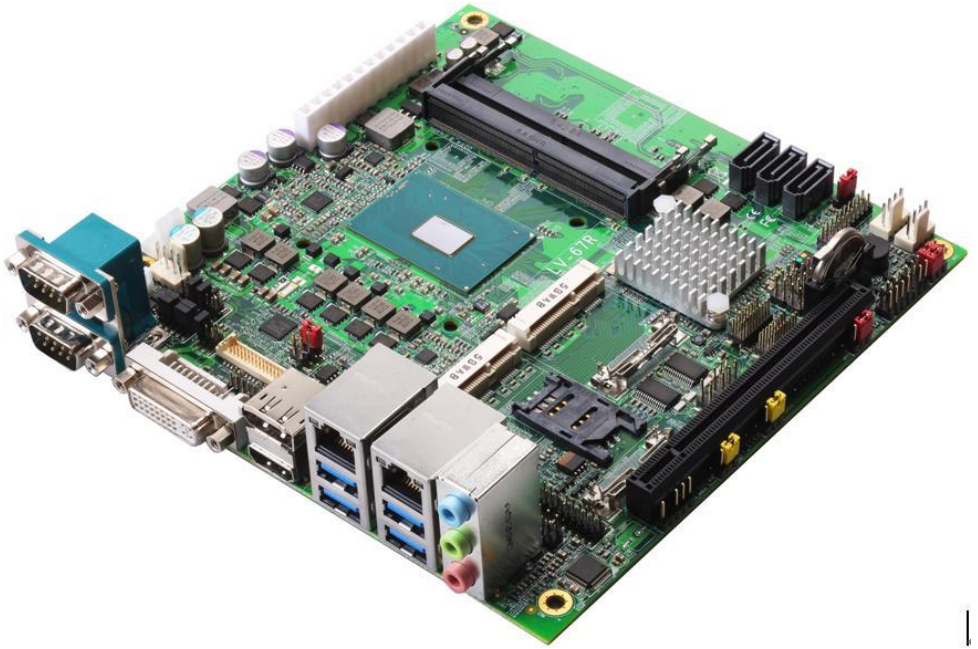


Product Test Report



Product Name	LV-67R
Product Version	A
Issued Date	2016.06.20
Report Edition	1.1
BIOS Version	1.0
Testing Engineer	PERRY
Check Engineer	Daniel

REVISION HISTORY

DATE	REVISION NO.	PAGE	DESCRIPTONS
2016.06.20	Ver. 1.0	52	Initial Release
2017.11.02	Ver. 1.1	52	Power Consumption(PCI-E) Revise

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1. Function test

1.1 Hardware function

Base Function Test(OS:Win7/64)

Item	Description	Result	Remark
1	Power Button	PASS	
2	Reset	PASS	
3	Power LED	PASS	
4	HDD LED	PASS	
5	SATA 1/2/3	PASS	SATAIII : 1 ~ 2 ~ 3 ~
6	CN_USB2-1	PASS	USB2-1-1 ~ USB2-1-2 ~
7	CN_USB2-2	PASS	USB2-2-1 ~ USB2-2-2 ~
8	USB3.0 1/2/3/4	PASS	
9	CN_USB3-1	PASS	
10	DDR4 A/B	PASS	DDR4A ~ DDR4B ~
11	COM 1/2	PASS	Mouse ~ FTDI ~
12	CN_COM 3/4	PASS	Mouse ~ FTDI ~
13	CN_COM 5/6	PASS	Mouse ~ FTDI ~
14	CN_PS2	PASS	
15	AUDIO	PASS	Line in ~ Line out ~ Mic in ~
16	CN_AUDIO	PASS	Line out ~ Mic in ~
17	CN_DIO	PASS	測試軟體&卡
18	CN_LPC	PASS	
19	CPUFAN	PASS	
20	SYSFAN	PASS	
21	MINI_CARD 1	PASS	WIFI Card ~

22	MINI_CARD 2	PASS	MPX-210D2 ~ / mSATA ~
23	CN_CRT	PASS	
24	DVI	PASS	
25	Display port	PASS	
26	HDMI	PASS	
27	CN_LVDS	PASS	
28	CN_INV	PASS	
29	LAN 1/2	PASS	I219-LM ~ I210 ~
30	DC_IN	PASS	
31	PCIE_16X	PASS	PCIE x16 : GTX650 ~ PCIE x4 : GTX650 + 轉接卡 x4 ~ PCIE x1 : GTX650 + 轉接卡 x1 ~
32	RS422&485	PASS	COM422 ~ COM485 ~

Jumper

Item	Description	Result
1	JRTC	PASS
2	JCSEL1	PASS
3	JCSEL2	PASS
4	JVLCD	PASS
5	JAT	PASS
6	JMSATA	PASS

1.2 BIOS function : (2016/03/23)

Item	Description	Result	Remark
1	Press 'Del' to run Setup Utility	PASS	
2	Ctrl-Alt-Del – Soft-Reboot	PASS	
3	Save & Exit Setup	PASS	
4	Date & Time Setting	PASS	
5	NumLock	PASS	
6	Quick Boot	PASS	
7	Diagnostic Splash Screen	PASS	
8	Diagnostic Summary Screen	PASS	
9	UEFI Boot	PASS	
10	Select Language	PASS	
11	Active Processor Cores	PASS	
12	Hyper-Threading	PASS	
13	Primary IGFX Boot Display	PASS	
14	SATA Configuration	PASS	SATA Controller [~] SATA Mode Selection [~]
15	USB Configuration	PASS	USB Port Disable Override [~]
16	HD Audio Configuration	PASS	HD Audio [~]
17	PCH LAN Controller	PASS	I219-LM(Disabled) [~]
18	Wake on LAN Enable	PASS	
19	Super IO Chip	PASS	
20	Watch Dog Timer Select	PASS	
21	Power Control	PASS	
22	Smart Fan Feature	PASS	CPU Smart Fan Mode [~] SYS Smart Fan Mode [~]
23	Hardware Monitor	PASS	

1.3 Driver

CD Edition :

1. Windows 7 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	10.1.1.13
2	Graphic Driver	PASS	20.19.15.4352
3	Audio Driver	PASS	6.0.1.7541
4	LAN Driver	PASS	I219LM:12.13.17.4 I210:12.13.27.0
5	USB 3.0 Driver	PASS	4.0.4.51

2. Windows 7 64-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	10.1.1.13
2	Graphic Driver	PASS	20.19.15.4352
3	Audio Driver	PASS	6.0.1.7541
4	LAN Driver	PASS	I219LM:12.13.17.4 I210:12.13.27.0
5	USB 3.0 Driver	PASS	4.0.4.51

3. Windows 8.1 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	10.1.1.13
2	Graphic Driver	N/C	No support
3	Audio Driver	PASS	6.0.1.7541
4	LAN Driver	PASS	I219LM:12.13.17.4 I210:12.14.7.0

4. Windows 8.1 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	10.1.1.13
2	Graphic Driver	PASS	20.19.15.4352
3	Audio Driver	PASS	6.0.1.7541
4	LAN Driver	PASS	I219LM:12.13.17.4 I210:12.14.7.0

5. Windows 10 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	10.1.1.13
2	Graphic Driver	PASS	20.19.15.4352
3	Audio Driver	PASS	6.0.1.7541
4	LAN Driver	PASS	I219LM:12.13.17.4 I210:12.12.226.0

2. Compatibility test

2.1 CPU Test

Test environment:

OS Windows 7 professional SP1

Test program : PC MARK 2005

Spec Code	CPU Speed	Max Turbo Frequency	Family	Processor	Max TDP	Smart Cache	Result
SR2DT	2.80GHz	3.5GHz	Core	i7-6820EQ	45W	8MB	PASS
SR2DU	2.70GHz	3.4GHz	Core	i5-6440EQ	45W	6MB	PASS
SR2DV	2.70GHz		Core	i3-6100E	35W	3MB	PASS

2.2 Operation System Test

Item	Description	Result	Remark
1	Windows 7 32-bit	PASS	
2	Windows 7 64-bit	PASS	
3	Windows 8.1 32-bit	PASS	
4	Windows 8.1 64-bit	PASS	
5	Windows 10 64-bit	PASS	
6	CentOS-6.7-i386	PASS	Audio > BIOS Setup

