



RSB-3710

Release Note

Released Version: UIV10036
Released Date: 2021-04-14

Advantech Co., Ltd.

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ABSTRACT

This document describes how to use diagnostic tool for board functionality verification.

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Part No.

Version: 1.00

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1. Hardware Information

CPU: RK3399

2. Software Information

Ubuntu18.04

3. Release Version

Rev	Date	Description	Release by
UIV10036	2021-04-14	The first release	Yunjin.Jiang

4. Add New Features

5. Function Test

Module	Test Steps	Result
CPU Cores	CPUinfo under kernel cat /proc/cpuinfo grep "processor" wc -l	PASS
CPU Speed	A72 cat /sys/devices/system/cpu/cpufreq/policy4/cpuinfo_max_freq	PASS
	A53 cat /sys/devices/system/cpu/cpufreq/policy0/cpuinfo_max_freq	PASS
CPU DVFS	cat /sys/devices/system/cpu/cpufreq/policy0/scaling_cur_freq cat /sys/devices/system/cpu/cpufreq/policy4/scaling_cur_freq	PASS
memeory	check meminfo capacity cat /proc/meminfo	PASS
	Check memory clock under kernel cat /sys/class/devfreq/dmc/cur_freq	PASS
	memtester 1000M 5	PASS
GPU	check gpu working using benchmark or web http://webglsamples.org	PASS
	Check GPU clock cat /sys/class/devfreq/ff9a0000.gpu/cur_freq	PASS
VPU	Play video and check decoding mode	PASS
PMIC	1.8V/3.3V/5V voltage,reset,poweroff	N/A

DEBUG UART	config as normal uart port	PASS
	System debug message output and input	PASS
SD	SD card read/write	PASS
eMMC	emmc read/write	PASS
I2C	i2cdetect i2cget i2cset	PASS
LAN	RGMII	PASS
	USB	PASS
UART	ttyS0: rs232_loop /dev/ttyS0 /dev/ttyS1 115200 h 100	PASS
	ttyS4: rs232_loop /dev/ttyS0 /dev/ttyS1 115200 h 100	PASS
USB2.0	USB disk read/write cat /sys/bus/usb/devices/5-1/speed	PASS
	UVC camera preview/capture/video	PASS
USB3.0	USB disk read/write cat /sys/bus/usb/devices/5-1/speed	PASS
USB OTG	Host mode	PASS
	Slave mode	PASS
HDMI	Audio Play	PASS
	Multiple resolution:720p@60Hz/1080p@60Hz/4K@60Hz...	PASS
LVDS	Backlight adjustment	PASS
	lvds-g070vw01	PASS
	lvds-g150xgel05	N/A
	lvds-g215hvn01	N/A
eDP	Backlight adjustment	PASS
	edp-1366x768	PASS
	edp-1920x1080	PASS

RTC	date 2021-03-01 17:11:22 hwclock -w	PASS
Audio Codec	play and record	PASS
GPIO	GPIO input/output	PASS
Watchdog	cat /dev/watchdog	PASS
Power Button	Power off/sleep by OS	PASS
SW reboot	reboot	PASS
M.2	EWM-W188	PASS
mini PCIE	EC25	PASS
UIO	UIO-4030	PASS
	UIO-4032	PASS
	UIO-4034	PASS
	UIO-4036	PASS
tools	mac_write	PASS
	RKDevTool	PASS
	SDDiskTool	PASS

6. Performance Test

Module	Test Steps	Result	Remark
Benchmark	apt install hardinfo/glmark2 cpu:benchmarks---cpu blowfish(eg:5.91s) 2D:benchmarks---gpu drawing(eg:5418) 3D:taskset -c 4-5 glmark2-es2	PASS	cpu: blowfish 5.97 2D: cpu drawing 1059.87 3D: hdmi only, glmark2 106
lan	throughput: pc: iperf3 -s ARM: iperf3 -c 192.168.1.1 -i 5 -d -t 180	PASS	[4] 0.00-180.01 sec 18.7 GBytes 893 Mbits/sec 0

			sender [4] 0.00-180.01 sec 18.7 GBytes 893 Mbits/sec receiver
	Packet Lost: pc: iperf3 -s ARM: iperf3 -c 192.168.1.1 -u -b 80M -t 43200 -l 60k	PASS	0.00-43200.00 sec 402 GBytes 80.0 Mbits/sec 0.285 ms 46/7031223 (0.00065%)
Lan2	throughput: pc: iperf3 -s ARM: iperf3 -c 192.168.1.1 -i 5 -d -t 180	PASS	[4] 0.00-180.00 sec 4.28 GBytes 204 Mbits/sec 0 sender [4] 0.00-180.00 sec 4.28 GBytes 204 Mbits/sec receiver
	Packet Lost: pc: iperf3 -s ARM: iperf3 -c 192.168.1.1 -u -b 80M -t 43200 -l 60k	PASS	[4] 0.00-43200.00 sec 402 GBytes 80.0 Mbits/sec 0.321 ms 0/7031240 (0%)
SD	read: dd if=/dev/mmcblk0p1 of=/dev/zero bs=1M count=4 conv=fsync write: dd if=/dev/zero of=/dev/mmcblk0p1 bs=1M count=4 conv=fsync	PASS	4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.153698 s, 27.3 MB/s 4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.868263 s, 4.8 MB/s
eMMC	read: dd if=/dev/mmcblk1 of=/dev/ram0 bs=1M count=4 conv=fsync write: dd if=/dev/ram0 of=/dev/mmcblk1 bs=1M count=4 conv=fsync	PASS	4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.0313461 s, 134 MB/s 4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.0520002 s, 80.7 MB/s
usb2.0	read: dd if=/dev/sda of=/dev/zero bs=1M count=4 conv=fsync write: dd if=/dev/zero of=/dev/sda bs=1M count=4 conv=fsync	PASS	4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.161903 s, 25.9 MB/s 4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.297164 s, 14.1 MB/s

	UVC Camera Power on detect 200 times Preview 2 hours	PASS	
usb3.0	read: dd if=/dev/sda of=/dev/zero bs=1M count=4 conv=fsync write: dd if=/dev/zero of=/dev/sda bs=1M count=4 conv=fsync	PASS	4194304 bytes (4.2 MB, 4.0 MiB) copied, 0.0741508 s, 56.6 MB/s 4194304 bytes (4.2 MB, 4.0MiB) copied, 0.177687 s, 23.6 MB/s
BurnIn	Run BurnIn.sh 4H	PASS	
