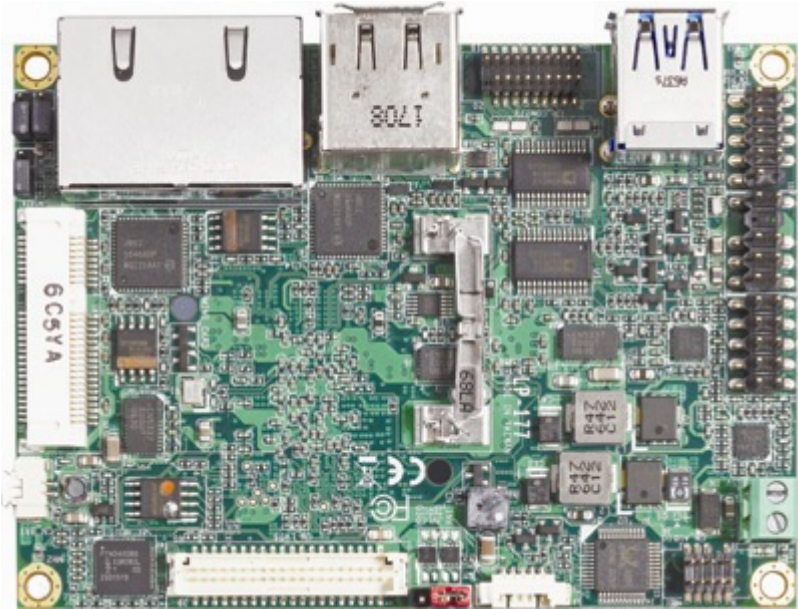


Product Test Report



Product Name	LP-177
Product Version	A
Issued Date	2018.06.12
Report Edition	1.1
BIOS Version	1.0
Testing Engineer	Rick
Check Engineer	Daniel

REVISION HISTORY

DATE	REVISION NO.	PAGE	DESCRIPTONS
2017.12.21	Ver. 1.0	All	Initial Release
2018.06.12	Ver. 1.1	8	Add 1866Hz Memory test

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1. Function test

1.1 Hardware functions

Base Function Test

Item	Description	Result
1	Power Button	PASS
2	Reset	PASS
3	Power LED	PASS
4	HDD LED	PASS
5	SYS FAN	PASS
6	CPU FAN	PASS
7	PS2	PASS
8	CN_AUDIO	PASS
9	LAN1	PASS
10	LAN2	PASS
11	DDR3L	PASS
12	SATA	PASS
13	USB2.0 1/2	PASS
14	USB3.0 1/2	PASS
15	COM 1/2	PASS
16	HDMI	PASS
17	Display Port	PASS
18	LVDS	PASS
19	MINI_CRAD	PASS

Jumper

Item	Description	Result
1	JRTC	PASS
2	JAT	PASS
3	JMSATA	PASS
4	JVLCD	PASS

1.2 BIOS function

Item	Description	Result	Remark
1	Press 'Del' to run Setup Utility	PASS	
2	Ctrl-Alt-Del – Soft-Reboot	PASS	
3	Selection Language	PASS	
4	Save & Exit Setup	PASS	
5	Date & Time Setting	PASS	
6	Numlock	PASS	
7	HD Audio Support	PASS	
8	Chipset SATA	PASS	
9	USB BIOS Support	PASS	DOS
10	Serial Port	PASS	
11	Set Supervisor Password	PASS	
12	Power On Password	PASS	
13	Boot Type Order	PASS	
14	Hard Disk Drive	PASS	

1.3 Driver

CD edition : IPCLi1-1.7

1. Windows 10 64 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	10.0.1
2	Graphic Driver	PASS	21.20.16.4550
3	Audio Driver	PASS	6.0.1.8036
4	LAN Driver	PASS	12.15.184.0

2. Compatibility test

2.1 CPU Test

Test environment:

OS: Windows 10 64-bit

Test program : PC MARK 2005

Spec	CPU Speed	Family	Processor	MAX TDP	Smart Cache	Result
SR2Y9	1.10 GHz	Pentium	N4200	6 W	2 MB	PASS
SR2YB	1.10 GHz	Celeron	N3350	6 W	2 MB	PASS

