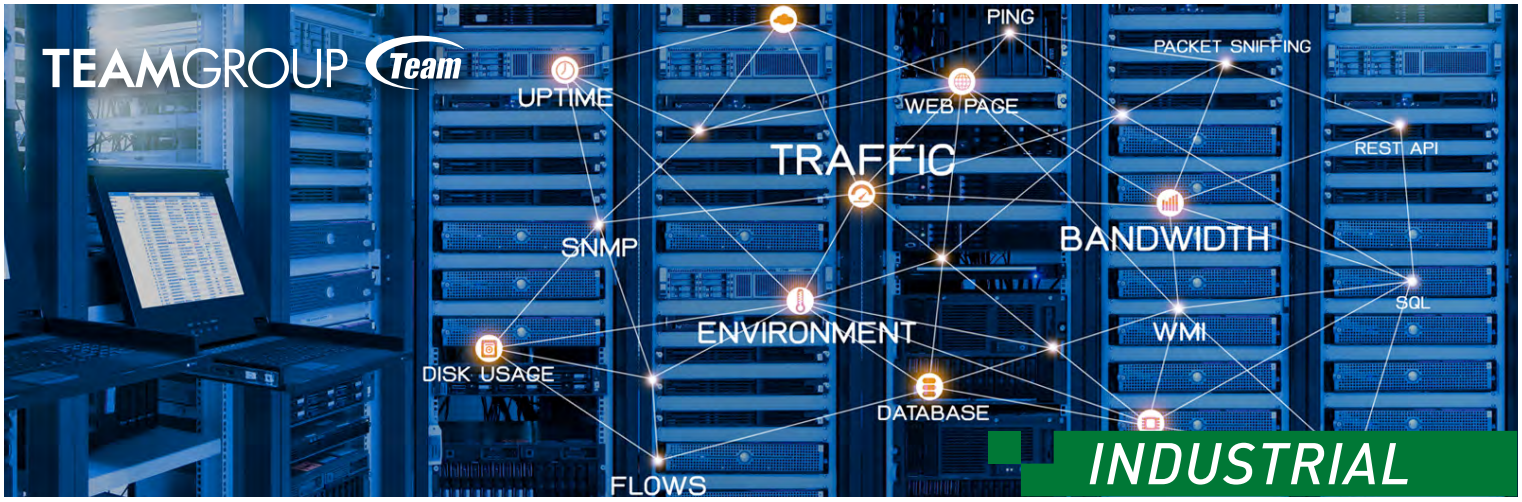

N75A-M80

N75G-M80

N75A-M80 / N75G-M80

M.2 PCIe Gen3 SSD

United States Patent / US11051392B2
Taiwan Invention Patent / I703921
China Utility Patent / CN 211019739 U
Taiwan Utility PATENT (number: M541645)

Industrial rugged series SSD, adopt wide temperature 3D TLC chip and DRAM cache controller. N75G-M80 SSD using patented ultra-thin graphene heat sink (thermal conduction technology) and N75A-M80 using patented aluminum fin heat sink (thermal diversion technology). The exceptional radiating performance offers N75A-M80 and N75G-M80 SSD a more stable performance and prolongs the service life effectively under industrial environments.

Main Feature

- Leading heat dissipation technology
- Durable Industrial-Grade 3D TLC
- Equipped with a cache DRAM
- Supports Error Correction Codes (ECC) Such as LDPC
- Global Wear Leveling Technology
- Supports S.M.A.R.T. Function (exclusive S.M.A.R.T. Tool software developed by TEAMGROUP)
- Supports AES256 bit Hardware Encryption/ TCG Opal 2.0 Security Subsystem Class
- Patented graphene/copper cooling technology-N75G
  United States Patent (No.: US 110,513,92 B2)
  Taiwan Invention Patent (No.: I703921)
  China Utility Model Patent (No.: CN 211019739 U)
- Patented aluminum fin cooling technology-N75A
  Taiwan Utility Patent (number: M541645)

Ordering Information

Model	Capacity	Team P/N
N75A-M80	128GB	TE128GN75AKM80-W
	256GB	TE256GN75AMM80-W
	512GB	TE512GN75AMM80-W
N75G-M80	128GB	TE128GN75GKM80-W
	256GB	TE256GN75GMM80-W
	512GB	TE512GN75GMM80-W

Specification

	N75A-M80	N75G-M80
Interface	PCIe 3.0 x4	
Flash Type	3D TLC NAND Flash	
Capacity	128GB / 256GB / 512GB[3]	
Sequential R/W	R/W: 3,500 / 2,100MB/s (Max.)[4]	
Working Voltage	DC 3.3V±5%	
Dimension	80.0(L) x 23.4(W) x 12.9(H) mm (with Aluminum heat sink)	80.0(L) x 22.0(W) x 3.8(H)mm (with Graphene heat sink)
Shock	• Operation: 50G/11ms (compliant with MIL-STD-202G Test condition A) • Non-operation: 1500G/0.5ms (compliant with MIL-STD-883K Test condition B)	
Vibration	• Operation: 7.69 Grms, 20~2000 Hz/random (compliant with MIL-STD-810G General) • Non-operation: 4.02 Grms, 15 ~ 2000 Hz/sine (compliant with MIL-STD-810G General)	
MTBF	> 3 million hours	
Storage Temperature	-55°C (-67°F) ~ 95°C (203°F)	
Operation Temperature	-40°C (-40°F) ~ 85°C (185°F)	
Humidity	5% ~ 95%	
Max. Power Consumption (Operation)	4.27W	
Max. Power Consumption (Non-operation)	0.82W	
P/E Cycle	3K	
Thermal Sensor	√	
External DRAM Buffer	√	
TRIM	√	
S.M.A.R.T.	√	
Warranty	3-year limited warranty	