*Linux Audio BIOS Setup :

Advanced > Intel Advanced Menu > PCH-IO Configuration > HD Audio Configuration > iDisplay Audio

Disconnect [Enabled]

2.3 Memory Test

Test environment:

OS Windows 7 Professional SP1

Test program : PC MARK 2005 & AIDA64

Manufacturer/ Model No.	Chip	Frequency	Capacity Mbytes	Result
ADATA AD4S2133W8G15-BSSD	SEC 452 BCPB K4A4G085WD	DDR4 2133	8GB	PASS
Kingston KVR21S15D8/8	SKhynix H5AN4G8NMFR	DDR4 2133	8GB	PASS
Kingston KVR21S15D8/8	SKhynix H5AN4G8NMFR	DDR4 2133	8GBx2	PASS
Crucial Micron CT4G4SFS8213	SRA77D9RGQ	DDR4 2133	4GB	PASS
Crucial Micron CT4G4SFS8213	SRA77D9RGQ	DDR4 2133	4GBx2	PASS
Transcend TS1GSH64V1H	SEC 613 BCPB K4A4G085WD	DDR4 2133	8GB	PASS

Transcend TS1GSH64V1H	SEC 613 BCPB K4A4G085WD	DDR4 2133	8GBx2	PASS
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.4 Graphic Quality Test

2.4.1 Test environment OS : Windows 7 professional SP1 64-bit

Driver version : 20.19.15.4352

Resolution	Color	DVI	HDMI	Display Port	Remark
800*600	16 / 32bit	PASS	PASS	PASS	Single
1024*768	16 / 32bit	PASS	PASS	PASS	Single
1152*864	16 / 32bit	PASS	PASS	PASS	Single
1280*600	16 / 32bit	PASS	PASS	PASS	Single
1280*720	16 / 32bit	PASS	PASS	PASS	Single
1280*768	16 / 32bit	PASS	PASS	PASS	Single
1280*800	16 / 32bit	PASS	PASS	PASS	Single
1280*960	16 / 32bit	PASS	PASS	PASS	Single
1280*1024	16 / 32bit	PASS	PASS	PASS	Single
1360*768	16 / 32bit	PASS	PASS	PASS	Single
1366*768	16 / 32bit	PASS	PASS	PASS	Single
1400*1050	16 / 32bit	PASS	PASS	PASS	Single
1440*900	16 / 32bit	PASS	PASS	PASS	Single
1600*900	16 / 32bit	PASS	PASS	PASS	Single
1680*1050	16 / 32bit	PASS	PASS	PASS	Single
1920*1080	16 / 32bit	PASS	PASS	PASS	Single
1920*1200	16 / 32bit	N/C	PASS	PASS	Single
1920*1440	16 / 32bit	N/C	PASS	PASS	Single
2048*1152	16 / 32bit	N/C	PASS	PASS	Single
2560*1440	16 / 32bit	N/C	PASS	PASS	Single

3840*2160	16 / 32bit	N/C	PASS	PASS	Single
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2.4.2 Test environment OS : OS Windows 10 64-bit

Resolution	Color	DVI	HDMI	Display Port	Remark
800*600	16 / 32bit	PASS	PASS	PASS	Single
1024*768	16 / 32bit	PASS	PASS	PASS	Single
1152*864	16 / 32bit	PASS	PASS	PASS	Single
1280*600	16 / 32bit	PASS	PASS	PASS	Single
1280*720	16 / 32bit	PASS	PASS	PASS	Single
1280*768	16 / 32bit	PASS	PASS	PASS	Single
1280*800	16 / 32bit	PASS	PASS	PASS	Single
1280*960	16 / 32bit	PASS	PASS	PASS	Single
1280*1024	16 / 32bit	PASS	PASS	PASS	Single
1360*768	16 / 32bit	PASS	PASS	PASS	Single
1366*768	16 / 32bit	PASS	PASS	PASS	Single
1400*1050	16 / 32bit	PASS	PASS	PASS	Single
1440*900	16 / 32bit	PASS	PASS	PASS	Single
1600*900	16 / 32bit	PASS	PASS	PASS	Single
1680*1050	16 / 32bit	PASS	PASS	PASS	Single
1920*1080	16 / 32bit	PASS	PASS	PASS	Single
1920*1200	16 / 32bit	N/C	PASS	PASS	Single
1920*1440	16 / 32bit	N/C	PASS	PASS	Single
2048*1152	16 / 32bit	N/C	PASS	PASS	Single
2560*1440	16 / 32bit	N/C	PASS	PASS	Single
3840*2160	16 / 32bit	N/C	PASS	PASS	Single

2.5 Audio

Test environment:

OS Windows 7 32-bit

Driver version : 6.0.1.7541

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	Line in	PASS	

OS Windows 7 64-bit

Driver version : 6.0.1.7541

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	Line in	PASS	

OS Windows 8.1 32 bit

Driver version : 6.0.1.7541

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	Line in	PASS	

OS Windows 8.1 64 bit

Driver version : 6.0.1.7541

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
4	Line in	PASS	

OS Windows 10 64-bit

Driver version : 6.0.1.7541

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	Line in	PASS	

2.6 HDD Test

Test environment:

OS Windows 7 professional SP1

Model	Interface	Capacity	Size Detect	Data Transfer
Seagate Barracuda 7200.12	SATA	1.0 TB	PASS	PASS
Seagate Barracuda 7200.10	SATA	160GB	PASS	PASS
WD5002AALX	SATA	500GB	PASS	PASS

2.7 DVD/CD-ROM Test

Test environment:

OS Windows

Model	Interface	Detect	Data Transfer	Play CD
Transcend DVD TS8XDVDS-K	USB	PASS	PASS	PASS
LITEON eTAU108	USB	PASS	PASS	PASS
Pioneer DDVR-S19LBK-24X	SATA	PASS	PASS	PASS
LITEON iHES312	SATA	PASS	PASS	PASS
ASUS DRW-1814BLT	SATA	PASS	PASS	PASS

2.8 USB device Test

1. Windows 7 32/64-bit

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
DVD/CD ROM	PASS	
USB Mass storage	PASS	
USB 3.0	PASS	

*USB device need to install driver first.

2. Windows 8.1 32/64-bit

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

3. Windows 10 64-bit

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

2.9 Serial Port Test

1. Windows 7 32-bit

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

2. Windows 7 64-bit

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

3. Windows 8.1 32-bit

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

4. Windows 8.1 64-bit

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

5. 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. MS-DOS

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2. Windows 7 32/64-bit

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

3. Windows 8.1 32/64-bit

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

5. Windows 10 64-bit

Item	Description	Result	Remark
1	Keyboard LED Status Test	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 7 32/64-bit (I219-LM)

driver version : 12.13.17.4

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

2. Windows 8.1 32/64-bit (I219-LM)

driver version :

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

3. Windows 10 32/64-bit (I219-LM)

driver version : 12.13.17.4

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

4. Windows 7 32/64-bit (I210)

64-bit driver version : 12.13.27.0

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

6. Windows 8.1 32/64-bit (I210)

driver version :

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

7. Windows 10 64-bit (I210)

64-bit driver version : 12.12.226.0

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

EtherCAT :

Windows 7 64-bit (I210)

Item	Description	Result	Remark
1	EtherCAT Workbench	PASS	
2	EtherCAT Master	PASS	

2.12 Power Supply Test

Item	TYPE	Description	Result	Remark
1	ATX Power(12V)	V12 POWER BS400W	PASS	
2	Adapter(19V)	FSP120-AAA	PASS	