2.2 Memory Test

Table1 ↓

Test environment:

OS: Windows 10 64-bit

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Memory test Source
Kingston KVR16LS11/8	Micro HSN77 D9RVX	DDR3L 1600	8 GB	PASS
Kingston KVR16LS11/4	NANYA NT5CC512M8BN-DI	DDR3L 1600	4 GB	PASS
acpi CMA5-GA01BA L01A00	SK hynix H5TC4GB3AFR	DDR3L 1600	8 GB	PASS
TLA AD3SHT4GG5 WB-CKGBL/DL	SK hynix H5TC4GB3BFR /DFR	DDR3L 1600	4 GB	PASS
TLA AD3SHT8GSA WB-CKGBL/DL	SK hynix H5TC4GB3BFR /DFR	DDR3L 1600	8 GB	PASS

Table2 ↓

Test environment:

Test program: Memtest86 5.01

Time: 24Hrs

Manufacturer	Chip	Frequency	Capacity Mbytes	Memory test Source
CERVOZ CIR-S3SUSP1808 G	K4B4G0846E	DDR3L 1866	8 GB	PASS
ACPI CMA5-FGA01BA L01B00	H5TC4G83BFR	DDR3L 1866	8 GB	PASS
Kingston HX318LS11IB/8	C803Z5459	DDR3L 1866	8 GB	PASS

2.3 HDMI Graphic Quality Test

Test environment:

OS Windows 10 64-bit

Driver version : 21.20.16.4550

Resolution	Color	Result	Remark
800 x 600	16 /32bit	PASS	
1024 x 768	16 /32bit	PASS	
1152 x 864	16 /32bit	PASS	
1280 x 600	16 /32bit	PASS	
1280 x 720	16 /32bit	PASS	
1280 x 768	16 /32bit	PASS	
1280 x 800	16 /32bit	PASS	
1280 x 960	16 /32bit	PASS	
1280 x 1024	16 /32bit	PASS	
1360 x 768	16 /32bit	PASS	
1366 x 768	16 /32bit	PASS	
1400 x 1050	16 /32bit	PASS	
1440 x 900	16 /32bit	PASS	
1600 x 900	16 /32bit	PASS	
1680 x 1050	16 /32bit	PASS	
1920 x 1080	16 /32bit	PASS	

2.4 Display Port Graphic Quality Test

Test environment:

OS Windows 10 64-bit

Driver version : 21.20.16.4550

Resolution	Color	Result	Remark
800 x 600	16 /32bit	PASS	
1024 x 768	16 /32bit	PASS	
1152 x 864	16 /32bit	PASS	
1280 x 600	16 /32bit	PASS	
1280 x 720	16 /32bit	PASS	
1280 x 768	16 /32bit	PASS	
1280 x 800	16 /32bit	PASS	
1280 x 960	16 /32bit	PASS	
1280 x 1024	16 /32bit	PASS	
1360 x 768	16 /32bit	PASS	
1366 x 768	16 /32bit	PASS	
1400 x 1050	16 /32bit	PASS	
1440 x 480	16 /32bit	PASS	
1440 x 576	16 /32bit	PASS	
1440 x 900	16 /32bit	PASS	
1600 x 900	16 /32bit	PASS	
1600 x 1200	16 /32bit	PASS	
1680 x 1050	16 /32bit	PASS	
1792 x 1344	16 /32bit	PASS	
1856 x 1392	16 /32bit	PASS	
1920 x 1080	16 /32bit	PASS	

1920 x 1200	16 /32bit	PASS	
1920 x 1440	16 /32bit	PASS	
2048 x 1152	16 /32bit	PASS	
2560 x 1440	16 /32bit	PASS	

2.5 Audio

Test environment:

OS Windows 10 64-bit

Driver version : 6.0.1.8036

Item	Description	Result	Remark
1	2.1CH	PASS	
2	Microphone	PASS	

2.6 HDD Test

Test environment:

OS Windows 10 64-bit

HDD Model	Interface	Capacity	HDD Size Detect	HDD Data Transfer	HDD LED Check
Western Digital WD3200BEKT-00F3T0	SATA	320 GB	PASS	PASS	PASS
Western Digital WD5000LPCX-22VHAT0	SATA	500 GB	PASS	PASS	PASS
MemoRight MRSAJ6C064GC125C00	SSD	64 GB	PASS	PASS	PASS
INTEL SSDSC2BW240A4	SSD	240 GB	PASS	PASS	PASS
acpi CSC064GR5-G710A00D	mSATA	64 GB	PASS	PASS	PASS

2.7 DVD-ROM Test

Test environment:

OS Windows 10 64-bit

DVD-ROM Model	Interface	DVD-ROM Detect	DVD-ROM Data Transfer	Play DVD
LITEON DVD eTAU108	USB	PASS	PASS	PASS

2.8 USB Test

1. Windows 10 64-bit

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
DVD-ROM	PASS	
USB Mass storage	PASS	

2.9 Serial Port Test

1. Windows 10 64-bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	

2.10 PS2 Keyboard 、 Mouse Test

1. Windows 10 64-bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2.11 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows 10 64-bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	(IPERF)
2	Data Transfer Test	PASS	(IPERF)

2.12 Power Supply & Adapter Test

Item	Type	Description	Result	Remark
1	Adapter	TG-4201-5V 30W	PASS	
2	Adapter	EDAC EA10521B 30W	PASS	
3	Adapter	EDAC EA10681W-050 40W	PASS	
4	Adapter	LI SHIN 0219B1280 12V 80W	PASS	It needs add DC-DC3
5	Adapter	FSP GROUP INC. FSP120-AAA 19V 120W	PASS	It needs add DC-DC3

2.13 OS Install

Item	Description	Result	Remark
1	Windows 10 64 bit	PASS	

2.14 PCI Express Mini Card

Motherboard	PCI Express mini card	Result	Remark
LP-177	MPX-210D	PASS	WIN 10
	MPX-210D2	PASS	WIN 10
	MPX-350	PASS	WIN 10
	MPX-574D	PASS	WIN 10
	MPX-574D2	PASS	WIN 10
	MPX-954E	PASS	WIN 10
	MPX-2213	PASS	WIN 10
	MPX-7202	PASS	WIN 10
	MPX-8188	PASS	WIN 10
	mSATA	PASS	WIN 10

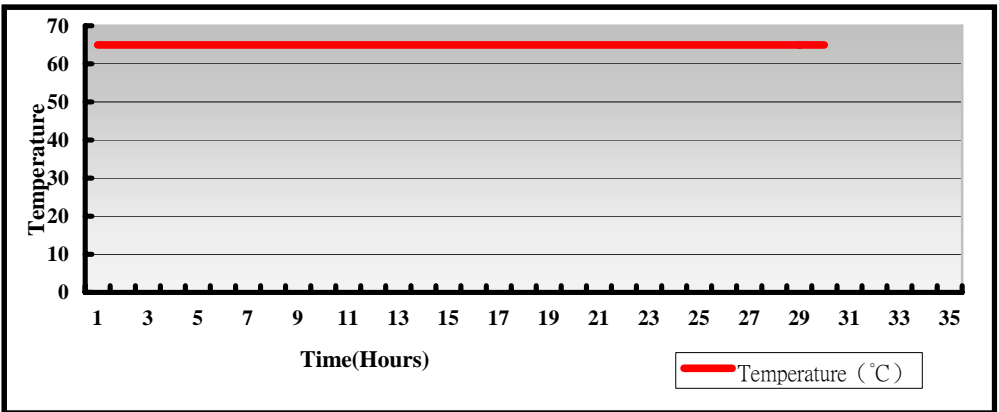
3. Environmental test

3.1 Temperature Test

Hardware Device list:

System Board	LP-177TN3_B
CPU	Intel(R) Pentium (TM) N3350 1.10GHz
Memory	Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX)
HDD	Intel SSDSC2BW240A4 240GB
Operating OS	Windows 10 64-bit
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark 2006 + Prime95

Test Result:

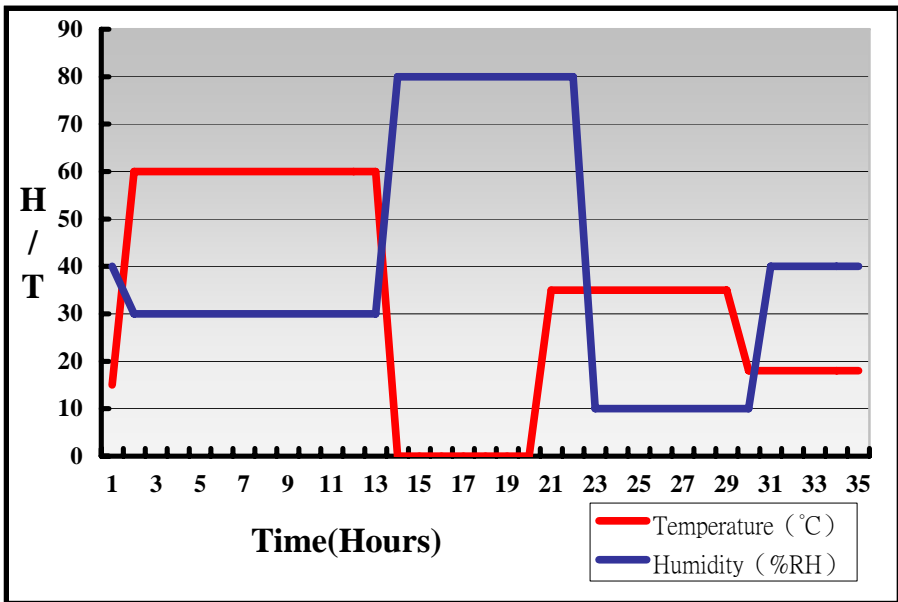


Power supply needs add DC-DC3

Hardware Device list:

System Board	LP-177TN3_B
CPU	Intel(R) Pentium (TM) N3350 1.10GHz
Memory	Kingston DDR3L 1600 8GB(Micro HSN77 D9RVX)
HDD	Intel SSDSC2BW240A4 240GB
Operating OS	Windows 10 64-bit
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark 2006 + Prime95

Test Result:



Power supply needs add DC-DC3

Boot up Test:

Hardware Device list:

System Board	LP-177TN3_B
CPU	Intel(R) Pentium (TM) N3350 1.10GHz
Memory	Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX)
HDD	Intel SSDSC2BW240A4 240GB

