CVGesture

Performance Report

2017-10-19

OPEN AI LAB

Revision Record

Date	Rev	Change Description	Author
2017-10-19	0.1.0	Initial version	

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1 Purpose

CVGesture is a demo APP maintained by OPEN AI LAB, it support “palm” and “fist” gesture recognization. This report is tested on RK3399 platform. The report includes CPU data.

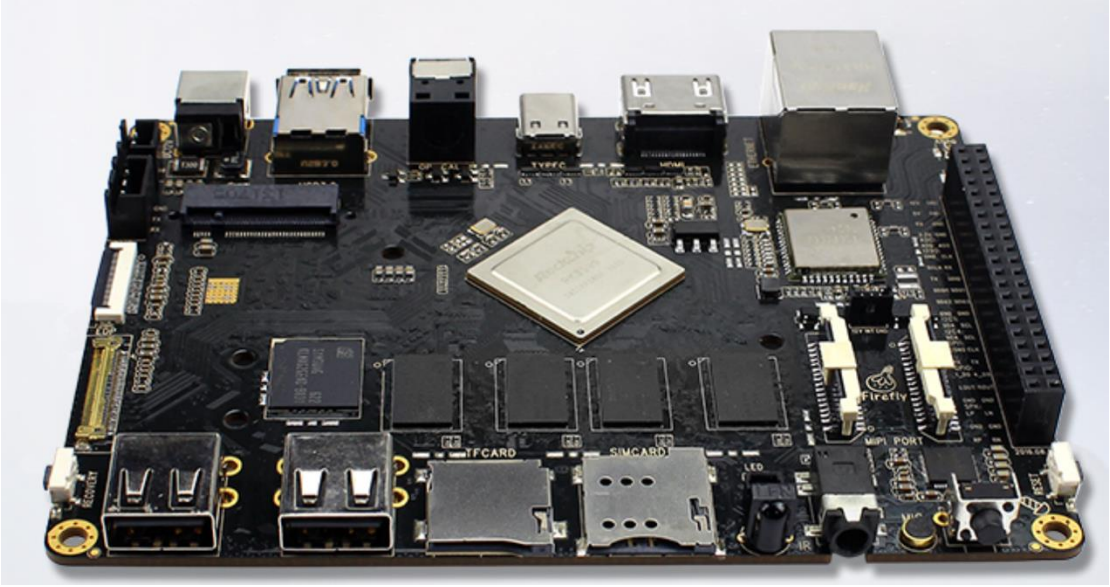
2 Test Environment

Hardware SoC : Rockchip RK3399

- GPU: Mali T864 (800MHz)
- CPU: Dual-core Cortex-A72 up to 2.0GHz (real frequency is 1.8GHz); Quad-core Cortex-A53 up to 1.5GHz (real frequency is 1.4GHz)

Operating System : Ubuntu 16.04

Software: OpenCV3.3

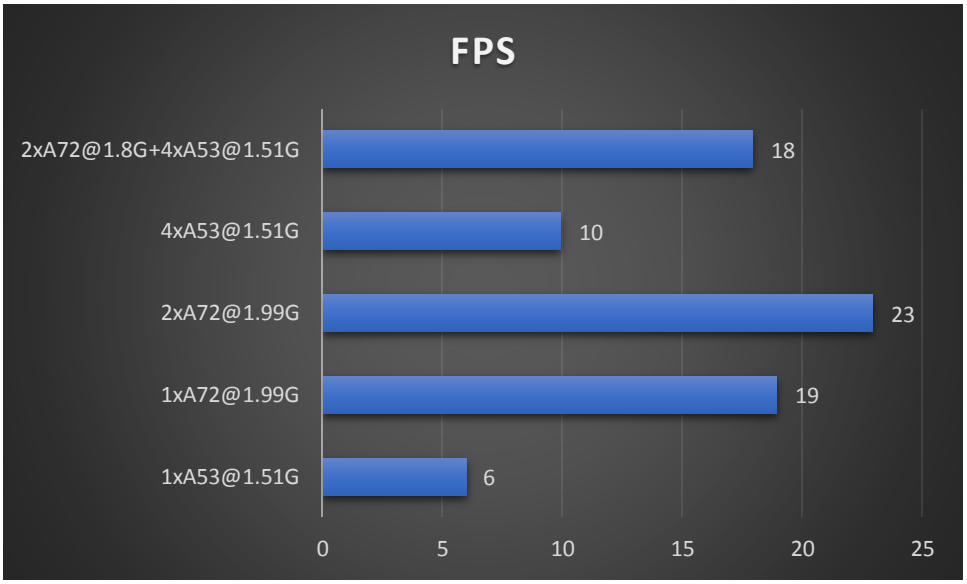


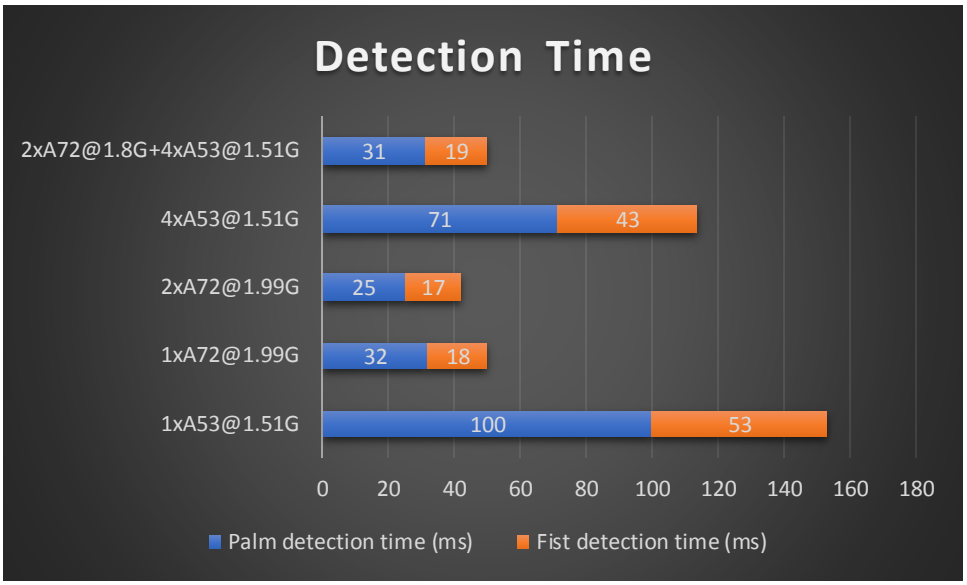
3 Performance On Different Cores

Calculate the FPS(Frame rate Per Second) in five seconds, and print the result in terminal. Skip the result of first five seconds. Recognize two gestures: palm and fist. The palm and fist detection time are also averaged in five seconds, skip the result of first five seconds.

FPS on different cores, 640x480 resolution

	FPS	Palm detection time (ms)	Fist detection time (ms)
1xA53@1.51G	6	100	53
1xA72@1.99G	19	32	18
2xA72@1.99G	23	25	17
4xA53@1.51G	10	71	43
2xA72@1.8G+4xA53@1.51G	18	31	19





4 Conclusion

From the above test cases, we can deduce that:

- the performance on 2xA72 is best, but only increase 21 precent versus 1xA72
- the preformance on 4xA53 increase 66 precent versus 1xA53
- the preformance on 1xA72 is 1.9X versus 4xA53

The algogrthim should run on A72, A53 can not meet the performance requirement.