



ALL-AROUND TOUCHING SOLUTION PROVIDER

Embedded Touch Monitor/PC

Model : DM050



Guangzhou TouchWo Electronics Co., Ltd

Version V1.0



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1 Overview

1.1 Introduction

Touchwo outward push embedded all-in-one machine with compact texture fine new design, is specifically designed for a variety of use environment and industrial products. Capacitive touch screen using Mo 7 level explosion-proof waterproof tempered glass; using LED backlight technology combined with A gauge LCD, the picture colorful, transparent, longer service life, the whole machine environmental protection low-power design, electronic components using certified brands, equipped with high-quality motherboard, can meet a variety of harsh working environment, while supporting a variety of application interfaces and diverse peripheral devices.

The product quality assurance, Touchwo focus on product reliability, environmental adaptability, practicality, scalability, EMC compatibility, etc.. The face frame is made of aluminum alloy, and the back shell is designed with galvanized plate private mold, which can be in a harsh environment, dust-proof, rust-proof, pressure-resistant, and resistant to high and low temperatures. The whole machine is easy to disassemble and install, simple and convenient, which can be applied to industrial intelligence, artificial intelligence, intelligent workshop, commercial institutions, financial institutions and other automation fields.

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1.1 Features

- Stereo heat dissipation structure: new multi-hole stereo heat dissipation design, better heat dissipation effect.
- Installation : The installation method of pushing from outside to inside makes the machine and the embedded structure fixed on a plane, which is beautiful and elegant.
- Pure plane capacitive touch panel, support personalization : 5-inch new generation of pure plane level 7 explosion-proof and shock-resistant glass panel, accurate touch , fast response, long touch life; support color, screen printing LOGO etc customization.
- Multi-touch, responsive: high sensing accuracy, fast response, surface can be glossy or matte finish, support more refined industrial operation, touch no blind spots.



- Faster operation and more reliable storage: High quality chips from famous brands with high life expectancy.
- Massive compatibility, rich interfaces: support compatible with most industrial control configuration software, support customized multi-serial port, USB interface and diverse peripheral devices. (such as: 232, 485, TTL and other interfaces, cameras, 4G modules, card swipe, fingerprint recognition, POE power supply, two-dimensional code, small ticket printer, etc.)
- HD display : 5-inch LCD screen, using LED backlight, low power consumption, clear, natural, transparent colors, support multi-screen with display / asynchronous display, easy to expand multi-screen synchronous / asynchronous display.
- Strict quality control and strict testing: the whole machine has undergone 48 hours aging, electrostatic detection, vibration, high voltage, display and other multi-pass inspection. Regulated voltage/electronic load test, voltage withstand test, touch/calibration test, controlled high temperature test, constant temperature and humidity test, controlled drop test.

2 Technical Parameters

2.1 System Design

Output	HDMI for Android
Input	HDMI for Touch Monitor
Touchscreen	PCAP,10 points touch.
Display	HDMI
PC video decoding	MPEG、 H.264 etc
Structure design	Sheet metal backshell, embedded for industrial
Module	Display, touch integration, one key switch



2.2 LCD Parameters

Type	LCD panel (a-Si TFT-LCD WLED backlight) A grade		
Size	5inch(5:3)		
Display Area	109.5 (W) *66.3 (H) mm		
Resolution	800*480		
Brightness	$\geq 250\text{cd/m}^2$	Contrast Ratio	$\geq 1000: 1$
Response Time	60% (Typ.)(Tr/Td) ms	Refresh Frequency	60Hz
Total number of colors	16M , RGB 40 Pins		
Viewing Angle	70/70/70/70 (Typ.)(CR ≥ 10)(left/right/up/down)		
Lifetime	30000Hour		

