



PL2731 Single-LUN Mass Storage Card Reader Controller Product Test Summary Guide

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1. Product Overview

The PL2731 is a USB 3.0 single-LUN mass storage card reader controller. When connected to generic PC with Super-Speed host, the PL2731 activates protocol engine of USB BOT mass storage class and transfers files in USB3.0 Super-Speed line rate (5Gbps) and squeeze the SD card up to UHS-I SDR104 performance.

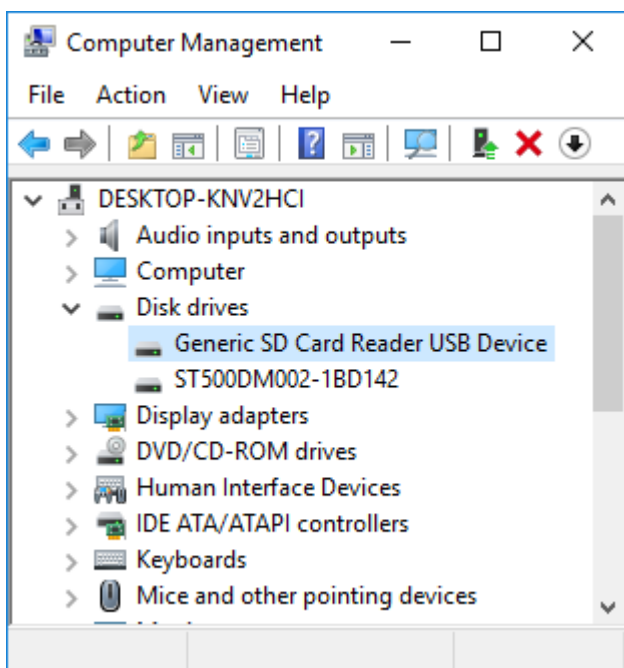
To save BOM cost, many components have been integrated into PL2731. The PL2731 integrates both USB 3.0 Super-Speed (5Gbps) transceiver and Hi-Speed / Full-speed transceiver. The PL2731 also integrates power management components including regulator to SD card power, regulator to SD UHS-I interface, regulator for core, and regulator for GPIO. Besides built-in regulators, the PL2731 integrates chip power stability monitors to make sure controller does not enter unknown state when system power is unstable. To maximize system compatibility and to integrate more value-added features, the PL2731 can be upgraded through commodity SPI flash.

2. USB 3.0 Interface

Test Configuration (Windows 10 X64)	
System	Gigabyte GA Z97-HDC
Chipset	Intel Z97
CPU	Intel(R)Core(TM)i3-4150 CPU@3.5G
Memory	4G
OS	Windows 10 (X64)
USB Host & Driver	Intel Z97 (Driver : 10.0. 15063.0.17031)
SD Card Type/Size	SanDisk 95/90MB Extreme Pro micro SDHC UHS-I U3/ Class 10/64G
Test Program	ATTO Disk Benchmark v2.47 / CrystalDiskMark v3.0.3

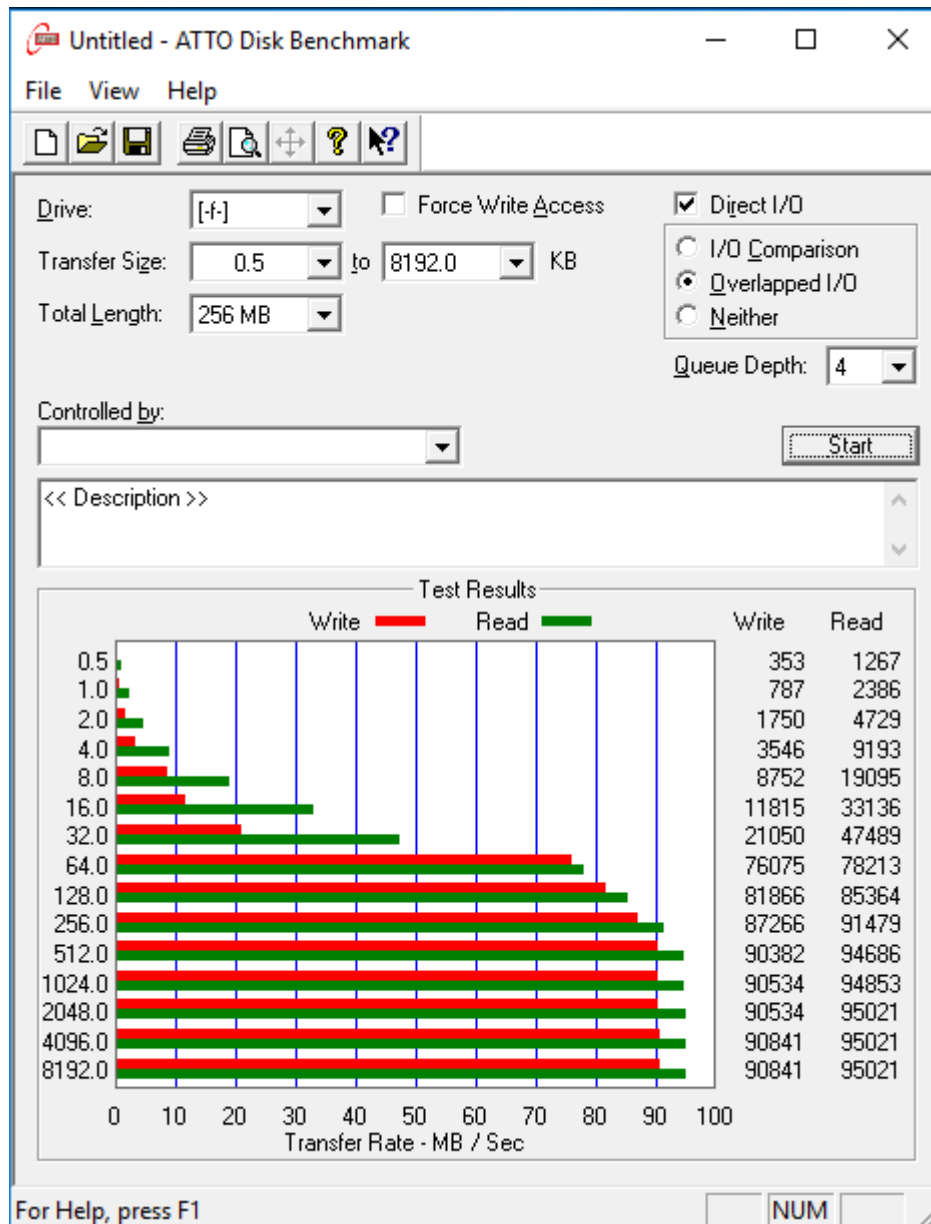
Table 2-1 : Test Configuration (Windows 10 X64)