2.13 PCI Express mini card

Motherboard	PCI Express mini card	Result	Card1	Card2	Remark
LV-67R	MPX-24794G2	PASS	N/C	~	Win7(32bit)&8.1(32bit)
	MPX-25858	PASS	N/C	~	Win7(32bit)
	MPX-643	PASS	N/C	~	Win7&8.1&10
	MPX-954	PASS	N/C	~	Win7&8.1&10
	MPX-6864	PASS	N/C	~	Win7(32bit)
	MPX-750	X	X	X	
	MPX-210D	PASS	N/C	~	Win7&8.1&10
	MPX-210D2	PASS	N/C	~	Win7&8.1&10
	MPX-3132*	PASS	~	~	Win7
	WiFi Card	PASS	~	~	Win7&8.1&10
	mSATA (Crucial M500 120G)	PASS	N/C	~	Win10&8.1

*MPX-3132 BIOS Setting:

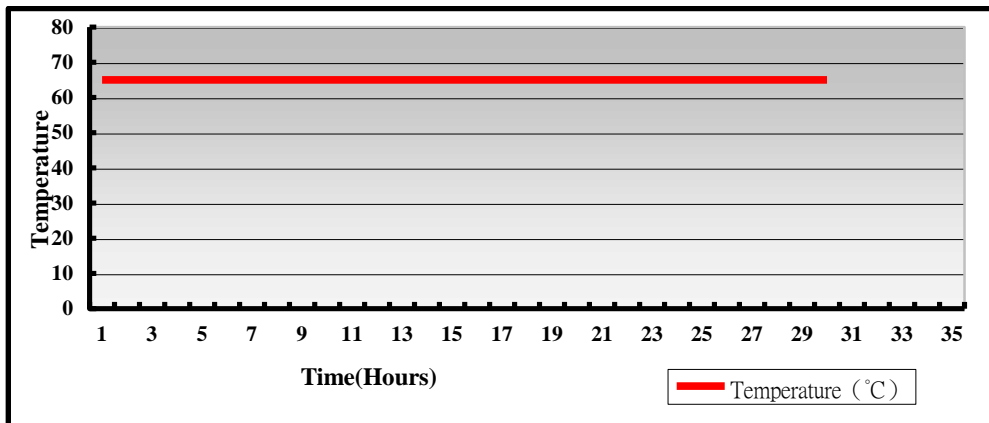
INTEL Advance menu----> ACPI settings

Native PCIE Enable [\[Disabled\]](#)

3. Environmental test

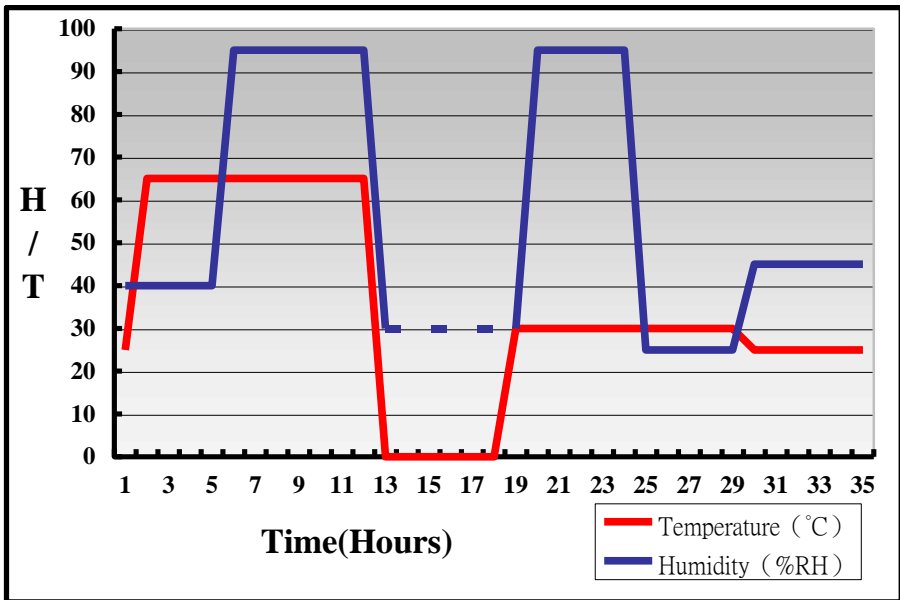
3.1 Temperature Test

System Board	LV-67R
CPU	Intel® Core™ i7-6820EQ 2.80GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB
Operating OS	Windows 10 64bit
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark +Prime95-266



Hardware Device list:

System Board	LV-67R
CPU	Intel® Core™ i7-6820EQ 2.80GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB
Operating OS	Windows 10 64bit
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark +Prime95-266



Definition : When the temperature is 30 degrees below arrive, humidity measurements have not, so by the dashed line express.

Boot Up Test:

Hardware Device list:

System Board	LV-67R
CPU	Intel® Core™ i7-6820EQ 2.80GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

Temperature	Result	Remark
65°C	PASS	50 Times
-40°C	PASS	50 Times

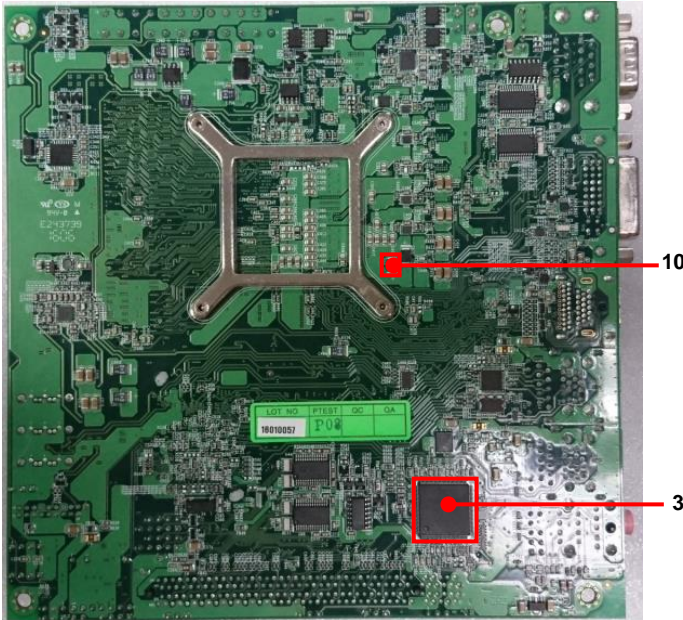
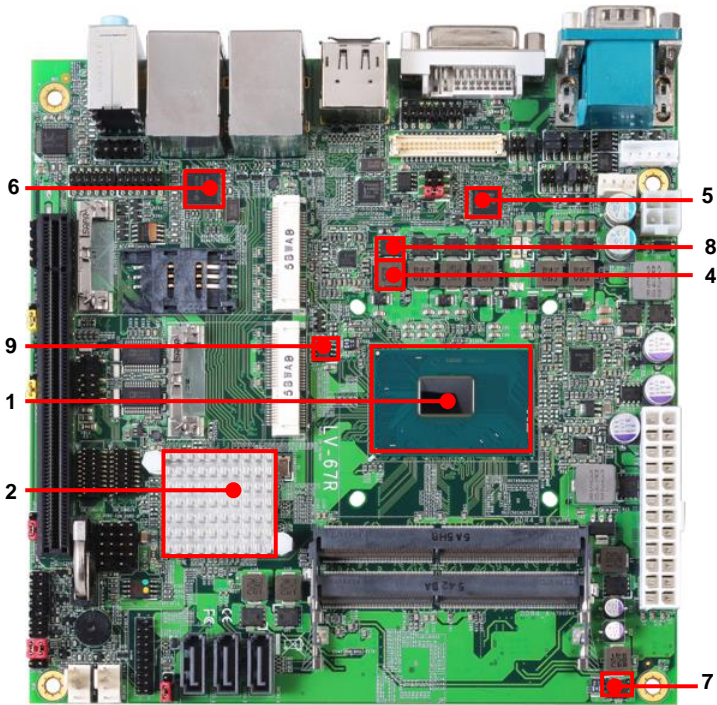
3.2 Thermal measurements at various points on the board

Test Environment :

CPU	Intel® Core™ i7-6820EQ 2.80GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB
Power	V12 POWER BS400W
Operating System	Windows 10 64-bit
Test Program	3DMark 2006 + Prime 95-266

Test Result:

Item	Environmental temperature	26°C
1	CPU	67.4°C
2	PCH(QM170)	43.5°C
3	SIO	38.3°C
4	L11	46.7°C
5	U5	42.2°C
6	U14	41.7°C
7	Q10	42.7°C
8	Q26	44.8°C
9	Q28	41.3°C
10	C445	50.2°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	LV-67R
CPU	Intel® Core™ i7-6820EQ 2.80GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

12V => Power Supply : V12 POWER BS400W

19V => Adapter : FSP120-AAA

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.03	24.36	4.51	54.12
19V	1.61	30.59	2.97	56.43

1. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GV-N650OC-1GI(GTX650)
---------------	-----------------------

12V => DC Power Supply: GW Instek SPS-3610

19V => DC Power Supply: GW Instek SPS-3610

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.92	35.04	9.38	112.56
19V	1.96	37.24	5.87	111.53

1. b. Test Environment:

The same as above but with LCD panel

LCD panel	AUO M170EG01 17"LCD
-----------	---------------------

12V => Power Supply: V12 POWER BS400W

19V => Adapter : FSP120-AAA

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.52	42.24	6.30	75.6
19V	2.46	46.74	4.26	80.94

2. Test Environment:

Motherboard	LV-67R
CPU	Intel® Core™ i5-6440EQ 2.70GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

12V => Power Supply: V12 POWER BS400W

19V => Adapter : FSP120-AAA

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.04	24.48	4.08	48.96
19V	1.14	21.66	2.67	50.73

2. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GV-N650OC-1GI(GTX650)
---------------	-----------------------

12V => DC Power Supply: GW Instek SPS-3610

19V => DC Power Supply: GW Instek SPS-3610

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.83	33.96	9.29	111.48
19V	1.89	35.91	5.81	110.39

2. b. Test Environment:

The same as above but with LCD panel

LCD panel	AUO M170EG01 17"LCD
-----------	---------------------

12V => Power Supply: V12 POWER BS400W

19V => Adapter : FSP120-AAA

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.60	43.2	6.28	75.36
19V	2.35	44.65	4.07	77.33

3. Test Environment:

Motherboard	LV-67R
CPU	Intel® Core™ i3-6100E 2.70GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

12V => Power Supply: V12 POWER BS400W

19V => Adapter : FSP120-AAA

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.58	18.96	2.91	34.92
19V	1.10	20.9	1.96	37.24

3. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GV-N650OC-1GI(GTX650)
----------------------	------------------------------

12V => DC Power Supply: GW Instek SPS-3610

19V => DC Power Supply: GW Instek SPS-3610

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.79	33.48	7.85	91.2
19V	1.89	35.91	4.98	91.01

3. b. Test Environment:

The same as above but with LCD panel

LCD panel	GV-N650OC-1GI(GTX650)
-----------	-----------------------

12V => Power Supply: V12 POWER BS400W

19V => Adapter : FSP120-AAA

Voltage	MS-DOS Boot up		Win7(64Bit) 3DMARK 11(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.57	42.84	4.96	59.52
19V	2.26	42.94	3.23	61.37

5. Performance Test

5.1 Performance Test 8.0

Windows 7 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	<p>Intel® Core™ i7-6820EQ 3.50GHz ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD) Seagate Barracuda 7200.12 1.0TB</p>	PASS	<p>Summary 1672.5 CPU Mark 7588 2D Graphics Mark 649 3D Graphics Mark 334.6 Memory Mark 1958 Disk Mark 858</p>

Windows 7 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i5-6440EQ 3.40GHz ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD) Seagate Barracuda 7200.12 1.0TB	PASS	Summary 1475.5 CPU Mark 5867 2D Graphics Mark 649 3D Graphics Mark 332.9 Memory Mark 1969 Disk Mark 602

Windows 7 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i3-6100E 2.70GHz ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD) Seagate Barracuda 7200.12 1.0TB	PASS	Summary 1495.6 CPU Mark 4244 2D Graphics Mark 628 3D Graphics Mark 328.6 Memory Mark 1931 Disk Mark 801

Windows 8.1 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i7-6820EQ 3.50GHz Crucial Micron CT4G4SFS8213 4GBx1 (SRA77D9RGQ) Seagate Barracuda 7200.10 160GB	PASS	Summary 1252 CPU Mark 7375 2D Graphics Mark 528 3D Graphics Mark 271.3 Memory Mark 1733 Disk Mark 472.9

Windows 8.1 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i5-6440EQ 3.40GHz Crucial Micron CT4G4SFS8213 4GBx1 (SRA77D9RGQ) Seagate Barracuda 7200.10 160GB	PASS	Summary 1325.4 CPU Mark 5802 2D Graphics Mark 513 3D Graphics Mark 332.6 Memory Mark 1720 Disk Mark 498.0

Windows 8.1 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i3-6100E 2.70GHz Crucial Micron CT4G4SFS8213 4GBx1 (SRA77D9RGQ) Seagate Barracuda 7200.10 160GB	PASS	Summary 1151.5 CPU Mark 4116 2D Graphics Mark 512 3D Graphics Mark 271.5 Memory Mark 1700 Disk Mark 453.7

Windows 10 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i7-6820EQ 3.50GHz Crucial Micron CT4G4SFS8213 4GBx1 (SRA77D9RGQ) Seagate Barracuda 7200.10 160GB	PASS	Summary 1354.5 CPU Mark 7243 2D Graphics Mark 598 3D Graphics Mark 337.4 Memory Mark 1640 Disk Mark 462.3

Windows 10 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i5-6440EQ 3.40GHz Crucial Micron CT4G4SFS8213 4GBx1 (SRA77D9RGQ) Seagate Barracuda 7200.10 160GB	PASS	Summary 1302.3 CPU Mark 5758 2D Graphics Mark 590 3D Graphics Mark 283.6 Memory Mark 1684 Disk Mark 513

Windows 10 x64

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ i3-6100E 2.70GHz Crucial Micron CT4G4SFS8213 4GBx1 (SRA77D9RGQ) Seagate Barracuda 7200.10 160GB	PASS	Summary 1262.2 CPU Mark 4058 2D Graphics Mark 584 3D Graphics Mark 323.7 Memory Mark 1611 Disk Mark 489.4

5.2 3D MARK

Windows 7 64-bit

CPU	Intel® Core™ i7-6820EQ 2.80GHz			
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)			
HDD	Seagate Barracuda 7200.12 1.0TB			
WEIGHTED SUITE		Result	Score	Remark
3DMARK2003		PASS	5801	
3DMARK2005		N/A	N/A	
3DMARK2006	3DMARK Score	PASS	3656	
	SM2.0 Score	PASS	1221	
	HDR/SM3.0 Score	PASS	1359	
	CPU Score	PASS	5990	
3DMARK11	3DMARK Score	PASS	X162	
	Graphics Score	PASS	143	
	Physics Score	PASS	6530	
	Combined Score	PASS	187	
3DMARK Vantage	3DMARK Score	PASS	P2325	
	GPU Score	PASS	1789	
	CPU Score	PASS	22857	

Windows 7 64-bit

CPU	Intel® Core™ i5-6440EQ 2.70GHz			
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)			
HDD	Seagate Barracuda 7200.12 1.0TB			
WEIGHTED SUITE		Result	Score	Remark
3DMARK2003		PASS	5600	
3DMARK2005		PASS	5644	
3DMARK2006	3DMARK Score	PASS	3617	
	SM2.0 Score	PASS	1212	
	HDR/SM3.0 Score	PASS	1352	
	CPU Score	PASS	5344	
3DMARK11	3DMARK Score	PASS	X161	
	Graphics Score	PASS	142	
	Physics Score	PASS	5703	
	Combined Score	PASS	184	
3DMARK Vantage	3DMARK Score	PASS	P2235	
	GPU Score	PASS	1734	
	CPU Score	PASS	16708	

Windows 7 64-bit

CPU	Intel® Core™ i3-6100E 2.70GHz			
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)			
HDD	Seagate Barracuda 7200.12 1.0TB			
WEIGHTED SUITE		Result	Score	Remark
3DMARK2003		PASS	5504	
3DMARK2005		PASS	5405	
3DMARK2006	3DMARK Score	PASS	3465	
	SM2.0 Score	PASS	1183	
	HDR/SM3.0 Score	PASS	1312	
	CPU Score	PASS	3739	
3DMARK11	3DMARK Score	PASS	X153	
	Graphics Score	PASS	135	
	Physics Score	PASS	4038	
	Combined Score	PASS	177	
3DMARK Vantage	3DMARK Score	PASS	P2091	
	GPU Score	PASS	1649	
	CPU Score	PASS	10645	

