

Rocktech Displays Limited



Module P/N: RK-Android-PX30-01

Version: 1.1

Description: Android System HMI Board/Kits

TEL: 0086-755-26065260

Fax: 0086-755-26065261

E-mail: Sales@rocktech.com.hk

Web: www.rocktech.com.hk

Revision History

Date	Rev.	Page	Description
2021-06-18	1.1	All	First issue

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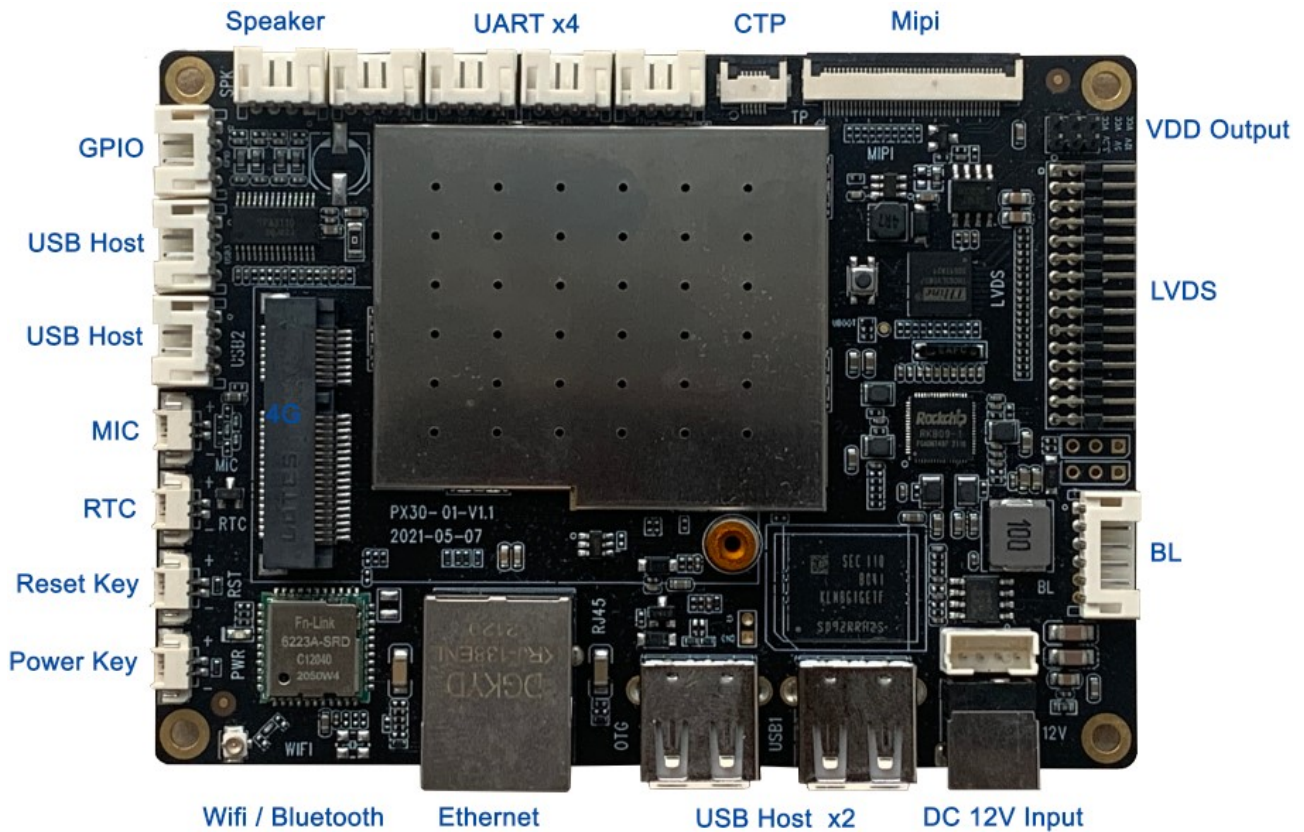
1. General Features

RK-Android-PX30-01 is a HMI board working on Android operating system, designed for customer's convenience running their products under Android control unit. It supports Serial interface with customer's MCU, by sending commands via Serial interface from customized APP, customer would easily finish their control unit development running on Android system.