2.1 Device Manager (View by Connection)

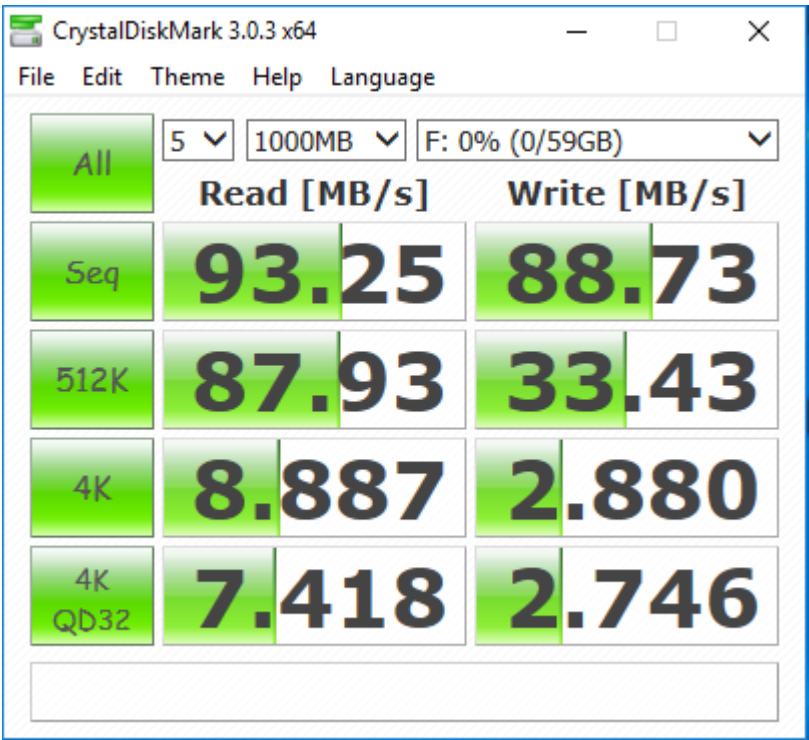


Driver Provider:	Microsoft
Driver Date:	6/21/2006
Driver Version:	10.0.15063.0
Digital Signer:	Microsoft Windows

2.2 ATTO Disk Benchmark



2.3 CrystalDiskMark



3. SD Card Compatibility

Test Configuration (Windows 10 X64)	
System	Gigabyte GA Z97-HDC
Chipset	Intel Z97
CPU	Intel(R)Core(TM)i3-4150 CPU@3.5G
Memory	4G
OS	Windows 10 (X64)
USB Host & Driver	Intel Z97 (Driver : 10.0. 15063.0.17031)
Test Program	ATTO Disk Benchmark v2.47

Table 3-1 : Test Configuration (Windows 10 X64)

SD Card				ATTO Benchmark	
No.	Brand	Type	Size	Read	Write
1	SanDisk	280/250MB Extreme Pro SDXC UHS-II U3	16GB	47259	45574
2	SanDisk	95/90MB Extreme Pro SDXC UHS-I U3 Class 10	256GB	94685	87863
3	SanDisk	95/90MB Extreme Pro SDXC UHS-I U1/Class 10	64GB	94686	88301
4	SanDisk	80/60MB Extreme PLUS SDHC/SDXC UHS-I U1/Class 10	16GB	95021	71870
5	SanDisk	45/30MB Extreme SDHC/ SDXC UHS-I U1/ Class 10	8GB	47176	39475
6	SanDisk	Ultra SDHC/SDXC/ Class 10	16GB	47716	13829
7	SanDisk	SDHC Class 4	8GB	47716	5344
8	Toshiba	95/90MB Exceria SDHC UHS-I U1/Class 10	32GB	93206	60458
9	Toshiba	30MB SDHC UHS-I/ Class 10	32GB	38960	13858
10	SONY	94/60MB SDXC UHS-I U3/Class 10	128GB	85221	56229
11	SONY	40MB SDXC UHS-I /Class 10	128GB	47093	36771
12	SONY	95/30MB SDXC UHS-I /Class 10	16GB	92738	34470
13	Kingston	90/80MB SDXC UHS-I U3 Class 10	256GB	93858	51523
14	Kingston	90/80MB SDXC UHS-I U3/ Class 10	64GB	94022	61994
15	Kingston	90/45MB SDXC UHS-I/ Class 10	128GB	93858	3158
16	Kingston	30MB SDXC UHS-I /Class 10	128GB	48984	14039
17	Kingston	SDHC/Class 4	16GB	20032	4915
18	Transcend	285/180MB SDHC UHS-II U3 Class 10	32GB	91304	86731
19	Transcend	95/85MB SDXC UHS-I U3/Class 10	64GB	93045	86872

20	Transcend	95/60MB SDXC UHS-I U3 Class 10	256GB	93045	67958
21	Transcend	90MB 600x SDHC/SDXC UHS-I/Class 10	128GB	93045	62137
22	Transcend	45MB 300x SDHC/SDXC UHS-I/Class 10	32GB	92723	25228
23	Transcend	SDHC/Class 10	128GB	47176	36822
24	Transcend	SDHC/Class 6	32GB	23839	16735
25	Transcend	SDHC/Class 4	32GB	47176	5134
26	Transcend	Wi-Fi SDHC/Class 10	32GB	21913	17533
27	Apacer	45MB SDXC/SDHC UHS-I /Class 10	32GB	52945	14225
28	Apacer	45MB SDXC/SDHC UHS-I/ Class 10	16GB	46603	12005
29	Apacer	SDHC/Class 10	16GB	47011	12880
30	ADATA	95/60MB Premier Pro SDXC/ UHS-I/ Class 10	64GB	93045	66692
31	ADATA	95/45MB Premier Pro SDXC/UHS-I/ Class 10	32GB	93206	66280
32	ADATA	30MB Premier SDXC/SDHC UHS-I/ Class 10	16GB	93206	12980
33	ADATA	30MB Premier SDXC/SDHC UHS-I /Class 10	8GB	47093	21526
34	ADATA	SDHC /Class 4	4GB	20198	4848
35	RiDATA	SDHC/Class 10	32GB	23526	17824
36	Lexar	95MB PRO 600x SDHC/UHS-I/ Class 10	128GB	93206	67958
37	PATRIOT	80/10MB SDXC/UHS-I Class 10	256GB	80455	16957
38	eye fi	mobi SDHC/Class 10	16GB	21840	19608

Table 3-2 : SD Card Brand and Type

Micro SD Card				ATTO Benchmark	
No.	Brand	Type	Size	Read	Write
1	SanDisk	95/90MB Extreme Pro micro SDHC UHS-I U3/ Class 10	64GB	95021	90534
2	SanDisk	90MB micro SDHC UHS-I U1/Class 10	200GB	94853	86872
3	SanDisk	90/40MB Extreme micro SDHC UHS-I U3/Class 10	32GB	95021	49710
4	SanDisk	60/40MB Extreme micro SDHC UHS-I U3/Class 10	32GB	74981	56512
5	SanDisk	80/30MB Extreme micro SDHC UHS-I U1/Class 10	16GB	95021	32856
6	SanDisk	80MB Ultra micro SDHC/ SDXC UHS-I /Class 10	128GB	94853	52531
7	SanDisk	45/30MB Extreme micro SDHC UHS-I Class 10	16GB	47259	32977
8	SanDisk	48MB Ultra micro SDHC/ SDXC UHS-I /Class 10	16GB	47093	18064
9	SanDisk	48/30MB Ultra micro SDHC/ SDXC UHS-I Class 10	8GB	47176	14128
10	SanDisk	micro SD/ SDHC Class 4	4GB	23776	5137
11	Toshiba	95/60MB micro SDHC UHS-I U3 Class 10	32GB	94353	61147
12	Toshiba	40MB micro SDHC UHS-I Class 10	16GB	35887	11447
13	SONY	95/30MB micro SDXC UHS-I Class 10	16GB	93045	33850
14	SONY	40MB SDXC UHS-I Class 10	64GB	47093	24183