5.4 PC MARK

Windows 7 64-bit

CPU	Intel® Core™ i7-6820EQ 2.80GHz			
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)			
HDD	Seagate Barracuda 7200.12 1.0TB			
WEIGHTED SUITE		Result	Score	Remark
PCMARK2002	CPU Score	PASS	N/A	
	Memory Score	PASS	50944	
	HDD Score	PASS	3928	
PCMARK2004	PCMark Score	PASS	N/A	
	CPU Score	PASS	N/A	
	Memory Score	PASS	15013	
	Graphic Score	PASS	5142	
	HDD Score	PASS	7103	
PCMARK2005	PCMark Score	PASS	N/A	
	CPU Score	PASS	11802	
	Memory Score	PASS	11483	
	Graphic Score	PASS	N/A	
	HDD Score	PASS	7877	

Windows 7 64-bit

CPU	Intel® Core™ i5-6440EQ 2.70GHz			
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)			
HDD	Seagate Barracuda 7200.12 1.0TB			
WEIGHTED SUITE		Result	Score	Remark
PCMARK2002	CPU Score	PASS	N/A	
	Memory Score	PASS	48840	
	HDD Score	PASS	3426	
PCMARK2004	PCMark Score	PASS	N/A	
	CPU Score	PASS	N/A	
	Memory Score	PASS	14030	
	Graphic Score	PASS	5140	
	HDD Score	PASS	6880	
PCMARK2005	PCMark Score	PASS	N/A	
	CPU Score	PASS	11351	
	Memory Score	PASS	10776	
	Graphic Score	PASS	N/A	
	HDD Score	PASS	7502	

Windows 7 64-bit

CPU	Intel® Core™ i3-6100E 2.70GHz			
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)			
HDD	Seagate Barracuda 7200.12 1.0TB			
WEIGHTED SUITE		Result	Score	Remark
PCMARK2002	CPU Score	PASS	N/A	
	Memory Score	PASS	46804	
	HDD Score	PASS	3115	
PCMARK2004	PCMark Score	PASS	N/A	
	CPU Score	PASS	N/A	
	Memory Score	PASS	12287	
	Graphic Score	PASS	5543	
	HDD Score	PASS	6923	
PCMARK2005	PCMark Score	PASS	N/A	
	CPU Score	PASS	9897	
	Memory Score	PASS	10246	
	Graphic Score	PASS	N/A	
	HDD Score	PASS	7525	

5.5 AIDA64

Windows 7 64-bit

CPU	Intel® Core™ i7-6820EQ 2.80GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

Summary :

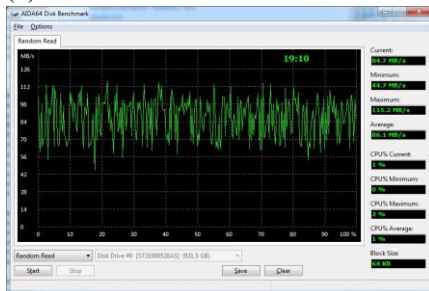
Summary

Computer:	ACPI x64-based PC	Input:	Keyboard Mouse
Computer Type	Microsoft Windows 7 Ultimate	Standard PS/2 Keyboard	
Operating System	Service Pack 1	HID-compliant mouse	
OS Service Pack	8.0.7601.17514 (IE 8.0 - Windows 7 SP1)		
Internet Explorer	DirectX 11.0	Network:	
DirectX	USER-PC	Primary IP Address	127.0.0.1
Computer Name	user	Primary MAC Address	00-03-1D-01-14-92
User Name	user-PC	Network Adapter	Intel(R) Ethernet Connection (2) I219-LM
Login Domain	2016-03-28 / 01:15	Network Adapter	Intel(R) I210 Gigabit Network Connection
Date / Time			
		Peripherals:	
Motherboard:	QuadCore , 2800 MHz (28 x 100)	Printer	Fax
CPU Type	COMPELL LV-67R	Printer	Microsoft XPS Document Writer
Motherboard Name	Intel Sunrise Point QM170, Intel Skylake-H	USB3 Controller	Intel Sunrise Point PCH - USB 3.0 xHCI Controller
Chipset	8080 MB (DDR4-2133 DDR4 SDRAM)	USB Device	USB Input Device
System Memory	8 GB DDR4-2133 DDR4 SDRAM (16-15-15-36 @ 1067 MHz) (15-15-15-36 @ 1067 MHz) (14-14-14-35 @ 1037 MHz) (13-12-13-32 @ 962 MHz) (12-12-12-30 @ 888 MHz) (11-11-11-27 @ 814 MHz) (9-9-9-22 @ 664 MHz)		
DIMM1: A-Data	Phoenix 03/23/2016	DMI:	
BIOS Type	Communications Port (COM1)	DMI BIOS Vendor	Phoenix Technologies Ltd.
Communication Port	Communications Port (COM2)	DMI BIOS Version	SKLH_4.0.0.360
Communication Port	Communications Port (COM3)	DMI System Manufacturer	
Communication Port	Communications Port (COM4)	DMI System Product	
Communication Port	Communications Port (COM5)	DMI System Version	
Communication Port	Communications Port (COM6)	DMI System Serial Number	
Display:		DMI Motherboard Manufacturer	COMPELL
Video Adapter	Intel(R) HD Graphics 530 (1 GB)	DMI Motherboard Product	LV-67R
Video Adapter	Intel(R) HD Graphics 530 (1 GB)	DMI Motherboard Version	
3D Accelerator	Intel HD Graphics 530	DMI Motherboard Serial Number	
Monitor	Asus PB278 [27" LCD] [CBLMTF096773]	DMI Chassis Manufacturer	
		DMI Chassis Version	
Multimedia:		DMI Chassis Serial Number	
Audio Adapter	Intel Skylake HDMI @ Intel Sunrise Point PCH - High Definition Audio Controller	DMI Chassis Assat Tag	LapTop
Audio Adapter	Realtek ALC262 @ Intel Sunrise Point PCH - High Definition Audio Controller	DMI Chassis Type	
Storage:			
IDE Controller	Standard AHCI 1.0 Serial ATA Controller		
Disk Drive	ST31000528AS ATA Device [1 TB, 7200 RPM, SATA-II]		
SMART Hard Disks Status	FAIL		
Partitions:			
C: (NTFS)	99899 MB (70537 MB free)		
D: (NTFS)	195.3 GB (173.5 GB free)		
E: (NTFS)	99999 MB (82668 MB free)		
Total Size	390.5 GB (323.1 GB free)		

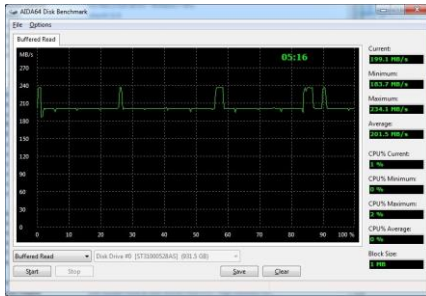
Tools:

1. Disk Benchmark :

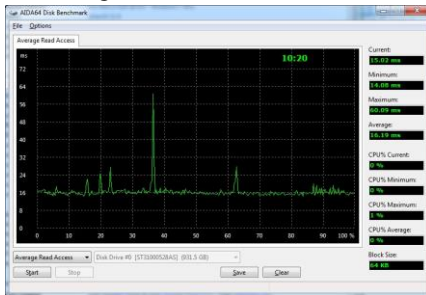
(1)Random Read :



