P10600HY070Z_T01

High-Performance Android LCD Module

HY10600Z070_T01 is an industrial-grade Android serial port LCD screen based on the Rockchip RK3576 ARM processor. This product features 4-core Cortex-A72 and 4-core Cortex-A53 processors with a main frequency as high as 2.2GHZ, offering low power consumption and high performance. Video decoding supports 8K@30fps/4K@120fps, video encoding supports 4K@60fps, supports HDMI and MIPI display interfaces, and features a high-performance NPU with 6 TOPS computing power.

Supported by the Android 14 system, with industrial-grade parameter performance, it brings an excellent and stable experience to your product.

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

- ✓ Smart Cockpit
- ✓ Smart Whiteboard
- ✓ Robotic Vacuum Cleaner
- ✓ Power sector
- ✓ Energy & Chemical

Product Feature

RK3576

RAM 4GB

ROM 16GB

Support Android、Linux

Display size 1024×600

Display Brightness 350nit

WIFI Support 2.4G/5G frequency band

Bluetooth 5.0

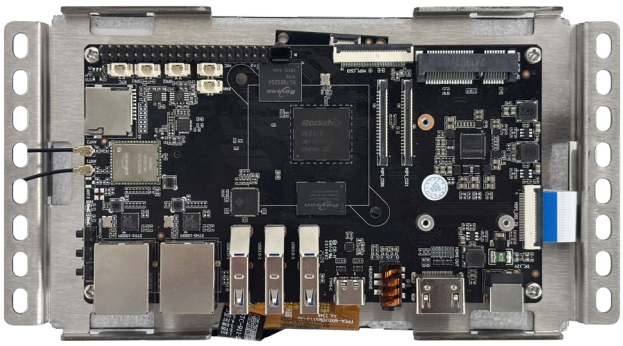
Ethernet Supports 10m/100m/1000m

4G support (optional)

Gpio support

Front View

Back View



Version Info

Ver.	Date	Descriptions
V1.2	2025/08/01	First release

Detailed Parameters

Core Performance

CPU	Cortex-A72*4,Cortex-A53*4
RAM	4G / 8G / 16G
eMMC	16G / 32G
GPU	Mali G52 MC3
NPU	RKNN 6 Tops

System Version

Android	Support Android 14
Linux	Support Debian12 / Ubuntu2404

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

Expansion Device

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

Voltage Current

Parameter	Condition	Min	Typ	Max	Unit
Working Voltage	–	12	12	12	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	–	–

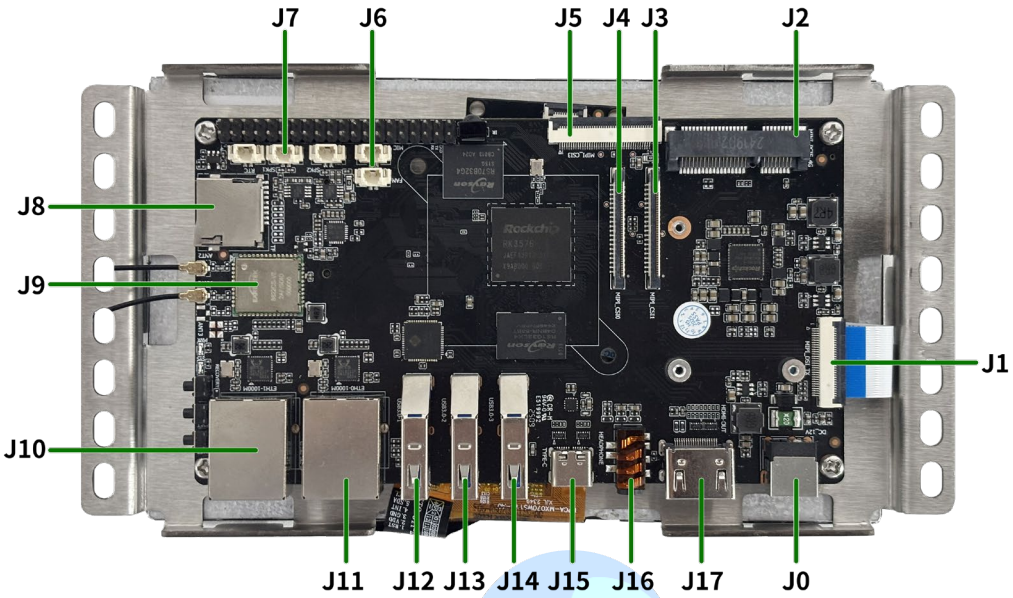
Serial Port Parameter

Parameter	Condition	Min	Typ	Max	Unit
Baud Rate	Standard	1200	9600	115200	bps
Serial Mode	-	User Interface	-		

Interface Parameter

Interface	Parameter	Interface	Parameter
USB	USB 3.0 HOSTx3. USB3.1 OTG/ DP v1.4	WIFI	Support 802.11b/g/n Wi-Fi 2.4G/5G
Bluetooth	Bluetooth 5.0	4G	4G /GPS (Optional)
Ethernet	Support 10m/100m/1000m Ethernet*2	Gyroscope	–
NFC	–	Light sensor	–
M.2	Support	Infrared receiver	Support

