Rockchip

RV1106

A high SoC

Features

CPU

ARM Cortex-A7, 1.2GHz

MCU 300MHz

NPU

0.5TOPS, support INT4、INT8、INT16

Memory

16-bit DDR2/DDR3/DDR4

RV1106G2 embedded 1Gb DDR design

eMMC 4.51, dual and quad SPI Flash Support

Multi-Media

5M ISP 3.x with 2F HDR(Line-based/Frame-based/DCG)

Support 2*MIPI CSI/LVDS/sub-LVDS S

DVP interface with BT.656/BT.1120

H.264/H.265 encoder capability:

- 3072*1728@25 + 1280*720@25 + 720*576@25 + 5FPS JPEG
- 2592*1944@25 + 1280*720@25 + 720
- 2880*1620@25 + 1280*720@25 + 720*576@25 + 5FPS JPEG
- 2560*1440@30 + 1280*720@30 + 720*576@30 + 5FPS JPEG

16M FPS JPEG snapshot

Six bitrate control modes (CBR, VBR, FIXQP,

AVBR, QPMAP, and CVBR)

Intelligent encoding mode

8-area OSD

Ultra-low delay encoding

Rockchip Intelligent Video Engine

Support 20+ IVE algorithms

Support rotation, x-mirror, y-

Support scale down/up

External Interface

RMII interface with TSO network acceleration [illegible]

and Ethernet PHY

One USB 2.0 Host/Device

Dual SDIO 3.0 interface for Wi-Fi and SD card

2-channel 、12 PWM interfaces

I2C、SPI、and UART interfaces

Embedded Audio codec、RTC、POR

SDK

Linux-5.10 base SDK

Physical Specifications

Power Consumption

- Typical power consumption of 5M30fps:
  760mW

Operating Voltage

- 0.9V core voltage
- 3.3V I/O voltage
- 1.8V DDR2/1.5(1.35)V DDR3(L)/1.2V DDR4 SDRAM interface voltage

Device Information

Package:	QFN128
	Body: 12.3mm x 12.3mm
	Ball pitch: 0.35mm

RV1106 Target Applications

AI Application

IPC

Block Diagram