

Specification

PCM-UR02 Android Mainboard

SPEC (V_1.0)

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Chapter 1 Product Overview

1.1 Overview

PCM-UR02 board is one Android mainboard based on RK3288 chip, with small size, high performance, low power consumption, cost-effective and so on. It supports Ethernet, HDMI, WIFI, Bluetooth, Camera, supports most video and image format, supports HDMI/VGA video output, LVDS display driver with dual 8 bits. It also could lighten different sizes of TFT LCD, simplify the system design of the machine, with SD card and SIM card connector, more strong stability, suitable for POS cash register, video advertising machine, self-service terminals, smart home and used for various industry applications.

1.2 Description

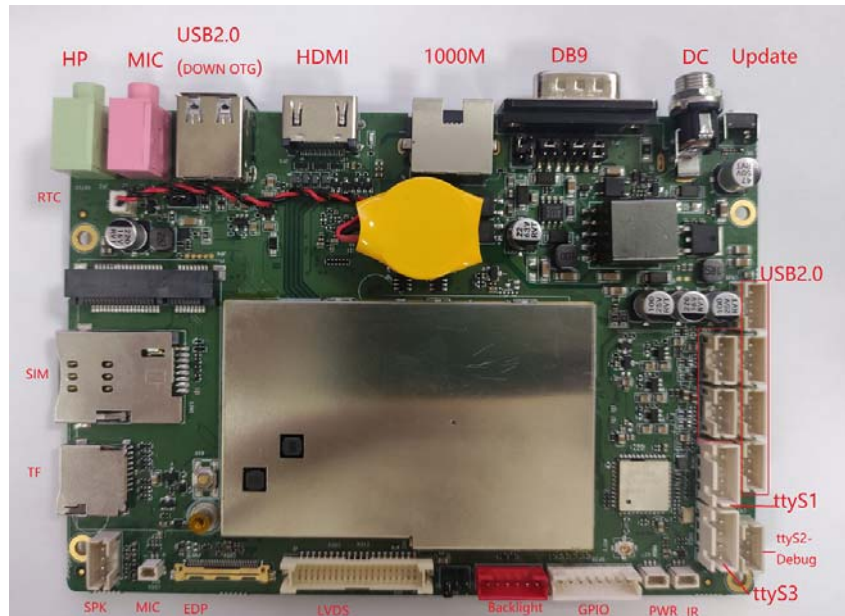
- Full function: with USB/LVDS/MIPI/Ethernet/HDMI/WIFI/Bluetooths on board, simplifying the system design, with SD card connector.
- network support : built in PCI-E connector ; support all kinds of with PCI-E connector, transferring and updating on line, better suited for remote maintenance of POS POS cash register 、 advertising machine, saving labor cost.
- Full extended connectors: eight USB2.0(6 sockets, 2 standard USB 2.0), 3 UART, GPIO/ADC, satisfy all kinds of peripheral needs.
- High definition: Maximum support for 4K decoding and different kind

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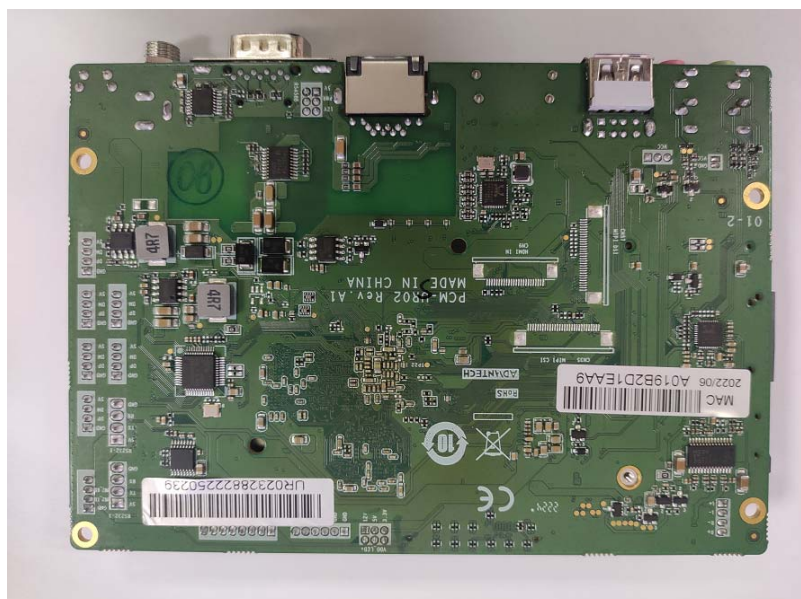
of LCDs with LVDS singnal.

