

# Product Test Report



<b>Product Name</b>	<b>FS-A79</b>
<b>Product Version</b>	<b>A</b>
<b>Issued Date</b>	<b>2018.12.11</b>
<b>Report Edition</b>	<b>1.0</b>
<b>BIOS Version</b>	<b>1.0</b>
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**REVISION HISTORY**

<b>DATE</b>	<b>REVISION NO.</b>	<b>PAGE</b>	<b>DESCRIPTONS</b>
<b>2018.12.11</b>	<b>Ver. 1.0</b>	<b>74</b>	<b>Initial Release</b>

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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	CPUFAN	PASS
6	SYSFAN	PASS
7	CN_AUDIO	PASS
8	LAN1(I219)	PASS
9	LAN2(I210)	PASS
10	DDR4 A/B	PASS
11	SATA3-1/2/3	PASS
12	CN_USB3 - 1/2/3	PASS
13	CN_USB2 - 1/2	PASS
14	COM 1/2/3/4/5/6	PASS
15	PS2	PASS
16	CN_DVI 1/2	PASS
17	Display Port	PASS
18	CN_CRT	PASS
19	LVDS	PASS
20	MINI_CRAD	PASS

21	PCIEX16	PASS
22	PCIEX1	PASS
23	PCIEX4	PASS
24	PCI	PASS

### Jumper

Item	Description	Result
1	JRTC	PASS
2	JAT	PASS
4	JP1	PASS
5	JP2	PASS
6	JCSEL1	PASS
7	JCSEL2	PASS
8	JCSEL3	PASS
9	JCSEL4	PASS
10	JVUSB	PASS
11	JMSATA	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	Save & Exit Setup	PASS	
4	Date & Time Setting	PASS	
5	Selection Language	PASS	
6	Numlock	PASS	

Item	Description	Result	Remark
7	Active Processor Cores	PASS	
8	Hyper-Threading	PASS	
9	Channel A&B DIMM Control	PASS	
10	LCD Control	PASS	
11	HD Audio	PASS	
12	Wake On LAN	PASS	
13	LVDS Configuration	PASS	
14	COM Port 1~6	PASS	
15	Keyboard Controller	PASS	
16	Power Loss	PASS	
17	Watch Dog Timer	PASS	
18	Auto Wake on S5	PASS	
19	iAMT	PASS	

## 1.3 Driver

### CD edition : IPCI2-1.0

#### 1. Windows 10 64 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	
2	VGA Driver	PASS	24.20.100.6194
3	Audio Driver	PASS	6.0.1.8036
4	LAN Driver	PASS	I219LM:12.17.10.7 I210: 12.15.184.0

## 2. Compatibility test

### 2.1 CPU Test

Test environment:

OS: Windows 10 64bit

Test program : PC MARK05 & BurnIn Test8.1

Spec	CPU Speed	Family	Processor	MAX TDP	Smart Cache	Result
<a href="#">SR3WX</a>	2.4GHz	CORE	i7-8700T	35W	12 MB	PASS
<a href="#">SR3QS</a>	3.2GHz	CORE	i7-8700	65W	12 MB	PASS
<a href="#">SR3XE</a>	3GHz	CORE	i5-8500	65W	9 MB	PASS
<a href="#">SR3N5</a>	3.6GHz	CORE	i3-8100	65W	6MB	PASS
<a href="#">SR3X9</a>	3.7GHz	Pentium Gold	G5400	58W	4MB	PASS
<a href="#">SR3W4</a>	3.1GHz	Celeron	G4900	54W	2MB	PASS

### 2.2 Memory Test

Test environment:

OS: Windows 10 64bit

Test program : PC MARK05 & BurnIn Test8.1 & MemTest64  
& MemTest86+

Manufacturer	Chip	Frequency	Capacity Mbytes	Memory test Source
Kingston KVR26N19D8/16	Micron 7RH45D9VHP 7RH75D9VHP 7UH75D9VHP	DDR4 2666	16 GB	PASS
Crucial CT16G4DFD8266.C16 FD1	Micron 8DD45C9BGT 8MD75C9BGT	DDR4 2666	16 GB	PASS
Crucial CT8G4DFS8266.C8F D1	Micron 8MD75C9BJF	DDR4 2666	8 GB	PASS

## 2.3 CRT Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	
1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1600 x 1200	32bit	PASS	
1680 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	



## 2.4 DVI Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

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

## 2.5 HDMI Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	
1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1680 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	
3840 x 2160	32bit	PASS	

## 2.6 Display Port Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	
1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1600 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	
3840 x 2160	32bit	PASS	

## 2.7 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	
3	LINE	PASS	

OS Ubuntu 16.04 / 18.04

Item	Description	Result	Remark
1	2.1CH	PASS	

OS Fedora 28 Workstation

Item	Description	Result	Remark
1	2.1CH	PASS	

## 2.8 HDD Test

Test environment:

OS Windows 10 64bit

Test program : PC MARK05 & BurnIn Test8.1 & CrystalDiskMark

HDD Model	Interface	Capacity	HDD Size Detect	HDD Data Transfer	HDD LED Check
INTEL SSDSC2BW240A4	SSD	240 GB	PASS	PASS	PASS
SPCC Solid State disk(S55)	SSD	120 GB	PASS	PASS	PASS
CT120 BX500	SSD	120 GB	PASS	PASS	PASS
WD 10EZEX	HDD	1 TB	PASS	PASS	PASS
Kingston DT100G3/32G	USB	32 GB	PASS	PASS	PASS

<b>Kingston DT Hyper X 3.0</b>	<b>USB</b>	<b>63 GB</b>	PASS	PASS	PASS
<b>Crucial_CT 120M500SSD</b>	<b>mSATA</b>	<b>120 GB</b>	PASS	PASS	PASS
<b>Innodisk 3MV2-P DVMSR-64GD81BC 1QC</b>	<b>mSATA</b>	<b>64 GB</b>	PASS	PASS	PASS

## 2.9 DVD-ROM Test

Test environment:

OS Windows 10 64bit

<b>DVD-ROM Model</b>	<b>Interface</b>	<b>DVD-ROM Detect</b>	<b>DVD-ROM Data Transfer</b>	<b>Play DVD</b>
<b>PIONEER DVD DVR-219L</b>	<b>SATA</b>	PASS	PASS	PASS
<b>ASUS DRW-2D1ST a</b>	<b>SATA</b>	PASS	PASS	PASS
<b>ASUS DRW-1814BLT</b>	<b>SATA</b>	PASS	PASS	PASS
<b>LITEON iHES312-33 3</b>	<b>SATA</b>	PASS	PASS	PASS
<b>Transcend DVD TS8XDVDS-K</b>	<b>USB</b>	PASS	PASS	PASS
<b>LITEON DVD eTAU108</b>	<b>USB</b>	PASS	PASS	PASS
<b>PIONEER DVD DVR-XD11T</b>	<b>USB</b>	PASS	PASS	PASS
<b>ZYNET GT32N A201</b>	<b>USB</b>	PASS	PASS	PASS

## 2.10 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. Ubuntu 16.04 / 18.04

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

### 3. Fedora 28 Workstation

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

## 2.11 Serial Port Test

### 1. Windows 10 64-bit

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

## 2.12 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. Ubuntu 16.04 / 18.04

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

### 3. Fedora 28 Workstation

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

## 2.13 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. Ubuntu 16.04 / 18.04

Item	Description	Result	Remark
1	Device Manager Check	PASS	

### 3. Fedora 28 Workstation

Item	Description	Result	Remark
1	Device Manager Check	PASS	

## 2.14 Power Supply Test

Item	Type	Description	Result	Remark
1	ATX Power	Thermaltake TR2-450AH2NCB	PASS	
2	ATX Power	SEED BS400	PASS	
3	ATX Power	Seasonic SS-520GB 520W	PASS	
4	ATX Power	AcBel PC7008 430W	PASS	



## 2.15 OS Install

Item	Description	Result	Remark
1	Windows 10 64 bit	PASS	
2	Ubuntu 16.04 (ubuntu-16.04.5-desktop-amd64)	PASS	
3	Ubuntu 18.04 (ubuntu-18.04.1-desktop-amd64)	PASS	
4	Fedora 28 (Fedora-Workstation-Live-x86_64-28-1.1)	PASS	

## 2.16 PCI Express Mini Card

Motherboard	PCI Express mini card	Result	Remark
FS-A79	MPX-210D	PASS	
	MPX-210D2	PASS	
	MPX-574D	PASS	
	MPX-574D2	PASS	
	MPX-350	PASS	

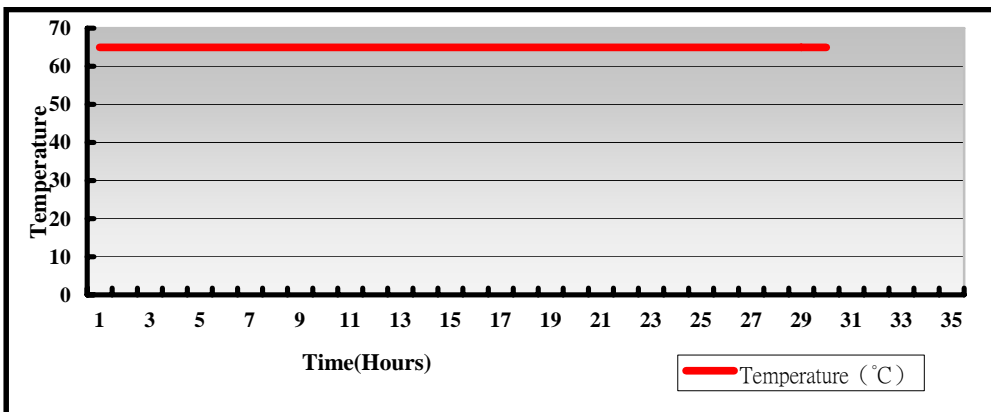
### 3. Environmental test

#### 3.1 Temperature Test

Hardware Device list:

System Board	FS-A79
CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26N19D8/16*2 (Micron 7RH45D9VHP)
HDD	INTEL SSDSC2BW240A4 240GB
Operating OS	Windows 10 64bit
Test Equipment	GIANT FORCE GTH-150-60-SP-AR LCD-9530 Programmer/Controller
Test Program	3DMark06 + Prime95

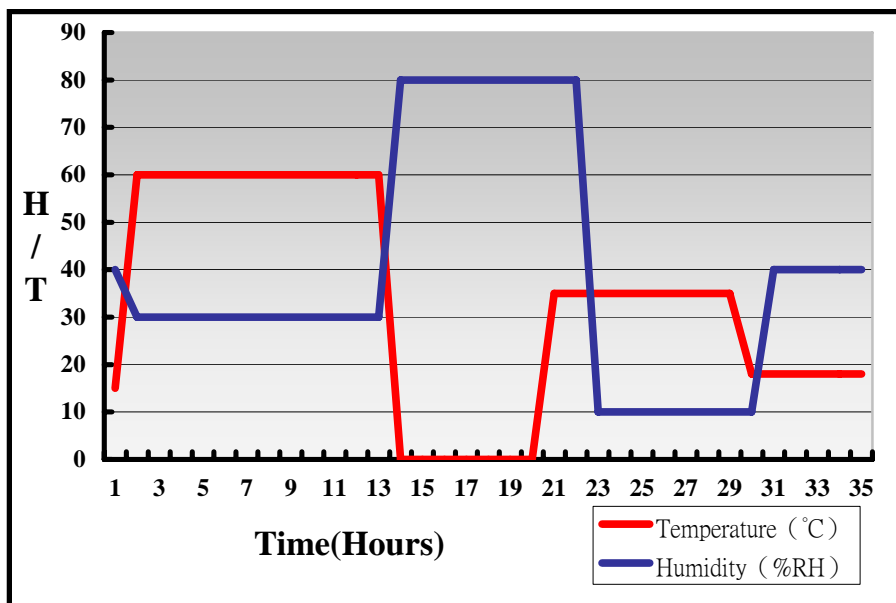
Test Result:



### Hardware Device list:

System Board	FS-A79
CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26N19D8/16*2 (Micron 7RH45D9VHP)
HDD	INTEL SSDSC2BW240A4 240GB
Operating OS	Windows 10 64bit
Test Equipment	GIANT FORCE GTH-150-60-SP-AR LCD-9530 Programmer/Controller
Test Program	3DMark06 + Prime95

### Test Result:



## Boot up Test:

### Hardware Device list:

<b>System Board</b>	<b>FS-A79</b>
<b>CPU</b>	<b>Intel(R) Core(TM) i7-8700 3.2GHz</b>
<b>Memory</b>	<b>Kingston KVR26N19D8/16*2 (Micron 7RH45D9VHP)</b>
<b>HDD</b>	<b>INTEL SSDSC2BW240A4 240GB</b>

<b>Temperature</b>	<b>Result</b>	<b>Remark</b>
<b>-40°C</b>	PASS	50 Times
<b>80°C</b>	PASS	50 Times

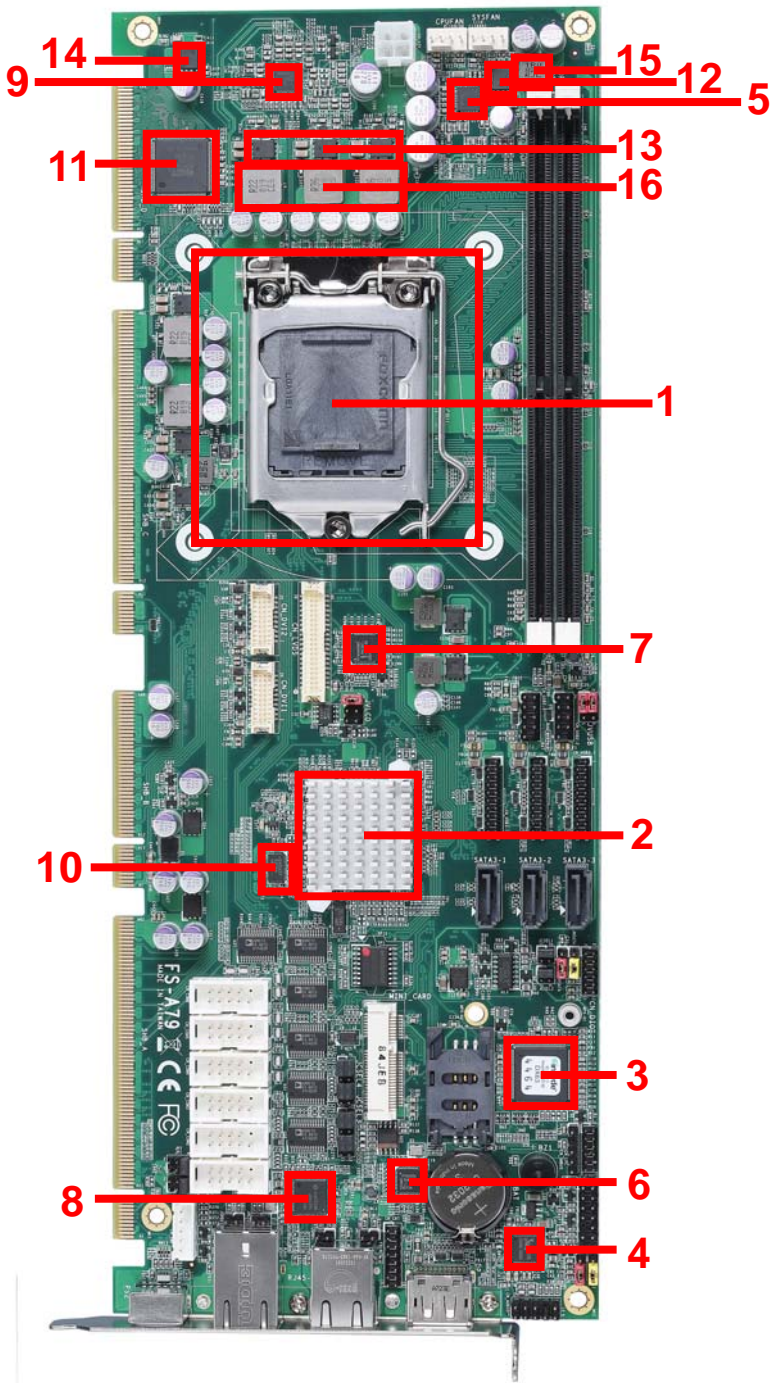
## 3.2 Thermal measurements at various points on the board

### Test Environment:

<b>CPU</b>	Intel(R) Core(TM) i7-8700 3.2GHz
<b>Memory</b>	Kingston KVR26N19D8/16*2 (Micron 7RH45D9VHP)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB
<b>Power</b>	Thermaltake TR2-450AH2NCB
<b>Operating System</b>	Windows 10 64-bit
<b>Test Program</b>	3DMARK06+Prime95

### Test Result:

<b>Item</b>	<b>Environmental temperature</b>	<b>25°C</b>
<b>1</b>	<b>CPU</b>	<b>71°C</b>
<b>2</b>	<b>PCH (Q370)</b>	<b>33.6°C</b>
<b>3</b>	<b>U6</b>	<b>26.1°C</b>
<b>4</b>	<b>U8</b>	<b>33.4°C</b>
<b>5</b>	<b>U17</b>	<b>38.5°C</b>
<b>6</b>	<b>U21</b>	<b>29.3°C</b>
<b>7</b>	<b>U24</b>	<b>35.2°C</b>
<b>8</b>	<b>U27</b>	<b>33.1°C</b>
<b>9</b>	<b>U33</b>	<b>41.8°C</b>
<b>10</b>	<b>U34</b>	<b>35.9°C</b>
<b>11</b>	<b>U40</b>	<b>48°C</b>
<b>12</b>	<b>Q5</b>	<b>36.9°C</b>
<b>13</b>	<b>Q12 &amp; Q14 &amp; Q16</b>	<b>60.5°C</b>
<b>14</b>	<b>Q25</b>	<b>40.6°C</b>
<b>15</b>	<b>L2</b>	<b>34.6°C</b>
<b>16</b>	<b>L5 &amp; L7 &amp; L9</b>	<b>42.5°C</b>