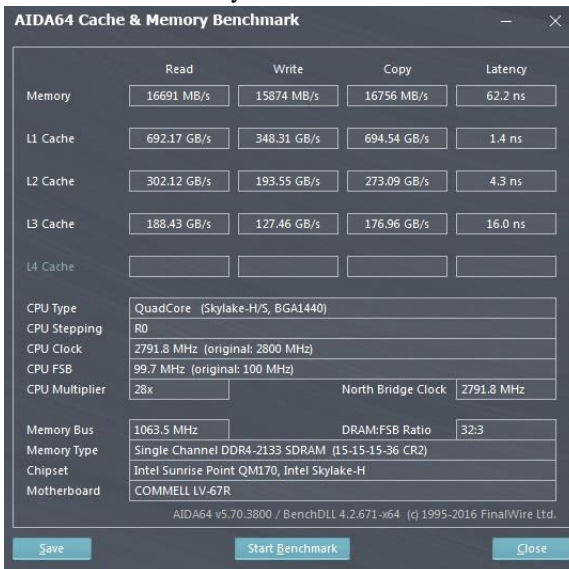
(2) Buffered Read :



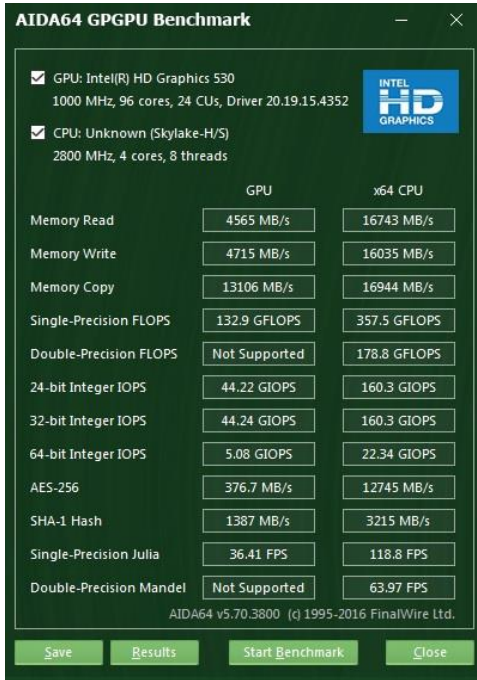
(3) Average Read Access :



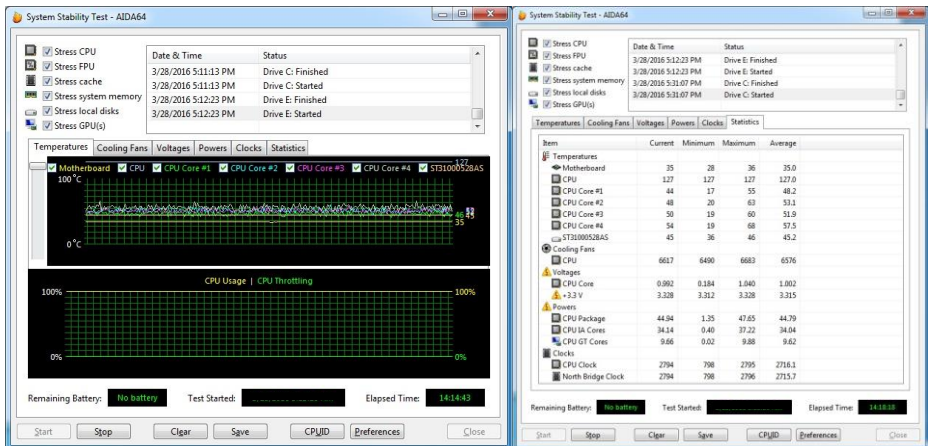
2. Cache & Memory Benchmark :



3. GPGPU Benchmark :



4. System Stability Test



5. AIDA64 CPUID

AIDA64 CPUID

Processor	QuadCore		
Code Name	Skylake-H/5		
Platform	BGAI440		
Stepping	R0		
CPUID Vendor	GenuineIntel	14 nm	
CPUID Name	Intel(R) Core(TM) i7-6820EQ CPU @ 2.80GHz		
CPUID Rev.	6	5E	3
Core Voltage	0.600 V		
CPU Clock	798.2 MHz	L1I / L1D Cache	32 KB / 32 KB
Multiplier	8x	L2 Cache	256 KB
Bus Clock	99.8 MHz	L3 Cache	8 MB
Bus Speed		L4 Cache	
Instruction Set	x86, x86-64, MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, AVX, AVX2, FMA, AES		
Motherboard	COMMELL LV-67R		
BIOS Version	SKLH_4.0.0.360		
Chipset	Intel Sunrise Point QM170, Intel Skylake-H		
Integr. Video	Active (Intel HD Graphics 530)		
Memory Type	Single Channel DDR4-2133 SDRAM (15-15-15-36 CR2)		
Memory Clock	1064.3 MHz	DRAM:FSB Ratio	32:3

CPU #1 / Core #1 / HIT Unit #1 AIDA64 v5.70.3800 Save Close

Windows 7 64-bit

CPU	Intel® Core™ i5-6440EQ 2.70GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

Summary :

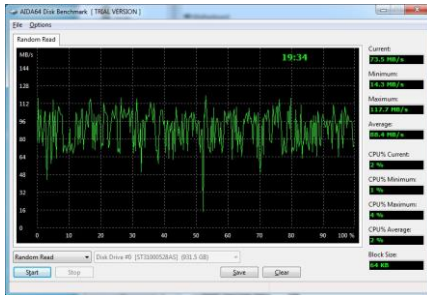
Summary

Computer:		Input:
Computer Type	ACPI x64-based PC	Keyboard
Operating System	Microsoft Windows 7 Ultimate	Mouse
OS Service Pack	Service Pack 1	
Internet Explorer	8.0.7601.17514 [IE 8.0 - Windows 7 SP1]	
DirectX	DirectX 11.0	
Computer Name	USER-PC	
User Name	user	
Login Domain	user-PC	
Date / Time	2016-03-23 / 20:33	
Motherboard:		Network:
CPU Type	QuadCore, 2700 MHz (27 x 100)	Primary IP Address
Motherboard Name	Intel Corp. Skylake DT DDR4 RVP8	Primary MAC Address
Motherboard Chipset	Intel Sunrise Point QM170, Intel Skylake-H	Network Adapter
System Memory	8080 MB (DDR4-2133 DDR4 SDRAM)	Network Adapter
DIMM1: A-Data	8 GB DDR4-2133 DDR4 SDRAM (14-15-15-36 @ 1067 MHz) (15-15-15-36 @ 1067 MHz) (14-14-14-33 @ 1037 MHz) (13-13-13-32 @ 962 MHz) (12-12-12-30 @ 888 MHz) (11-11-11-27 @ 814 MHz) (9-9-9-22 @ 666 MHz)	Intel(R) Ethernet Connection (2) I219-LM
BIOS Type	Phoenix (03/11/2016)	Intel(R) I210 Gigabit Network Connection
Communication Port	Communications Port (COM1)	
Communication Port	Communications Port (COM2)	
Communication Port	Communications Port (COM3)	
Communication Port	Communications Port (COM4)	
Communication Port	Communications Port (COM5)	
Communication Port	Communications Port (COM6)	
Display:		Peripherals:
Video Adapter	Intel(R) HD Graphics 530 (1 GB)	Printer
Video Adapter	Intel(R) HD Graphics 530 (1 GB)	Fax
Video Adapter	Intel(R) HD Graphics 530 (1 GB)	Microsoft XPS Document Writer
3D Accelerator	Intel HD Graphics 530	Printer
Monitor	Asus P8278 (27" LCD) (CBLMTF096773)	Microsoft XPS Document Writer
Multimedia:		USB3 Controller
Audio Adapter	Intel Skylake HDMI @ Intel Sunrise Point PCH - High Definition Audio Controller	USB Device
Audio Adapter	Realtek ALC262 @ Intel Sunrise Point PCH - High Definition Audio Controller	
Storage:		DMI:
IDE Controller	Standard AHCI 1.0 Serial ATA Controller	DMI BIOS Vendor
Disk Drive	ST31000528AS ATA Device (1 TB, 7200 RPM, SATA-II)	DMI BIOS Version
SMART Hard Disks	FAIL	SKLH_4.0.0.360
Status		DMI System Manufacturer
		Intel Corporation
		DMI System Product
		Skylake Client platform
		DMI System Version
		0.1
		DMI System Serial Number
		System Serial Number
		88888888-87888888-88888788-88888888
		DMI Motherboard Manufacturer
		Intel Corp.
		DMI Motherboard Product
		Skylake DT DDR4 RVP8
		DMI Motherboard Version
		1
		DMI Motherboard Serial Number
		1
		DMI Chassis Manufacturer
		Intel Corporation
		DMI Chassis Version
		0.1
		DMI Chassis Serial Number
		serial=
		DMI Chassis Asset Tag
		Un-Supported
		DMI Chassis Type
		LspTpt
Partitions:		
C: (NTFS)	99899 MB (70485 MB free)	
D: (NTFS)	195.3 GB (173.5 GB free)	
E: (NTFS)	99999 MB (82646 MB free)	
Total Size	390.5 GB (323.1 GB free)	

