

## P12800HY101C\_B01

### Consuming grade Android LCD Module

P12800HY101C\_B01 is an industrial Android serial port LCD screen based on Rockchip RK3128 ARM processor. The product integrates the excellent features of Rockchip RK3128, with a quad-core Cortex-A7 solution, supporting most of the mainstream decoding schemes under 1080p@60fps and H.265/H.264/MVC/VP8 decoding schemes under 1080p@30fps. At the same time, good JPEG image processing performance and 3D GPU make the platform compatible with OpenGL ES 2.0, OpenVG1.1.

### Application Area

- ✓ Security field
- ✓ Electric power industry
- ✓ Energy and chemical industry
- ✓ Industrial control equipment

### Front View



### Back View



## About Proculus

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

RK3128 1.3GHz Quad-core A7 ARM

RAM 1GB

ROM 8GB

Support Android、Linux

Display size 1280x800

Display Brightness 300nit

UART 3\*RS232/TTL,1\*RS232/TTL/RS485

USB2.0 \*4

WIFI Support 2.4G frequency band

Ethernet Supports two channels 10m/100m

4G support (optional)

## Version Info

Ver.	Date	Descriptions
V1.0	2025/12/09	First Release

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

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## Detailed Parameters

### Core Performance

CPU	1.3GHz Quad-core A7 ARM
RAM	1GB DDR3
eMMC	8GB eMMC
GPU	Mali400 MP2
Power Manager	RK805

### Display Performance

Display Color	16.7M (16777216) colors, 24-bit color 8R8G8B
Display Size	216.58 mm(W)×135.36 mm(H), 1280×800
View Area Size	219.46 mm(W)×138.10mm(H), 1280×800
Resolution	1280×800
Backlight Mode	LED
Luminance	300nit

### Voltage Current

Parameter	Condition	Min	Typ	Max	Unit
Working Voltage	—	12	12	24	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)	80	89	—	Deg
	θR	Φ=0° (3 o'clock)	80	89	—	
	θT	Φ=90° (12 o'clock)	80	89	—	
	θB	Φ=270° (6 o'clock)	80	89	—	

### 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	—	—	NONE	—	—

### System Version

Android	Android 5.1/7.1
Linux	—

### Expansion Device

MIC	3.5mm Audio Input
Speaker	3.5mm Audio Output
Buzzer	Support
GPIO	Support
IIC	Support
TF Card	Support
HDMI OUT	Nonsupport
USB Camera	Support

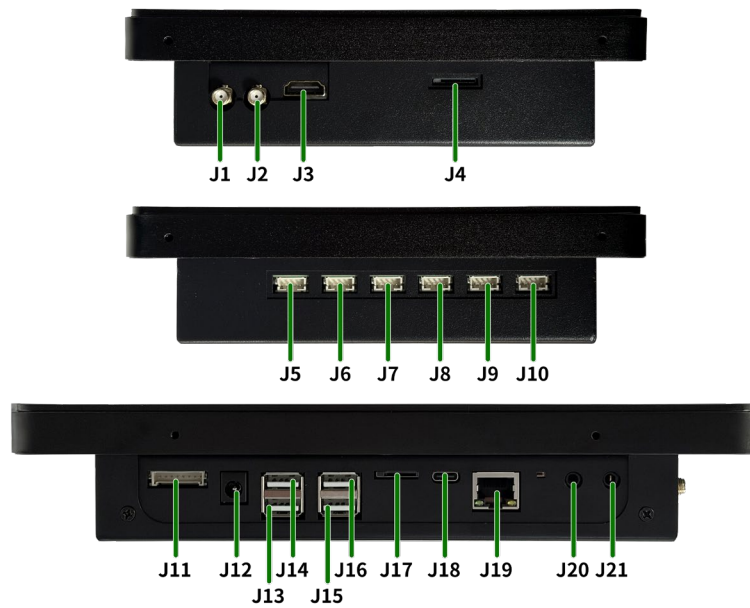
**Serial Port Parameter**

Parameter	Condition	Min	Typ	Max	Unit
Baud Rate	Standard	1200	9600	115200	bps
Serial Mode	3*RS232/TTL, 1*RS232/RS485/TTL	User Interface	12Pin_2.0mm		

