

## P10600HY070P\_T01 High-Performance Android LCD Module

P10600HY070P\_T01 is an industrial level Android LCM based on Rockchip RK3288 ARM. It is equipped with Quad-core Cortex-A17, supports most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions under 1080p@60fps and many other great features of Rockchip RK3288. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and 1.1 OpenVG1.1.

RK3288 has high-performance external memory interface (DDR3/DDR3L/LPDDR2) capable of sustaining demanding memory bandwidths, also provides a complete set of peripheral interface to support very flexible applications.

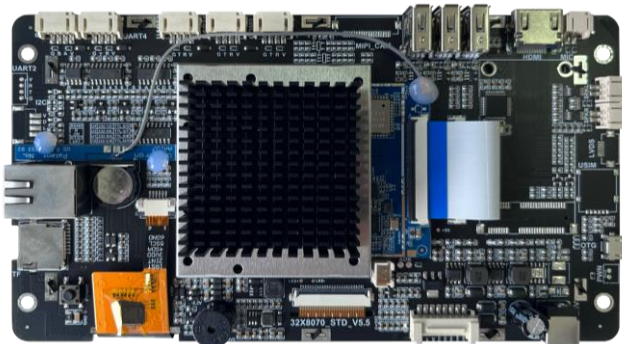
### Application Area

- ✓ Wisdom medical
- ✓ Smart transport
- ✓ Security
- ✓ Power sector
- ✓ Energy & Chemical

### Front View



### Back View



## About PROCLUS

As a custom LCM manufacturer that is focusing on all-in-one TFT LCDs, we offer LCM solutions based on your requirements.

Our solutions include UART, Android and HDMI. They simplify GUI development and are cost-effective.

## Product Feature

- RK3288 1.8GHz
- RAM 2GB
- ROM 8GB
- Support Android、Linux
- Display size 1024×600
- Display Brightness 350nit
- UART RS232/TTL\*3、RS232/TTL/RS485\*1
- USB2.0\*3
- WIFI Support 2.4G/5G frequency band
- Bluetooth 4.0
- Ethernet Supports 10m/100m/1000m
- 4G support (optional)

## Version Info

Ver.	Date	Descriptions
V5.4	2023/08/01	Added version records, added side view
V5.5	2024/01/29	Optimized RS485 hardware functions
V5.5	2024/07/08	Optimal layout design

For more detailed information about Proculus Technologies LCD module solutions, visit [www.proclustech.com](http://www.proclustech.com)

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## Detailed Parameters

### Core Performance

CPU	1.8GHz Quad-core A17 ARM
RAM	2GB DDR3
eMMC	Default 8GB, Support 16/32/64GB
GPU	Mali-T764 MP4
Power Manager	ACT8846 PMU

### Display Performance

Display Color	16.7M (16777216) colors, 24-bit color 8R8G8B
Display Size	154.21 mm(W)×85.92 mm(H), 1024×600
View Area Size	155.96 mm(W)×88.87mm(H), 1024×600
Resolution	1024×600
Backlight Mode	LED
Luminance	350

### Voltage Current

Parameter	Condition	Min	Typ	Max	Unit
Working Voltage	-	6	12	16	V
Working Current	-	-	400	-	mA
Power	12V 2A DC (Recommended)				

### Visual Angle Parameter

Visual Angle (CR≥10)	Angle	Angle Parameter	Min	Typ	Max	Unit
	θL	Φ=180° (9 o'clock)	70	80	-	Deg
	θR	Φ=0° (3 o'clock)	70	80	-	
	θT	Φ=90° (12 o'clock)	50	60	-	
	θB	Φ=270° (6 o'clock)	60	70	-	

### Reliability Testing

Parameter	Condition	Min	Typ	Max	Unit
Working Temperature	60%RH at 12V voltage	-20	25	70	°C
Storage Temperature	-	-30	25	85	°C
Working Humidity	25°C	10%	60%	90%	RH
Protection Paint	-	-	无	-	-

### System Version

Android	Support Android 5.1/7.1/8.1
Linux	Support Ubuntu 18.04

### Expansion Device

MIC	Audio input interface
Speaker	Audio output interface
Buzzer	Support
GPIO	Nonsupport
IIC	Support
TF Card	Support
HDMI OUT	Support
USB Camera	Support

### Serial Port Parameter

Parameter	Condition	Min	Typ	Max	Unit
Baud Rate	Standard	1200	9600	115200	bps
Serial Mode	3*RS232/TTL, 1*RS232/TTL/RS485	User Interface	8Pin_2.0mm socket		

