WQ5008 Multimodal 3D vision processing chip

Overview

The chip is currently the only one in the industry that can simultaneously support binocular ToF, binocular structured light, structured light +ToF fusion upgrade solution, created variety of 3D vision core operator hardening acceleration processing, with high throughput, strong low-power computing power and leading high integration; Self-developed multi-channel data acquisition and neural network depth algorithm, support in complex environment to achieve high frequency sensing computing, to the greatest extent to meet the customer's more application needs and innovation direction.

Functions

- Built-in self-developed high-performance RISC-V multicore architecture, support enhanced computational capability upgrades and SIMD ISA improvements.
- Newly self-developed ISP algo and image preprocessing modules, support image processing and arbitrary angle rotation, affine transformation, scaling, and distortion correction of images.
- Further improved 3D vision hardware processing module, in addition to structured light, added TOF deep processing module, and binocular processing operator.
- Support 3-channel 1080P@30fps high-resolution image acquisition, high-performance image processing, and H.264/MJPEG encoding at 1080p@30fps.
- Support financial-grade security encryption engine with complete TrustZone solution, effectively preventing various side-channel attacks, providing customers with all-round data asset protection.

Applications

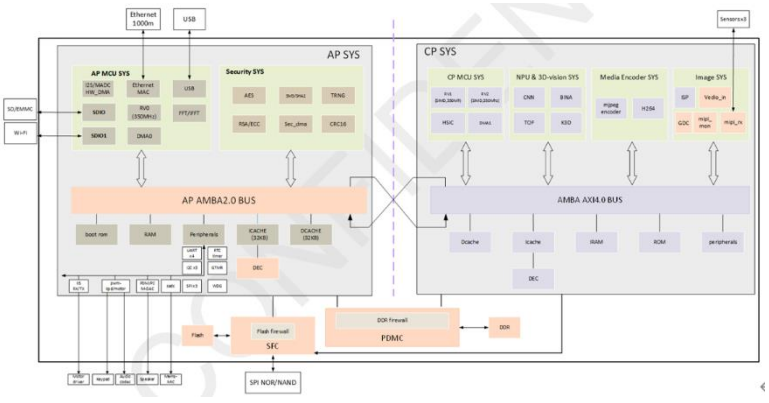
Intelligent door lock

Facial-recognition payment

Intelligent vacuum cleaner

Robot

Block Diagram



Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. WUQI Microelectronics Co., Ltd. shall have no liability for any error or damage of any kind resulting from the use of this document.