Rocktech Displays Limited



Android/Linux System Board Spec

Module P/N: RK-Android-3576-T10

Version: 1.0

Description: Android/Linux System Embedded Board

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Revision History

Date	Rev.	Page	Description
2025-08-14	1.0	All	First issue

CONTENTS

- General Features
- Outline Dimension And Product Pictures
- Electrical Specifications
- Block Diagram
- Serial Interface Description
- Reliability Testing Standard
- Technical Support

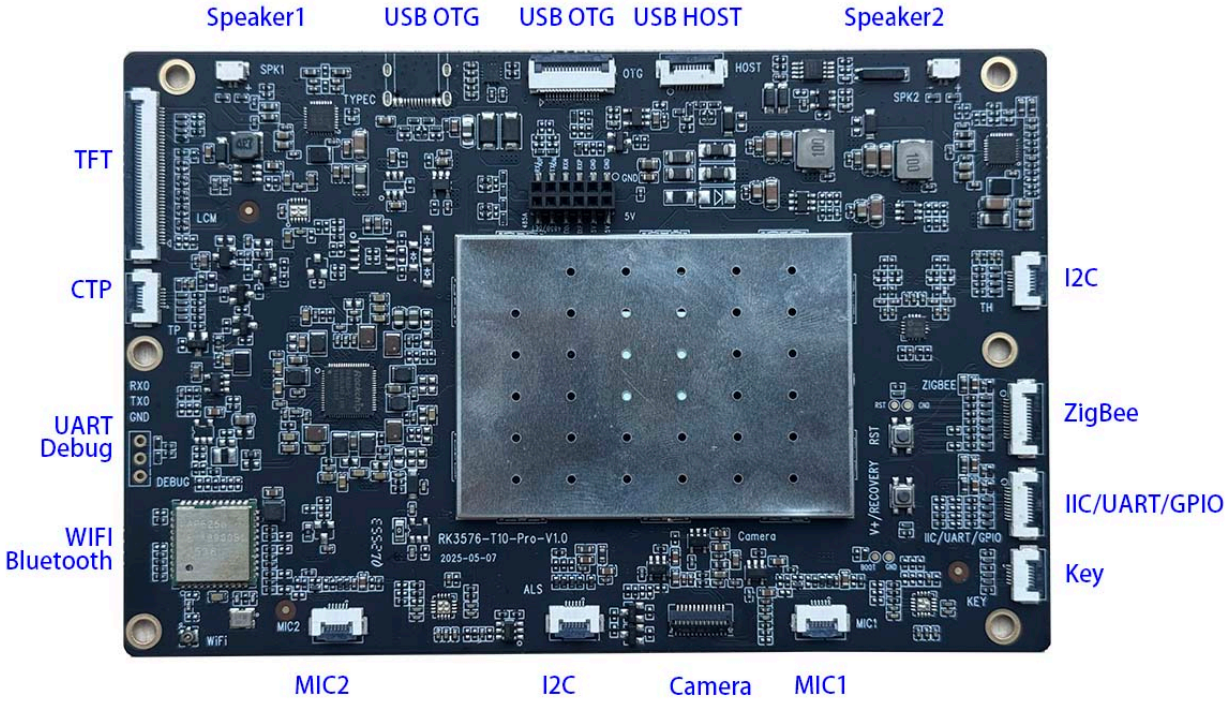
1. General Features

RK-Android-3576-T10 is a HMI board working on Android/Linux operating system, designed for customer's convenience running their products under Android/Linux 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/Linux system.