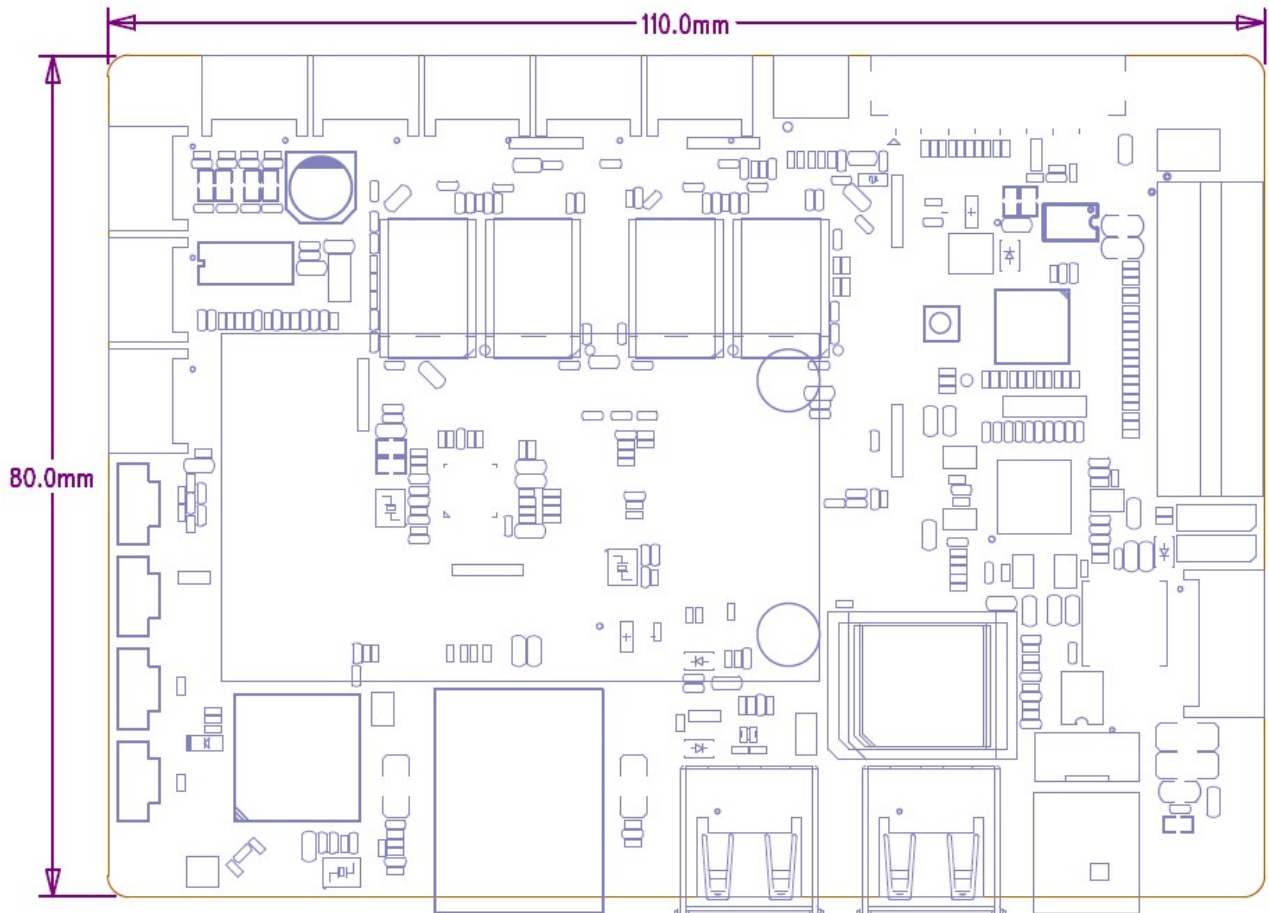
RK-Android-PX30 series works based on Android 8.1 operating system, uses Rockchip PX30 SOC with Quad-core Cortex™-A35, integrated 2G DDR and 8GB eMMC, supporting video playing, image viewing, Audio/LVDS/RGB signal output, RS232/RS485/Ethernet /Wifi/3G/Bluetooth/USB interface etc.