1. 3 Sketch map of appearance and interface

TOP:



Bottom:



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Chapter 2 Hardware Spec

Hardware Spec sheet	
CPU	RK3288 Cortex A17 Quad-core @1.6GHz
Memory	2G
FLASH	eMMC FLASH 16G
WIFI、Bluetooth	Built in Wifi/Bluetooth
Ethernet	X1, 10M/100M/1000M
USB socket	2 USB HOST + 6 USB socket
串口	2 RS232 (ttyS1, ttyS3) +1 DB9-ttyS4
Extended memory	Support TF card
HDMI output	Support , 4K
LVDS output	Support Dual LVDS output
EDP output	Support , 1080P
Audio output	Support left/right channel output, Built Speaker、earphone socket、Mic socket
RTC	Support
IR	Support
Time switch	Support
OS	Android8.1 above
OS updating	Support USB/TF/Network on line updating
Working temperature	0~60° C
Weight(g)	147.5

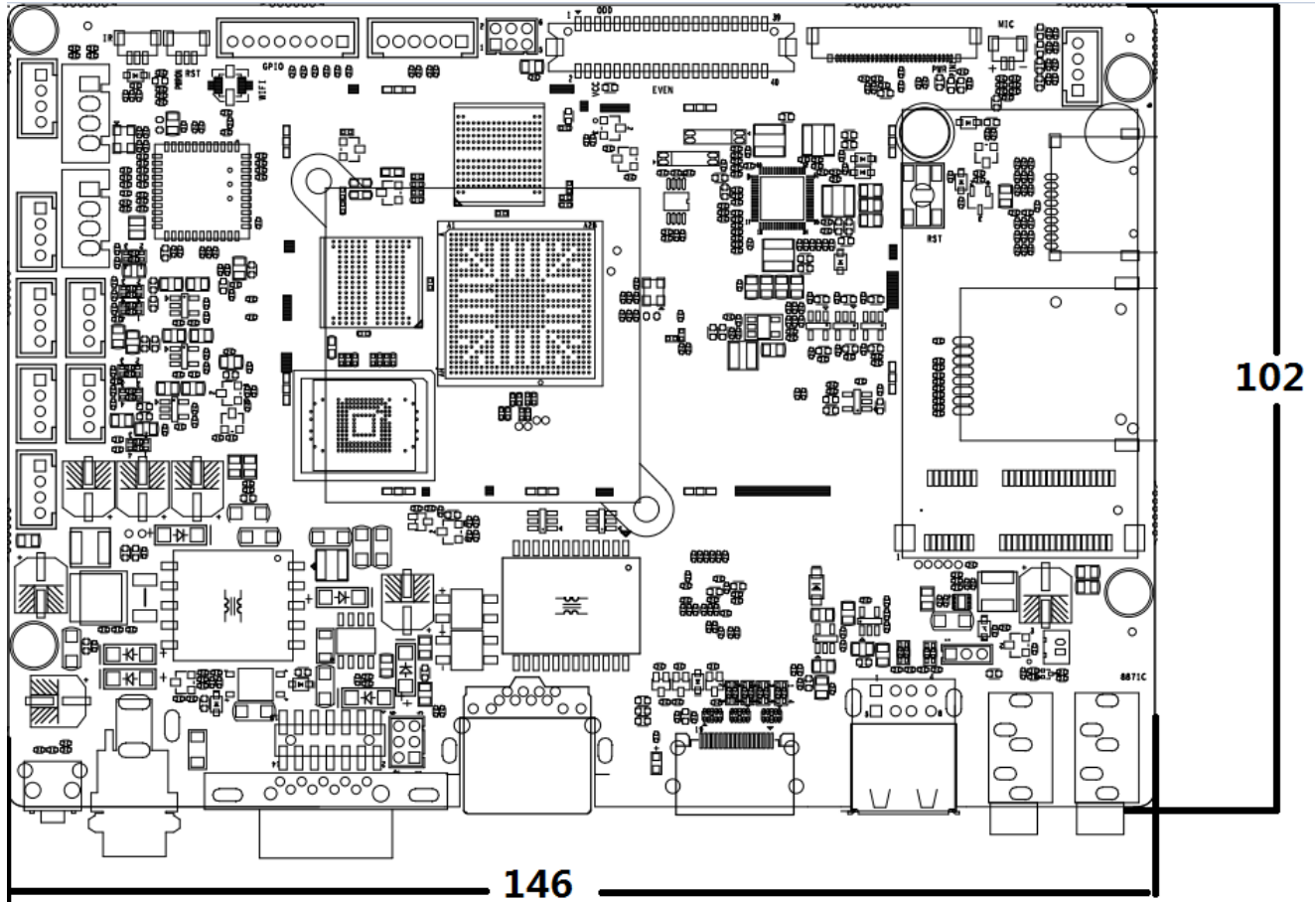
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多媒体支持列表	
Video	Support avi、flv、wmv、rm、rmvb、mpeg 、ts、mp4 etc.
Image	Support JPEG、PNG、GIF、BMP etc.

