

Product Qualification

--- Compatibility Test ---

Product Name : ST180-25 3840GB

Product P/N : ST180-25 3840GB

Qualification : Qual. All

Test Result : PASS

QT	Approved	Date
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Test Result Summary						
Product Name	ST180-25 3840GB 4Tb*8 7mm Metal Housing ET Thermal Sensor NO DEVSLP OP					
Platform Information						
Vendor	ASUS	Gigabyte	ASUS	Gigabyte		
Motherboard	PRIME Z690-A	H370-DH3	TUF H370-PRO GAMING (WI-FI)	GA-Z170X-Gaming 3		
Chipset	Intel® Z690	Intel® H370	Intel® H370	Intel® Z170		
BIOS	1403	F14	1901	F5b		
Operating System	Windows 10	Windows 10	Windows 10	Windows 10		
Test Result						
Function Operation Test	Base Function	--	V	--	--	
	Format	V	V	--	--	
	Product Inf. Check	V	--	--	--	
	System Install	V	--	--	--	
	Performance	V	--	--	--	
System Stress Test	Warm Boot	--	--	V	--	
	Cold Boot	--	--	--	V	
	Sleep	--	--	V	--	
	IOmeter	--	V	--	--	
	BurnIn	--	V	--	--	
Application Test	RAID Function	--	V	--	--	
Remark						
PASS						

A. Function Operation Test

1. Base Function Test

Test Item	Test method	Pass criteria	Result
Copy	OS : Windows 10 Utility : FileCompare	No error found in each stage	PASS
Delete			PASS
Restart			PASS
Compare			PASS
Suspend (S3)			PASS
Hibernate (S4)			PASS
Hot Plug			PASS

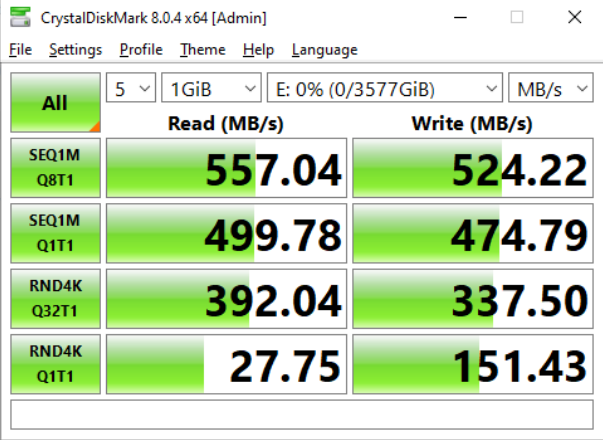
2. Format Test

Test Item	Test method	Pass criteria	Capacity
FAT32	OS : Windows 10 Utility : Format	No error when disk format, capacity meets specification	--
NTFS			3.49TB
exFAT			3.49TB

3. Product Info. Check

Test Item	Test method	Pass criteria	Result
S.M.A.R.T	OS : Windows 10 Utility : Apacer SSDWidget2.0	Product information meets specification	PASS

4. Performance

Test method	Result															
OS : Windows 10 Benchmark Tool : CrystalDiskMark	 <table border="1"> <thead> <tr> <th></th> <th>Read (MB/s)</th> <th>Write (MB/s)</th> </tr> </thead> <tbody> <tr> <td>All</td> <td>557.04</td> <td>524.22</td> </tr> <tr> <td>SEQ1M Q8T1</td> <td>499.78</td> <td>474.79</td> </tr> <tr> <td>RND4K Q32T1</td> <td>392.04</td> <td>337.50</td> </tr> <tr> <td>RND4K Q1T1</td> <td>27.75</td> <td>151.43</td> </tr> </tbody> </table>		Read (MB/s)	Write (MB/s)	All	557.04	524.22	SEQ1M Q8T1	499.78	474.79	RND4K Q32T1	392.04	337.50	RND4K Q1T1	27.75	151.43
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SEQ1M Q8T1	499.78	474.79														
RND4K Q32T1	392.04	337.50														
RND4K Q1T1	27.75	151.43														

Note : Results may differ from various flash configurations or host system setting.

