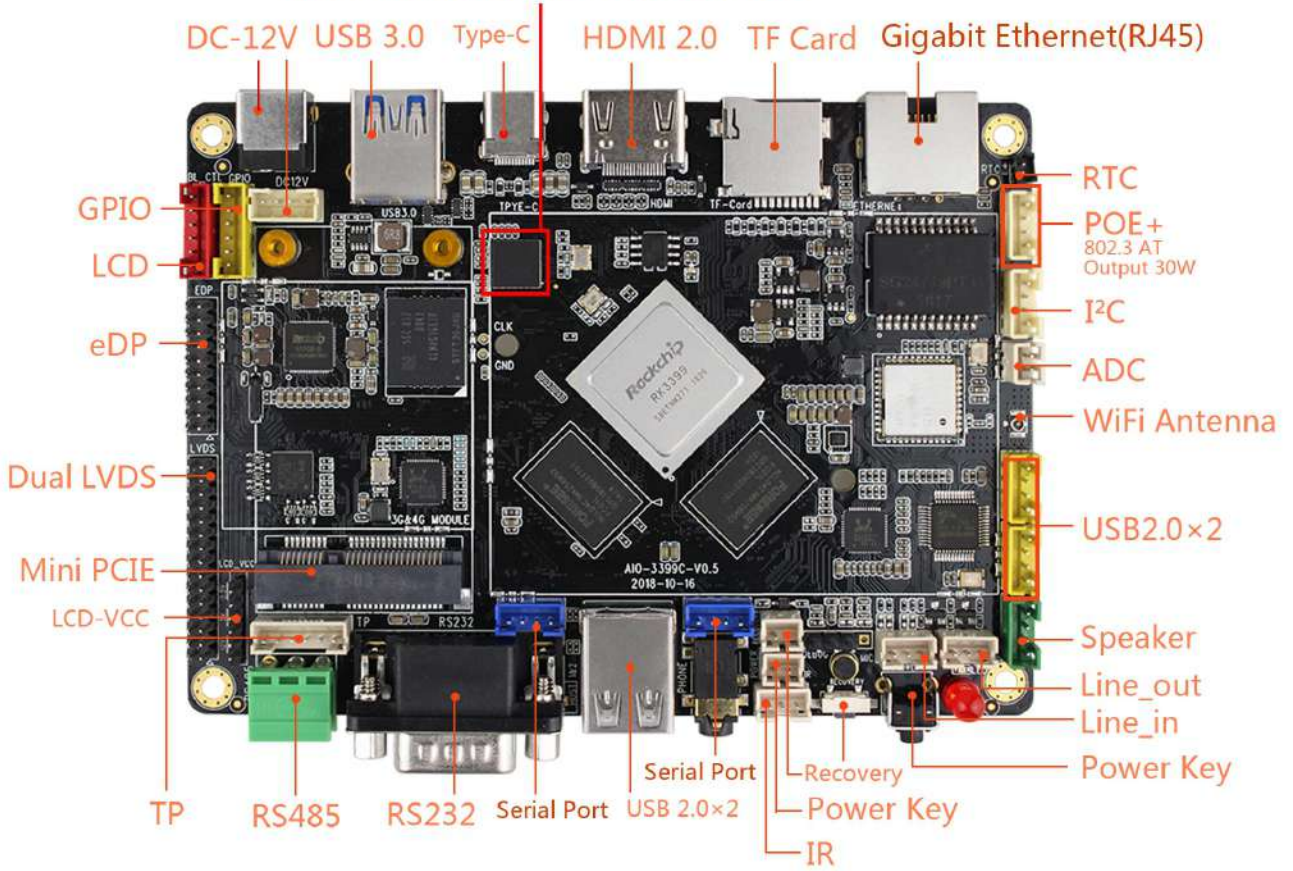


2. Specification

Specification	
SOC	Rockchip RK3399 (28nm HKMG Process)
CPU	Six-Core ARM 64-bit processor, up to 1.8GHz Based on Big.Little architecture, Dual-Core Cortex-A72 and Quad-Core Cortex-A53 with separate NEON coprocessor
GPU	ARM® Mali-T860 MP4 Quad-core GPU Support OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11 Support AFBC(frame buffer compression)
VPU	Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps 1080P multi-format video decoding (WMV, MPEG-1/2/4, VP8) 1080P video coding, support H.264, VP8 format Video post processor, de-interlacing, de-noising, edge/detail/color optimization
RAM	2GB Dual-Channel LPDDR4 (2GB/4GB Optional)
Storage	8GB high-speed eMMC 5.1 (8GB/16GB/32GB/128GB) Support TF Card Extended Storage
NPU	Onboard AI neural network processor SPR2801S: Computing power up to 2.8 TOPS, peak up to 5.6Tops, 9.3Tops/W ultra-high efficiency Support PLAI (PyTorch) and MDK (Caffe) model training tools Follow-up support TensorFlow Support Image Classification Model VGG-16(GNet1), GNet18 and Gnetfc Support Target Detection Model: SSD (Based on VGG)
Hardware Features	
Network	10 / 100 / 1000 Mbps Ethernet interface (RJ45) support 2.4GHz / 5GHz dual-band WiFi, 802.11a/b/g/n/ac protocol Support Bluetooth 4.1 (support BLE) Mini PCIe (Used to expand 3G/4G modules, use with Micro SIM card slot)
Multimedia	Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps 1080P Multi-format video decoding (VC-1, MPEG-1/2/4, VP8) Support the encoding of 1080P videos with H.264 and VP8 formats Video post processor: deinterlacing, denoising, edge/ detail/ color optimization
Display	Dual VOP: support 4096X2160 and 2560X1600 HDMI2.0 support 4K 60Hz display, support HDCP 1.4/2.2 Support DisplayPort 1.2 (4lines, Maximum support 4K 60Hz) Support eDP 1.3 (4 lines, 10.8Gbps) ,can directly drive multiple resolutions eDP interface LCD screen Support dual 6/8-bit LVDS interface, up to 24-bit 1920×1200 resolution Support Rec.2020 and Rec.709 color gamut conversion
Audio	1 x PHONE, 1 x LINE-IN, 1 x LINE-OUT, Microphone (left and right channel)
Serial port	RS232×1, RS485×1, Debug serial port x 1, Onboard 2-way TTL port
USB	Type-C (OTG), 1 x USB3.0, 4 x USB2.0(interface x 2, socket x 2)
Interface	1 x ADC, SPI / GPIO, LED x 2, I2C x 1, Gravity sensor x 1(Scalable) Dual ISP pixel processing capability up to 13MPix/s, Supports imultaneous input of two-way camera data
Power	With a one-way infrared receiver, support infrared remote control DC 12V-2A(DC5.5 × 2.1mm), Support for external connection(Power socket×1) Can power by POE+ (802.3 AT, Output Power30W) Ethernet
OS / Software	
OS	Android, Linux+QT, Ubuntu
Software	Support PLAI (PyTorch) and MDK (Caffe) model training tools Follow-up support TensorFlow Support Image Classification Model VGG-16(GNet1), GNet18 and Gnetfc Support Target Detection Model: SSD (Based on VGG)
Appearance	
PCB Size	126 mm× 91.3mm

3.Interface description

Artificial Intelligence Processor NPU



SIM Card (MicroSIM)

