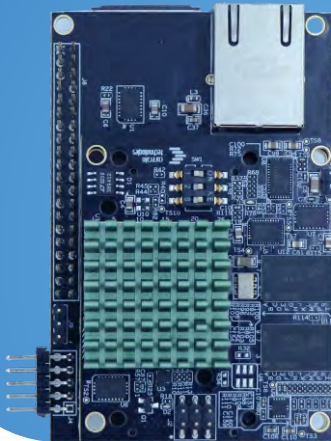


Rainman Accelerator

Custom AI Streaming Architecture (CAISA)

Empowered by Custom AI Streaming Architecture (CAISA), the Corerain accelerator series, Rainman and Nebula, provide high-performance, low power consumption and low-latency AI solution to both IoT frontend and backend systems.



60x60^{pixel}
1080P
50 FPS



Rainman 3

Rainman 2

Rainman 1

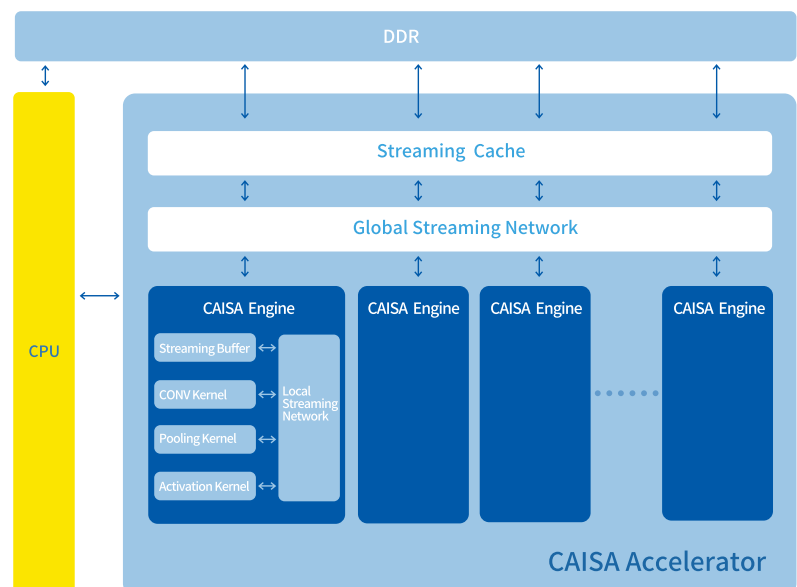
Frontend Object Detection and Tracking

1080p video streams

Full-scale real-time object detection

Minimum object size: 60x60

50 Frames Per Second (FPS) for AI processing



Rainman Accelerator



General

Embedded System (Cortex-A9 dual-core, ARM Processor)
 Core board dimensions 50mm x 60mm
 1GB DDR4 Memory
 1Gb Flash onboard storage
 5V USB Type-C power supply
 Power consumption 7.0W~8.5W

I/O

Multiple expansion boards design for users I/O:
 Ethernet, USB, SPI, GPIO, etc.
 FPGA program: 10-pin JTAG

Operating Environment

Operating temperature: 0°C~70°C
 Storage temperature: -10°C~80°C
 Working humidity: 5%~90% (no condensation)

Development Support

RainBuilder Toolchain
 TensorFlow, Caffe, etc.



Robot



Drone



Camera

Applications



Face

Face detection, tracking, human traffic counting
 Face recognition
 Attribute analysis: age, gender etc.



Vehicle

Vehicle detection, tracking, vehicle traffic counting
 Vehicle attribute analysis: color, category,
 license plate recognition etc.



Pedestrian

Pedestrian detection, tracking, pedestrian traffic counting
 Attribute analysis: clothing color, age, gender etc.

Electric Power



Autonomous Driving



Smart Education, Smart Retail, Logistics