Temperature	Result	Remark
-40°C	PASS	50 Times.
85°C	PASS	50 Times

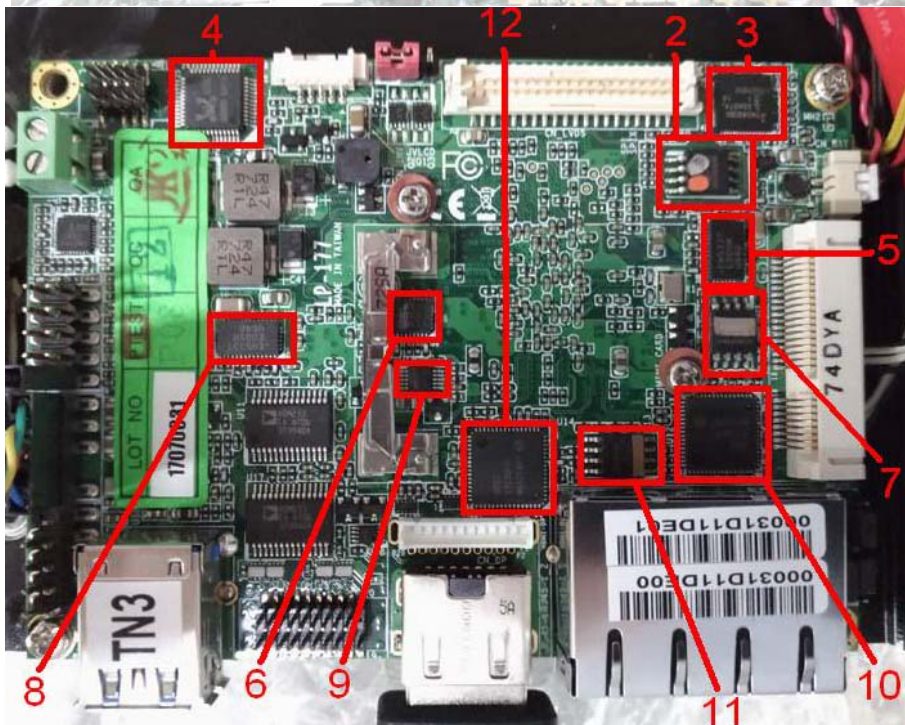
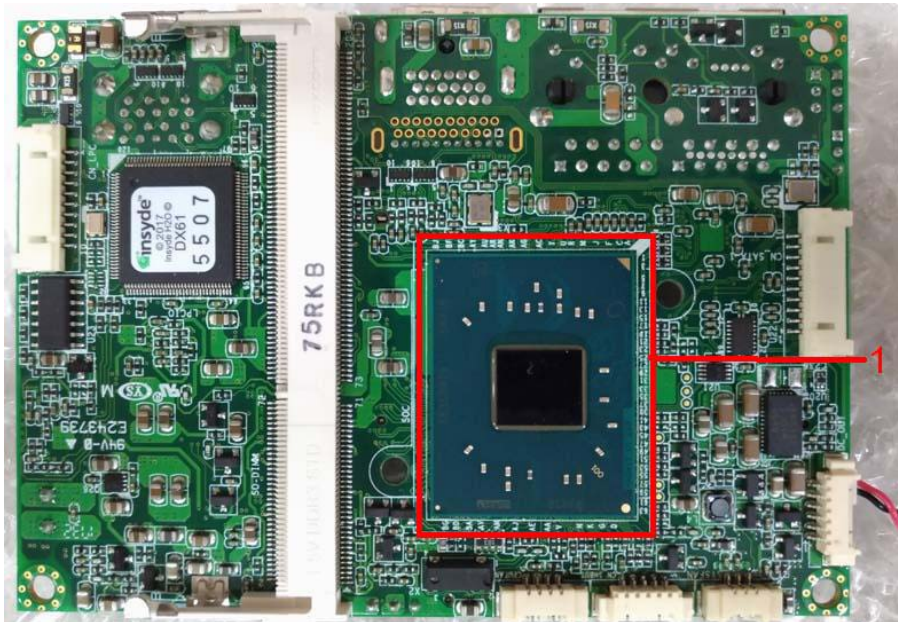
3.2 Thermal measurements at various points on the board

Test Environment:

CPU	Intel(R) Pentium (TM) N3350 1.10GHz
Memory	Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX)
HDD	Intel SSDSC2BW240A4 240GB
DC-DC power converter	DC-DC-5V_A
Adapter	FSP GROUP INC. FSP120-AAA
Operating System	Windows 10 64-bit
Test Program	BurnIn 7.1 Pro

Test Result:

Item	Environmental temperature	22°C
1	CPU	59.3°C
2	SPI (ICW25Q64FWSSIQ)	50.8°C
3	U1 (ICPTN3460BS)	48.4°C
4	U2 (ICHALC262-VD2-GR)	55.6°C
5	U5 (ICEN5337QI)	54°C
6	U6 (ICEN5337QI)	51.6°C
7	U7 (ICH25VF080B)	50.9°C
8	U8 (ICEN5337QI)	53.4°C
9	U10 (ICRT9026GFR)	53°C
10	U12 (ICI210-AT)	48.2°C
11	U13 (ICH25VF080B)	47.9°C
12	U14 (ICI210-AT)	50.9°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	LP-177 include Heat Spreader			
CPU	Intel(R) Pentium(TM) N4200 1.10GHz			
Memory	Kingston DDR3L 1600 4GB (NANYA NT5CC512M8BN-DI)			
HDD	MemoRight MRSAJ6C064GC125C00 64GB			
POWER	19V Adapter: FSP FSP120-AAA			
DC-DC power converter	DC-DC-5V_A			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.05	5.25	3.77	18.85