15	SONY	70MB micro SDXC UHS-I Class 10	128GB	81905	19781
16	SONY	40MB SDXC UHS-I Class 10	16GB	47093	12905
17	Kingston	90/80MB micro SDHC/SDXC UHS-I U3 Class 10	128GB	93858	53155
18	Kingston	90/80MB micro SDHC UHS-I Class 10	32GB	94853	70548
19	Kingston	90/45MB micro SDHC UHS-I Class 10	32GB	92563	44078
20	Kingston	micro SDHC/SDXC UHS-I Class 10	32GB	47093	17021
21	Kingston	micro SDHC/SDXC UHS-I Class 10	16GB	45420	11768
22	Kingston	micro SDHC/Class 4	16GB	23526	5027
23	Kingston	micro SDHC/Class 4	4GB	20305	6662
24	Transcend	95/85MB micro SDHC/UHS-I U3/Class 10	32GB	94738	85235
25	Transcend	60MB micro SDHC/UHS-I Class 10	128GB	76695	22845
26	Transcend	45MB micro SDHC/UHS-I Class 10	32GB	93206	22203
27	Transcend	microSDHC/Class 6	8GB	22943	10639
28	Apacer	95/45MB micro SDHC UHS-I/ Class 10	32GB	92404	46281
29	Apacer	40MB micro SDXC/SDHC UHS-I/ Class 10	16GB	42473	25761
30	Apacer	micro SDHC Class 4	8GB	32458	5770
31	ADATA	95/90MB XPG micro SDXC/SDHC UHS-I U3 Class 10	64GB	93045	86452
32	ADATA	50MB Premier Pro micro SDXC/UHS-I Class 10	128GB	93045	34952
33	ADATA	45/40MB Premier Pro micro SDXC /UHS-I Class 10	16GB	47011	36571
34	ADATA	micro /SDHC/Class4	4GB	23860	11696
35	RiDATA	30MB micro SDHC/UHS-I Class 10	64GB	77694	22962
36	Samsung	90/80MB PRO micro SDXC/UHS-I/Class 10	64GB	93531	87154
37	Samsung	80/20MB EVO micro SDXC/UHS-I/Class 10	128GB	78720	22075
38	Samsung	48MB EVO micro SDXC/UHS-I/Class 10	64GB	47093	23797
39	Lexar	90MB PRO 633x micro SDHC/UHS-I Class 10	32GB	93045	23776
40	Lexar	45MB PRO 300x micro SDHC/UHS-I Class 10	16GB	47093	22295
41	Verbatim	90/80MB micro SDHC/UHS-I Class 10/32G	32GB	93045	71966
42	Verbatim	45MB micro SDHC/UHS-I Class 10	128GB	71774	18088
43	Strontium	65MB micro SDHC/UHS-I Class 10	16GB	93045	13288
44	Pretec	50/10MB micro SDHC/UHS-I Class 10	32GB	93206	18771
45	PQI	90/45MB micro SDHC/UHS-I Class 10	32GB	90534	47343

Table 3-3 : Micro SD Card Brand and Type

3.1 SD Card Support Brand

Apacer 、ADATA 、APOTOP 、Choicee 、Gigastone 、Kingston 、Kingmax 、Lexar 、PQI 、PATRIOT 、PNY 、Pretec 、RiDATA 、SanDisk 、Silicon Power 、SONY 、SHARPEN 、Strontium 、Transcend 、Toshiba 、TOPMORE 、TDK 、Team 、Tcell 、Verbatim

3.2 Legacy SD Card Support

SD Card				
No.	Brand	Type	Size	Result
1	amazing		2GB	Pass
2	ADATA		2GB	Pass
3	Transcend		2GB	Pass
4	TOSHIBA	Class 6	2GB	Pass
5	Transcend		2GB	Pass
6	Kingston		2GB	Pass
7	ADATA	Class 4	4GB	Pass
8	Kingston	Class 6	4GB	Pass
9	Transcend	Class 2	4GB	Pass
10	Transcend	Class 4	4GB	Pass
11	Transcend	Class 6	4GB	Pass
12	SanDisk	Class 4	4GB	Pass
13	Kingston	Class 4	4GB	Pass
14	SanDisk	Class 4	4GB	Pass
15	SanDisk	Class 10 (30MB/s)	4GB	Pass
16	Transcend	Class 10	4GB	Pass
17	PNY	Class 10	8GB	Pass
18	Kingston	Class 10	8GB	Pass
19	ADATA	Class 4	8GB	Pass
20	ADATA	Class 10	8GB	Pass
21	ADATA	U1/Class 10	8GB	Pass
22	SONY	U1/ Class 10(94MB/s)	8GB	Pass
23	SONY	Class 4	8GB	Pass
24	SanDisk	Class 10/ I (HD,30MB/s)	8GB	Pass
25	Apacer	Class 10	8GB	Pass
26	Transcend	Class 10	8GB	Pass
27	Kingston	Class 4	8GB	Pass
28	Transcend	Class 4	8GB	Pass
29	Transcend	Class 6	8GB	Pass
30	Transcend	Class 10	8GB	Pass
31	SanDisk	Class 2	8GB	Pass
32	SanDisk	Class 4	8GB	Pass
33	Kingston	Class 4	8GB	Pass
34	Kingston	Class 10	8GB	Pass
35	Transcend	Class 2	8GB	Pass

36	Transcend	U1/Class 10	8GB	Pass
37	Transcend	U1/Class 10	8GB	Pass
38	TOSHIBA	Class 10	8GB	Pass
39	SILICON POWER	Class 6	8GB	Pass
40	RiDATA	Class 6	8GB	Pass
41	SanDisk	Class 6/ I (30MB/s)	8GB	Pass
42	TOSHIBA	U1/Class 10	8GB	Pass
43	PNY	U1/ Class 10(35MB/s)	16GB	Pass
44	ADATA	U1/ Class 10	16GB	Pass
45	ADATA	Class4	16GB	Pass
46	Apacer	Class4	16GB	Pass
47	Apacer	U1/ Class 10	16GB	Pass
48	TOSHIBA	Class4	16GB	Pass
49	TOSHIBA	U1/ Class 10(30MB/s)	16GB	Pass
50	Kingston	Class 10	16GB	Pass
51	Kingston	U1/Class 10	16GB	Pass
52	Apacer	Class 10	16GB	Pass
53	SONY	Class 4	16GB	Pass
54	ADATA	U1/ Class 10(95MB/s)	16GB	Pass
55	PNY	Class 10	16GB	Pass
56	SONY	U1/ Class 10(94MB/s)	16GB	Pass
57	SILICON POWER	Class 10	16GB	Pass
58	Transcend	Class 2	16GB	Pass
59	Transcend	Class 4	16GB	Pass
60	Transcend	Class 4	16GB	Pass
61	Transcend	Class 10	16GB	Pass
62	SanDisk	Class 4	16GB	Pass
63	Kingston	Class 10	16GB	Pass
64	TOSHIBA	U1/ Class 10	16GB	Pass
65	Transcend	Class 6	16GB	Pass
66	SanDisk	Class 6(20MB/s)	16GB	Pass
67	Kingston	Class 4	16GB	Pass
68	SanDisk	Class 10 (30MB/s)	16GB	Pass
69	SanDisk	Class 10	16GB	Pass
70	Transcend	Class 6	16GB	Pass
71	SanDisk	U1/ Class 10 (Extreme/45MB)	16GB	Pass
72	Transcend	U1(300X)	16GB	Pass
73	SONY	U1/ Class 10 (30MB/s)	16GB	Pass