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Chapter 3 Dimension drawing

3.1 PCB Dimension



PCB: 6 Layer

Size: 146mm*102mm ($\pm 0.5\text{mm}$) , thickness 1.6mm ($\pm 0.5\text{mm}$)

Screw hole specification: Diameter 3mm ($\pm 0.5\text{mm}$) x 4

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Chapter 4 Note

During assembly and use, please pay attention to the following problems:

1. Short circuit between bare board and peripherals.
2. Pay attention to anti-static measures during assembly to avoid damaging the motherboard.
3. When installing LVDS panel, pay attention to whether the voltage and current of the panel meet the requirements. Pay attention to the pin pin sequence of the screen socket.
4. When installing LVDS screen, pay attention to whether the screen backlight voltage and current meet the requirements. If the power of the screen backlight is more than 20W, whether to use other power supply boards for power supply.
5. When installing peripherals (USB, IO. Etc), pay attention to the IO level and current output of peripherals.

FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help important announcement

Important Note:

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country Code selection feature to be disabled for products marketed to the US/Canada.

This device is intended only for OEM integrators under the following conditions:

1. The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2. The transmitter module may not be co-located with any other transmitter or antenna,
3. For all products market in US, OEM has to limit the operation channels in CH1 to CH11 for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change. (if modular only test Channel 1-11)

As long as the three conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Important Note:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

The final end product must be labeled in a visible area with the following" Contains FCC ID: **M82-PCMUR02**"

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

2.2 List of applicable FCC rules

CFR 47 FCC PART 15 SUBPART C has been investigated. It is applicable to the modular transmitter

2.3 Specific operational use conditions

This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system.

2.4 Limited module procedures

Not applicable

2.5 Trace antenna designs

Not applicable

2.6 RF exposure considerations

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

2.7 Antennas

This radio transmitter **FCC ID:M82-PCMUR02** has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna No.	Model No. of antenna:	Type of antenna:	Gain of the antenna (Max.)	Frequency range:
Bluetooth&2.4G	/	PIFA Antenna	1.26dBi for 2400~2500MHz;	
5GWIFI	/	PIFA Antenna	0.74dBi for 5150~5850MHz;	

2.8 Label and compliance information

The final end product must be labeled in a visible area with the following" Contains **FCC ID:M82-PCMUR02**".

2.9 Information on test modes and additional testing requirements

Host manufacturer is strongly recommended to confirm compliance with FCC requirements for the transmitter when the module is installed in the host.

2.10 Additional testing, Part 15 Subpart B disclaimer

Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B.