The same as above but with LCD panel

Display Panel	AUO G065VN01 V2 6.5"LCD			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.35	6.75	4.05	20.25

2. Test Environment:

Motherboard	LP-177 include Heat Spreader			
CPU	Intel(R) Pentium(TM) N3350 1.10GHz			
Memory	Kingston DDR3L 1600 4GB (NANYA NT5CC512M8BN-DI)			
HDD	MemoRight MRSAJ6C064GC125C00 64GB			
POWER	19V Adapter: FSP FSP120-AAA			
DC-DC power converter	DC-DC-5V_A			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.01	5.05	3.69	18.45

The same as above but with LCD panel

Display Panel	AUO G065VN01 V2 6.5"LCD			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.3	6.5	4.16	20.8

3. Test Environment:

Motherboard	LP-177 include Heat Spreader			
CPU	Intel(R) Pentium(TM) N3350 1.10GHz			
Memory	Kingston KVR16LS11/8 (Micro HSN77 D9RVX)			
HDD	Western Digital WD5000LPCX-22VHAT0 500GB			
POWER	19V Adapter: FSP FSP120-AAA			
DC-DC power converter	DC-DC-5V_A			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1	8.9	3.86	19.3

The same as above but with LCD panel

Display Panel	AUO G065VN01 V2 6.5"LCD			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.4	8.95	4.07	20.35

4. Test Environment:

Motherboard	LP-177 include Heat Spreader			
CPU	Intel(R) Pentium(TM) N3350 1.10GHz			
Memory	Acpi CMA5-GA01BAL01A00 (SK hynix H5TC4GB3AFR)			
HDD	Western Digital WD5000LPCX-22VHAT0 500GB			
POWER	19V Adapter: FSP FSP120-AAA			
DC-DC power converter	DC-DC-5V_A			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.07	8.7	3.33	16.65

The same as above but with LCD panel

Display Panel	AUO G065VN01 V2 6.5"LCD			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.35	9	3.89	19.45

5. Test Environment:

Motherboard	LP-177 include Heat Spreader			
CPU	Intel(R) Pentium(TM) N4200 1.10GHz			
Memory	Kingston KVR16LS11/8 (Micro HSN77 D9RVX)			
HDD	Western Digital WD5000LPCX-22VHAT0 500GB			
POWER	19V Adapter: FSP FSP120-AAA			
DC-DC power converter	DC-DC-5V_A			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.05	5.25	3.55	17.75

The same as above but with LCD panel

Display Panel	AUO G065VN01 V2 6.5"LCD			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.28	6.4	3.85	19.25

6. Test Environment:

Motherboard	LP-177 include Heat Spreader			
CPU	Intel(R) Pentium(TM) N4200 1.10GHz			
Memory	Acpi CMA5-GA01BAL01A00 (SK hynix H5TC4GB3AFR)			
HDD	Western Digital WD5000LPCX-22VHAT0 500GB			
POWER	19V Adapter: FSP FSP120-AAA			
DC-DC power converter	DC-DC-5V_A			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.03	5.15	3.58	17.65

The same as above but with LCD panel

Display Panel	AUO G065VN01 V2 6.5"LCD			
Voltage	MS-DOS Boot up		Windows 10 64-bit 3D MARK VANTAGE + PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
5V	1.36	6.8	3.81	19.05

5. Performance Test

5.1 3D MARK2006

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium (TM) N4200 1.10GHz	PASS	4209
2	SM2.0 Source	acpi DDR3L 1600 8GB (SK hynix 5TC4GB3AFR)	PASS	1373
3	HDR/SM3.0 Source	MemoRight	PASS	1750
4	CPU Source	MRSAJ6C064GC125C00 64GB	PASS	3027

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium (TM) N4200 1.10GHz	PASS	3943
2	SM2.0 Source	Kingston DDR3L 1600 4GB (NANYA)	PASS	1257
3	HDR/SM3.0 Source	NT5CC512M8BN-DI MemoRight	PASS	1633
4	CPU Source	MRSAJ6C064GC125C00 64GB	PASS	3012