Tools:

1. Disk Benchmark :

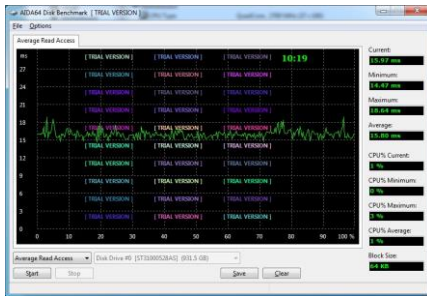
(1)Random Read :



(2)Buffered Read :



(3)Average Read Access :



2. Cache & Memory Benchmark :

AIDA64 Cache & Memory Benchmark

	Read	Write	Copy	Latency
Memory	16311 MB/s	15927 MB/s	15853 MB/s	70.4 ns
L1 Cache	670.23 GB/s	336.05 GB/s	670.64 GB/s	1.5 ns
L2 Cache	297.83 GB/s	189.47 GB/s	260.26 GB/s	4.5 ns
L3 Cache	168.77 GB/s	112.66 GB/s	161.40 GB/s	17.1 ns
L4 Cache				

CPU Type: QuadCore (Skylake-H/S, BGA1440)
 CPU Stepping: R0
 CPU Clock: 2693.4 MHz (original: 2700 MHz)
 CPU FSB: 99.8 MHz (original: 100 MHz)
 CPU Multiplier: 27x North Bridge Clock: 2693.4 MHz

Memory Bus: 1064.1 MHz DRAM:FSB Ratio: 32:3
 Memory Type: Single Channel DDR4-2133 SDRAM (15-15-15-36 CR2)
 Chipset: Intel Sunrise Point QM170, Intel Skylake-H
 Motherboard: Intel Corp. Skylake DT DDR4 RVP8

AIDA64 v5.70.3800 / BenchDLL 4.2.671-x64 (c) 1995-2016 FinalWire Ltd.

Save Start Benchmark Close

3. GPGPU Benchmark :

AIDA64 GPGPU Benchmark

GPU: Intel(R) HD Graphics 530
 1000 MHz, 96 cores, 24 CUs, Driver 20.19.15.4352

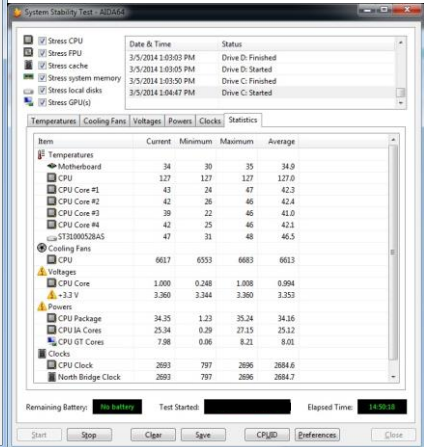
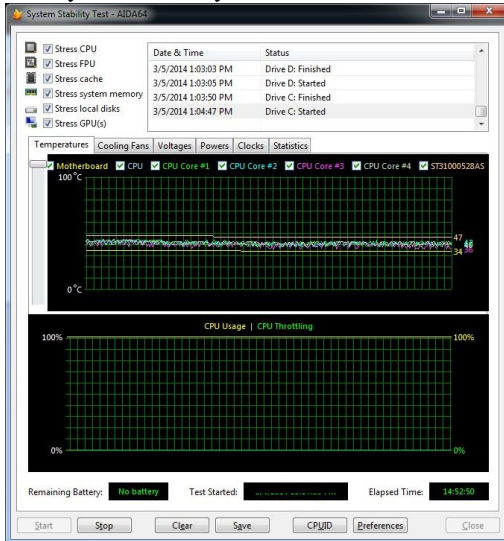
CPU: Unknown (Skylake-H/S)
 2700 MHz, 4 cores, 4 threads

	GPU	x64 CPU
Memory Read	4099 MB/s	16465 MB/s
Memory Write	4591 MB/s	16045 MB/s
Memory Copy	13073 MB/s	16317 MB/s
Single-Precision FLOPS	131.5 GFLOPS	344.6 GFLOPS
Double-Precision FLOPS	Not Supported	172.3 GFLOPS
24-bit Integer IOPS	43.78 GIOPS	152.9 GIOPS
32-bit Integer IOPS	43.73 GIOPS	153.0 GIOPS
64-bit Integer IOPS	5.03 GIOPS	21.53 GIOPS
AES-256	373.3 MB/s	11900 MB/s
SHA-1 Hash	1378 MB/s	2949 MB/s
Single-Precision Julia	36.08 FPS	111.0 FPS
Double-Precision Mandel	Not Supported	61.57 FPS

AIDA64 v5.70.3800 (c) 1995-2016 FinalWire Ltd.

Save Results Start Benchmark Close

4. System Stability Test



5. AIDA64 CPUID



Windows 7 64-bit

CPU	Intel® Core™ i3-6100E 2.70GHz
Memory	ADATA DDR4 2133 8GBx1 (SEC 452 BCPB K4A4G085WD)
HDD	Seagate Barracuda 7200.12 1.0TB

Summary :

Summary

Computer:
 Computer Type ACPI x64-based PC
 Operating System Microsoft Windows 7 Ultimate
 OS Service Pack Service Pack 1
 Internet Explorer 8.0.7601.17514 (IE 8.0 - Windows 7 SP1)
 DirectX DirectX 11.0
 Computer Name USER-PC
 User Name user
 Login Domain user-PC
 Date / Time 2016-03-28 / 00:37

Motherboard:
 CPU Type DualCore, 2700 MHz (27 x 100)
 Motherboard Name COMPELL LV-67R
 Motherboard Chipset Intel Sunrise Point QM170, Intel Skylake
 System Memory 8082 MB (DDR4-2133 DDR4 SDRAM)
 DIMM1 A-Data 8 GB DDR4-2133 DDR4 SDRAM (18-19-19-36 @ 1067 MHz) (15-15-15-36 @ 1067 MHz) (14-14-14-35 @ 1037 MHz) (12-13-13-32 @ 962 MHz) (12-12-12-30 @ 888 MHz) (11-11-11-27 @ 814 MHz) (9-9-9-22 @ 666 MHz)
 BIOS Type Phoenix (03/23/2016)
 Communication Port Communications Port (COM1)
 Communication Port Communications Port (COM2)
 Communication Port Communications Port (COM3)
 Communication Port Communications Port (COM4)
 Communication Port Communications Port (COM5)
 Communication Port Communications Port (COM6)

Display:
 Video Adapter Intel(R) HD Graphics 530 (1 GB)
 Video Adapter Intel(R) HD Graphics 530 (1 GB)
 Video Adapter Intel(R) HD Graphics 530 (1 GB)
 3D Accelerator Intel HD Graphics 530
 Monitor Asus PB278 [27" LCD] (CBLMTF096773)

Multimedia:
 Audio Adapter Intel Skylake HDMI @ Intel Sunrise Point PCH - High Definition Audio Controller
 Audio Adapter Realtek ALC252 @ Intel Sunrise Point PCH - High Definition Audio Controller

Storage:
 IDE Controller Standard AHCI 3.0 Serial ATA Controller
 Disk Drive ST31000528AS ATA Device (1 TB, 7200 RPM, SATA-II)
 SMART Hard Disks Status FAIL