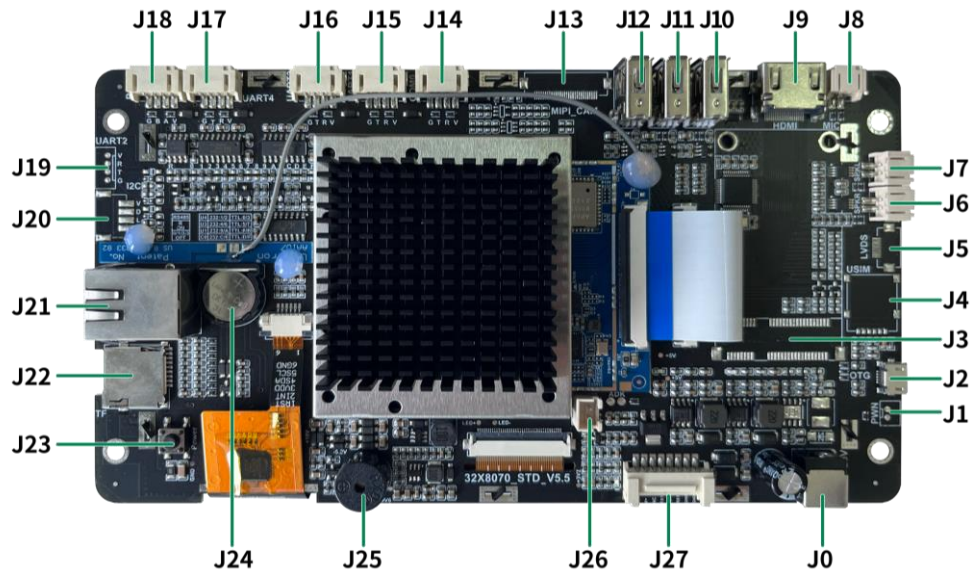
### Interface Parameter

Interface	Parameter	Interface	Parameter
USB	USB DEBUG*1. USB HOST*3	WIFI	Support 802.11b/g/n Wi-Fi 2.4G/5G
Bluetooth	Bluetooth 4.0	4G	4G /GPS (Optional)
Ethernet	Support 10m/100m/1000m Ethernet	Gyroscope	-
NFC	-	Light sensor	-



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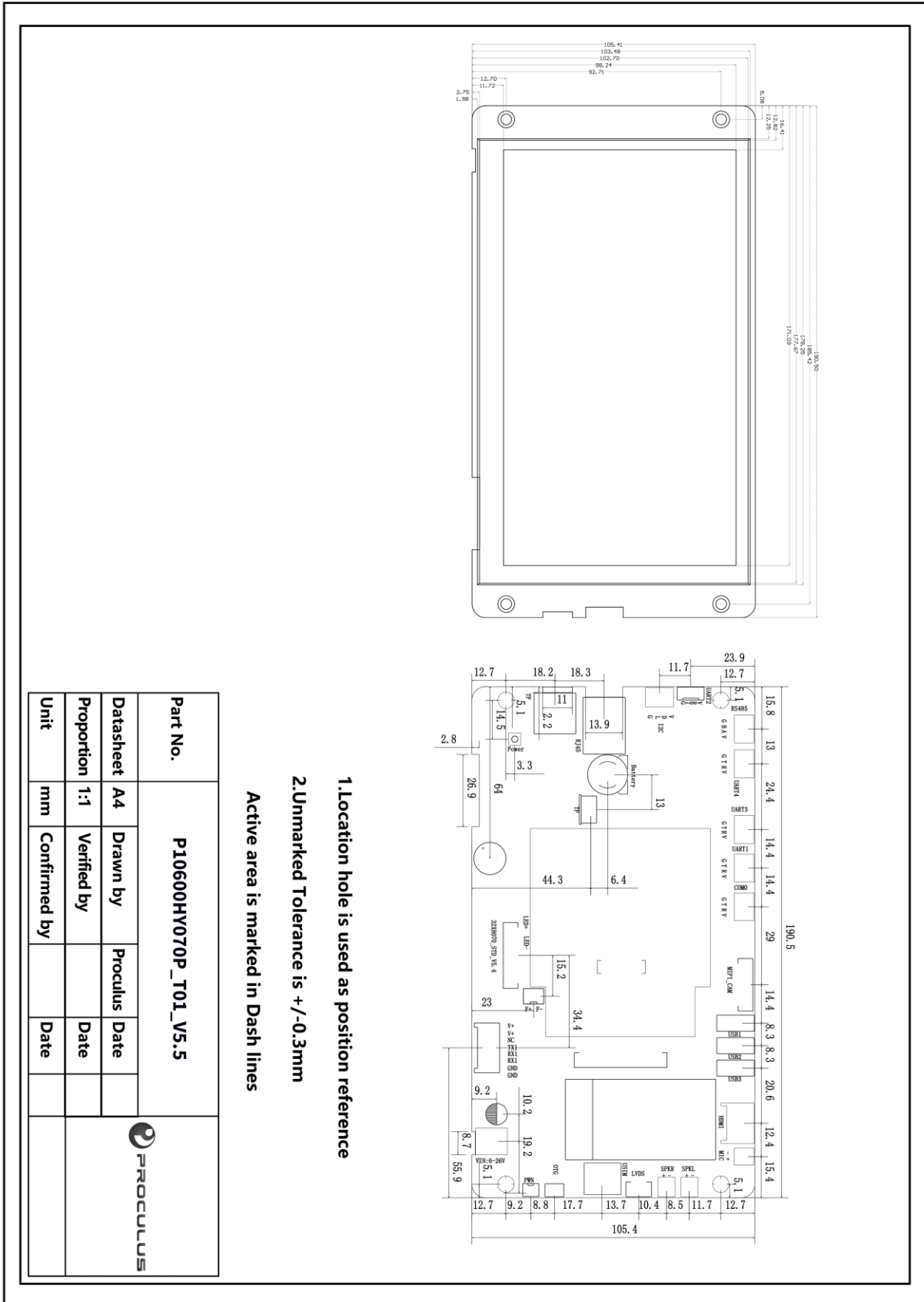
## Interface Specification