RoHS COMPLIANT D33D08 RoHS

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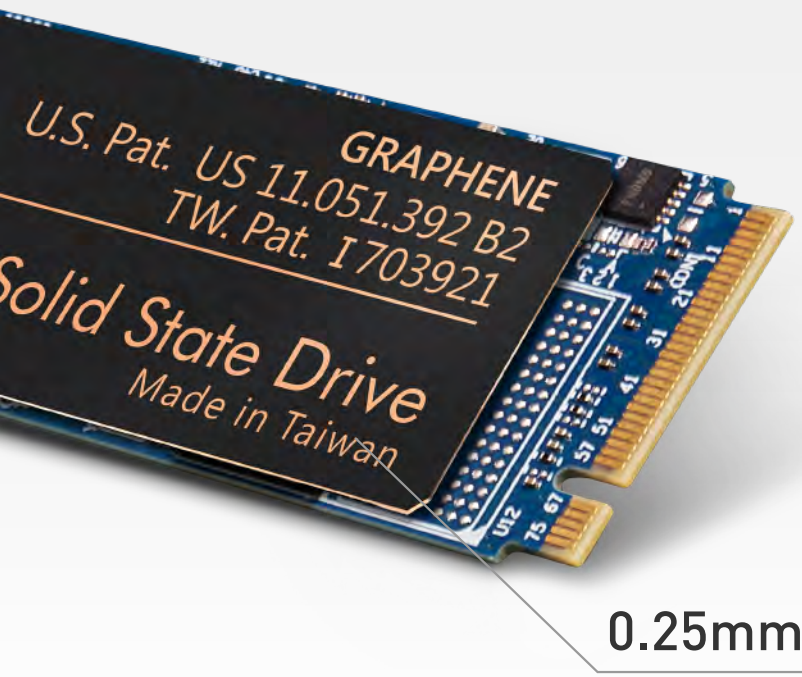


TAIWAN EXCELLENCE 2022

COMPUTEX d&i awards 2021

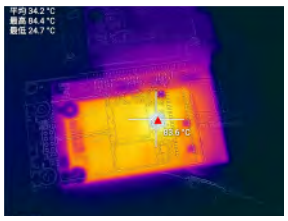
2021 Computex d&i awards
2022 Taiwan Excellence Awards

0.25mm ultra-thin techniques

Heat Dissipation Performance[1] [2]

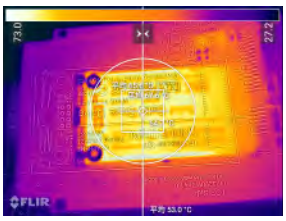
Time for Sequential R/W		Controller Test Measure	
		At Wide Temp. (85°C) Environment	At Room Temp. (28°C) Environment
M.2 PCIe SSD without heat sink	Idle Mode	66°C	37°C
	5min(°C)	92°C	84°C
	30min(°C)	91°C	84°C
N75G With Graphene heat sink	Idle Mode	63°C	33°C
	5min(°C)	89°C	73°C
	30min(°C)	87°C (4.4% better cooling)	77°C
N75A With Aluminum Fin heat sink	Idle Mode	51°C	29°C
	5min(°C)	83°C	49°C
	30min(°C)	82°C (9.9% better cooling)	64°C

W/O graphene heat sink



Heat is concentrated in the controller, which can easily cause the SSD to slow down or crash.

W/graphene heat sink



The heat is evenly dispersed on the graphene heat sink to maintain the normal operation of the SSD.

with graphene heat sink

8.3% cooling (At Room Temp.)

with Aluminum heat sink

23.8% cooling (At Room Temp.)

[1] Initial read/write stages, temperature continuous raising. The N75A-M80 is equipped with TEAMGROUP's patented aluminum fin heat sink which delivers better cooling with natural convection or strong air cooling (e.g., fans), and the N75G-M80 equipped with patented graphene heat sink to achieve thermal conduction . The SSD has endured rigorous testing in closed spaces and burn-in tests. Results showed that the heat sinks support stable performance and extended SSD life.

[2] SSD performance is affected by controller temperature, the data is derived from TEAMGROUP lab testing and was calculated by comparing the controller temperatures from an M.2 PCIe Gen3*4 SSD w/o cooling fin against this product. TEAMGROUP adopted a simulation approach for creating the testing environment by using a mask and no fans. The actual speeds may vary depending on the platform's hardware and software.

[3] 1GB=1,000,000,000 Bytes. The operating system will show 1,000,000,000 Bytes/1024/1024/1024=0.93GB.

[4] This product is compatible with Intel and AMD platforms, and the performance result is tested on a motherboard that supports PCIe 3.0 interface by the internal laboratory. The actual speed may vary depending on the software and hardware conditions of the platform.

• We reserve the right to modify product specifications without prior notice.

RoHS COMPLIANT FC CE D33D08 RoHS

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