CVGesture

Performance Report

2017-12-25

OPEN AI LAB

Revision Record

Date	Rev	Change Description	Author
2017-10-19	0.1.0	Initial version	
2017-12-25	0.2.0	New cascade classifier	Hao Han

catalog

1 Purpose

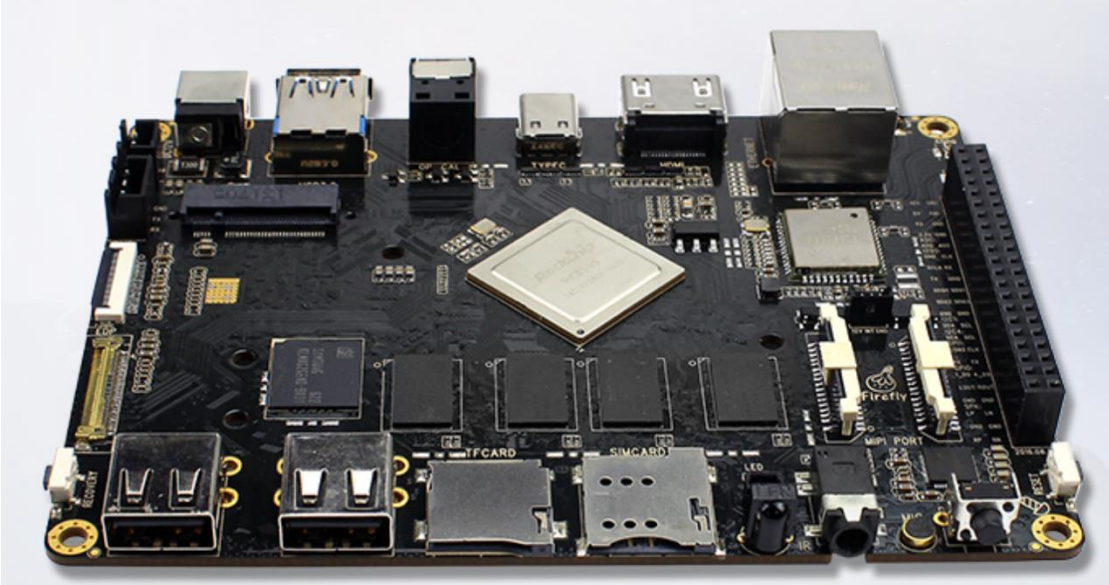
This Report is tested on RK3399 platform. The report includes CPU data.

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

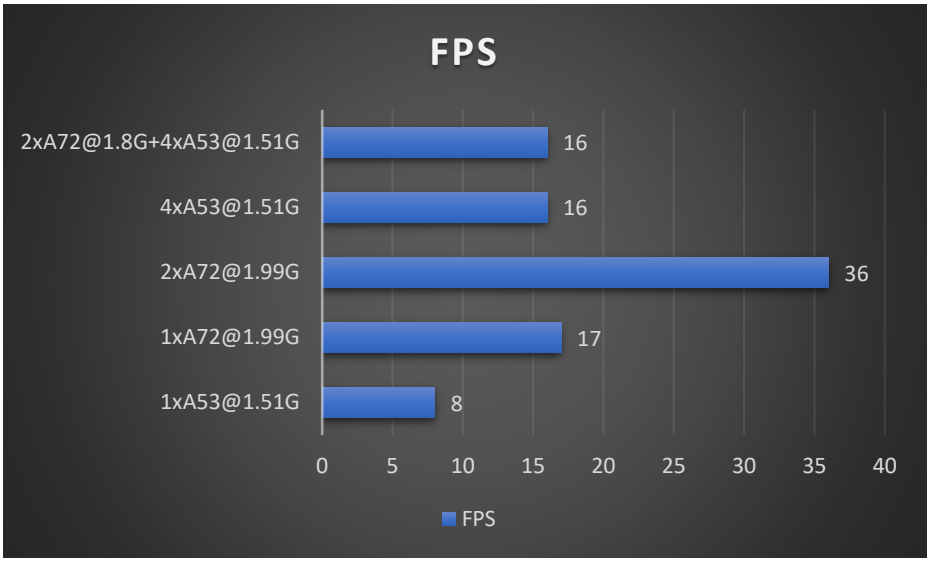


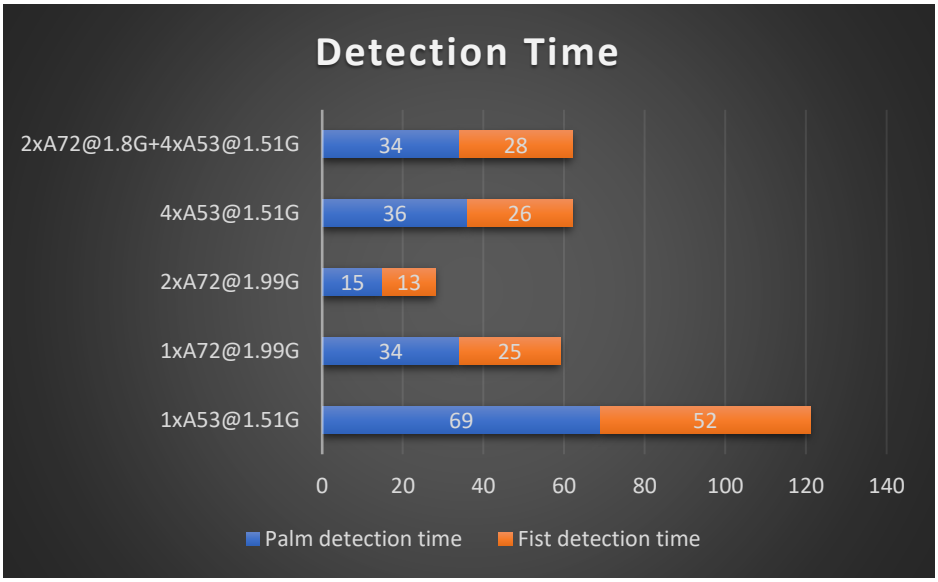
3 Performance On Different Cores

Caclute 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	8	69	52
1xA72@1.99G	17	34	25
2xA72@1.99G	36	15	13
4xA53@1.51G	16	36	26
2xA72@1.8G+4xA53@1.51G	16	34	28





4 Conclusion

From the above test cases, we can deduce that :

- the performance on 2xA72 is best, it has over 100 percent increase versus 1xA72
- the preformance on 4xA53 increase 100 precent versus 1xA53
- the preformance on 1xA72 is similiar versus 4xA53

The algogrthim should run on A72 or 4xA53, single A53 core cannot meet the performance requirement.