Partitions:
 C: (NTFS) 99899 MB (70537 MB free)
 D: (NTFS) 195.3 GB (173.5 GB free)
 E: (NTFS) 99999 MB (82668 MB free)
 Total Size 390.5 GB (320.5 GB free)

Input:
 Keyboard Standard PS/2 Keyboard
 Mouse HID-compliant mouse

Network:
 Primary IP Address 127.0.0.1
 Primary MAC 00-03-1D-01-14-9A
 Address
 Network Adapter Intel(R) Ethernet Connection (2) I219-LM
 Network Adapter Intel(R) I210 Gigabit Network Connection

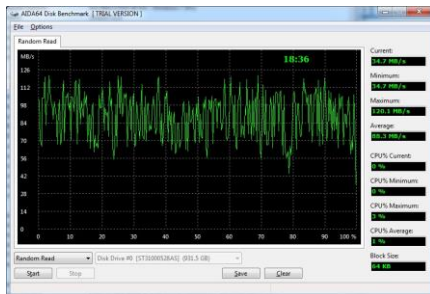
Peripherals:
 Printer Fax
 Printer Microsoft XPS Document Writer
 USB3 Controller Intel Sunrise Point PCH - USB 3.0 xHCI Controller
 USB Device USB Input Device

DMI:
 DMI BIOS Vendor Phoenix Technologies Ltd.
 DMI BIOS Version SKLH_4.0.0.360
 DMI System Manufacturer
 DMI System Product
 DMI System Version
 DMI System Serial Number
 DMI Motherboard Manufacturer COMPELL
 DMI Motherboard Product LV-67R
 DMI Motherboard Serial Number
 DMI Chassis Manufacturer
 DMI Chassis Version
 DMI Chassis Serial Number
 DMI Chassis Asset Tag
 DMI Chassis Type Laptop

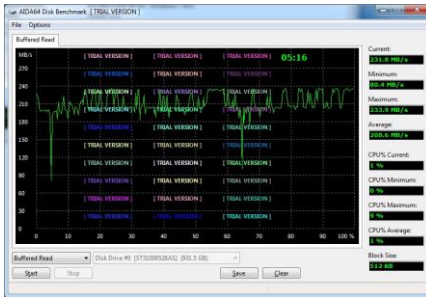
Tools:

1. Disk Benchmark :

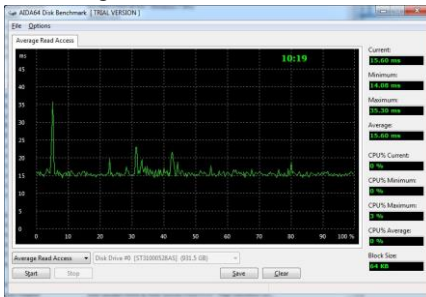
(1)Random Read :



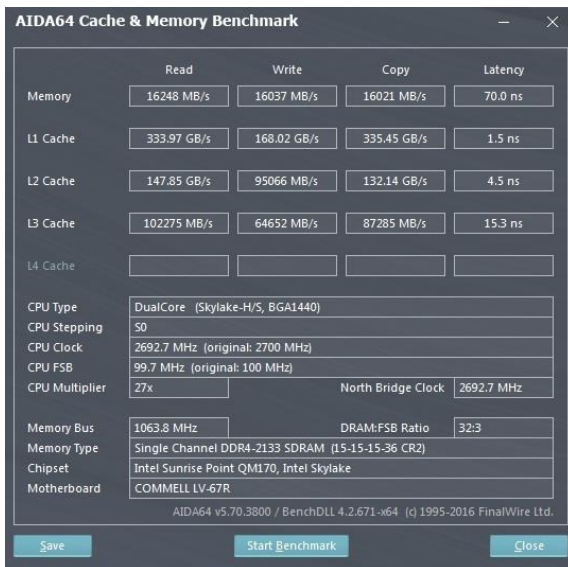
(2)Buffered Read :



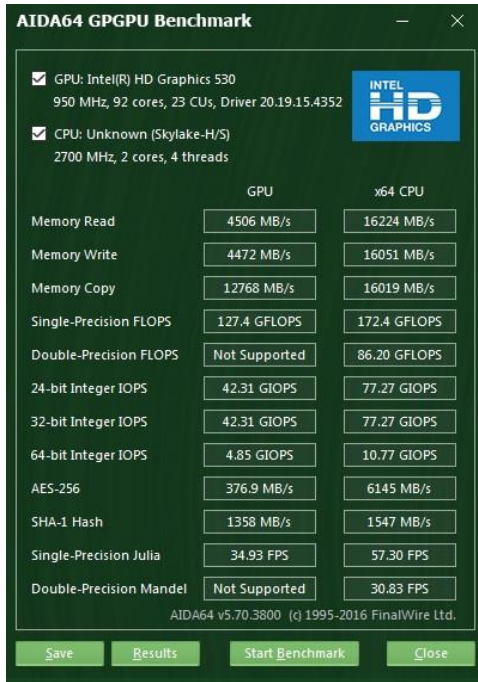
(3)Average Read Access :



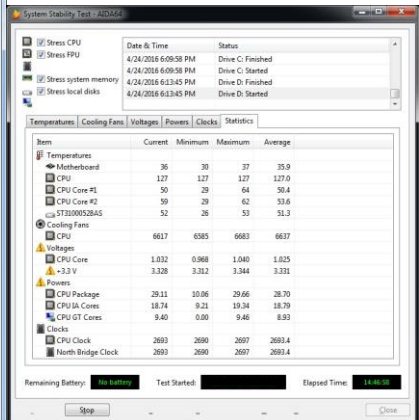
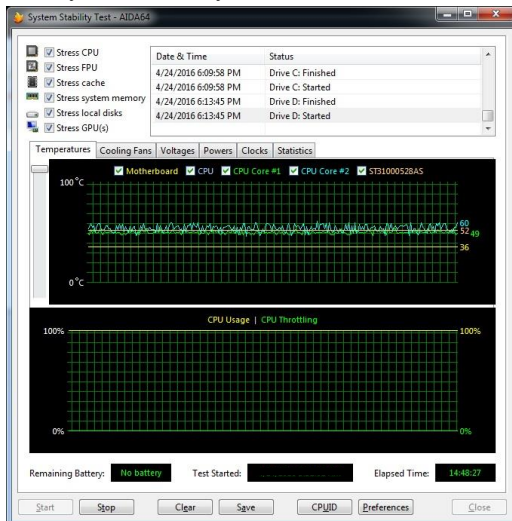
2. Cache & Memory Benchmark :



3. GPGPU Benchmark :



4. System Stability Test



5. AIDA64 CPUID



5.6 Storage Performance

5.6.1 HDD

Test environment:

OS Windows 7 (64Bit)

Program (HD Tune)

HDD Model	Interface	Capacity	Average	Burst Rate	Access time
Seagate Barracuda 7200.12	SATA	1.0TB	88.5 MB/sec	103.6 MB/sec	18.0 ms
Seagate Barracuda 7200.10	SATA	160GB	59.3 MB/sec	77.2 MB/sec	15.7 ms
WD5002AALX	SATA	500GB	109.4 MB/sec	250.1 MB/sec	16.4 ms
Transcend	USB	16GB	29.7 MB/sec	28.4 MB/sec	0.707 ms
ADATA	USB3.0	16GB	96.8 MB/sec	44.3 MB/sec	1.31 ms

5.6.2 CD/DVD-ROM

Test environment:

OS Windows 7 (64Bit)

Program (NERO)

CD/DVD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	DVD
Transcend DVD TS8XDVDS-K	USB	5.46x	210 ms	17 MB/s	4X -16 X DVD+R
LITEON eTAU108	USB	5.46x	181 ms	21 MB/s	4X -16 X DVD+R
Pioneer DDVR-S19LBK-24X	SATA	10.88x	181 ms	41 MB/s	4X -16 X DVD+R
LITEON iHES312	SATA	10.68x	138 ms	43 MB/s	4X -16 X DVD+R
AUSU DRW-1814BLT	SATA	10.38x	182 ms	47 MB/s	4X -16 X DVD+R