2.3 Touch Panel Parameters

Touch Technology	Projected capacitive touch		
Response time	< 5ms		
Touch points	Standard 10-point touch, you can zoom in/out of the picture and other multi-touch functions		
Touch effective recognition	> 1.5mm	Touch data output method	Coordinate output
Scanning frequency	200Hz	Scanning accuracy	4096 \times 4096
Communication method	USB 2.0,3.0	Theoretical number of click	over 50million times
Firmware	upgraded by USB	drivers	NA.
Working current/voltage	180Ma/DC+5V \pm 5%		
Anti-light interference	Normal use when sunlight, incandescent lamps, fluorescent lamps and other strong light changes		
Surface hardness	Chemically tempered, explosion-proof glass of Mohs 7		
Operating system	Win 7/ Win 8/Win 10/CE/Mac/Android/Linux /XP		



2.4 Electrical properties

Input power supply	110-240V AC 50/60Hz	Output power	DC 12V3A
Monitor consumption	< 20 W	Standby power	< 0.5 W
Android consumption	< 25 W	Speaker	8 Ω 2W

2.5 Working Environment

Working Temperature	0℃-50℃
Working Humidity	10% - 80%
Store Temperature	-5℃-60℃
Store Humidity	10% - 70%
Altitude	Under 5000meters

2.6 CPU

Item	Touch Monitor	Android 安卓	customization
Chipset	External host required, refer to 3.1 for detailed parameters	Quad-core RK3288 Quad-core RK3568 Hexa-Core RK3399	YES
Ram		2G/4G	
Rom		8G	
Graphics card		16/32G options	
Resolution		Android HD	
OS		720P	
		RK3288/3399: 7.1 RK3568: 11.0	
Network		Integrated 10/100/1000M adaptive NIC, wireless NIC 802.11 a/b/g/n	



3 Interfaces & Accessories

3.1 Parameters for Touch Monitor

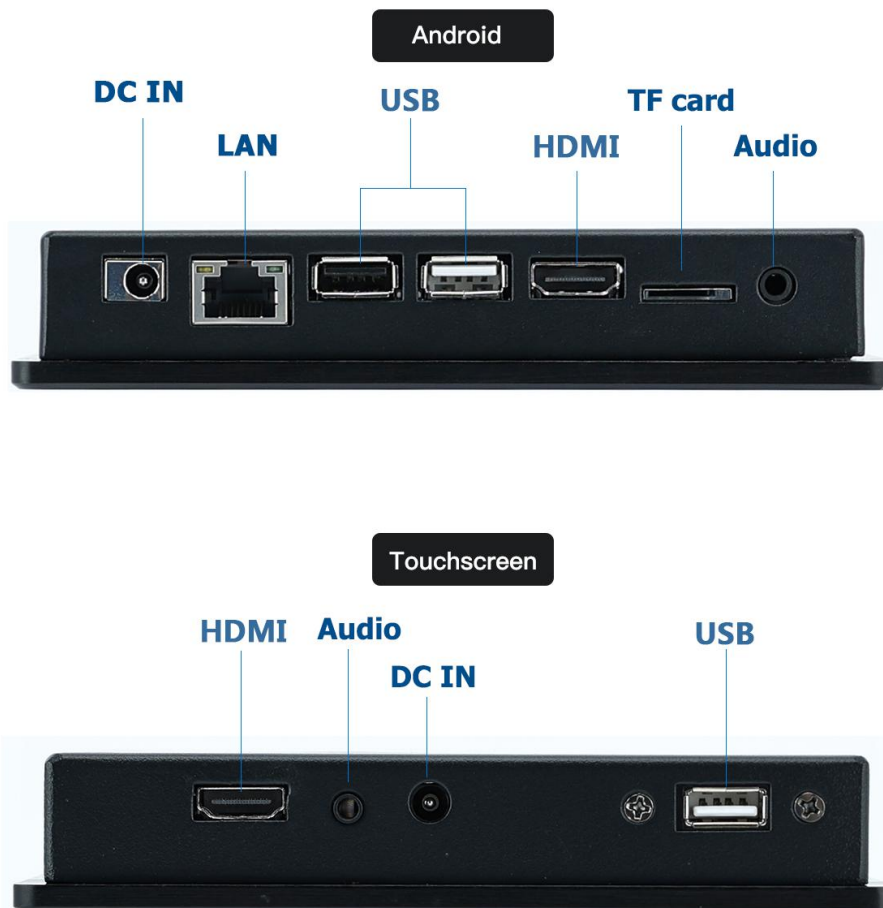
DC In	2.1mm DC12V*1	Audio	1
HDMI input	1	USB touch port	1