Interface Specification

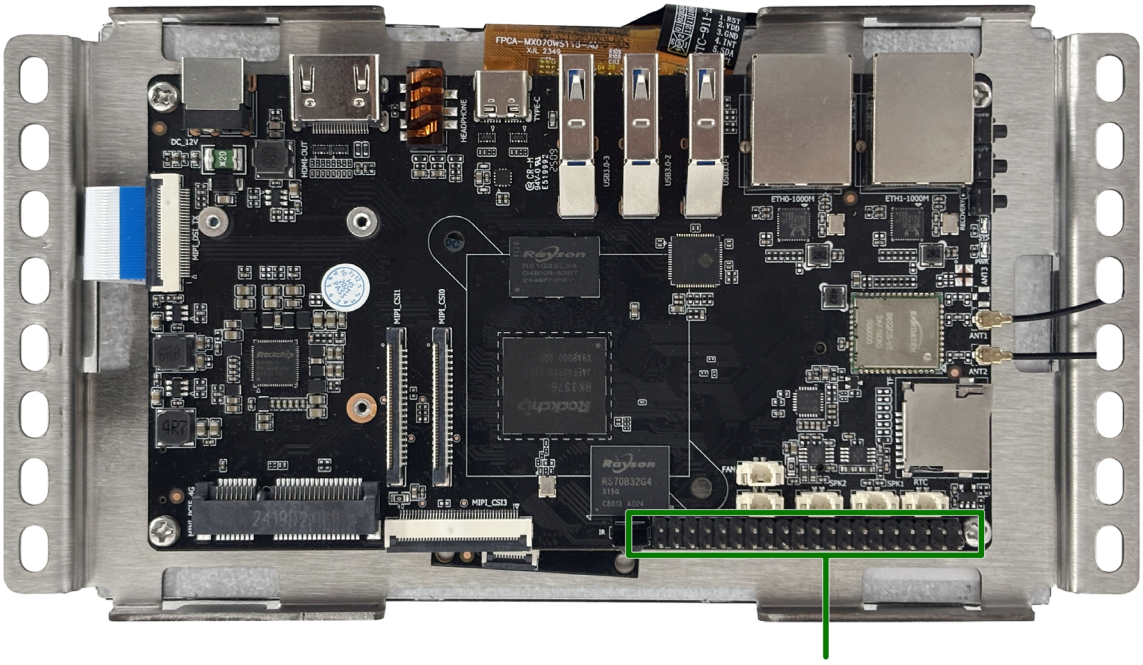


Num.	Interface	Description
J0	Power	12V/2A power supply
J1	MIPI Display	LCD screen display interface
J2	MINI PCIE 4G	4G LTE Module/GPS (Optional)
J3	M.2 SSD	Storage expansion
J4	MIPI camera interface	Reserved
J5	M.2 SSD	Storage expansion
J6	Fan interface	Cooling fan interface
J7	SPK	Audio output interface
J8	TF card	Storage expansion
J9	WIFI/BT	Network module
J10	RJ45 interface1	Support 10M/100M/1000M network
J11	RJ45 interface2	Support 10M/100M/1000M network
J12	USB3.0_HOST1	Support USB Peripherals/Support dual USB parallel use
J13	USB3.0_HOST2	Support USB Peripherals/Support dual USB parallel use
J14	USB3.0_HOST3	Support USB Peripherals/Support dual USB parallel use
J15	Type-c interface	OTG /App debugging/ Firmware upgrade interface

Num.	Interface	Description
J16	Headphone interface	Audio output interface
J17	HDMI	HDMI output interface