General Features	
CPU	Rockchip PX30, Quad-core Cortex™-A35, 1.3G frequency
Operation System	Android 8.1
Memory	DDR 2G
Internal Memory	eMMC 8GB
GPU	Mali-G31 GPU
Serial Interface	UART interface
TFT LCD supported	7"/10.1"/32" TFT LCD
CTP supported	CTP with I2C interface
Internet connection supports	Ethernet/ Wifi/Bluetooth
Speaker Supported	Left/Right Channel
Microphone	Microphone supported
USB 2.0 interface	4x USB host
Audio Output	Speaker
Display Resolution Supports	Max 1920x1080
Video Format supports	wmv, avi, flv, rm, rmvb, mpeg, ts,mp4 etc
Audio Format Supports	Mp3 etc
Image format Supports	BMP,JPEG,PNG,GIF etc
Real Time Clock supports	Supports Real Time Clock

2. Outline dimension and product pictures



RK-Android-PX30-01 with peripheral blocks, picture for reference

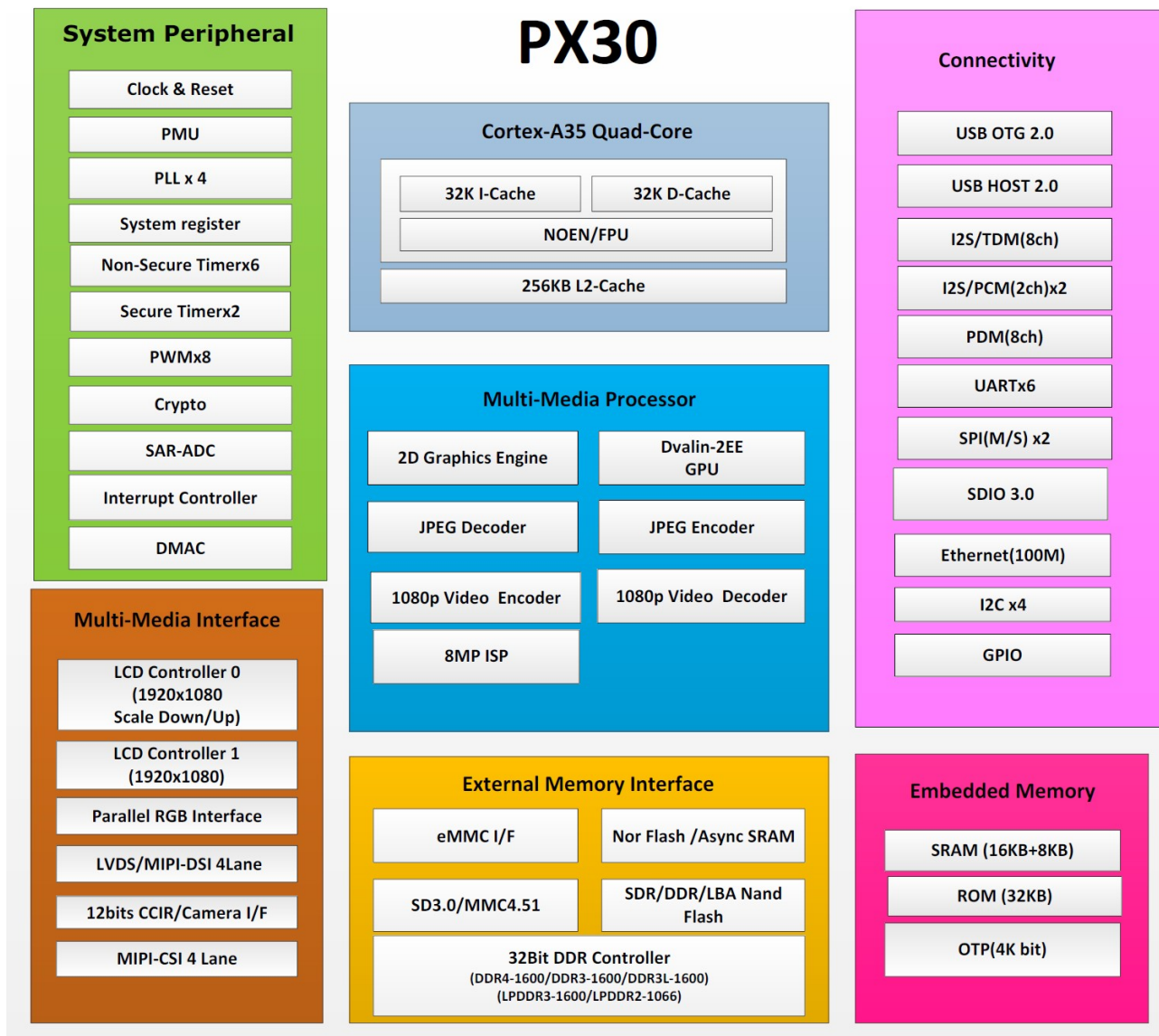


RK-Android-PX30-01 outline

3. Electrical specifications

Items		Min	Typical	Max
Power Supply	DC12V input	--	12V	
Power Consumption	Operating current	--	150mA	800mA
Environment	Operating Temp	-20°C	--	70°C
	Storage Temp	-30°C	--	80°C

4. Block Diagram



5. Serial Interface Description

Speaker interface connector

Pin 1	SPK_R+
Pin 2	SPK_R-
Pin 3	SPK_L+
Pin 4	SPK_L-

UART3 interface connector

Pin 1	GND
Pin 2	RX
Pin 3	TX
Pin 4	5V

UART0 interface connector

Pin 1	GND
Pin 2	RX
Pin 3	TX
Pin 4	5V

UART4 interface connector

Pin 1	GND
Pin 2	RX
Pin 3	TX
Pin 4	5V

UART2 interface connector

Pin 1	GND
Pin 2	RX
Pin 3	TX
Pin 4	5V

UART3 interface connector

Pin 1	GND
Pin 2	RX3
Pin 3	TX3
Pin 4	5V

