



S745-M42 | M.2 SATA SSD



TEAMGROUP's industrial S745-M42 SSD is space-saving M.2 form factor, with the SATA III 6Gb/s transmission interface, uses ES-level 3D NAND Flash, and adopts 112-layer flash memory which increases I/O efficiency by nearly 50% from the former 96-layer flash memory. The SSD is also equipped with ECC, TRIM commands, global wear leveling technology, end-to-end data protection, and bad block management. TEAMGROUP testing reveals that the SSD is a durable-grade SSD that supports up to 3,000 wear leveling counts while also delivering low latency and high efficiency. The SSD can be applied to AIoT, 5G, edge computing, smart monitoring, smart healthcare, the metaverse, and other future applications and can become the most reliable, optimal storage solution for industrial clients.

Main Feature

- Equipped with 112-layer 3D NAND with I/O efficiency increased up to 50%
- Built-in LDPC ECC for error correction
- Supports S.M.A.R.T. Function (exclusive smart tool software developed by TEAMGROUP)
- Global wear leveling technology
- Supports NCQ
- Supports ATA
- Supports TRIM Commands
- Bad Block Managements

Ordering Information

S745-M42	Capacity	Team P/N
Standard Temp.	64GB	TE64GS745KM42
	128GB	TE128GS745KM42
	256GB	TE256GS745KM42
	512GB	TE512GS745KM42
	1TB	TE1TS745KM42

Specification

Interface	SATA III 6.0Gb/s
Flash Type	3D TLC
Capacity	64G/128GB/256GB/512GB/1TB ^[1]
Sequential R/W	R/W: 520 / 485MB/s (Max.) ^[2]
Max. Power consumption	3.3V±5%
Dimension	42.0(L) x 22.0(W) x 3.5(H) mm
Shock	• Operation: 50G / 11ms (compliant with MIL-STD-202G Test condition A) • Non-operation: 1,500G / 0.5ms (compliant with MIL-STD-883K Test condition B)
Vibration	• Operation: 7.69 Grms, 20~2,000 Hz / random (compliant with MIL-STD-810G General) • Non-operation: 4.02 Grms, 15 ~ 2,000 Hz / sine (compliant with MIL-STD-810G General)
MTBF	> 3 million hours
Storage Temperature	-55°C ~ +95°C
Operation Temperature	• Standard Temp.: 0°C (32°F) ~ +70°C (158°F)
P/E Cycle	3K
Thermal Sensor	✓
External DRAM Buffer	x
TRIM	✓
S.M.A.R.T.	✓
Warranty	3-year limited warranty ^[3]

[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 not be warranted. (Erase Count MLC: 3,000 times, SLC: 60,000 times, High Endurance 3D TLC(10K): 10,000 times, Industrial 3D TLC: 3,000 times) The erase count judge standard is to use TEAMGROUP official released S.M.A.R.T. Tool.

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