3.2 Parameters for Touch Android PC

DC In	2.1mm DC12V*1	Earphone	1
RJ45	1	HDMI	1
USB (with OTG)	2	WIFI	1
TF slot	1	TTL/232/485 options	



Interface parameters



3.3 Package

Product Manual	*1
AC Power Cord	*1
Power adapter	*1
Embedded snap / wall / bracket (three options)	*1
Warranty card	*1



Certificate of Conformity	*1
HDMI/USB cable	*1 for each (1.5meters length for touch monitor only)
WIFI antenna	*1 (for Android PC only)



Instruction



certificates warranty



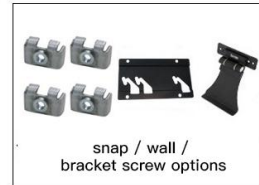
Power cable



HDMI



USB

snap / wall /
bracket screw options

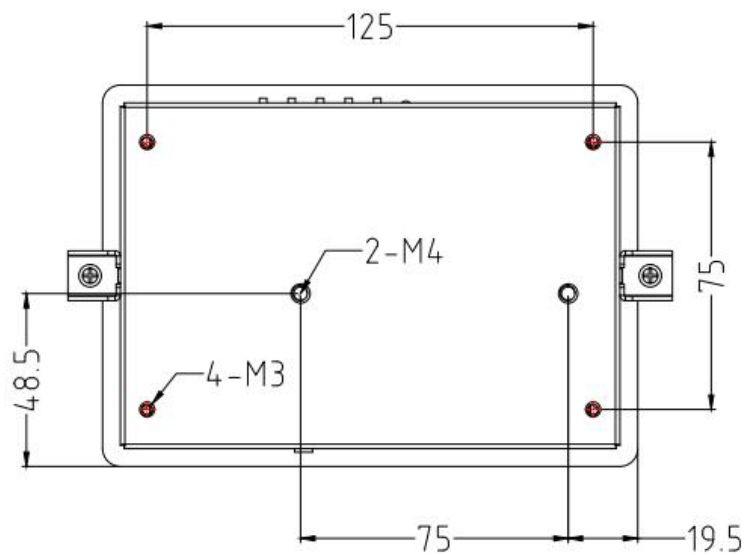
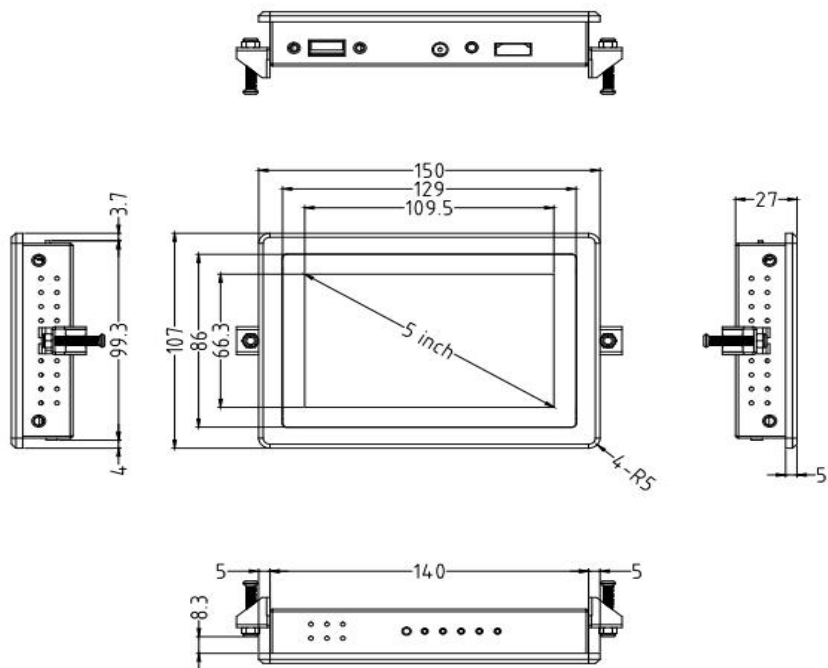
4 Structure / Specification

