

Rocktech Displays Limited



Android System HMI Board/Kits Spec

Module P/N: RK-Android-3288-01

Version: 1.4

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
2019-06-18	1.0	All	First issue
2020-08-28	1.4	All	Second issue

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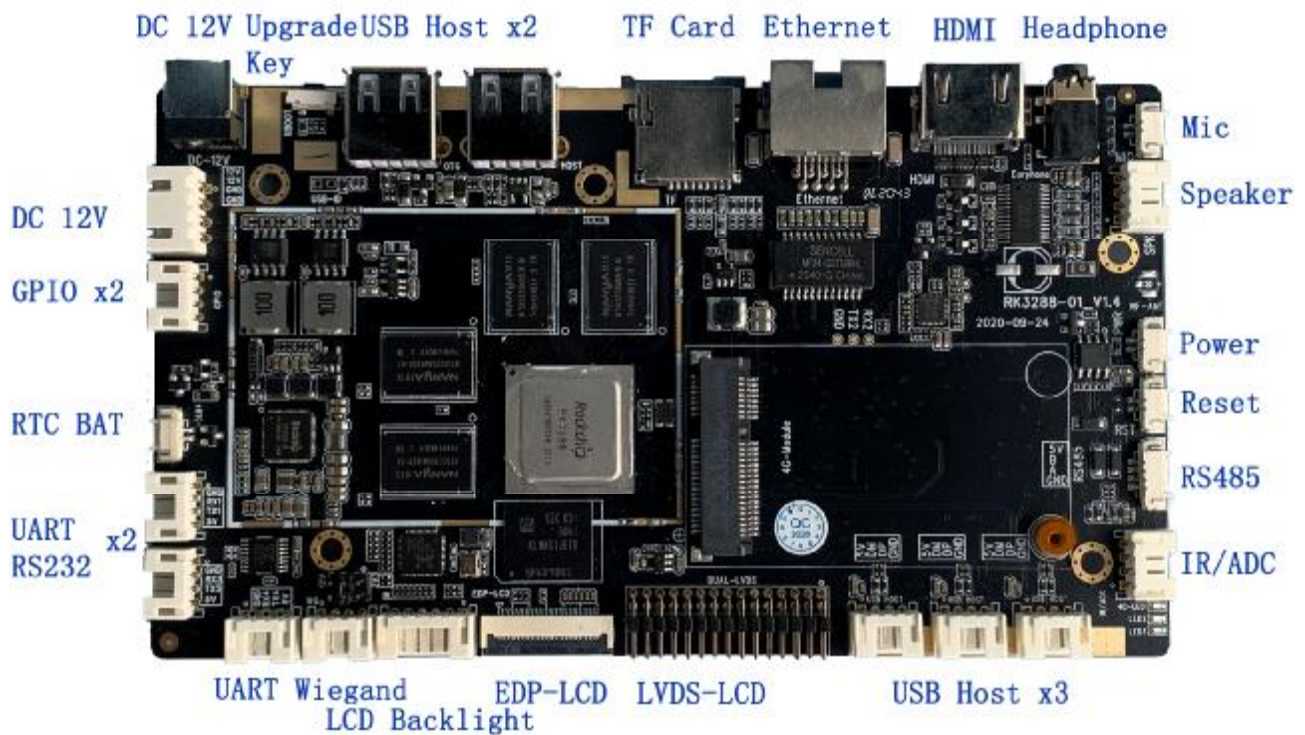
1. General Features

RK-Android-3288-01 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.