## 4. Reliability Test

### 4.1 Power Consumption Test

#### 1. Test Environment:

<b>Motherboard</b>	<b>FS-A79</b>
<b>CPU</b>	Intel(R) Core(TM) i7-8700 3.2GHz
<b>Memory</b>	Crucial CT16G4DFD8266.C16FD1 16GB*2 (Micron 8MD75C9BGT)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB

**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	3.21	38.52	9.27	111.24
5V	1.42	7.1	3.16	15.8
3.3V	0.61	2.013	0.59	1.947
5VSB	0.55	2.75	0.003	0.015

#### 1. a. Test Environment:

The same as above but with LCD

<b>Display Panel</b>	<b>LTM170EH-L01 17"LCD</b>
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**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	2.46	29.52	11.18	134.16
5V	1.67	8.35	3.62	18.1
3.3V	0.74	2.442	0.78	2.574
5VSB	0.57	2.85	0.003	0.015

## 2. Test Environment:

<b>Motherboard</b>	<b>FS-A79</b>
<b>CPU</b>	Intel(R) Core(TM) i5-8500 3.0GHz
<b>Memory</b>	Crucial CT16G4DFD8266.C16FD1 16GB*2 (Micron 8MD75C9BGT)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB

**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	2.55	30.6	8.43	101.16
5V	1.3	6.5	3.03	15.15
3.3V	0.59	1.947	0.59	1.947
5VSB	0.51	2.55	0.007	0.035

## 2. a. Test Environment:

The same as above but with LCD

<b>Display Panel</b>	<b>LTM170EH-L01 17"LCD</b>
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**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	2.32	27.84	10.62	127.44
5V	1.64	8.2	3.71	18.55
3.3V	0.73	2.409	0.72	2.376
5VSB	0.53	2.65	0.002	0.01



### 3. Test Environment:

<b>Motherboard</b>	<b>FS-A79</b>
<b>CPU</b>	Intel(R) Core(TM) i3-8100 3.6GHz
<b>Memory</b>	Crucial CT16G4DFD8266.C16FD1 16GB*2 (Micron 8MD75C9BGT)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB

**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>2.58</b>	<b>30.96</b>	<b>6.63</b>	<b>79.56</b>
<b>5V</b>	<b>1.29</b>	<b>6.45</b>	<b>2.85</b>	<b>14.25</b>
<b>3.3V</b>	<b>0.59</b>	<b>1.947</b>	<b>0.58</b>	<b>1.914</b>
<b>5VSB</b>	<b>0.51</b>	<b>2.55</b>	<b>0.003</b>	<b>0.015</b>

### 3. a. Test Environment:

The same as above but with LCD

<b>Display Panel</b>	<b>LTM170EH-L01 17"LCD</b>
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**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>2.51</b>	<b>30.12</b>	<b>8.04</b>	<b>96.48</b>
<b>5V</b>	<b>1.63</b>	<b>8.15</b>	<b>3.39</b>	<b>16.95</b>
<b>3.3V</b>	<b>0.72</b>	<b>2.376</b>	<b>0.72</b>	<b>2.376</b>
<b>5VSB</b>	<b>0.65</b>	<b>3.25</b>	<b>0.001</b>	<b>0.005</b>

#### 4. Test Environment:

<b>Motherboard</b>	<b>FS-A79</b>
<b>CPU</b>	Intel(R) Pentium(R) Gold G5400 3.7GHz
<b>Memory</b>	Crucial CT16G4DFD8266.C16FD1 16GB*2 (Micron 8MD75C9BGT)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB

**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>1.91</b>	<b>22.92</b>	<b>3.92</b>	<b>47.04</b>
<b>5V</b>	<b>1.25</b>	<b>6.25</b>	<b>2.58</b>	<b>12.9</b>
<b>3.3V</b>	<b>0.6</b>	<b>1.98</b>	<b>0.59</b>	<b>1.947</b>
<b>5VSB</b>	<b>0.52</b>	<b>2.6</b>	<b>0.001</b>	<b>0.005</b>

#### 4. a. Test Environment:

The same as above but with LCD

<b>Display Panel</b>	<b>LTM170EH-L01 17"LCD</b>
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**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>2.35</b>	<b>28.2</b>	<b>5.72</b>	<b>68.64</b>
<b>5V</b>	<b>1.62</b>	<b>8.1</b>	<b>3.14</b>	<b>15.7</b>
<b>3.3V</b>	<b>0.72</b>	<b>2.376</b>	<b>0.73</b>	<b>2.409</b>
<b>5VSB</b>	<b>0.51</b>	<b>2.55</b>	<b>0.005</b>	<b>0.025</b>

## 5. Test Environment:

<b>Motherboard</b>	<b>FS-A79</b>
<b>CPU</b>	Intel(R) Celeron(R) G4900 3.1GHz
<b>Memory</b>	Crucial CT16G4DFD8266.C16FD1 16GB*2 (Micron 8MD75C9BGT)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB

**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>1.39</b>	<b>16.68</b>	<b>3.02</b>	<b>36.24</b>
<b>5V</b>	<b>1.36</b>	<b>6.8</b>	<b>2.59</b>	<b>12.95</b>
<b>3.3V</b>	<b>0.59</b>	<b>1.947</b>	<b>0.58</b>	<b>1.914</b>
<b>5VSB</b>	<b>0.52</b>	<b>2.6</b>	<b>0.005</b>	<b>0.025</b>

## 5. a. Test Environment:

The same as above but with LCD

<b>Display Panel</b>	<b>LTM170EH-L01 "LCD</b>
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**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>2.20</b>	<b>26.4</b>	<b>4.83</b>	<b>57.96</b>
<b>5V</b>	<b>1.63</b>	<b>8.15</b>	<b>3.08</b>	<b>15.4</b>
<b>3.3V</b>	<b>0.73</b>	<b>2.409</b>	<b>0.72</b>	<b>2.376</b>
<b>5VSB</b>	<b>0.53</b>	<b>2.65</b>	<b>0.008</b>	<b>0.04</b>

