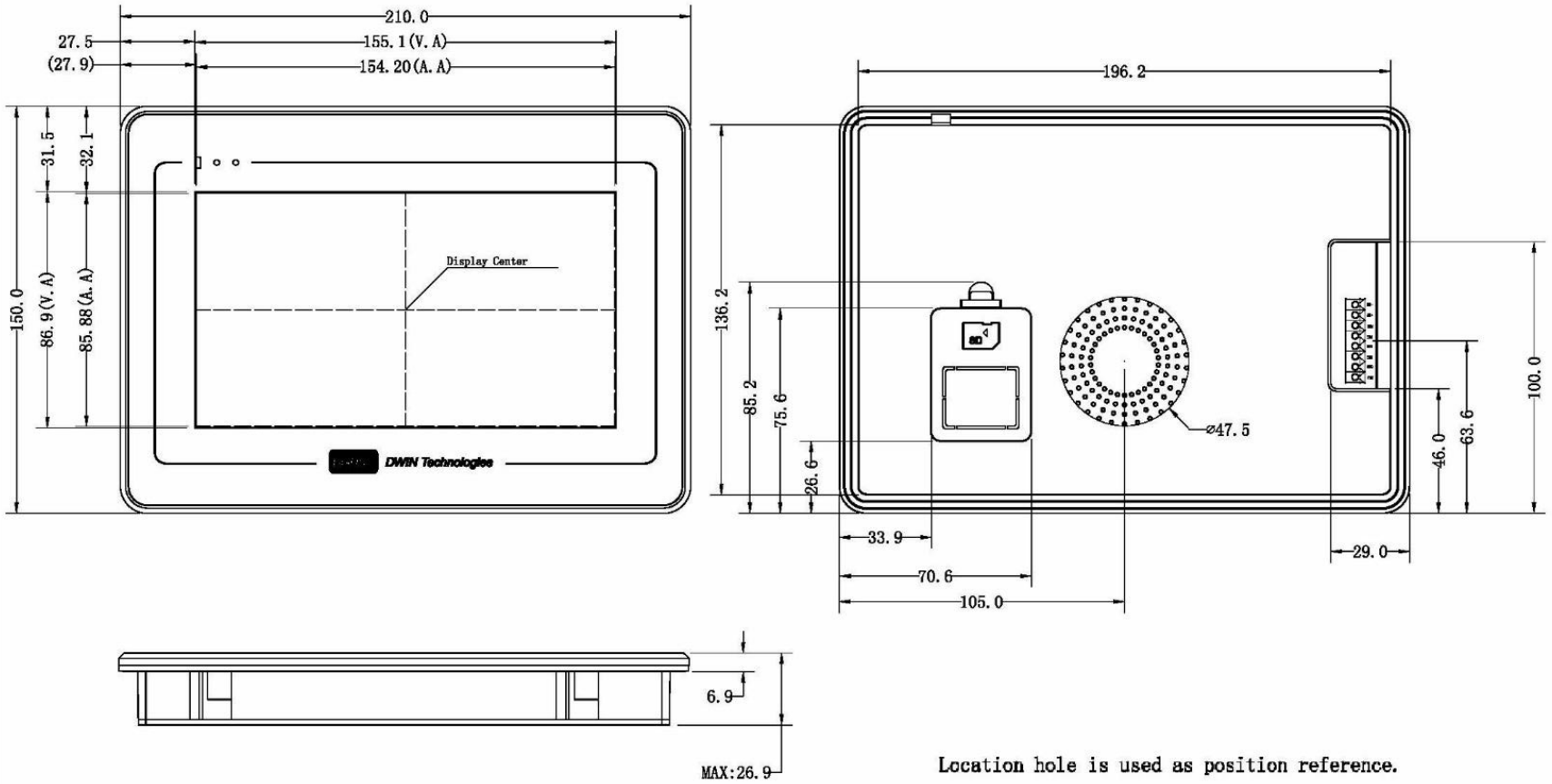
Operating environment

Operating Temperature	-20℃~70℃ (12V @ 60% RH)
Storage Temperature	-30℃~80℃
Conformal Coating	Yes
Protective Level	IP65 (Front)
Operating Humidity	10%~90%RH, typical value of 60% RH

Package & Dimensions

Form Factor	210.0mm (W)×150.0mm (H)×26.9mm (T)
Installation Dimensions	Positioning hole: 196.2(+0.5mm)×136.2(+0.5mm)
Net Weight	490g

Disclaimer: The product design is subject to alternation and improvement without prior notice.



Definition	Pin#	Type	Description
VIN	1	P	Power Input
GND	2	P	GND
TX2	3	O	DOUT
RX2	4	I	DIN
TX4	5	O	DOUT
RX4	6	I	DIN
A5+	7	485-	485+
B5-	8	485-	485-

Location hole is used as position reference.

Unmarked Tolerance is +/-0.3mm

Active area is marked in Dash lines

Model	DMG80480T070_15WTR					DWIN Technologies
Drawing	A4	Drawn	DWIN	Date		
Scale	1:1	Review		Date		
Unit	MM	Approval		Date		