74	Transcend	U1/ Class 10 (85MB/s)	16GB	Pass
75	SONY	U1/ Class 10 (95MB/s)	16GB	Pass
76	Gigaston	Class 10	16GB	Pass
77	Gigaston	Class 4	16GB	Pass
78	SanDisk	Class 10 (30MB/s)	16GB	Pass
79	SanDisk	Class 10(Ultra/30MB)	16GB	Pass
80	SanDisk	Class 2	32GB	Pass
81	TOPRAM	Class 6	32GB	Pass
82	SILICON POWER	Class 10	32GB	Pass
83	Apacer	Class 4	32GB	Pass
84	Apacer	Class 10	32GB	Pass
85	PQI	Class 10	32GB	Pass
86	ADATA	U1/ Class 10	32GB	Pass
87	SILICON POWER	Class 6	32GB	Pass
88	PNY	U1/ Class 10	32GB	Pass
89	Kingston	Class 10	32GB	Pass
90	ADATA	Class 4	32GB	Pass
91	TOPRAM	U1/ Class 10	32GB	Pass
92	PNY	Class 10	32GB	Pass
93	SONY	U1/ Class 10 (94MB/s)	32GB	Pass
94	TOSHIBA	U1/ Class 10 (30MB/s)	32GB	Pass
95	TOSHIBA	U1/ Class 10 (95MB/s)	32GB	Pass
96	Kingston	U1/ Class 10	32GB	Pass
97	TOPRAM	Class 10	32GB	Pass
98	Transcend	Class 4	32GB	Pass
99	Transcend	Class 10	32GB	Pass
100	SanDisk	Class 4	32GB	Pass
101	SanDisk	U1/Class 10 (30MB/s)	32GB	Pass
102	Transcend	Class 6	32GB	Pass
103	SanDisk	Class 2	32GB	Pass
104	SanDisk	Class 10 (30MB/s)	32GB	Pass
105	SanDisk	Class 4	32GB	Pass
106	Transcend	Class 6	32GB	Pass
107	Transcend	Class 10	32GB	Pass
108	SanDisk	U1/ Class 10 (45MB/s)	32GB	Pass
109	Kingston	Class 4	32GB	Pass
110	SanDisk	U1/ Class 10(Ultra/30MB)	32GB	Pass
111	SONY	U1/ Class 10 (30MB/s)	32GB	Pass

112	Transcend	U1/ Class 10 (85MB/s)	32GB	Pass
113	Kingston	Class 10	32GB	Pass
114	ADATA	U1/ Class 10 (R95/W45)	32GB	Pass
115	Gigaston	Class 4	32GB	Pass
116	Verbatim	Class 10	32GB	Pass
117	PRETEC	U1/ Class 10 (433X)	32GB	Pass
118	PRETEC	Class 10	32GB	Pass
119	SanDisk	U1/ Class 10(Ultra/30MB)	32GB	Pass
120	Panasonic	Class 10	64GB	Pass
121	TOSHIBA	Class 10	64GB	Pass
122	Kingston	U1/ Class 10	64GB	Pass
123	Kingston	U1/ Class 10	64GB	Pass
124	Kingston	Class 10	64GB	Pass
125	TOPRAM	Class 10	64GB	Pass
126	ADATA	U1/ Class 10 (95MB/s)	64GB	Pass
127	Apacer	Class 10	64GB	Pass
128	SanDisk	Class 4	64GB	Pass
129	Transcend	U1/ Class 10	64GB	Pass
130	SanDisk	U1/ Class 10(Ultra/30MB)	64GB	Pass
131	SanDisk	U1/ Class 10(95MB)	64GB	Pass
132	Transcend	U1/ Class 10	64GB	Pass
133	SanDisk	U1/ Class 10(45M/s)	64GB	Pass
134	Kingston	Class 10	64GB	Pass
135	白牌		64GB	Pass
136	Verbatim	U1/ Class 10	64GB	Pass
137	PRETEC	U1/ Class 10 (433X)	64GB	Pass
138	Kingston	Class 10	128GB	Pass
139	OEM	U1/ Class 10	128GB	Pass
140	SanDisk	U1/ Class 10 (Extreme Pro)	128GB	Pass
141	Transcend	Class 10	128GB	Pass
142	Verbatim	U1/ Class 10	128GB	Pass
143	Gigaston	U1/ Class 10	128GB	Pass
144	PNY	90MB SDXC/UHS-I Class 10	256GB	Pass
145	Quanwang	SDHC/UHS-I U1/Class 10	256GB	Pass

Table 3-4 : Legacy SD Card Brand and Type

Micro SD Card				
No.	Brand	Type	Size	Result
1	Kingston		2GB	Pass
2	SanDisk		2GB	Pass
3	Transcend		2GB	Pass
4	Kingston		2GB	Pass
5	SanDisk		2GB	Pass
6	Kingston		2GB	Pass
7	TOSHIBA	Class 4	4GB	Pass
8	Transcend	Class 2	4GB	Pass
9	SanDisk	Class 4	4GB	Pass
10	SanDisk	Class 2	4GB	Pass
11	Transcend	Class 6	4GB	Pass
12	Transcend	Class 4	4GB	Pass
13	Transcend	Class 6	8GB	Pass
14	RiDATA	Class 6	8GB	Pass
15	RiDATA	Class 6	8GB	Pass
16	Transcend	Class 2	8GB	Pass
17	Kingston	Class 4	8GB	Pass
18	SanDisk	Class 4	8GB	Pass
19	SanDisk	Class 4	8GB	Pass
20	Transcend	U1/ Class 10 (40/20/MB/s)	8GB	Pass
21	Transcend	U1/ Class 10(Ultimate,90M/s)	8GB	Pass
22	Transcend	U1/ Class 10 (Extreme Pro)	8GB	Pass
23	SILICON POWER	Class 4	8GB	Pass
24	SILICON POWER	Class 4	8GB	Pass
25	SILICON POWER	Class 10	8GB	Pass
26	Apacer	Class 4	8GB	Pass
27	ADATA	U1/ Class 10(R45/W20)	8GB	Pass
28	ADATA	U1/ Class 10	8GB	Pass
29	PQI	Class 10	8GB	Pass
30	PNY	Class 10	8GB	Pass
31	TOPRAM	Class 10	8GB	Pass
32	Kingston	Class 10	8GB	Pass
33	SILICON	Class 10	8GB	Pass