## 6. Test Environment:

<b>Motherboard</b>	<b>FS-A79</b>
<b>CPU</b>	Intel(R) Core(TM) i7-8700T 2.4GHz
<b>Memory</b>	Crucial CT16G4DFD8266.C16FD1 16GB*2 (Micron 8MD75C9BGT)
<b>HDD</b>	INTEL SSDSC2BW240A4 240GB

**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	1.87	22.44	4.25	51
5V	1.26	6.3	3.00	15
3.3V	0.6	1.98	0.59	1.947
5VSB	0.53	2.65	0.005	0.025

## 6. a. Test Environment:

The same as above but with LCD

<b>Display Panel</b>	<b>LTM170EH-L01 "LCD</b>
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**Power Supply: Thermaltake TR2-450AH2NCB 450W**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	2.09	25.08	6.33	75.96
5V	1.63	8.15	3.54	17.7
3.3V	0.73	2.409	0.73	2.409
5VSB	0.51	2.55	0.008	0.04

## 5. Performance Test

### 5.1 3D MARK(2003、2005)

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
3DMARK2003 Scores	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16	PASS	17735
3DMARK2005 Scores	16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	18397

Weighted Suite	Test Environment	Result	Remark
3DMARK2003 Scores	Intel(R) Core(TM) i7-8700 3.2GHz Crucial	PASS	17602
3DMARK2005 Scores	CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	18429

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>16528</b>
<b>3DMARK2005 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>17591</b>

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Core(TM) i5-8500 3.0GHz Crucial CT16G4DFF8266.C16FD1</b>	<b>PASS</b>	<b>16554</b>
<b>3DMARK2005 Scores</b>	<b>16GB*2 INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>17699</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>15986</b>
<b>3DMARK2005 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>16716</b>

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Core(TM) i3-8100 3.6GHz Crucial CT16G4DFF8266.C16FD1</b>	<b>PASS</b>	<b>15857</b>
<b>3DMARK2005 Scores</b>	<b>16GB*2 INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>16712</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2</b>	PASS	10886
<b>3DMARK2005 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	10462

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2</b>	PASS	10791
<b>3DMARK2005 Scores</b>	<b>INTEL SSDSC2BW240A4 240GB</b>	PASS	10476



**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2</b>	PASS	10626
<b>3DMARK2005 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	10242

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Celeron(R) G4900 3.1GHz Crucial</b>	PASS	10534
<b>3DMARK2005 Scores</b>	<b>CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	10198

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26N19D8/16</b>	<b>PASS</b>	<b>17680</b>
<b>3DMARK2005 Scores</b>	<b>16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>18481</b>

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2003 Scores</b>	<b>Intel(R) Core(TM) i7-8700T 2.4GHz Crucial</b>	<b>PASS</b>	<b>17720</b>
<b>3DMARK2005 Scores</b>	<b>CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>18476</b>

## 5.2 3D MARK2006

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	11849
2	SM2.0 Source		PASS	4078
3	HDR/SM3.0 Source		PASS	4489
4	CPU Source		PASS	11948

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	11827
2	SM2.0 Source		PASS	4075
3	HDR/SM3.0 Source		PASS	4475
4	CPU Source		PASS	11961

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	11163
2	SM2.0 Source		PASS	3855
3	HDR/SM3.0 Source		PASS	4278
4	CPU Source		PASS	10046

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i5-8500 3.0GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	11182
2	SM2.0 Source		PASS	3887
3	HDR/SM3.0 Source		PASS	4261
4	CPU Source		PASS	10048

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	10478
2	SM2.0 Source		PASS	3706
3	HDR/SM3.0 Source		PASS	4091
4	CPU Source		PASS	7307

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i3-8100 3.6GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	10464
2	SM2.0 Source		PASS	3710
3	HDR/SM3.0 Source		PASS	4072
4	CPU Source		PASS	7331

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	6828
2	SM2.0 Source		PASS	2493
3	HDR/SM3.0 Source		PASS	2541
4	CPU Source		PASS	5271

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	6800
2	SM2.0 Source		PASS	2479
3	HDR/SM3.0 Source		PASS	2533
4	CPU Source		PASS	5272

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	6458
2	SM2.0 Source		PASS	2414
3	HDR/SM3.0 Source		PASS	2502
4	CPU Source		PASS	3627

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Celeron(R) G4900 3.1GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	6427
2	SM2.0 Source		PASS	2400
3	HDR/SM3.0 Source		PASS	2485
4	CPU Source		PASS	3660

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
1	3DMARK Source	<b>Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	11737
2	SM2.0 Source		PASS	4116
3	HDR/SM3.0 Source		PASS	4498
4	CPU Source		PASS	9575

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
1	3DMARK Source	<b>Intel(R) Core(TM) i7-8700T 2.4GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	11709
2	SM2.0 Source		PASS	4077
3	HDR/SM3.0 Source		PASS	4518
4	CPU Source		PASS	9544



### 5.3 3D MARK VANTAGE

#### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P8781
2	GPU SCORE		PASS	6899
3	CPU SCORE		PASS	48299

#### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P8679
2	GPU SCORE		PASS	6817
3	CPU SCORE		PASS	48054

#### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P8051
2	GPU SCORE		PASS	6403
3	CPU SCORE		PASS	35304

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P8019
2	GPU SCORE		PASS	6378
3	CPU SCORE		PASS	35104

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz  Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P7516
2	GPU SCORE		PASS	6177
3	CPU SCORE		PASS	21474

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P7424
2	GPU SCORE		PASS	6091
3	CPU SCORE		PASS	21612

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P4414
2	GPU SCORE		PASS	3590
3	CPU SCORE		PASS	14163

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P4412
2	GPU SCORE		PASS	3584
3	CPU SCORE		PASS	14388

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P4190
2	GPU SCORE		PASS	3555
3	CPU SCORE		PASS	9020

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P4166
2	GPU SCORE		PASS	3534
3	CPU SCORE		PASS	8997

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz  Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P8642
2	GPU SCORE		PASS	6885
3	CPU SCORE		PASS	36842

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P8551
2	GPU SCORE		PASS	6812
3	CPU SCORE		PASS	36551

