P_3288B
High-Performance BOX
Android LCD Module

P_3288B is an industrial level Android LCM based on Rockchip RK3288 ARM. It is equipped with Quad-core Coretex-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.

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.

About PROCULUS

As a custom LCM manufacturer that is focusing on all-in-one TFT LCDs, we offer LCM solutions based on your requirements.
HDMI. They simplify GUI development and are cost-effective.

Application Area

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

Product Feature

RK3288 1.8GHz
RAM 2GB
ROM 32GB
Support Android、Linux
UART RS232/TTL*3、RS232/TTL/RS485*1
USB2.0*4
WIFI Support 2.4G/5G frequency band
Bluetooth 4.0
Ethernet Supports 10m/100m/1000m
4G support (optional)
Box products support 15-inch and 18.5-inch display screens.

Front View

Back View

Version Info

Ver.	Date	Descriptions
V1.0	2025/09/28	First release
V1.1	2025/10/29	EMMC upgrade to 32GB

Detailed Parameters

Core Performance

CPU	1.8GHz Quad-core A17 ARM
RAM	2GB DDR3
eMMC	32GB
GPU	Mali-T764 MP4
Power Manager	ACT8846 PMU

System Version

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

Display Performance

Display Color	16.7M (16777216) colors, 24-bit color 8R8G8B
Display Size	304.128 mm(W)×228.096 mm(H), 1024×768 409.8 mm(W)×230.4 mm(H), 1366×768
View Area Size	326.5 mm(W)×253.5mm(H), 1024×768 413.0 mm(W)×233.2mm(H), 1366×768
Resolution	1024×768（15inch）, 1366×768 (18.5inch)
Backlight Mode	LED
Luminance	350

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

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

	Angle	Angle Parameter	Min	Typ	Max	Unit
Visual Angle (CR≥10)	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	℃
Storage Temperature	–	-30	25	85	℃
Working Humidity	25℃	10%	60%	90%	RH
Protection Paint	–	–	无	–	–

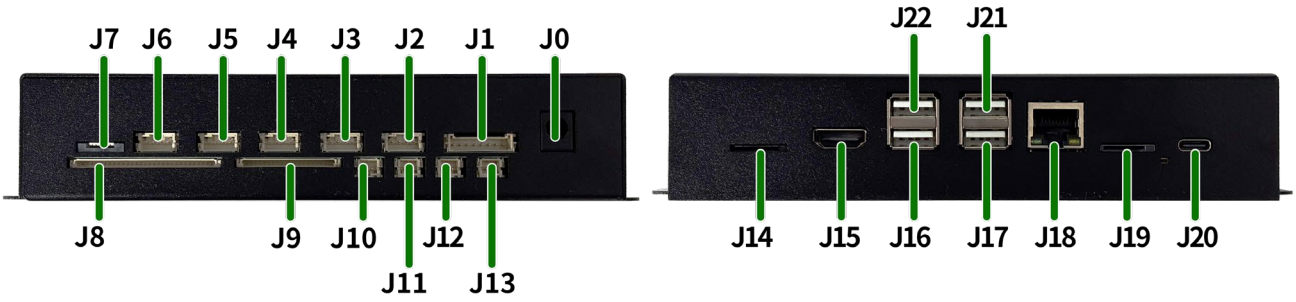
Serial Port Parameter

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 2.0 HOST*4	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	–