	POWER			
34	TOSHIBA	Class 4	8GB	Pass
35	Transcend	Class 6	16GB	Pass
36	Transcend	Class 2	16GB	Pass
37	Transcend	Class 4	16GB	Pass
38	SanDisk	Class 2	16GB	Pass
39	Transcend	Class 10	16GB	Pass
40	TOSHIBA	U1/ Class 10 (40/20/MB/s)	16GB	Pass
41	SanDisk	U1/ Class 10 (Extreme Pro)	16GB	Pass
42	SONY	Class 4	16GB	Pass
43	Transcend	Class 4	16GB	Pass
44	Transcend	U1/ Class 10(Ultimate,90M/s)	16GB	Pass
45	ADATA	Class 10	16GB	Pass
46	ADATA	U1/ Class 10	16GB	Pass
47	ADATA	U1/ Class 10(R45/W40)	16GB	Pass
48	TOPRAM	Class 4	16GB	Pass
49	TOPRAM	U1/ Class 10	16GB	Pass
50	PNY	U1/ Class 10	16GB	Pass
51	SILICON POWER	Class 4	16GB	Pass
52	Apacer	U1/ Class 10	16GB	Pass
53	SanDisk	Class 4	16GB	Pass
54	TOSHIBA	U1/ Class 10 (EXCERIA)	16GB	Pass
55	Kingston	Class 10	16GB	Pass
56	Apacer	Class 4	16GB	Pass
57	TOPRAM	Class 10	16GB	Pass
58	TOPRAM	U1/ Class 10	16GB	Pass
59	TOSHIBA	Class 4(Extreme Pro)	16GB	Pass
60	SILICON POWER	Class 10	16GB	Pass
61	Gigastone	Class 4	16GB	Pass
62	Gigastone	Class 10	16GB	Pass
63	Verbatim	Class 10	16GB	Pass
64	SanDisk	Class 4	32GB	Pass
65	SanDisk	Class 4	32GB	Pass
66	SanDisk	Class 4	32GB	Pass
67	Transcend	Class 4	32GB	Pass
68	ADATA	Class 10	32GB	Pass

69	Gigastone	Class 10	32GB	Pass
70	Kingston	Class 10	32GB	Pass
71	白牌	Class 6	32GB	Pass
72	Transcend	U1/ Class 10(300X,45M/s)	32GB	Pass
73	PQI	Class 10	32GB	Pass
74	PQI	U1/ Class 10	32GB	Pass
75	TOSHIBA	Class 4	32GB	Pass
76	ADATA	U1/ Class 10	32GB	Pass
77	Apacer	U1/ Class 10	32GB	Pass
78	TOPRAM	Class 4	32GB	Pass
79	TOPRAM	Class 10	32GB	Pass
80	TOPRAM	Class 6	32GB	Pass
81	OEM	Class 10	32GB	Pass
82	Kingston	Class 4	32GB	Pass
83	Apacer	Class 4	32GB	Pass
84	SILICON POWER	Class 10	32GB	Pass
85	Gigastone	Class 4	32GB	Pass
86	SanDisk	U1/ Class 10 (Ultra)	64GB	Pass
87	SanDisk	U1/ Class 10 (Ultra)	64GB	Pass
88	Transcend	U1/ Class 10(300X,45M/s)	64GB	Pass
89	ADATA	U1/ Class 10	64GB	Pass
90	TOPRAM	U1/ Class 10(Tablet)	64GB	Pass
91	Apacer	U1/ Class 10	64GB	Pass
92	TOSHIBA	U1/ Class 10	64GB	Pass
93	Kingston	U1/ Class 10	64GB	Pass
94	SONY	U1/ Class 10	64GB	Pass
95	3C Pro	U1/ Class 10	64GB	Pass
96	PRETEC	U1/ Class 10	64GB	Pass
97	SAMSUNG	U1/ Class 10	64GB	Pass
98	Maxell	U1/ Class 10	128GB	Pass
99	microflash	U1/ Class 10	128GB	Pass
100	Netac	U1/ Class 10	128GB	Pass
101	OV	U1/ Class 10	128GB	Pass
102	KINGBANK	U1/ Class 10	128GB	Pass

Table 3-5 : Legacy Micro SD Card Brand and Type

4. USB 3.0 Host & System Compatibility Test

4.1 Windows OS Platform

No.	Test Items
1	DUT Detection – Device Manager, Disk Management, My Computer
2	Partition - Quick Format – Benchmark Test
3	Copy/Compare 4GB Files/Folder
4	Power Cycle Test 5X – Plug USB cable and do Cold Boot, Warm Boot, DUT Power On/OFF, Hotplug USB Cable, Safe Removal, Standby (S1/S3), Hibernate (S4)
5	Abnormal Test (While Copy Files do Unplug USB cable, Standby/Hibernate, and Power Off DUT) – DUT should still be detected and work properly after doing Abnormal Test
6	Plug to USB 2.0 root port and do copy/compare test

Table 4-1 : Test Configuration (Windows 10 X64)

System + OS + Host Compatibility List			
No.	System	Host Controller	OS
1	Asus Z97-C Motherboard Intel(R)Core(TM)i3-4150 CPU@3.5G 4GB RAM Memory Intel Z97 Chipset	Asmedia USB 3.1 xHCI Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86
2	GA-F2A88X-D3H Motherboard AMD A10-7700K APU with Radeon(tm)R7 Graphics 3.4G 4GB RAM Memory AMD A88X Chipset	AMD USB 3.0 xHCI Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86
3	Asus Z97-C Motherboard Intel(R)Core(TM)i3-4150 CPU@3.5G 4GB RAM Memory Intel Z97 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86

4	Asus Z87-PRO Motherboard Intel(R)Core(TM)i3-4130 CPU@3.4G 4GB RAM Memory Intel Z87 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86
5	Asus P8H77 Motherboard Intel Core i3 3.30GHz CPU 4GB RAM Memory Intel H77 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86
6	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host PCIe Host Card μPD720202A 2-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86
7	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host On-board NEC Chip μPD720201 2-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86
8	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host On-board NEC Chip μPD720200 2-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86
9	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Proceasor 3.60G / 4GB RAM SB950 Chipset	Asmedia 1042 USB 3.0 Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86
10	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	Fresco Logic USB 3.0 PCIe Host Card (GEN2) FL1100 4-Port Driver v10.0.10240.16461	Win10 x64 Win10 x86
11	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Proceasor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ198A 2-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86