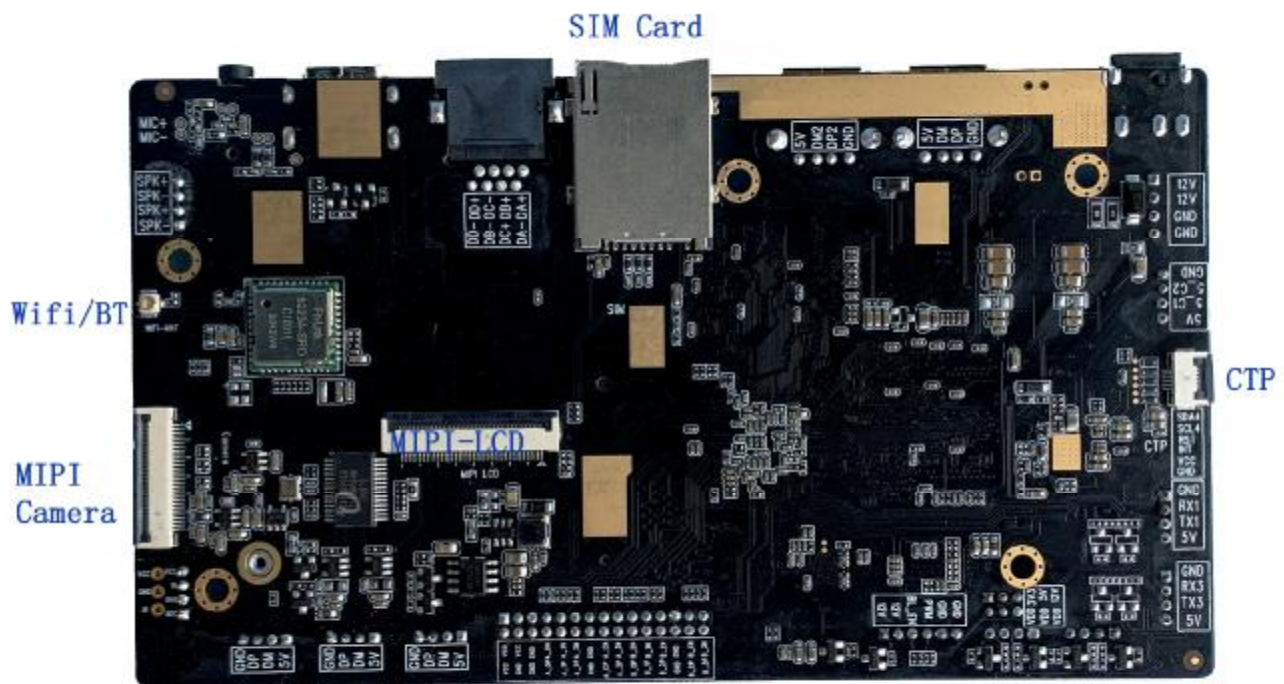
RK-Android-3288 series works based on Android 8.1 operating system, uses Rockchip RK3288 SOC with Quad-core Cortex™-A17, integrated 1G DDR and 8GB eMMC, supporting video playing, image viewing, HDMI/VGA/Audio/LVDS/RGB signal output, RS232/RS485/ Ethernet /Wifi/3G/Bluetooth/USB interface etc.

General Features	
CPU	Rockchip RK3288, Quad-core Cortex™-A17, 1.8G frequency
Operation System	Android 8.1
Memory	DDR 2G
Internal Memory	eMMC 8GB
GPU	Mali-T764 GPU
Serial Interface	UART/RS232/RS485 interface
TFT LCD supported	7.0~55" TFT LCD with EDP/MIPI/LVDS interface
CTP supported	CTP with I2C/USB interface
Internet connection	Ethernet/WCDMA 4G/Wifi/Bluetooth
Camera supported	Maximum 13M Pixels
Speaker Supported	Left/Right Channel
Microphone	Microphone supported
USB 2.0 interface	one USB OTG, four USB host
Ethernet	10/100/1000 Ethernet
3G/4G	Supported
HDMI	Supported
Audio Output	Speaker / Headphone
GPIO	Supported
Display Resolution	Max 3840*2160
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
System Updates	Support System updates via USB interface