## 5.4 3D MARK 11

### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P2358
2	Graphics SCORE		PASS	2036
3	Physics SCORE		PASS	13232
4	Combined SCORE		PASS	2256

### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P2362
2	Graphics SCORE		PASS	2042
3	Physics SCORE		PASS	13100
4	Combined SCORE		PASS	2244

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P2185
2	Graphics SCORE		PASS	1894
3	Physics SCORE		PASS	10879
4	Combined SCORE		PASS	2093

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P2182
2	Graphics SCORE		PASS	1892
3	Physics SCORE		PASS	10762
4	Combined SCORE		PASS	2094

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P2105
2	Graphics SCORE		PASS	1850
3	Physics SCORE		PASS	7755
4	Combined SCORE		PASS	1990

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P2106
2	Graphics SCORE		PASS	1853
3	Physics SCORE		PASS	7705
4	Combined SCORE		PASS	1982

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
1	3DMARK SCORE	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	P1229
2	Graphics SCORE		PASS	1059
3	Physics SCORE		PASS	5742
4	Combined SCORE		PASS	1265

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
1	3DMARK SCORE	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	P1233
2	Graphics SCORE		PASS	1064
3	Physics SCORE		PASS	5706
4	Combined SCORE		PASS	1262



**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P1209
2	Graphics SCORE		PASS	1064
3	Physics SCORE		PASS	3485
4	Combined SCORE		PASS	1268

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P1208
2	Graphics SCORE		PASS	1064
3	Physics SCORE		PASS	3436
4	Combined SCORE		PASS	1266

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	P2361
2	Graphics SCORE		PASS	2051
3	Physics SCORE		PASS	11179
4	Combined SCORE		PASS	2252

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	P2361
2	Graphics SCORE		PASS	2051
3	Physics SCORE		PASS	11205
4	Combined SCORE		PASS	2248

## 5.5 3D MARK

### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	516
2	Graphics SCORE		PASS	445
3	CPU SCORE		PASS	6192

### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	516
2	Graphics SCORE		PASS	445
3	CPU SCORE		PASS	6130

### Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	478
2	Graphics SCORE		PASS	413
3	CPU SCORE		PASS	5062

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	<b>Intel(R) Core(TM) i5-8500 3.0GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	478
2	Graphics SCORE		PASS	413
3	CPU SCORE		PASS	5038

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	<b>Intel(R) Core(TM) i3-8100 3.6GHz  Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	457
2	Graphics SCORE		PASS	397
3	CPU SCORE		PASS	3474

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	<b>Intel(R) Core(TM) i3-8100 3.6GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	456
2	Graphics SCORE		PASS	396
3	CPU SCORE		PASS	3461

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	256
2	Graphics SCORE		PASS	222
3	CPU SCORE		PASS	2384

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	256
2	Graphics SCORE		PASS	222
3	CPU SCORE		PASS	2374

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	253
2	Graphics SCORE		PASS	221
3	CPU SCORE		PASS	1558

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Celeron(R) G4900 3.1GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	253
2	Graphics SCORE		PASS	221
3	CPU SCORE		PASS	1550

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700T 2.4GHz  Kingston KVR26N19D8/16 16GB*2  (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	516
2	Graphics SCORE		PASS	446
3	CPU SCORE		PASS	4917

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700T 2.4GHz  Crucial CT16G4DFF8266.C16FD1  16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	516
2	Graphics SCORE		PASS	446
3	CPU SCORE		PASS	4929

## 5.6 PC MARK2005

<b>Test Environment</b>
Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Source	PASS	N/A
2	CPU Source	PASS	18341
3	Memory Source	PASS	15620
4	Graphic Source	PASS	4733
5	HDD Source	PASS	39503

<b>Test Environment</b>
Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Source	PASS	N/A
2	CPU Source	PASS	18687
3	Memory Source	PASS	15735
4	Graphic Source	PASS	4849
5	HDD Source	PASS	39244

<b>Test Environment</b>
<b>Intel(R) Core(TM) i5-8500 3.0GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	16943
3	<b>Memory Source</b>	PASS	13501
4	<b>Graphic Source</b>	PASS	4919
5	<b>HDD Source</b>	PASS	41143

<b>Test Environment</b>
<b>Intel(R) Core(TM) i5-8500 3.0GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	16712
3	<b>Memory Source</b>	PASS	13267
4	<b>Graphic Source</b>	PASS	4692
5	<b>HDD Source</b>	PASS	40681



<b>Test Environment</b>
<b>Intel(R) Core(TM) i3-8100 3.6GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	15168
3	<b>Memory Source</b>	PASS	11113
4	<b>Graphic Source</b>	PASS	4650
5	<b>HDD Source</b>	PASS	41441

<b>Test Environment</b>
<b>Intel(R) Core(TM) i3-8100 3.6GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	15192
3	<b>Memory Source</b>	PASS	11261
4	<b>Graphic Source</b>	PASS	4829
5	<b>HDD Source</b>	PASS	40364

<b>Test Environment</b>
<b>Intel(R) Pentium(R) Gold G5400 3.7GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	11581
3	<b>Memory Source</b>	PASS	11136
4	<b>Graphic Source</b>	PASS	3958
5	<b>HDD Source</b>	PASS	40673

<b>Test Environment</b>
<b>Intel(R) Pentium(R) Gold G5400 3.7GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	13333
3	<b>Memory Source</b>	PASS	11110
4	<b>Graphic Source</b>	PASS	4132
5	<b>HDD Source</b>	PASS	40090

<b>Test Environment</b>
<b>Intel(R) Celeron(R) G4900 3.1GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	8037
3	<b>Memory Source</b>	PASS	8731
4	<b>Graphic Source</b>	PASS	3864
5	<b>HDD Source</b>	PASS	31533

<b>Test Environment</b>
<b>Intel(R) Celeron(R) G4900 3.1GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	10277
3	<b>Memory Source</b>	PASS	9154
4	<b>Graphic Source</b>	PASS	4092
5	<b>HDD Source</b>	PASS	39693