12	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ188A 2-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86
13	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ168A 2-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86
14	GA-H61M-USB3H Motherboard Intel(R)Core(TM)i3-3240 CPU@3.4G / 4GB RAM Intel H61 Chipset	Via 805 USB 3.0 Host On-board Chipset Driver v10.0.10240.16461	Win10 x64 Win10 x86
15	ASUS P8H61M-LX Motherboard Intel(R)Core(TM)i3-2100 CPU@3.1G / 4GB RAM Intel H61 Chipset	TI USB 3.0 Host PCIe Host Card (GEN4) TI 35I 4-Ports Driver v10.0.10240.16461	Win10 x64 Win10 x86
16	GA-F2A88X-D3H Motherboard AMD A10-7700K APU with Radeon(tm)R7 Graphics 3.4G 4GB RAM Memory AMD A88X Chipset	AMD USB 3.0 xHCI Host On-board Chipset Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
17	Asus Z97-C Motherboard Intel(R)Core(TM)i3-4150 CPU@3.5G 4GB RAM Memory Intel Z97 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
18	Asus Z87-PRO Motherboard Intel(R)Core(TM)i3-4130 CPU@3.4G 4GB RAM Memory Intel Z87 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
19	Asus P8H77 Motherboard Intel Core i3 3.30GHz CPU 4GB RAM Memory Intel H77 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86

20	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host PCIe Host Card μPD720202A 2-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
21	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host On-board NEC Chip μPD720201 2-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
22	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host On-board NEC Chip μPD720200 2-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
23	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Asmedia 1042 USB 3.0 Host On-board Chipset Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
24	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	Fresco Logic USB 3.0 PCIe Host Card (GEN2) FL1100 4-Port Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
25	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ198A 2-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
26	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ188A 2-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
27	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ168A 2-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86

28	GA-H61M-USB3H Motherboard Intel(R)Core(TM)i3-3240 CPU@3.4G / 4GB RAM Intel H61 Chipset	Via 805 USB 3.0 Host On-board Chipset Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
29	ASUS P8H61M-LX Motherboard Intel(R)Core(TM)i3-2100 CPU@3.1G / 4GB RAM Intel H61 Chipset	TI USB 3.0 Host PCIe Host Card (GEN4) TI 35I 4-Ports Driver v6.3.9600.17393	Win8.1 x64 Win8.1 x86
30	GA-F2A88X-D3H Motherboard AMD A10-7700K APU with Radeon(tm)R7 Graphics 3.4G 4GB RAM Memory AMD A88X Chipset	AMD USB 3.0 xHCI Host On-board Chipset Driver v8.0.915.0	Win 7 x64 SP1 Win 7 x86 SP1
31	Asus Z97-C Motherboard Intel(R)Core(TM)i3-4150 CPU@3.5G 4GB RAM Memory Intel Z97 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v3.0.23.0	Win 7 x64 SP1 Win 7 x86 SP1
32	Asus P8H77 Motherboard Intel Core i3 3.30GHz CPU 4GB RAM Memory Intel H77 Chipset	Intel USB 3.0 xHCI Host On-board Chipset Driver v3.0.23.0	Win 7 x64 SP1 Win 7 x86 SP1
33	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host PCIe Host Card μPD720202A 2-Ports Driver v3.0.23.0	Win 7 x64 SP1 Win 7 x86 SP1
34	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host On-board NEC Chip μPD720201 2-Ports Driver v3.0.23.0	Win 7 x64 SP1 Win 7 x86 SP1
35	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	NEC USB 3.0 Host On-board NEC Chip μPD720200 2-Ports Driver v2.1.39	Win 7 x64 SP1 Win 7 x86 SP1

36	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Asmedia 1042 USB 3.0 Host On-board Chipset Driver v1.16.24	Win 7 x64 SP1 Win 7 x86 SP1
37	ASUS P8H67 Motherboard Intel(R) core(TM)i3-2120 CPU @ 3.30G 3.30G / 4GB RAM Intel H67 Chipset	Fresco Logic USB 3.0 PCIe Host Card (GEN2) FL1100 4-Port Driver v3.5.108.0	Win 7 x64 SP1 Win 7 x86 SP1
38	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ198A 2-Ports Driver v1.0.0.119	Win 7 x64 SP1 Win 7 x86 SP1
39	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ188A 2-Ports Driver v1.0.0.119	Win 7 x64 SP1 Win 7 x86 SP1
40	ASUS M5A97 Motherboard AMD FX(tm)-4100 Quad-Core Processor 3.60G / 4GB RAM SB950 Chipset	Etron USB 3.0 Host PCIe Host Card (GEN2) EJ168A 2-Ports Driver v1.0.0.119	Win 7 x64 SP1 Win 7 x86 SP1
41	GA-H61M-USB3H Motherboard Intel(R)Core(TM)i3-3240 CPU@3.4G / 4GB RAM Intel H61 Chipset	Via 805 USB 3.0 Host On-board Chipset Driver v4.90a	Win 7 x64 SP1 Win 7 x86 SP1
42	ASUS P8H61M-LX Motherboard Intel(R)Core(TM)i3-2100 CPU@3.1G / 4GB RAM Intel H61 Chipset	TI USB 3.0 Host PCIe Host Card (GEN4) TI 35I 4-Ports Driver v1.16.4	Win 7 x64 SP1 Win 7 x86 SP1

4.2 Mac OS Platform

Mac Test Configuration	
System	Apple MacBook Air
CPU / RAM	1.3GHz Dual-Core Intel Core i5 processor / 4GB Memory
Chipset	Intel xHCI Chipset
OS	Mac OS X 10.10.5
USB 3.0 Host Controller	Intel xHCI Controller
SD Card Type	ADATA 95/85MB XPG SDXC/SDHC/UHS-I U3/Class 10/64G

Table 4-2 : Test Configuration (Mac)

No.	Test	Test Item	Test Results
1	Enumeration Test	Detect Device Properly (Device Manager)	Pass
		Partition / Format Disk (Disk Management)	Pass
		Quick Format (My Computer)	Pass
2	Benchmark Test	AJA_SystemTest_Mac- Read (MB/sec)	79.5
		AJA_SystemTest_Mac- Write (MB/sec)	30.1
3	Power Cycle Test	Shutdown 3X	Pass
		Restart 3X	Pass
		Safe Removal 3X	Pass
		Hotplug 3X	Pass
		Standby / Sleep 3X	Pass
		DUT Power Reset 3X	Pass
4	Copy/Compare Test	4GB Files/Folder	Pass
5	Abnormal Test	Unplug cable while copy files	Pass
		Standby while copy files	Pass
		Power off DUT while copy files	Pass

5. Android System Compatibility Test

5.1 Android Platform

No.	Test Items
1	DUT Detection – File Commander, SD card
2	Copy/Compare 4GB Files/Folder
3	Power Cycle Test – Plug In Memory card, Copy file, Delete file, Safety Removal, Re-plug in memory card & access file
4	Memory card– SanDisk U1 16GB

Table 5-1 : Test Configuration (Android)