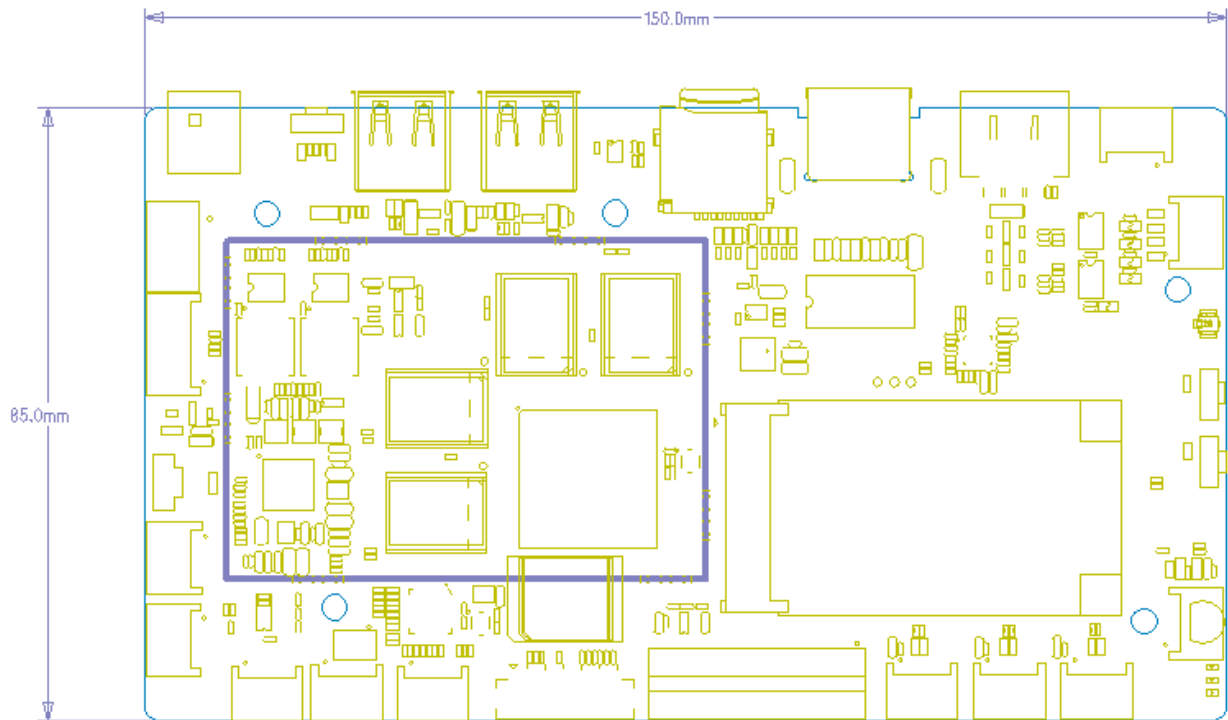
2. Outline dimension and product pictures