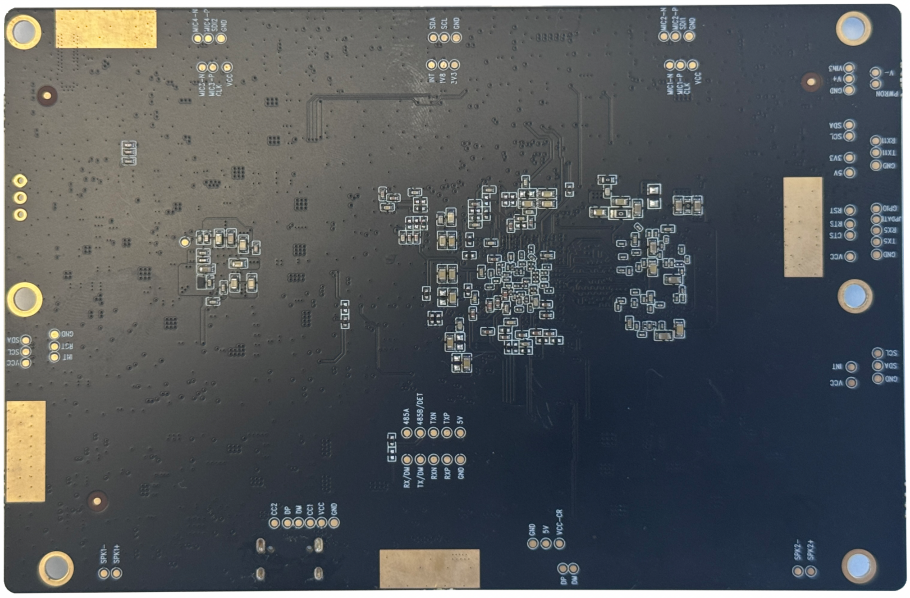
RK-Android-3576 series works based on Android/Linux operating system, uses Rockchip RK3576 SOC with Quad-Core Cortex-A72 + Quad-Core Cortex-A53, integrated 2G DDR and 32GB eMMC, supporting video playing, image viewing, Audio/LVDS signal output, RS232/RS485/ Ethernet /Wifi/4G/Bluetooth/USB interface etc.

General Features	
CPU	Rockchip RK3576, Quad-Core Cortex-A72 + Quad-Core Cortex-A53
Operation System	Android 14.0, Linux(Buildroot/Yocto/Debian)
Memory	DDR 2GB
Internal Memory	eMMC 32GB
GPU	Mali-G52 MC3
NPU	6TOPS* RKNN
Serial Interface	UART, RS232, RS485 supported
TFT LCD supported	4.3", 5", 7", 10.1", 12.1", 15.6", 21.5" etc.
CTP supported	CTP with I2C/USB interface
Internet connection	Ethernet/ Wifi/Bluetooth
Camera supported	MIPI Camera
Speaker Supported	Left/Right Channel
Microphone	supported
USB 2.0 interface	1xUSB Host,1xUSB OTG(Type-C)
Ethernet	10/100/1000 Ethernet
Audio Output	Speaker/Headphone
GPIO	Output/Input GPIO Supported
Max Display Resolution	4K@60Hz
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

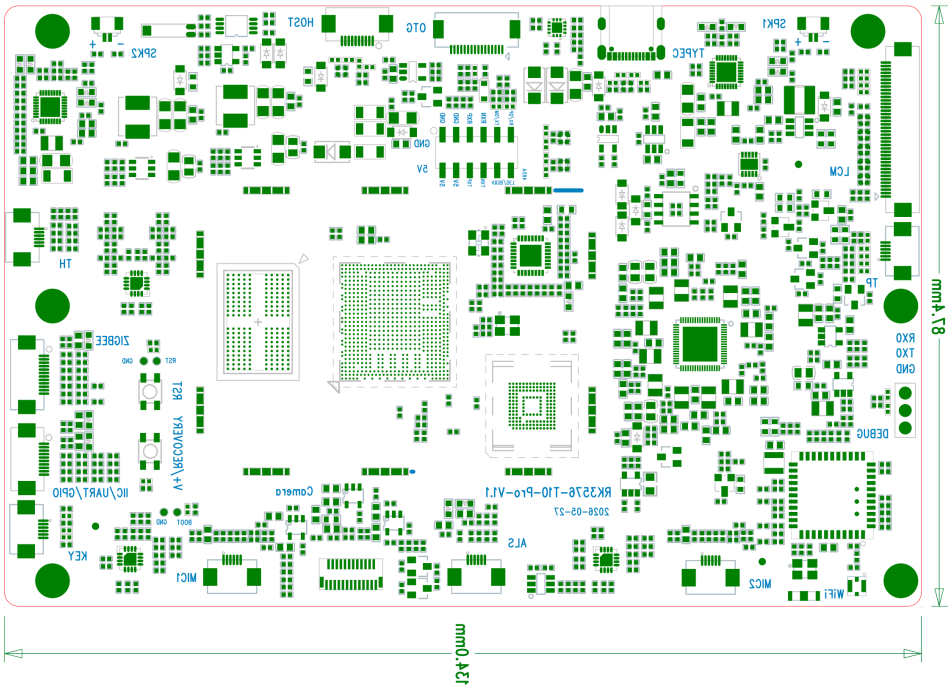
2. Outline dimension and product pictures