Android & Windows System List					
No.	Brand	Type	P/N	OS Ver.	Result
1	Acer	Tablet	Iconia One 7_BI-750	Android 4.4.4	Pass
2	ASUS	Tablet	MeMO Pad_ME172V	Android 4.1.1	Pass
3	ASUS	Tablet	Note 8	Windows 8.1	Pass
4	ASUS	Smart Phone	PadFone S_T00N	Android 4.4.2	Pass
5	ASUS	Tablet	ZenPad S	Android 5.0	Pass
6	CCIT	Tablet	A708G	Android 4.1.2	Pass
7	HTC	Smart Phone	HTC_One X+	Android 4.2.2	Pass
8	HUAWEI	Smart Phone	HUAWEI MT1_U06	Android 4.1.2	Pass
9	HUAWEI	Smart Phone	Nexus 6P	Android 6.0.1	Pass
10	LG	Tablet	G Tablet 8.0_V480	Android 4.4.2	Pass
11	LG	Smart Phone	G Flex	Android 4.2.2	Pass
12	LG	Smart Phone	Nexus 5X	Android 6.0.1	Pass
13	MI	Smart Phone	MI 3	Android 4.4.4	Pass
14	MI	Smart Phone	MI 3W	Android 4.4.4	Pass
15	MI	Tablet	MI PAD	Android 4.4.4	Pass
16	MI	Smart Phone	MI_4C	Android 5.1.1	Pass
17	MI	Smart Phone	HM2LTE-SA	Android 4.4.4	Pass
18	MEIZU	Smart Phone	MEIZU MX3_M351	Fly me os 3.3.1	Pass
19	Sony	Tablet	Z3_Compact_SGP641	Android 4.4.4	Pass
20	Sony	Smart Phone	S_LT26i	Android 4.1.2	Pass
21	Sony	Smart Phone	Z1_C6903	Android 5.1.1	Pass
22	Sharp	Tablet	SH-06F	Android 4.4.2	Pass
23	Samsung	Smart Phone	S3_GT-I9300	Android 4.1.1	Pass

24	Samsung	Smart Phone	Galaxy S6_SM-G9028	Android 5.1.1	Pass
25	Samsung	Smart Phone	Galaxy S6 Edge+_SM-G9287	Android 5.1.1	Pass
26	Samsung	Tablet	GALAXY Tab4_SM-T235Y	Android 4.4.2	Pass
27	Samsung	Tablet	GALAXY NOTE PRO_SM-P900	Android 4.4.2	Pass
28	Samsung	Tablet	GALAXY NOTE 10.1_GT-N8010	Android 4.1.2	Pass
29	Samsung	Tablet	GT-P6810	Android 4.0.4	Pass
30	TWM	Smart Phone	Amazing A6	Android 4.2.1	Pass
31	Microsoft	Smart Phone	Lumia 950 XL RM-1085	Window 10	Pass
32	ZUK	Smart Phone	ZUK Z1221	Android 5.1.1	Pass

5.2 Linux Platform

No.	Test Items
1	DUT Detection – SD card
2	Copy/Compare 4GB Files/Folder
3	Power Cycle Test 5X – Plug USB cable and do Cold Boot, Warm Boot, Hotplug USB Cable, Standby
4	Abnormal Test (While Copy Files do Unplug USB cable, Standby – DUT should still be detected and work properly after doing Abnormal Test)

Table 5-2 : Test Configuration (Android)

System + OS + Host Compatibility List			
No.	System	Host Controller	OS
1	ECS-MCP73T-M2 Motherboard Intel(R) Celerom(R) CPU 3.06G 3.07G / 2GB RAM Nvidia 630i	USB 2.0 Host	Ubuntu 14.04.1

6. USB Command Verifier Test & Interoperability Test

Test Configuration (Windows 8.1 X64)	
System	DELL XPS
Chipset	Intel Z87
CPU	Intel(R)Core(TM)i7-4770 CPU@3.4G
Memory	4G
OS	Windows 8.1 (X64)
USB Host & Driver Verison	Intel Z87
Test Program	USB30CV 2.1.5.1

Table 6-1 : Test Configuration (Windows 8.1 X64)

No.	Test Category	Test Items	Results
1	Frameworks Test (USB30CV) Chapter 9 Test	Super-Speed(USB 3.0) - SS device behind Root Port	Pass
		Super-Speed(USB 3.0) - SS device behind SS Hub	Pass
		High-Speed(USB 2.0) - SS device under High-Speed	Pass
		Full-Speed(USB 2.0) - SS device under Full-Speed	Pass
2	Frameworks Test (USB20CV) Chapter 9 Test	High-Speed(USB 2.0) - SS device behind High-Speed Hub	Pass
		Full-Speed(USB 2.0) - SS device behind Full-Speed Hub	Pass
3	Power Current Test (Super Speed)	Unconfiguration Power (X <=150mA)	Pass
		U0 Configuration Power (High power:<=900mA, Lower Power:X<=150mA)	Pass
		U0 Operation Power (High power:<=900mA, Lower Power:X<=150mA)	Pass
		U1 Power	Pass
		U2 Power	Pass
		U3 Power (X<=2.5mA)	Pass
4	Power Current Test (High Speed)	Operating Power (High power:<=500mA, Lower Power:X<=100mA)	Pass
		Unconfiguration Power (X <=100mA)	Pass
		Configuration Power (High power:<=500mA, Lower Power:X<=100mA)	Pass
		Suspend Mode Power with remote wake up	Pass

		Suspend Mode Power without remote wake up ($X \leq 2.5\text{mA}$)	Pass
		Powered' State Suspend Mode Power ($\leq 2.5\text{mA}$)	Pass
5	Power Current Test (Full Speed)	Operating Power (High power: $\leq 500\text{mA}$, Lower Power: $X \leq 100\text{mA}$)	Pass
		Unconfiguration Power ($X \leq 100\text{mA}$)	Pass
		Configuration Power (High power: $\leq 500\text{mA}$, Lower Power: $X \leq 100\text{mA}$)	Pass
		Suspend Mode Power with remote wake up	Pass
		Suspend Mode Power without remote wake up ($X \leq 2.5\text{mA}$)	Pass
		Powered' State Suspend Mode Power ($\leq 2.5\text{mA}$)	Pass

Table 6-2 : Test Item

7. USB 3.0 Link Layer Compliance test

No	Test Category	Test Items	Test Results
1	PL2731 Test	Ellisys USB Compliance	Pass
2		LeCroy USB Compliance	Pass

PS. Pass on 48 Pin package

7.1 Ellisys

Test Configuration (Windows 7 X86)	
System	Asus P8Z97
Chipset	Intel Z97
CPU	Intel(R)Core(TM)i3-4150 CPU@3.5G
Memory	4G
OS	Windows 7 (X86)
USB Speed	USB 3.0
Test Program (Ellisys)	Ellisys USB 3.0 Examiner Version: 2.0.5723 Ellisys USB 3.0 Analyzer Version: 2.0.4932