<b>Test Environment</b>
<b>Intel(R) Core(TM) i7-8700T 2.4GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	16074
3	<b>Memory Source</b>	PASS	14297
4	<b>Graphic Source</b>	PASS	4634
5	<b>HDD Source</b>	PASS	39101

<b>Test Environment</b>
<b>Intel(R) Core(TM) i7-8700T 2.4GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
1	<b>PCMark Source</b>	PASS	N/A
2	<b>CPU Source</b>	PASS	16555
3	<b>Memory Source</b>	PASS	14334
4	<b>Graphic Source</b>	PASS	4877
5	<b>HDD Source</b>	PASS	39021

## 5.7 PC MARK 7 & 8

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2	PASS	7043
PCMARK 8 Scores	(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	5890

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1	PASS	7042
PCMARK 8 Scores	16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	5876

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>6808</b>
<b>PCMARK 8 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5605</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Core(TM) i5-8500 3.0GHz Crucial CT16G4DFF8266.C16FD1 16GB*2</b>	<b>PASS</b>	<b>6816</b>
<b>PCMARK 8 Scores</b>	<b>INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5571</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>6577</b>
<b>PCMARK 8 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5388</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Core(TM) i3-8100 3.6GHz Crucial CT16G4DFF8266.C16FD1 16GB*2</b>	<b>PASS</b>	<b>6570</b>
<b>PCMARK 8 Scores</b>	<b>INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5360</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>6006</b>
<b>PCMARK 8 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5069</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2</b>	<b>PASS</b>	<b>6000</b>
<b>PCMARK 8 Scores</b>	<b>INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5116</b>



**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>5501</b>
<b>PCMARK 8 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>4736</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Celeron(R) G4900 3.1GHz Crucial CT16G4DFF8266.C16FD1 16GB*2</b>	<b>PASS</b>	<b>5279</b>
<b>PCMARK 8 Scores</b>	<b>INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>4687</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26N19D8/16 16GB*2</b>	<b>PASS</b>	<b>6804</b>
<b>PCMARK 8 Scores</b>	<b>(Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5645</b>

**Windows 10 64-bit**

<b>Weighted Suite</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>PCMARK 7 Scores</b>	<b>Intel(R) Core(TM) i7-8700T 2.4GHz Crucial CT16G4DFF8266.C16FD1 16GB*2</b>	<b>PASS</b>	<b>6803</b>
<b>PCMARK 8 Scores</b>	<b>INTEL SSDSC2BW240A4 240GB</b>	<b>PASS</b>	<b>5557</b>

## 5.8 PC MARK10

<b>Test Environment</b>
<b>Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	4355
<b>2</b>	<b>Essentials</b>	PASS	8474
<b>3</b>	<b>Productivity</b>	PASS	7036
<b>4</b>	<b>Digital Content Creation</b>	PASS	3762

<b>Test Environment</b>
<b>Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	4343
<b>2</b>	<b>Essentials</b>	PASS	8455
<b>3</b>	<b>Productivity</b>	PASS	6994
<b>4</b>	<b>Digital Content Creation</b>	PASS	3760

<b>Test Environment</b>
<b>Intel(R) Core(TM) i5-8500 3.0GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	4107
<b>2</b>	<b>Essentials</b>	PASS	8173
<b>3</b>	<b>Productivity</b>	PASS	6708
<b>4</b>	<b>Digital Content Creation</b>	PASS	3430

<b>Test Environment</b>
<b>Intel(R) Core(TM) i5-8500 3.0GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	4103
<b>2</b>	<b>Essentials</b>	PASS	8127
<b>3</b>	<b>Productivity</b>	PASS	6739
<b>4</b>	<b>Digital Content Creation</b>	PASS	3423

<b>Test Environment</b>
<b>Intel(R) Core(TM) i3-8100 3.6GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	3720
<b>2</b>	<b>Essentials</b>	PASS	7572
<b>3</b>	<b>Productivity</b>	PASS	6257
<b>4</b>	<b>Digital Content Creation</b>	PASS	2950

<b>Test Environment</b>
<b>Intel(R) Core(TM) i3-8100 3.6GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	3713
<b>2</b>	<b>Essentials</b>	PASS	7573
<b>3</b>	<b>Productivity</b>	PASS	6242
<b>4</b>	<b>Digital Content Creation</b>	PASS	2939

<b>Test Environment</b>
<b>Intel(R) Pentium(R) Gold G5400 3.7GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	3192
<b>2</b>	<b>Essentials</b>	PASS	7113
<b>3</b>	<b>Productivity</b>	PASS	6082
<b>4</b>	<b>Digital Content Creation</b>	PASS	2042

<b>Test Environment</b>
<b>Intel(R) Pentium(R) Gold G5400 3.7GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	3192
<b>2</b>	<b>Essentials</b>	PASS	7101
<b>3</b>	<b>Productivity</b>	PASS	6094
<b>4</b>	<b>Digital Content Creation</b>	PASS	2040

<b>Test Environment</b>
<b>Intel(R) Celeron(R) G4900 3.1GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	2731
<b>2</b>	<b>Essentials</b>	PASS	5833
<b>3</b>	<b>Productivity</b>	PASS	5317
<b>4</b>	<b>Digital Content Creation</b>	PASS	1783

<b>Test Environment</b>
<b>Intel(R) Celeron(R) G4900 3.1GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	2726
<b>2</b>	<b>Essentials</b>	PASS	5834
<b>3</b>	<b>Productivity</b>	PASS	5284
<b>4</b>	<b>Digital Content Creation</b>	PASS	1784

<b>Test Environment</b>
<b>Intel(R) Core(TM) i7-8700T 2.4GHz</b> <b>Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP)</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	4053
<b>2</b>	<b>Essentials</b>	PASS	7990
<b>3</b>	<b>Productivity</b>	PASS	6631
<b>4</b>	<b>Digital Content Creation</b>	PASS	3410

<b>Test Environment</b>
<b>Intel(R) Core(TM) i7-8700T 2.4GHz</b> <b>Crucial CT16G4DFF8266.C16FD1 16GB*2</b> <b>INTEL SSDSC2BW240A4 240GB</b>