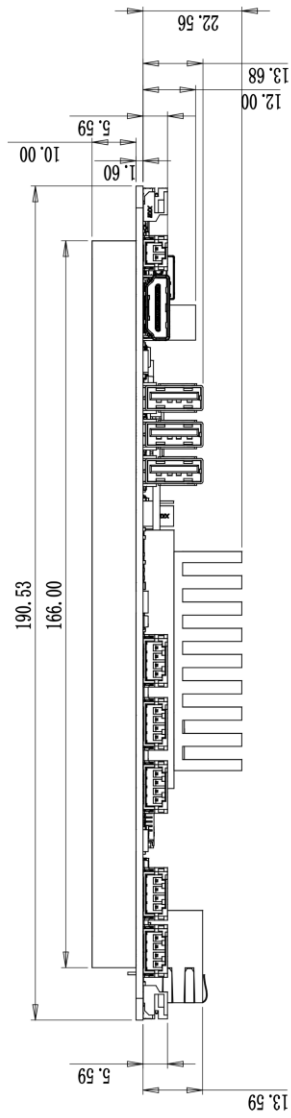
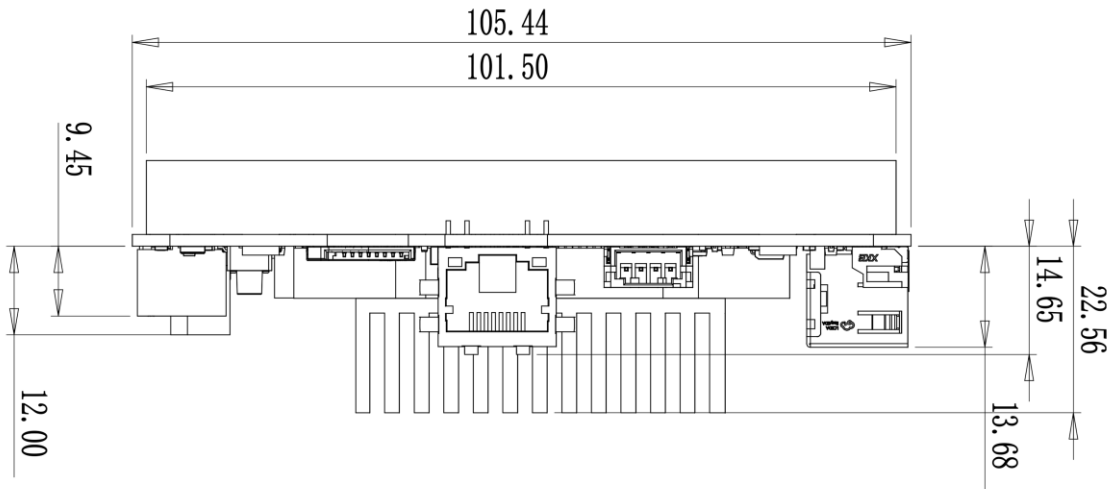
Num.	Interface	Description
J0	Power	12V/2A power supply (maximum voltage ranges from 6V to 16V DC)
J1	Wake-up	Control screen system on/off
J2	USB_Micro	OTG /App debugging/ Firmware upgrade interface
J3	MINI PCIE 4G	4G LTE Module/GPS (Optional)
J4	SIM card	Nano-SIM supported (Optional)
J5	LVDS interface	Reserved
J6	SPK_R	Right channel audio output interface
J7	SPK_L	Left channel audio output interface
J8	MIC	Audio input interface
J9	HDMI	HDMI output interface
J10	USB_HOST3	Support USB Peripherals
J11	USB_HOST2	Support USB Peripherals
J12	USB_HOST1	Support USB Peripherals/Support dual USB parallel use
J13	MIPI camera interface	Reserved
J14	COM0	Device name: COM0. Pin definition: 5V, RXD, TXD, GND
J15	UART1	Device name: ttyS1. Pin definition: 5V, RXD, TXD, GND

