

M.2 2280 PCIe Gen4 NVMe SSD

TAA COMPLIANT

PCIe GEN4 X4

This is a high-performance NVMe SSD delivering up to 7400 MB/s read and 6400 MB/s write over PCIe Gen4 x4. Designed for commercial client applications, it combines LDPC + RAID ECC with TLC NAND flash in the M.2 2280 form factor.

Top Features

- PCIe Gen4 x4
 - RoHS compliant
 - LDPC + RAID ECC algorithm
 - All SRAM ECC protection
 - Secure Erase & Crypto Erase
- Dynamic Wear Leveling & Bad Block Management
 - Thermal Throttling with on-die sensor
 - SmartRefresh™ data path protection
 - MTBF: 1,500,000 hours

Available Models

Part Number	Capacity	Form Factor	Interface	TBW
DIG-P4M20G04-00512	512 GB	M.2 2280-S2-M	PCIe Gen4 x4	300 TB
DIG-P4M20G04-01000	1 TB	M.2 2280-S2-M	PCIe Gen4 x4	600 TB
DIG-P4M20G04-02000	2 TB	M.2 2280-S2-M	PCIe Gen4 x4	1200 TB

Performance Summary

Capacity	Seq. Read	Seq. Write	Rand. Read	Rand. Write	Flash
512 GB	7200 MB/s	4300 MB/s	530K IOPS	750K IOPS	TLC
1 TB	7400 MB/s	6100 MB/s	1000K IOPS	850K IOPS	TLC
2 TB	7400 MB/s	6400 MB/s	1000K IOPS	950K IOPS	TLC

Note: Sequential performance measured with CrystalDiskMark 8.0, 1 GB range, 5 test count, Q8T1. Random performance measured with IOMeter, 1 GB range, 4K data size, QD=32T16. Platform: AMD Ryzen 7 5800X / AMD X570 / Win10 64-bit v1809. Measured at fresh-out-of-box state. Based on firmware ERFM1xxx-series; subject to change without notice. Deviations <5% will not be updated.

Reliability & Environmental

Parameter	Rating
MTBF	1,500,000 hours
UBER	< 1 sector per 10 ¹⁶ bits read
Op. Temp.	0°C to 70°C (case temp via S.M.A.R.T.)
Storage Temp.	-40°C to 85°C
Op. Humidity	Up to 90% RH @ 40°C
Shock (non-op)	1500 G
Vibration (non-op)	20–2000 Hz / up to 20 G
ESD	±4 kV (EN 61000-4-2 / IEC 61000-4-2)
Max Power (2 TB)	5.70 W (Active)
Idle Power (PS3)	50 mW
L1.2 Power (PS4)	< 5 mW
Op. Voltage	3.14 V – 3.47 V
Dimensions	80.00 × 22.00 × 2.15 mm
TBW (512 GB / 1 TB / 2 TB)	300 TB / 600 TB / 1200 TB

Compliance

- RoHS — Restriction of Hazardous Substances
- TAA Compliant
- CE, FCC, RCM

 **Contact:** sales@digistor.com | support@digistor.com |
©2023 DigiStor. All Rights Reserved. — Specifications subject to change without notice.

Security Capabilities

- Secure Erase — NVMe format command, writes 0x00 to all blocks
- Crypto Erase — resets cryptographic key to render data unrecoverable
- Physical Presence SID (PSID) — 32-character revert string on label
- All SRAM ECC protection — data path integrity
- Drive log — continuous event logging for diagnostics
- Host Memory Buffer (HMB) support
- Read Only Mode (End of Life) — AER event notification to host
- Media Wear Indicator via SMART Attribute byte index [5]
- Firmware Update — field upgradeable via NVMe Firmware Activate/Download commands

Flash Management Technology

LDPC + RAID ECC

Detects and corrects bit errors during read operations, protecting data from flash cell deterioration.

Dynamic Wear Leveling

Evenly distributes P/E cycles across all flash blocks to maximize NAND endurance and device lifetime.

SLC Caching

Dynamic SLC cache delivers burst write performance and improves endurance for consumer workloads.

SmartRefresh™

Proactively refreshes stored data to prevent retention loss and data corruption over drive lifetime.

Typical Applications

- Commercial client desktops and laptops requiring high-speed NVMe storage
- Workstation builds leveraging PCIe Gen4 bandwidth for content creation
- Edge computing appliances needing compact M.2 2280 form factor