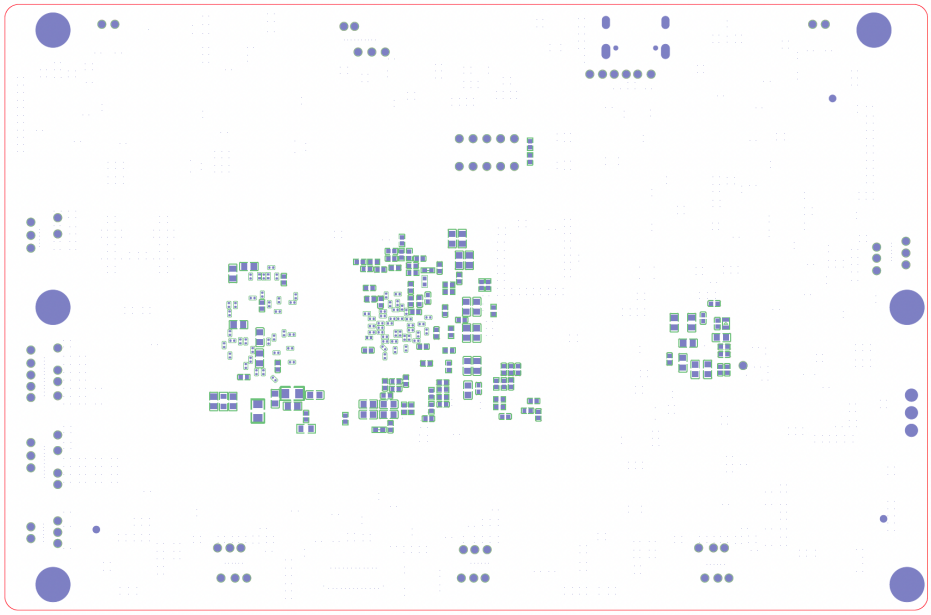


RK-Android-3576-T10 top



RK-Android-3576-T10 bottom



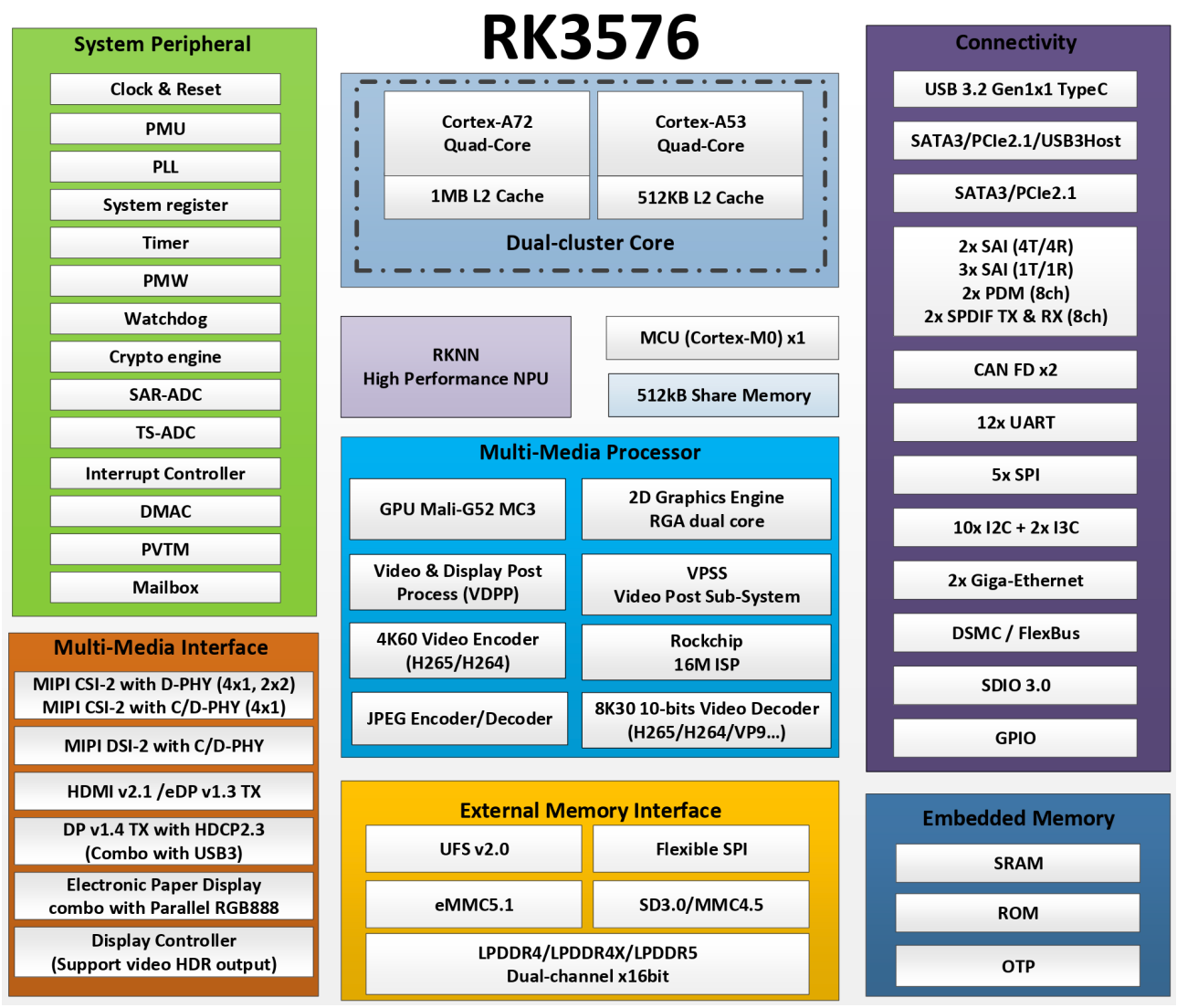


RK-Android-3576-T10 outline

3. Electrical specifications

Items		Min	Typical	Max
Power Supply	DC 5V input	--	5V	
Power Consumption	Operating current	--	300mA	-
Environment	Operating Temp	-20℃	--	70℃
	Storage Temp	-30℃	--	80℃

4. Block Diagram



5. Interface Description

Interface	Description
Power Input	5V DC input
USB OTG	USB Type-C
Ethernet	1x Ethernet
USB Host	1x 4Pin Connector
GPIO	Support
Zigbee	
Power-Key	
Wifi/Bluetooth	Support
I2C	Support
UART	Support
Speaker	L/R Speaker
MIC	Support dual/Quad microphone arrays.
UBoot key	For Firmware upgrade.
UART Debug	Support
LCD-MIPI	TFT LCD MIPI Interface
CTP	I2C CTP interface
Camera	MIPI Camera

UART/RS232/RS485 alternative, need customization

Other peripheral blocks customization questionary

Operation System:	Android14, Linux(Buildroot/ Debian/ Yocto)		
SOC:	Rockchip RK3576, Quad-Core Cortex-A72 + Quad-Core Cortex-A53		
Memory	DDR 2G		
Internal Memory	eMMC FLASH 32G		
Integrated Blocks	USB 2.0		
PCBA General Outline:			
Serial Interface:	☐UART	☐RS232	☐RS485
TFT LCD Size:	☐no need	☐need, Size:	
CTP:	☐no need	☐need USB interface	
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	
Speaker:	☐no need	☐need	
Microphone:	☐no need	☐need	
Real Time Clock	☐no need	☐need	
Other Blocks requires:			
Remark:			

6. Reliability Testing Standard

No.	Test Item		Test Conditions	Remark
1	High Temperature	Storage	80℃, 48Hr	
		Operation	70℃, 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/Linux SDK, rocktech will provide demo or document for some special function not included in Android/Linux SDK.

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