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	3933
2	SM2.0 Source		PASS	1285
3	HDR/SM3.0 Source		PASS	1616
4	CPU Source		PASS	3030

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 8GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	4160
2	SM2.0 Source		PASS	1357
3	HDR/SM3.0 Source		PASS	1735
4	CPU Source		PASS	2930

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 DR9VX) MemoRight MRSAJ6C064GC125C00 64GB	PASS	4168
2	SM2.0 Source		PASS	1370
3	HDR/SM3.0 Source		PASS	1723
4	CPU Source		PASS	2997

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 DR9VX) MemoRight MRSAJ6C064GC125C00 64GB	PASS	3460
2	SM2.0 Source		PASS	1237
3	HDR/SM3.0 Source		PASS	1426
4	CPU Source		PASS	1781

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Celeron(R) N3350 1.10GHz acpi DDR3L 1600 8GB (SK hynix 5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	3374
2	SM2.0 Source		PASS	1163
3	HDR/SM3.0 Source		PASS	1420
4	CPU Source		PASS	1809

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 4GB (NANYA NT5CC512M8BN-DI) MemoRight MRSAJ6C064GC125C00 64GB	PASS	3448
2	SM2.0 Source		PASS	1173
3	HDR/SM3.0 Source		PASS	1478
4	CPU Source		PASS	1788

5.2 3D MARK VANTAGE

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	P2630
2	GPU SCORE		PASS	2190
3	CPU SCORE		PASS	6605

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 4GB (NANYA NT5CC512M8BN-DI) MemoRight MRSAJ6C064GC125C00 64GB	PASS	P2471
2	GPU SCORE		PASS	2055
3	CPU SCORE		PASS	6278

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	P2469
2	GPU SCORE		PASS	2048
3	CPU SCORE		PASS	6431

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 8GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRS AJ6C064GC125C00 64GB	PASS	P2599
2	GPU SCORE		PASS	2164
3	CPU SCORE		PASS	6551

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRS AJ6C064GC125C00 64GB	PASS	P2627
2	GPU SCORE		PASS	2195
3	CPU SCORE		PASS	6411

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRS AJ6C064GC125C00 64GB	PASS	P1837
2	GPU SCORE		PASS	1626
3	CPU SCORE		PASS	3010

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB	PASS	P1837
2	GPU SCORE		PASS	1626
3	CPU SCORE		PASS	3010

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) N3350 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	P1920
2	GPU SCORE		PASS	1699
3	CPU SCORE		PASS	3148

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 4GB (NANYA NT5CC512M8BN-DI) MemoRight MRSAJ6C064GC125C00 64GB	PASS	P1780
2	GPU SCORE		PASS	1567
3	CPU SCORE		PASS	3001

5.3 3D MARK (TIME SPY)

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRS AJ6C064GC125C00 64GB	PASS	152
2	Graphics SCORE		PASS	133
3	CPU SCORE		PASS	931

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 8GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRS AJ6C064GC125C00 64GB	PASS	150
2	Graphics SCORE		PASS	131
3	CPU SCORE		PASS	920

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRS AJ6C064GC125C00 64GB	PASS	152
2	Graphics SCORE		PASS	133
3	CPU SCORE		PASS	963

5.4 3D MARK (Fire Strike)

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB	PASS	144
2	Graphics SCORE		PASS	170
3	Physics SCORE		PASS	3137
4	Combined SCORE		PASS	41

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB	PASS	291
2	Graphics SCORE		PASS	324
3	Physics SCORE		PASS	1548
4	Combined SCORE		PASS	98

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium (TM) N4200 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB	PASS	396
2	Graphics SCORE		PASS	423
3	Physics SCORE		PASS	3113
4	Combined SCORE		PASS	143

5.5 PC MARK2004

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	7420
3	Memory test Source	PASS	5517
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	7497
3	Memory test Source	PASS	5284
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	7474
3	Memory test Source	PASS	5277
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 8GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	7473
3	Memory test Source	PASS	5526
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	7463
3	Memory test Source	PASS	5541
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	6672
3	Memory test Source	PASS	5324
4	Graphic test Source	PASS	4817
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	6671
3	Memory test Source	PASS	5326
4	Graphic test Source	PASS	4976
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PC Mark Source	PASS	N/A
2	CPU test Source	PASS	6668
3	Memory test Source	PASS	5072
4	Graphic test Source	PASS	4454
5	HDD test Source	PASS	N/A

