

## **P845-M80** | *M.2 PCIe SSD*



PCIe Gen4\*4 M.2 SSD: P845-M80 of TEAMGROUP industrial product series adopts the latest NVMe 2.0 specification equipped with the new storage management mechanism, Endurance Group Management. It enables more versatile SSD planning in data access, further enhancing efficiency in SSD storage control and enabling the system to utilize SSD storage space more efficiently. It is equipped with the PCIe Gen4x4 transmission channel and uses the latest BiCs 112-layar NAND flash. The I/O performance increased by 50% in comparison with the 96-layer NAND flash. This new product supports SLC Caching technology, which drastically increases computing efficiency. It also integrates ECC, wear leveling, memory bad block management and dynamic thermal management mechanism. Through rigorous testing, it has passed the 3,000 times durability test and also fulfills the demand for low delay and high performance. It is expected to become the latest high-speed and reliable storage solution for industrial customers in 5G, edge computing, smart monitoring, smart healthcare, and future fields related to metaverse applications.t

## Main Feature

- High-performance PCIe Gen4x4 interface, supports the new generation NVMe 2.0 specification / in line with the new generation M.2 specification (length: 80mm)
- Adopts 112-layer 3D NAND, I/O performance increased by nearly 50% (\*compared with 96-layer 3D NAND)
- Supports SLC Caching technology and drastically increases computing efficiency
- Built-in LDPC and ECC for auto error correction
- S.M.A.R.T. Function (exclusive S.M.A.R.T. Tool software developed by TEAMGROUP)
- Great durability that has passed the 3,000 times durability test, effectively supports heavy workload applications
- Equipped with NAND flash bad block management and dynamic thermal management mechanism
- Supports 4K Page mapping for enhanced random access speed

## **Ordering Information**

P845-M80	Capacity	Team P/N
Standard Temp.	512GB	TE512GP845KM80
	1TB	TE1TP845KM80
	2TB	TE2TP845KM80

P845-M80W	Capacity	Team P/N
Wide Temp.	512GB	TE512GP845KM80-W
	1TB	TE1TP845KM80-W
	2TB	TE2TP845KM80-W

## **Specification**

Interface	PCIe 4.0x4
Flash Type	3D TLC
Capacity	512GB/1TB/2TB <sup>[1]</sup>
Sequential R/W	R/W: 4,580 / 4,255MB/s (Max.) <sup>[2]</sup>
Max. Power Consumption	3.3V x mA (operation)
Dimension	80(L) x 22.0(W) x 3.8(H) mm
Shock	<ul> <li>Operation: 50G / 11ms (compliant with MIL-STD-202G Test condition A)</li> </ul>
	• Non-operation: 1,500G / 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	Standard Temp.: 0°C (32°F) ~ +70°C (158°F) Wide Temp.: -40°C (-40°F) ~ +85°C (185°F)
P/E Cycle	ЗК
Thermal Sensor	V
External Dram Buffer	Х
TRIM	V
S.M.A.R.T.	V
Warranty	3-year limited warranty <sup>[3]</sup>

[1] 1GB=1,000,000,000 Bytes. In OS system, it would be displayed as 1,000,000,000 Bytes/1024/1024/1024 =0.93GB

[2] Transmission speed will vary according to different hardware/software conditions, therefore the data can only use for basic reference.

(3) The warranty period of solid-state drives (SSD) products is divided into a warranty of years and a warranty of the number of disk writes. One of the two conditions (the earlier one is the standard). Any improper action that causes the flash to exceed the lifespan limitation will no t be warranted. (Erase Count MLC:3,000 times, SLC: 60,000 times, High Endurance 3D TLC(10K): 10,000 times, In dustrial 3D TLC: 3,000 times.) The erase count judge standard is to use TEAMGROUP official released S.M.A.R.T. Tool.

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