Num.	Interface	Description
J16	UART3	Device name: ttyS3. Pin definition: 5V, RXD, TXD, GND
J17	UART4	Device name: ttyS4. Pin definition: 5V, RXD, TXD, GND/Same as J18
J18	RS485	Device name: ttyS4. Pin definition: 5V, RXD, TXD, GND/Same as J17
J19	Debug interface	not open temporarily
J20	IIC interface	Pin definition: 5V, SDA, SCL, GND (Reserved)
J21	RJ45 interface	Support 10M/100M/1000M network
J22	TF card	Can do memory expansion
J23	Wake-up	Control screen system on/off
J24	RTC	Supply system RTC
J25	Buzzer	Buzzer
J26	Radiator interface	Reserved
J27	User interface	Pin Definition: 12V, 12V, NC, TXD, RXD, RXD, GND, GND

# Product size drawing (product without shell)



- 1. Location hole is used as position reference
  - 2. Unmarked Tolerance is +/-0.3mm
- Active area is marked in Dash lines



**1. Location hole is used as position reference**

**2. Unmarked Tolerance is +/-0.3mm**

**Active area is marked in Dash lines**

Part No.	P10600HY070P_T01_V5.5				
Datasheet	A4	Drawn by	Proclus	Date	
Proportion	1:1	Verified by		Date	
Unit	mm	Confirmed by		Date	

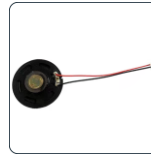
## Support peripheral accessories



### GPS function

Used for GPS positioning, map positioning, real-time location query

Support status:



### Loudspeaker

Used to output audio and play music

Support status:



### 4G function

Support 4g Internet access function, the following modules can be selected:

1-EC20: Signal is more stable, CAT4

2- EC25: CAT4

Support status:



### HDMI Output

Used to output screen display

Supported status:



### Extended storage

Expand storage space and export data for storing important data that can be migrated

Supported status:



### USB HD camera

Support 720P/1080P HD camera picture

Support status:



PROCLUS

## Service

Customers enjoy 1-year free warranty and lifetime maintenance guarantee for the purchase of our products, and users can also extend the warranty period by paying.

- 1, one year warranty: from the date of purchase enjoy 1 year free maintenance service.
- 2, lifetime maintenance: beyond the warranty period of the product, we provide paid maintenance services.
- 3, warranty scope: due to human use factors or force majeure caused by the damage is not within the scope of warranty; The CPU is not covered by warranty.

In addition, all the purchase of our company's products will be recorded, after-sales service personnel will actively and regularly ask you about the use of the industrial control board you have purchased, give suggestions on your product maintenance, or reply to possible problems in a timely

## Technical Support

Within 12 months from the date of purchase, front-line engineers will provide timely support during working days and working hours. The scope of support is as follows:

1. Support users to run Android system and related interface test programs.
2. support the common configuration of Android system
3. support customer Android product hardware support

## Notes

1. Do not plug and remove the core board and peripheral modules with power on
2. Please follow all warnings and guidelines on the product
3. Please keep this product dry. If accidentally splashed or soaked by any liquid, power off immediately and allow to dry fully
4. Pay attention to the ventilation and heat dissipation of the product during use to avoid damage to components caused by excessive temperature
5. Do not use or store this product in a dusty or dirty environment
6. Do not use this product in alternating hot and cold environment to avoid damage to components
7. Do not handle the product roughly. Falling, knocking or violent shaking may damage the line and components
8. Do not use organic solvents or corrosive liquids to clean the product
9. Do not repair or disassemble the company's products by yourself. If the products fail, please contact the company in time for maintenance
10. Unauthorized modification or use of unauthorized accessories may damage the product, and the resulting damage will not be guaranteed
11. If the LCD screen continuously works at the highest brightness, the LCD backlight life cycle will be halved; If a high contrast static display is displayed for more than 30 minutes, it may cause residual images on the LCD screen. You are advised to add a screensaver to avoid this problem

## Disclaimer

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