5.6 PC MARK2005

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	6449
3	Memory test Source	PASS	4633
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	6442
3	Memory test Source	PASS	4653
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	6441
3	Memory test Source	PASS	4656
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	6445
3	Memory test Source	PASS	4634
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	6443
3	Memory test Source	PASS	4650
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	4846
3	Memory test Source	PASS	4511
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	4840
3	Memory test Source	PASS	4532
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	System test Source	PASS	N/A
2	CPU test Source	PASS	4843
3	Memory test Source	PASS	4517
4	Graphic test Source	PASS	N/A
5	HDD test Source	PASS	N/A

5.7 x264 FHD Benchmark

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	8

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	7.8

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 8GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	8.1

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	7.6

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	7.6

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	3.9

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Result	Remark
1	PASS	3.9

5.8 Fritz Chess Benchmark

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	Relative speed	PASS	10.18
2	Kilo nodes per second	PASS	4885

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz Kingston DDR3L 1600 4GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	Relative speed	PASS	10.37
2	Kilo nodes per second	PASS	4976

Test Environment
Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 4GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	Relative speed	PASS	10.33
2	Kilo nodes per second	PASS	4960

Test Environment
<p>Intel(R) Pentium (TM) N4200 1.10GHz TLA DDR3L 1600 8GB (SK hynix H5TC4GB3BFR/DFR) MemoRight MRSAJ6C064GC125C00 64GB</p>

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	Relative speed	PASS	10.30
2	Kilo nodes per second	PASS	4944

Test Environment
<p>Intel(R) Celeron(R) N3350 1.10GHz Kingston DDR3L 1600 8GB (Micro HSN77 D9RVX) MemoRight MRSAJ6C064GC125C00 64GB</p>

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	Relative speed	PASS	4.97
2	Kilo nodes per second	PASS	2384

Test Environment
Intel(R) Celeron(R) N3350 1.10GHz acpi DDR3L 1600 8GB (SK hynix H5TC4GB3AFR) MemoRight MRSAJ6C064GC125C00 64GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	Relative speed	PASS	4.94
2	Kilo nodes per second	PASS	2371

5.9 Storage Performance

5.9.1 HDD

Test environment:

OS Windows 10 64-bit

Program (HD Tune)

HDD Model	Interface	Capacity	Average	Burst Rate	Access Time
Western Digital WD3200BEKT-00F3T0	SATA	320 GB	50.6 MB/sec	63.7 MB/sec	15.5 ms
Western Digital WD5000LPCX-22VHA0	SATA	500 GB	91.7 MB/sec	89 MB/sec	18.3 ms
MemoRight MRSAJ6C064GC125C00	SSD	64 GB	117.4 MB/sec	40.6 MB/sec	0.5 ms
INTEL SSDSC2BW240A4	SSD	240 GB	145.4 MB/sec	63 MB/sec	0.4 ms
acpi CSC064GR5-G710A00D	mSATA	64 GB	269.1 MB/sec	71.5 MB/sec	0.228 ms

HDD Model	Interface	Capacity	Average	Burst Rate	Access Time
BUFFALO BUF-HD-HXU3(B)	USB 3.0	1 TB	86.7 MB/sec	47.4 MB/sec	14.4 ms
KINGSTON DT HyperX 3.0	USB 3.0	64 GB	36.3 MB/sec	20.1 MB/sec	1.4 ms
Silicon-Power	USB 2.0	4 GB	1.1 MB/sec	1.1 MB/sec	1.2 ms
SMI USB DISK	USB 2.0	8 GB	12.2 MB/sec	10.4 MB/sec	1.2 ms

5.9.2 DVD-ROM

Test environment:

OS Windows 10 64-bit

Program (NERO)

DVD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	DVD
LITEON DVD eTAU108	USB	5.53 x	209 ms	5.53 MB/s	16 x