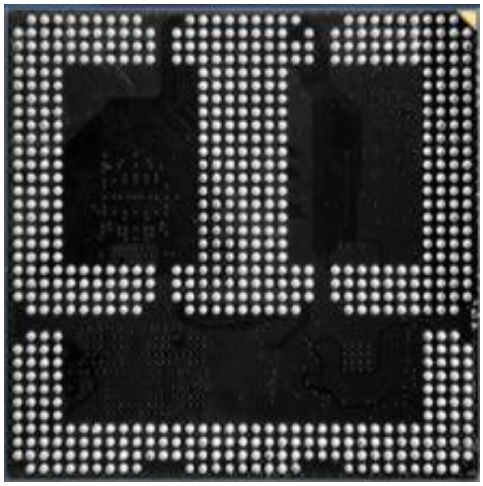
RK3566 CoreBoard

SoM-3566-OSM



The SoM-3566-OSM core board is an embedded core board developed according to the latest OSM (Open Standard Modules™) standard released by SGeT (Standardization Group for Embedded Technology e.V)， It adopts with Rockchip's RK3566 processor , up to 8GB (1/2/4/8G optional) LPDDR4 and 128GB(8/16/32/64/128GB) eMMC storage. It uses LGA package design, without connectors, can be directly soldered on the functional carrier board, which is more stable. Based on the design of OSM-L, it is small in size, low in power consumption, and has rich functional interfaces for expansion. It can be configured with a suitable development board according to the actual application. It can be flexibly used in audio-visual entertainment host, smart NVR, cloud terminal, IoT gateway, industrial control, edge computing, face gate, vehicle central control, commercial display equipment, AIoT and other application fields.

Quad-Core 64-bit Processor

- Quad-core 64-bit Cortex-A55 processor, main frequency can reach up to 1.8GHz
- 32KB L1-I Cache/ 32KB L1-D Cache
- Integrated dual-core architecture GPU
- High-performance NPU，1.0Tops
- High-performance VPU

Extensibility

662 ball grid contact points, Support UART、I2C、SPI、ADC、PWM、GPIO、PCIE2.1、USB2.0、USB3.0、HDMI、EDP、MIPI CSI、MIPI DSI、I2S、RGMII、SDIO、CIF Camera and other expansion interfaces.

Balance of Power consumption and Performance

- Support high performance
- Support low Power consumption

Excellent video codec function

VPU can realize 4K 60fps H.265/ H.264 / VP9 video decoding and 1080P 60fps H.265/H.264 video encoding

Support System platform

Debian

Android

BuildRoot

Yocto etc.

Extensive application scenarios

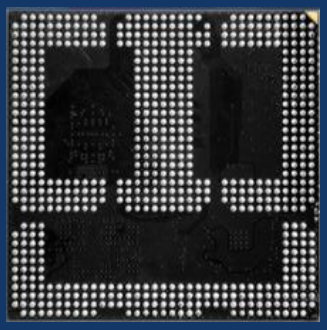
Audio and video entertainment host, face gate, intelligent NVR, cloud terminal, IoT gateway, industrial control, vehicle central control, commercial display, AIoT and other application fields.

Highlight features

- LGA Package
- Small Size, Scalable peripheral interfaces
- Hardware encryption, High security level

Enterprise level service

Provide comprehensive quality assurance, technical support and mass production services



Product Sepecifications

Chipset	RK3566	
Market	Global	
Processor	OS	Debian/Android/BuildRoot/Yocto, etc
	CPU	Quad-core 64-bit Cortex-A55processor，22nm lithography process ，main frequency can reach up to 1.8GHz
	GPU	ARM G52 2EE GPU，support OpenGL ES 1.1/2.0/3.2，OpenCL 2.0，Vulkan 1.1，Built-in high performance 2D acceleration hardware
	NPU	Integrated RKNN NPU AI accelerator, 1Tops@INT8 Supports one-click switching of Caffe/TensorFlow/TFLite/ONNX/PyTorch/Keras/Darknet
	LPDDR4	2GB（1/2/4/8G option）
	EMMC FLASH	8GB eMMC5.1(8/16/32/64/128GB option)
Application Interfaces	Ethernet	*1 RGMII
	SDIO	*2
	USB OTG	*1
	HDMI	*1
	eDP	*1
	LVDS	*1
	MIPI DSI	*1
	MIPI CSI	*1 (4 lanes)
	USB 2.0	*2
	USB 3.0	*1
	UART	*3 (UART2 --> Console)
	I2C	*4（I2C0-->PMIC,I2C2-->MIPI CSI, I2C3/I2C4 for purpose use）
	I2S	*1
	FSPI	*1
	SPI	*1
	PWM	*3
	ADC	*2
	JTAG	*1
	GPIO	*24
	PCIe 2.1	*1
	CIF	*1

Mechanical properties	
Power Supply	5V
Dimension	45*45mm(Size-L)
Temperature	Consumer (0° C to 70° C Tj) Industrial (-20° C to 85° C Tj)
RoHS and Reach compliant	Yes

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