**Windows 10 64-bit**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	4055
<b>2</b>	<b>Essentials</b>	PASS	8070
<b>3</b>	<b>Productivity</b>	PASS	6584
<b>4</b>	<b>Digital Content Creation</b>	PASS	3407



## 5.9 PerformanceTest 9.0

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	<b>Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	4518.0
2	CPU Mark		PASS	16639.6
3	2D Graphics Mark		PASS	900.2
4	3D Graphics Mark		PASS	1318.6
5	Memory Mark		PASS	3368.5
6	Disk Mark		PASS	4394.9

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	<b>Intel(R) Core(TM) i7-8700 3.2GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	4488.5
2	CPU Mark		PASS	16466.1
3	2D Graphics Mark		PASS	883.9
4	3D Graphics Mark		PASS	1317.5
5	Memory Mark		PASS	3369.0
6	Disk Mark		PASS	4426.9

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	4270.9
2	CPU Mark		PASS	13173.6
3	2D Graphics Mark		PASS	913.3
4	3D Graphics Mark		PASS	1227.0
5	Memory Mark		PASS	3208.0
6	Disk Mark		PASS	4450.1

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i5-8500 3.0GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	4265.2
2	CPU Mark		PASS	13136.6
3	2D Graphics Mark		PASS	916.3
4	3D Graphics Mark		PASS	1225.2
5	Memory Mark		PASS	3217.2
6	Disk Mark		PASS	4380.7

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	3769.8
2	CPU Mark		PASS	8809.7
3	2D Graphics Mark		PASS	841.0
4	3D Graphics Mark		PASS	1183.4
5	Memory Mark		PASS	2924.4
6	Disk Mark		PASS	4382.4

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i3-8100 3.6GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	3756.8
2	CPU Mark		PASS	8749.7
3	2D Graphics Mark		PASS	840.5
4	3D Graphics Mark		PASS	1172.6
5	Memory Mark		PASS	2915.2
6	Disk Mark		PASS	4424.3

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB</b>	PASS	2959.6
2	CPU Mark		PASS	5543.7
3	2D Graphics Mark		PASS	786.0
4	3D Graphics Mark		PASS	784.5
5	Memory Mark		PASS	2936.1
6	Disk Mark		PASS	4417.0

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	<b>Intel(R) Pentium(R) Gold G5400 3.7GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB</b>	PASS	2944.4
2	CPU Mark		PASS	5520.7
3	2D Graphics Mark		PASS	785.8
4	3D Graphics Mark		PASS	782.4
5	Memory Mark		PASS	2918.6
6	Disk Mark		PASS	4285.2

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	2452.4
2	CPU Mark		PASS	3467.0
3	2D Graphics Mark		PASS	712.3
4	3D Graphics Mark		PASS	774.2
5	Memory Mark		PASS	2584.9
6	Disk Mark		PASS	4339.4

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Celeron(R) G4900 3.1GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	2454.7
2	CPU Mark		PASS	3479.2
3	2D Graphics Mark		PASS	709.9
4	3D Graphics Mark		PASS	775.1
5	Memory Mark		PASS	2567.7
6	Disk Mark		PASS	4392.7

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26N19D8/16 16GB*2 (Micron 7RH75D9VHP) INTEL SSDSC2BW240A4 240GB	PASS	4252.0
2	CPU Mark		PASS	14082.6
3	2D Graphics Mark		PASS	831.2
4	3D Graphics Mark		PASS	1322.4
5	Memory Mark		PASS	3171.1
6	Disk Mark		PASS	4299.3

**Windows 10 64-bit**

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i7-8700T 2.4GHz Crucial CT16G4DFF8266.C16FD1 16GB*2 INTEL SSDSC2BW240A4 240GB	PASS	4223.8
2	CPU Mark		PASS	13968.7
3	2D Graphics Mark		PASS	821.1
4	3D Graphics Mark		PASS	1320.7
5	Memory Mark		PASS	3157.9
6	Disk Mark		PASS	4280.1

## 5.10 Storage Performance

### 5.10.1 HDD

Test environment:

OS Windows 10 64bit

Program: HD Tune

HDD Model	Interface	Capacity	Average	Burst Rate	Access Time
INTEL SSDSC2BW240A4	SSD	240 GB	263.2 MB/sec	256.5 MB/sec	0.190 ms
SPCC Solid State disk(S55)	SSD	120 GB	327.5 MB/sec	136.7 MB/sec	0.039 ms
CT120 BX500	SSD	120 GB	332.6 MB/sec	174.6 MB/sec	0.048 ms
WD 10EZEX	HDD	1 TB	150.8 MB/sec	260.7 MB/sec	16.3 ms
Kingston DT100G3/32G	USB	32 GB	88.7 MB/sec	31.8 MB/sec	0.271 ms
Kingston DT Hyper X 3.0	USB	63 GB	176.7 MB/sec	161.7 MB/sec	0.823 ms
Crucial_CT 120M500SSD	mSATA	120 GB	286.0 MB/sec	33.0 MB/sec	0.060 ms
Innodisk 3MV2-P DVMSR-64GD81BC1QC	mSATA	64 GB	312.5 MB/sec	291.4 MB/sec	0.043 ms

## 5.10.2 DVD-ROM

Test environment:

OS Windows 10 64bit

Program (NERO)

DVD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	DVD
PIONEER DVD DVR-219L	SATA	11.50x	195 ms	42 MB/s	1 - 16 x
ASUS DRW-2D1ST a	SATA	11.3 x	220 ms	35 MB/s	1 - 16 x
ASUS DRW-1814BLT	SATA	8.49 x	181 ms	42 MB/s	1 - 16 x
LITEON iHES312-33 3	SATA	11.29 x	156 ms	37 MB/s	1 - 16 x
Transcend DVD TS8XDVDS-K	USB	2.86 x	308 ms	14 MB/s	1 - 16 x
LITEON DVD eTAU108	USB	5.57 x	208 ms	18 MB/s	1 - 16 x
PIONEER DVD DVR-XD11T	USB	5.80 x	181 ms	20 MB/s	1 - 16 x
ZYNET GT32N A201	USB	5.70 x	213 ms	20 MB/s	1 - 16 x