**Interface Parameter**

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

## Interface Specification

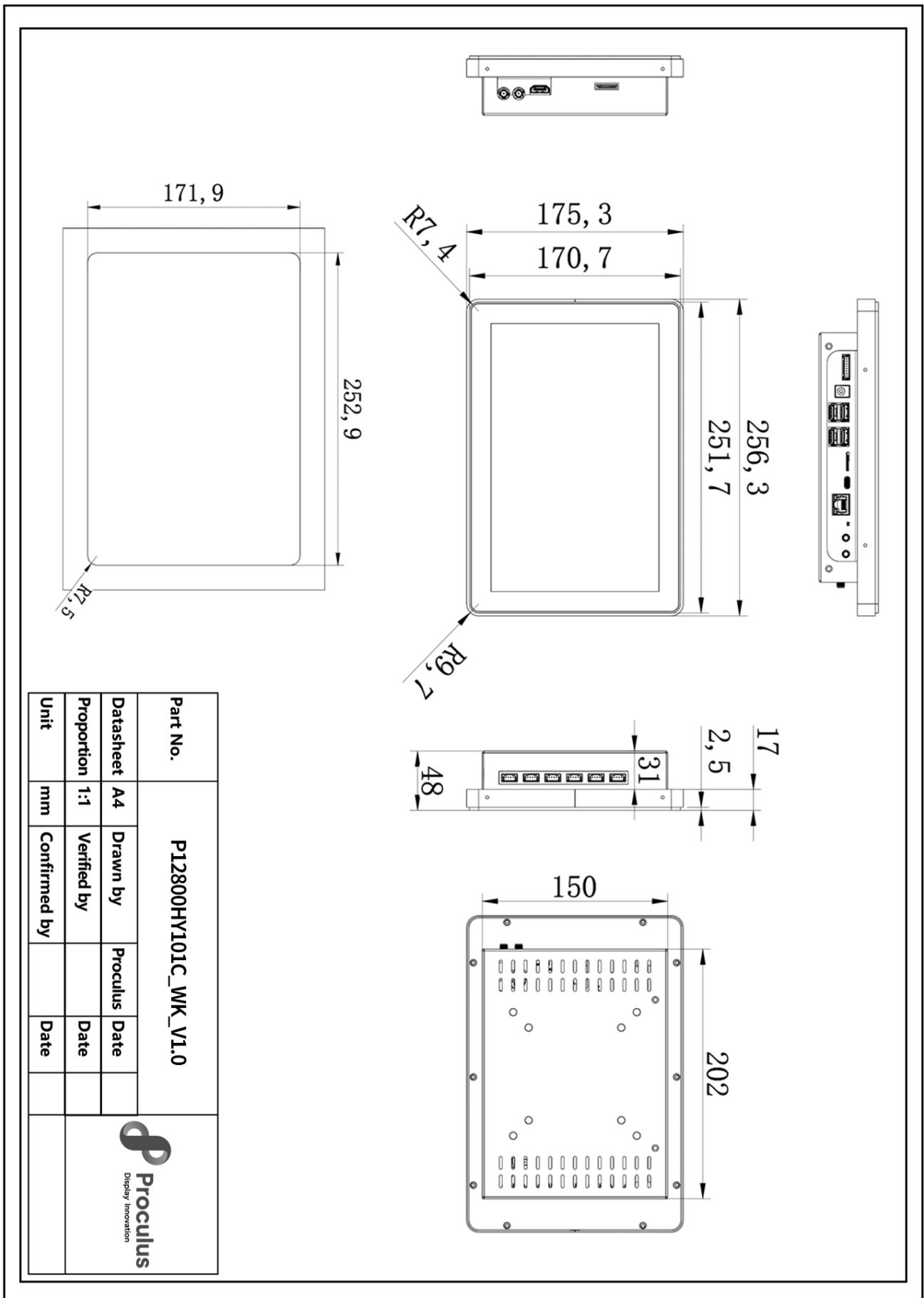


Num.	Interface	Description
J1	WIFI Antenna	WIFI antenna interface
J2	4G Antenna	4G antenna interface
J3	HDMI	-
J4	SIM card	Micro-SIM supported (Optional)
J5	RS485	ttyS0. Pin definition: GND, A, B, 5V
J6	UART0	ttyS0. Pin definition: GND, TX, RX, 5V (choose one from J5 and J6)
J7	UART1	ttyS1. Pin definition: GND, TX, RX, 5V
J8	UART3	ttyS3. Pin definition: GND, TX, RX, 5V
J9	COM0	ttyCOM0. Pin definition: GND, TX, RX, 5V
J10	IIC	IIC interface Pin definition: G,C,D,V
J11	User interface	Pin Definition: TX4,RX4,TX1,RX1,GND,GND,VIN,VIN
J12	Power	12V/2A power supply
J13	USB_HOST1	USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J14	USB_HOST2	USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J15	USB_HOST3	USB2.0 (Vertical 4P2.54mm). Support USB Peripherals

Num.	Interface	Description
J16	USB_HOST4	USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J17	TF Card	Memory expansion
J18	Type-C	OTG /App debugging/ Firmware upgrade interface
J19	RJ45	Support 10M/100M network
J20	MIC	Audio input interface
J21	SPK	Audio output interface

Note: The interface sequence is sorted from top to bottom and from left to right.

## Product size drawing



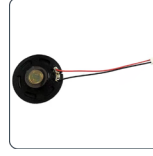
## Support peripheral accessories



### 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: ☒

## 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 manner and answer.

The quality determination criteria for products leaving the factory are as follows:

1. Appearance of the LCD screen:

The standards for dust, black spots and white spots on the LCD screen are that there should be no more than 3 spots inside the screen, the size should not exceed 0.35mm, and the scratches should not exceed 5mm.

2. Overall machine function test:

When starting up, there should be no black screen failure, screen flickering, white screen or screen flashing. The USB interface can read and write normally. The OTG interface can burn the system. The serial port function communication is normal. The speaker and microphone interfaces can broadcast and receive sound normally. The buzzer function sounds normally without tearing.

3. Overall appearance of the machine:

No missing PCBA parts, no damaged components. The WIFI antenna needs to be fixed with hot melt adhesive, and the LCD screen needs to be pasted with protective film.

## 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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