4.1 Physical Specification

Screen	5inch
Effective display size	109.5 * 66.3 mm (aspect ratio :5: 3)
Whole machine size (W×H×H)	150×107×27) mm
Package size (W×H×H)	340×277×97 mm
Embedded snap / wall mount / bracket (three options)	Snap (net weight 31g), wall mount (net weight 106.8g), stand (net weight 275g), optional base
Embedded snap / wall / bracket screw specifications	75mm or 125mm×75mm
Wall-mounted screw specifications	M4/M3
Net weight (bare)	0.479KG
Gross weight (packing)	0.9KG



4.2 Drawing





5 Product Pictures

5.1 Pictures



5.2 Color



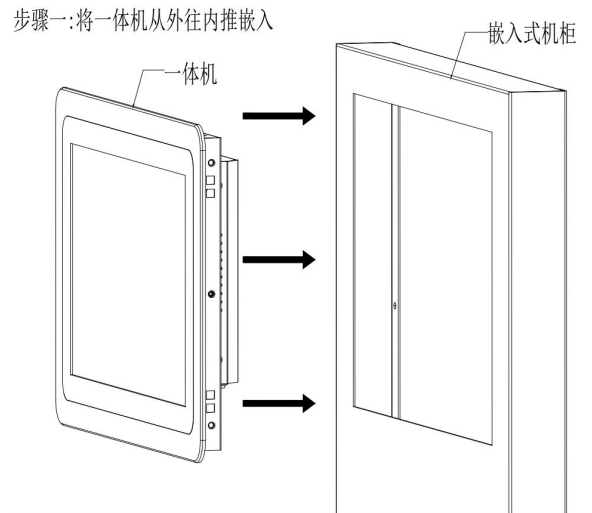


5.3 Real Pictures

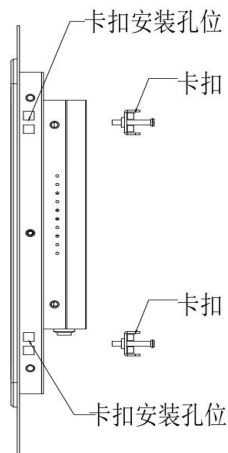




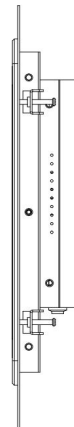
5.4 产品安装方式



步骤二:4个卡扣对准一体机左右两侧的孔位进行安装



步骤三:卡扣对准孔位卡好后,用螺丝刀将卡扣螺丝拧紧,直至螺丝头顶住嵌入式机柜后则安装完毕。





6 Warning

1. the product belongs to precision electronic equipment, front IP65, the overall protection level is IPX3, attention should be paid to avoid water splashing and rain.
2. Do not place the equipment in a humid environment, outdoor equipment need to increase the moisture-proof cover, when it rains, dew needs to do a good job of protection, to avoid water mist into the machine and glass mold. Humid use environment will accelerate the rapid aging of electronic components, thereby reducing the service life of this product, resulting in moisture damage to components.
3. Do not place the equipment for a long time in an environment with strong UV rays and direct sunlight. When the temperature is higher than 50 °C , ultraviolet light and high temperature irradiation screen will accelerate the deflection of liquid crystal molecules, the screen will accelerate aging, when the outdoor temperature is higher than 50 °C moved indoors or shade treatment.
4. the brightness of the product is not less than 250cd/m², in the case of high ambient brightness, the screen display will not be clear, please avoid putting it outdoors when the sunlight is strong.
5. when the temperature is lower than 0 °C , the screen may not work properly because the molecular deflection of liquid crystal is affected, so it is not recommended to use it when it is lower than 0°C.