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

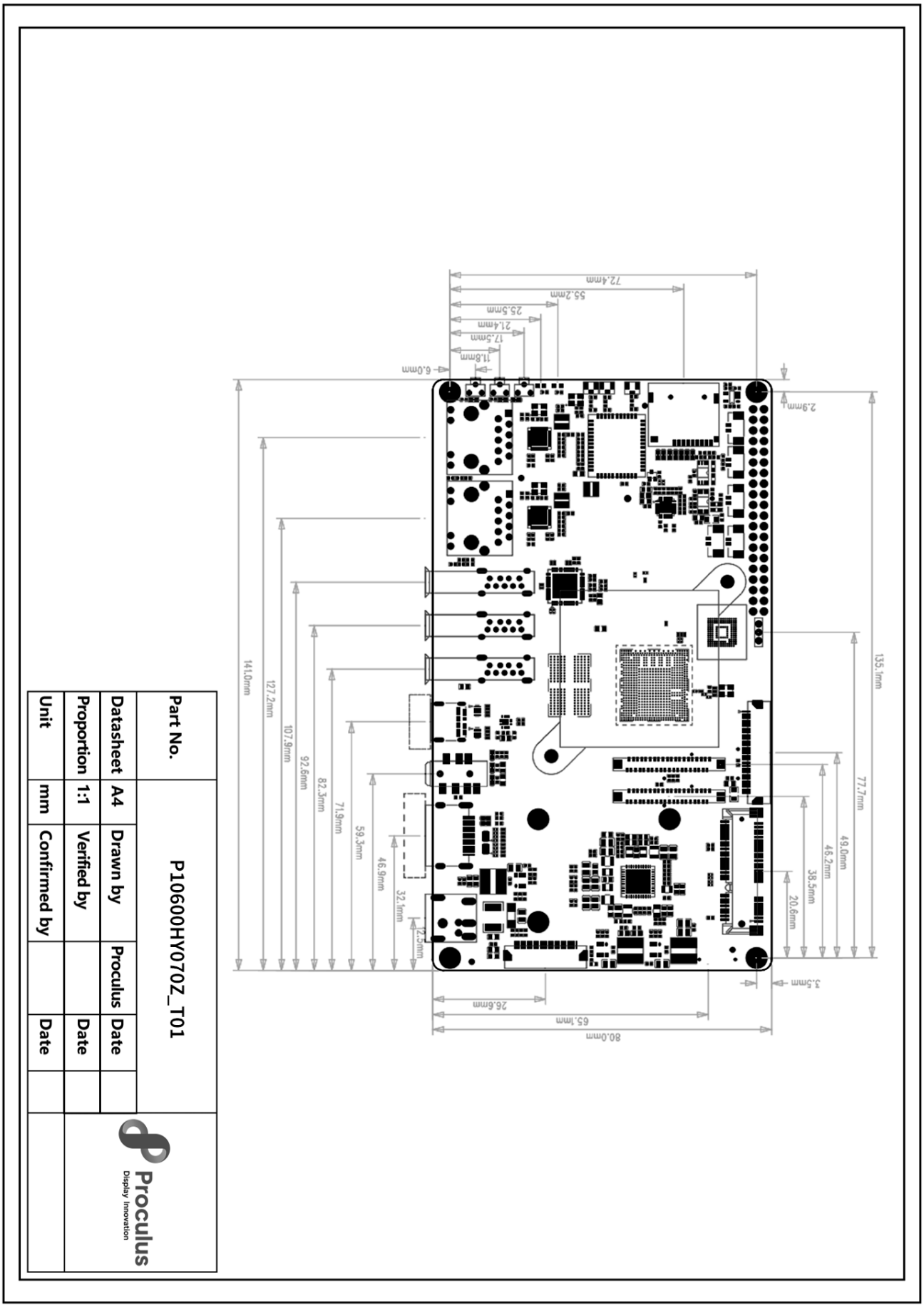
Interface Specification



40 Pin definition

		VCC-3.3V	1	2	VCC5V0_SYS				
		VCC-3.3V	3	4	VCC5V0_SYS				
UART6_TX_M0	CAN0_TX_M2	GPIO4_A4	5	6	GND				
UART6_RX_M0	CAN0_RX_M2	GPIO4_A6	7	8	GPIO4_B0	PDM1_CLK1_M1	SPI4_CLK_M2		
	PWM2_CH7_M2	GPIO2_D7	9	10	GPIO4_B1	PDM1_SDI2_M1	SPI4_MOSI_M2		
	PWM2_CH6_M2	GPIO2_D6	11	12	GPIO4_B2	PDM1_SDI1_M1	SPI4_MISO_M2		
		GND	13	14	GPIO0_C3	PWM0_CH1_M0			
		VCC-3.3V	15	16	GPIO1_D0	UART10_TX_M1	SPI_CS		
PWM2_CH2_M3	UART8_RX_M0	GPIO3_C5	17	18	GPIO1_D1	UART10_RX_M1	I3C0_SDA_PU_M1		
	UART8_TX_M0	GPIO3_C6	19	20	GND				
I2C3_SDA_M2	UART5_TX_M0	GPIO3_D5	21	22	GPIO3_A0	I2C7_SCL_M1	UART3_TX_M0		
I2C3_SCL_M2	UART5_RX_M0	GPIO3_D4	23	24	GPIO3_A1	I2C7_SDA_M1	UART3_RX_M0		
		VCC-3.3V	25	26	GPIO1_D2	I3C0_SCL_M1	PWM1_CH3_M1		
		GND	27	28	GPIO1_D3	I3C0_SDA_M1	PWM1_CH4_M1		
		GPIO0_A5	29	30	GPIO4_C6	CAN1_TX_M1	PWM2_CH2_M1	I2C6_SCL_M3	
		GND	31	32	GPIO4_C7	CAN1_RX_M1	PWM2_CH3_M1	I2C6_SDA_M3	
		GPIO3_B0	33	34	GND				
	UART0_RX_M0_DEBUG1	GPIO0_D5	35	36	SARADC_VIN4				
	UART0_TX_M0_DEBUG1	GPIO0_D4	37	38	SARADC_VIN5				
		GND	39	40	SARADC_VIN6				

Product size drawing (product without shell)



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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