1	Ellisys	TD.6.1 Lane Polarity Inversion Test - Testing Upstream Port (Device)	Pass
2		TD.6.2 Skip Test - Testing Upstream Port (Device)	Pass
3		TD.6.3 Elasticity Buffer Test - Testing Upstream Port (Device)	Pass
4		TD.6.4 LFPS Frequency Test - Testing Upstream Port (Device)	Pass
5		TD.6.4 LFPS Frequency Test - Testing Upstream Port (Device)	Pass
6		TD.6.5 Polling.LFPS Duration Test - Testing Upstream Port (Device)	Pass
7		TD.7.1 Link Bring Up Test - Testing Upstream Port (Device)	Pass
8		TD.7.2 Link Command Framing Test - Testing Upstream Port (Device)	Pass
9		TD.7.3 Link Command CRC Test - Testing Upstream Port (Device)	Pass
10		TD.7.4 Invalid Link Command Test - Testing Upstream Port (Device)	Pass
11		TD.7.5 Header Packet Framing Test - Testing Upstream Port (Device)	Pass
12		TD.7.6 Data Payload Framing Test - Testing Upstream Port (Device)	Pass
13		TD.7.7 RX Header Retransmission Test - Testing Upstream Port (Device)	Pass
14		TD.7.8 TX Header Retransmission Test - Testing Upstream Port (Device)	Pass
15		TD.7.9 PENDING_HP_TIMER Deadline Test - Testing Upstream Port (Device)	Pass
16		TD.7.10 CREDIT_HP_TIMER Deadline Test - Testing Upstream Port (Device)	Pass
17		TD.7.11 PENDING_HP_TIMER Timeout Test - Testing Upstream Port (Device)	Pass
18		TD.7.12 CREDIT_HP_TIMER Timeout Test - Testing Upstream Port (Device)	Pass
19		TD.7.13 Wrong Header Sequence Test - Testing Upstream Port (Device)	Pass
20		TD.7.14 Wrong LGOOD_N Sequence Test - Testing Upstream Port (Device)	Pass
21		TD.7.15 Wrong LCRD_X Sequence Test - Testing Upstream Port (Device)	Pass
22		TD.7.16 Link Command Missing Test - Testing Upstream Port (Device)	Pass
23		TD.7.17 tPortConfiguration Timeout Test - Testing Upstream Port (Device)	Pass
24		TD.7.22 PM_ENTRY_TIMER Timeout Test - Testing Upstream Port (Device)	Pass
25		TD.7.23 Accepted U1 Transaction Test - Testing Upstream Port (Device)	Pass
26		TD.7.24 Accepted U2 Transaction Test - Testing Upstream Port (Device)	Pass
27		TD.7.25 Accepted U3 Transaction Test - Testing Upstream Port (Device)	Pass
28		TD.7.26 U0 to Recovery Transition Test - Testing Upstream Port (Device)	Pass
29		TD.7.27 Hot Reset in Polling Test - Testing Upstream Port (Device)	Pass
30		TD.7.28 Hot Reset in U0 Test - Testing Upstream Port (Device)	Pass
31		TD.7.30 Recovery on 3 Failed RX HP Test - Testing Upstream Port (Device)	Pass
32		TD.7.33 Exit Compliance Mode Test - Testing Upstream Port (Device)	Pass
33		TD.7.37 Packet Pending Test - Testing Upstream Port (Device)	Pass
34		TD.7.38 Port Capability Tiebreaker Test - Testing Upstream Port (Device)	Pass

Table 7-1 : Test Configuration (Windows 7 X86)

7.2 LeCroy

Test Configuration (Windows 8.1 X64)	
System	Asus P8Z97
Chipset	Intel Z97
CPU	Intel(R)Core(TM)i3-4150 CPU@3.5G
Memory	4G
OS	Windows 8.1 (X64)
USB Speed	USB 3.0
Test Program(LeCroy)	Lecroy USB Compliance Suite Version: 2.70 Build 0373 Lecroy USB Protocol Suite Version: 7.24 Build 2137

1	LeCroy	TD.6.1.1 Lane Polarity Inversion Test (No Invert)	Pass
2		TD.6.1 Lane Polarity Inversion Test	Pass
3		TD.6.2 Skip Test	Pass
4		TD.6.3 Elasticity Buffer Test	Pass
5		TD.6.3 Elasticity Buffer Test	Pass
6		TD.6.5 Polling.LFPS Duration Test	Pass
7		TD.6.6 SCD Duration Test	N/A
8		TD.6.7 PWM Duration Test	N/A
9		TD.7.01 Link Bring-up Test (Subtest 1)	Pass
10		TD.7.02 Link Bring-up Test (Subtest 2)	N/A
11		TD.7.03 Link Bring-up Test (Subtest 3)	N/A
12		TD.7.04 Link Bring-up Test (Subtest 4)	N/A
13		TD.7.02 Link Commands Framings Robustness Test	Pass
14		TD.7.03 Link Commands CRC-5 Robustness Test	Pass
15		TD.7.04 Invalid Link Commands Test	Pass
16		TD.7.05 Header Packet Framing Robustness Test	Pass
17		TD.7.06 Data Payload Packet Framing Robustness Test	Pass
18		TD.7.07 RX Header Packet Retransmission Test	Pass
19		TD.7.08 TX Header Packet Retransmission Test	Pass
20		TD.7.09 PENDING_HP_TIMER Deadline Test	Pass
21		TD.7.10 CREDIT_HP_TIMER Deadline Test	Pass
22		TD.7.11 PENDING_HP_TIMER Timeout Test	Pass
23		TD.7.12 CREDIT_HP_TIMER Timeout Test	Pass
24		TD.7.13 Wrong Header Sequence Test	Pass
25		TD.7.14 Wrong LGOOD_N Sequence Test	Pass
26		TD.7.15 Wrong LCRD_X Sequence Test	Pass
27		TD.7.16 Link Command Missing Test	Pass
28		TD.7.17 tPortConfiguration Time Timeout Test	Pass
29		TD.7.22 PM_ENTRY_TIMER Timeout Test	Pass
30		TD.7.23 Accepted Power Management Transaction for U1 Test	Pass
31		TD.7.24 Accepted Power Management Transaction for U2 Test	Pass
32		TD.7.25 Accepted Power Management Transaction for U3 Test	Pass
33		TD.7.26 Transition to U0 from Recovery Test	Pass
34		TD.7.27 Hot Reset Detection in Polling Test	Pass
35		TD.7.28 Hot Reset Detection in U0 Test	Pass
36		TD.7.30 Recovery on three consecutive failed RX Header Packets Test	Pass
37		TD.7.33 Exit Compliance Mode Test	Pass
38		TD.7.37 Packet Pending Test	Pass
39		TD.7.38 Port Capability Tiebreaker Test	Pass

Table 7-2 : Test Configuration (Windows 8.1 X64)

8. SPI Flash Support List

Company	Size	Result
ATMEL	AT25F512AN 512K (1 bit)	Pass
MXIC	MX25L5121EMC-20G 512K (1 bit)	Pass
MXIC	MX25L1021EMC-20G 1M (1 bit)	Pass
MXIC	MX25L8036EM21-08G 8M (4 bit)	Pass
Chingis	Pm25LD256C 256K (2 bit)	Pass
Chingis	Pm25LQ032C 32M (4 bit)	Pass
Winbond	W25X40CL 4M (2 bit)	Pass
Winbond	W25Q128FV 128M (4 bit)	Pass
AMIC	A25LQ32AM-F/G 32M (4 bit)	Pass
ENO	EN25QH16 16M (4 bit)	Pass
ATMEL	AT25DQ321 32M (4 bit)	Pass
ATMEL	AT25DF321A 32M (1 bit)	Pass
GigaDevice	GD25Q16BSIGR 16M (4 bit)	Pass
Microchip	SST25VF064C 64M (2 bit)	Pass
港宏電子	KH25L5121EMC-20G 512K (1 bit)	Pass

Table 8-1 : SPI Support Type