



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
- Support eMMC 4.51, dual and quad SPI Flash

Multi-Media

- 5M ISP 3.x with 2F HDR(Line-based/Frame-based/DCG)
- Support 2*MIPI CSI /LVDS/sub LVDS
- 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*576@25 + 5FPS JPEG
 - 2880*1620@25 + 1280*720@25 + 720*576@25 + 5FPS JPEG
 - 2560*1440@30 + 1280*720@30 + 720*576@30 + 5FPS JPEG
- 16M@30FPS JPEG snapshot
- Six bit rate 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-mirror
- Support scale down/up

External Interface

- RMIII interface with TSO network acceleration and Ethernet PHY
- One USB 2.0 Host/Device
- Dual SDIO 3.0 interface for Wi-Fi and SD card
- 2-channel ADC、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 at 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

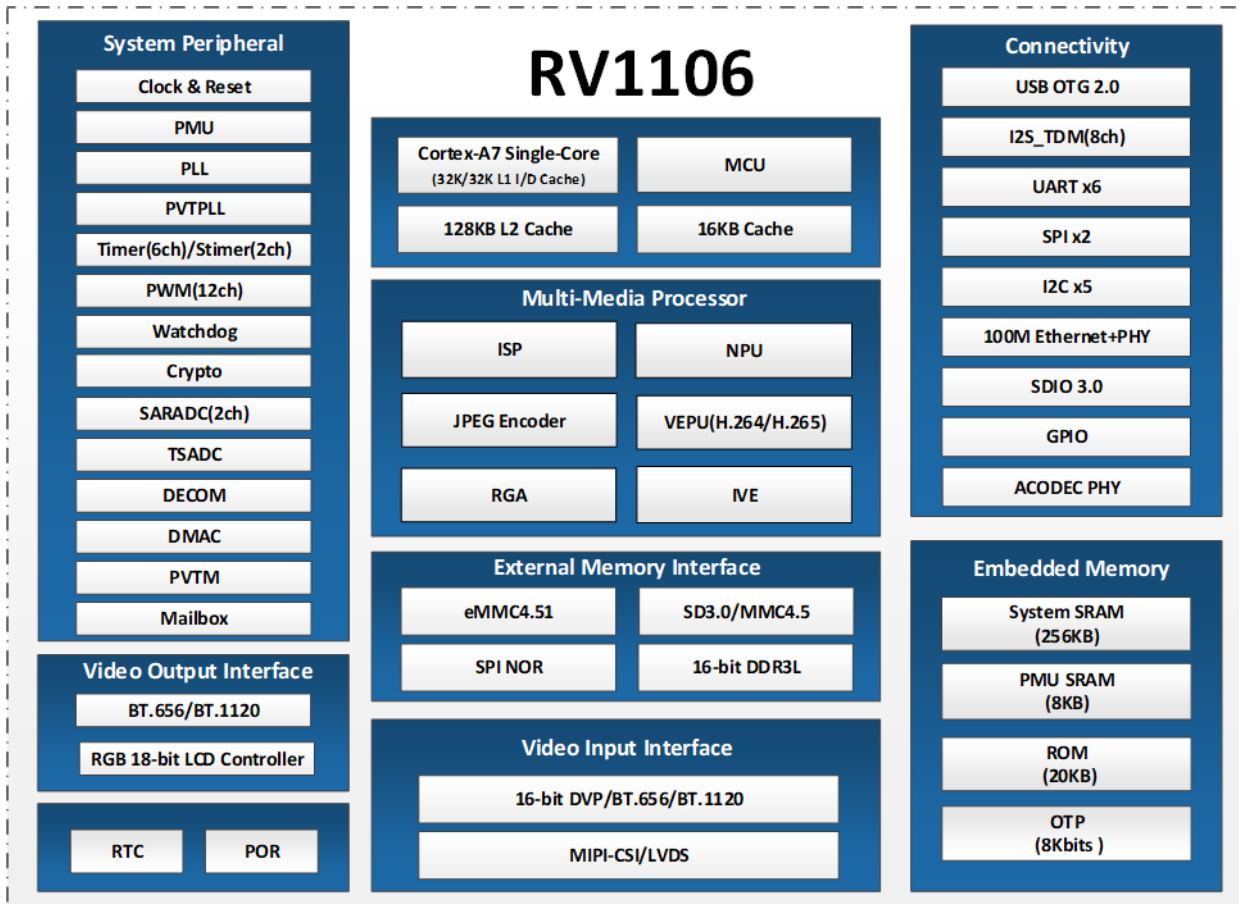
- Package:
- QFN128
- Body: 12.3mm x 12.3mm
- Ball pitch: 0.35mm

RV1106 Target Applications

- AI Application
- IPC



Block Diagram



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Application Typical Diagram – IPC