5. System Install Test

Test Item	Test method	Pass criteria	Result
Windows 11	Use installation flash drive, each driver is installed	Install the system without error	PASS
Windows 10			PASS

B. System Stress Test

1. Warm Boot Test

Test Item	Test method	Pass criteria	Result
Warm Boot	Test cycle : 3000 cycles OS : Windows 10 Utility : PassMark Rebooter	The system not crash, no error found	PASS

2. Cold Boot Test

Test Item	Test method	Pass criteria	Result
Cold Boot	Test cycle : 3000 cycles OS : Windows 10 Utility : HD_Speed Apacer Power Box : Power ON : 3 mins Power OFF : 30 secs	The system not crash, reboot cycle and power box cycle should be the same	PASS

3. Sleep Test

Test Item	Test method	Pass criteria	Result
Sleep	Test cycle : 3000 cycles OS : Windows 10 Utility : PassMark Sleeper	The system not crash, no error found	PASS

4. IOMeter Test

Test Item	Test method	Pass criteria	Result
4K random script, 70% Write 30% Read	Test duration : 24 hours each item OS : Windows 10 Utility : Iometer 2010	No error found in each item	PASS
1MB random script, 100% Write			PASS
4 JEDEC script			PASS
Pseudo random/24 patterns			PASS

5. BurnIn Test

Test Item	Test method	Pass criteria	Result
BurnIn Test	Test duration : 168 hours OS :Windows 10 Utility : PassMark BurnInTest	The test result show PASS	PASS

C. Application Test

1. RAID Function Test

RAID Mode	Test Item	Test method	Pass criteria	Result
RAID 0	Install System	Test duration : BurnIn Test 24 hours Rebuild 40cycle	Install the system without error, system not crush, burnin test result show PASS	PASS
	BurnIn Test			PASS
RAID 1	Install System	OS : Windows 10		PASS
	BurnIn Test	Utility : PassMark BurnInTest		PASS
	Rebuild	IRST		PASS

D. Platform Compatibility Test

Pass criteria		
The target SSD can be recognized/detected on below test platforms (select one from the same chipset)		
Item	Chipset	M/B
1	Intel H97	ASUS H97M-E
2	Intel Z97	Gigabyte GA-Z97X-UD3H
3	Intel Z170	ASUS Z170-A
4		Gigabyte GA-Z170X-Gaming 3
5		Gigabyte GA-Z170MX-Gaming 5
6		Gigabyte GA-Z170-HD3P
7	Intel Z270	Asus PRIME Z270-A
8		Gigabyte GA-Z270X-Gaming 5
9	Intel H370	Asus TUF H370-PRO GAMING (WI-FI)
10		Gigabyte H370 HD3
11	Intel Z390	ASUS PRIME Z390-A
12		Gigabyte GA-Z390 AORUS PRO WIFI
13		Gigabyte Z390 AORUS ELITE
14	Intel Z490	ASUS PRIME Z490-A
15		Gigabyte Z490 AORUS Elite AC
16	AMD X570	ASUS TUF Gaming X570-Plus WiFi
17		Gigabyte X570 AORUS Elite WIFI
18	Intel Z590	Asus PRIME Z590-A

E. Test Software Information

Item	Test Software	Remark
1	CrystalDiskMark	
2	PassMark BurnInTest	
3	PassMark Rebooter	
4	PassMark Sleeper	
5	Iometer 2010	
6	Intel Rapid Storage Technology	
7	HD_Speed	
8	Apacer SSDWidget2.0	
9	Apacer SDSMART	For SD Card Product
10	Apacer USBSMART	For USB Product

F. Additional Qualification:

1. Environmental

- 1. RoHS Standard 2011/65/EU , 2015/863/EU
- 2. Other Environmental Standard EC/1907/2006 ,(EU)757/2010,(EC)850/2004
- 3. WEEE (By Product) 2012/19/EU
- 4. Battery Standard N/A
- 5. Packing Standard 94/62/EC, 2013/2/EU
- 6. Others GB/T 26572-2011

2. Certification

- 1. CE No. _____
- 2. FCC No. _____
- 3. BSMI No. _____
- 4. VCCC No. _____
- 5. C-tick No. _____
- 6. Other _____