Interface Specification

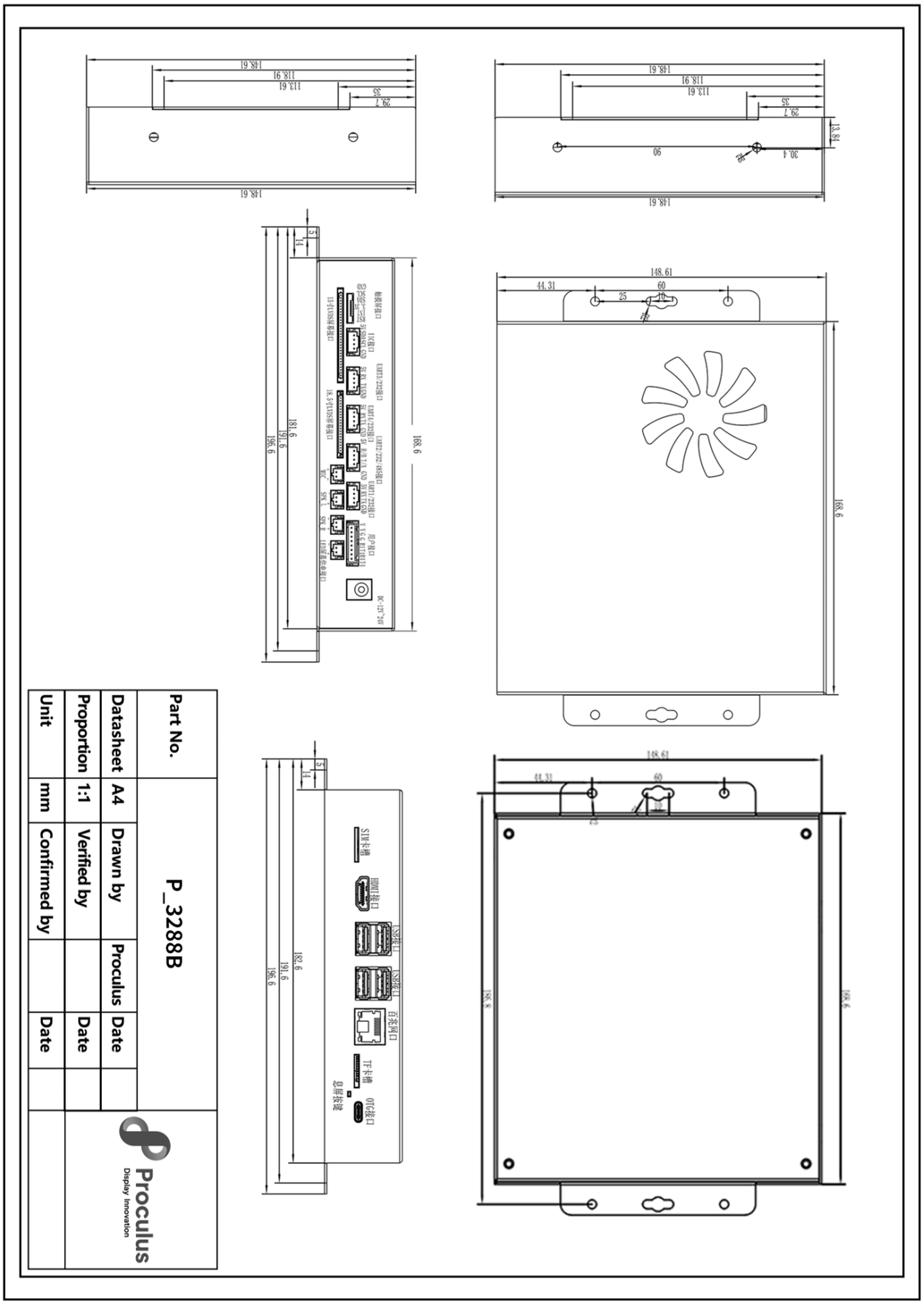


Num.	Interface	Description
J0	Power	12V/2A power supply (maximum voltage ranges from 12V to 24V DC)
J1	User interface	Pin Definition: V、V、GND、GND、RX1、TX1、RX4、TX4
J2	UART1	Device name: ttyS1. Pin definition: 5V, RXD, TXD, GND
J3	RS485	Device name: ttyS2. Pin definition: 5V, A,B, GND
J4	UART4	Device name: ttyS4. Pin definition: 5V, RXD, TXD, GND
J5	UART3	Device name: ttyS3. Pin definition: 5V, RXD, TXD, GND
J6	IIC interface	Pin Definition:5V、SDA、SCL、GND
J7	Touch interface	Pin Definition: GND、SCL、SDA、3.3V、INT、RST
J8	15inch LCD interface	15-inch LVDS display interface
J9	18.5inch LCD interface	18.5-inch LVDS display interface
J10	MIC	Audio input interface
J11	SPK_L	Left channel audio output interface
J12	SPK_R	Right channel audio output interface
J13	Screen power supply	Power supply interface for LED screen
J14	SIM card	SIM card interface
J15	HDMI	HDMI output interface

Num.	Interface	Description
J16	USB_HOST1	Support USB Peripherals
J17	USB_HOST2	Support USB Peripherals
J18	RJ45 interface	Support 10M/100M/1000M network
J19	TF card	Can do memory expansion
J20	IIC interface	Pin definition: 5V, SDA, SCL, GND (Reserved)
J21	USB_HOST3	Support USB Peripherals
J22	USB_HOST4	Support USB Peripherals

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.

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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