GPIO interface connector

Pin 1	5V
Pin 2	IO-D6
Pin 3	IO-D7
Pin 4	GND

UART/RS232/RS485 alternative, need customization

Other peripheral blocks customization questionnaire

Operation System:	Android 8.1		
SOC:	Rockchip PX30, Quad-core Cortex™-A35, 1.3G frequency		
Memory	DDR 2G		
Internal Memory	eMMC FLASH 8G		
Integrated Blocks	USB 2.0		
PCBA General Outline:			
Serial Interface:	☐ UART	☐ RS232	☐ RS485
TFT LCD Size:	☐ no need	☐ need, Size:	Resolution:
CTP:	☐ no need	☐ need, Size:	
POE:	☐ no need	☐ need	
TF card:	☐ no need	☐ need	
Ethernet:	☐ no need	☐ need	
GPIO:	☐ no need	☐ need	
Wifi:	☐ no need	☐ need	
Bluetooth:	☐ no need	☐ need	
4G Module:	☐ no need	☐ need	
HDMI Output:	☐ no need	☐ need	
Camera:	☐ no need	☐ need, resolution:	
Speaker:	☐ no need	☐ need	
Microphone:	☐ no need	☐ need	
VGA Output:	☐ no need	☐ need	
Other Blocks requires:			
Remark:			

6. Reliability Testing Standard

No.	Test Item		Test Conditions	Remark
1	High Temperature	Storage	85℃, 48Hr	
		Operation	80℃, 48Hr	
2	Low Temperature	Storage	-30℃, 48Hr	
		Operation	-20℃, 48Hr	
3	High Temperature and High Humidity		40℃, 90%RH, 48Hr	
4	ESD Test		Air +/-8KV 5 times; Contact: +/-4 KV 5 times;	
5	Vibration Test(Storage)		50HZ, 30min, Amplitude: 2 cm, X/Y/Z directions	

7. Technical Support

All peripheral hardware debugged well by Rocktech

Customer needs to develop their application based on Android SDK, rocktech will provide demo or document for some special function not included in Android SDK.

Future technical support, pls contact: sales@rocktech.com.hk