RK-Android-3288-01 front picture for reference



RK-Android-3288-01 back picture for reference



RK-Android-3288-01 front outline

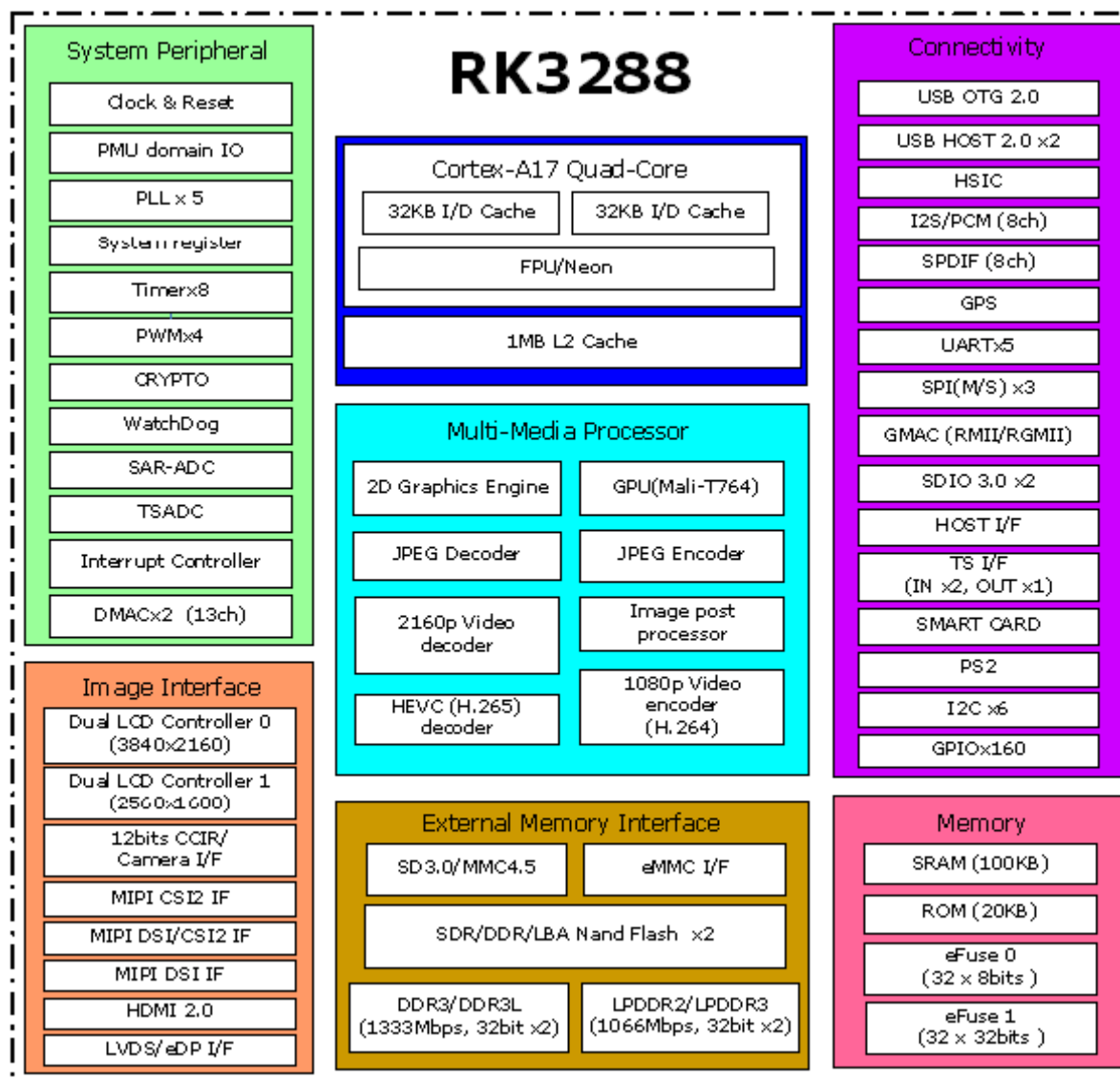


RK-Android-3288-01 back outline

3. Electrical specifications

Items		Min	Typical	Max
Power Supply	DC12V input	--	12V	
Power Consumption	Operating current	--	500mA	800mA
Environment	Operating Temp	-20°C	--	70°C
	Storage Temp	-30°C	--	80°C

4. Block Diagram



5. Interface Description

Speaker interface connector

Pin 1	SPK L+
Pin 2	SPK L-
Pin 3	SPK R+
Pin 4	SPK R-

UART interface connector

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

LCD Backlight interface connector

Pin 1	GND
Pin 2	GND
Pin 3	PWM
Pin 4	BL_EN
Pin 5	12V
Pin 6	12V

RS485 interface connector

Pin 1	GND
Pin 2	A
Pin 3	B
Pin 4	5V

USB interface connector

Pin 1	5V
Pin 2	DM
Pin 3	DP
Pin 4	GND

UART/RS232/RS485 alternative, need customization

Other peripheral blocks customization questionnaire

Operation System:	Android 8.1		
SOC:	Rockchip RK3288, Quad-core Cortex™-A17, 1.8G 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	
Other Blocks requires:			
Remark:			

6. Reliability Testing Standard

No.	Test Item		Test Conditions	Remark
1	High Temperature	Storage	80°C, 48Hr	
		Operation	70°C, 48Hr	
2	Low Temperature	Storage	-30°C, 48Hr	
		Operation	-20°C, 48Hr	
3	High Temperature and High Humidity		40°C, 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