

# RoHS Compliant PCI Express Flash Drive

## Consumer AS2280Q4X Product Specifications



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**Version 1.0**

**Apacer Technology Inc.**

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## Specifications Overview:

- **PCIe Interface**
  - Compliant with NVMe 1.3
  - Compatible with PCIe Gen4 x4 interface
- **Capacity**
  - 512GB
  - 1, 2, 4TB
- **Performance<sup>1</sup>**
  - Sequential Read/Write:
    - 512GB: Up to 4500 / 2500 MB/s
    - 1TB: Up to 5000 / 4400 MB/s
    - 2TB: Up to 5000 / 4400 MB/s
    - 4TB: Up to 5000 / 4400 MB/s
  - 4K Random Read/Write
    - 512GB : Up to 150K / 300K IOPS
    - 1TB : Up to 750K / 750K IOPS
    - 2TB : Up to 750K / 750K IOPS
    - 4TB : Up to 750K / 750K IOPS
- **Flash Management**
  - Low-Density Parity-Check (LDPC) Code
  - Global Wear Leveling
  - Bad block management
  - Flash Translation Layer: Page Mapping
  - Power Failure Management
  - S.M.A.R.T
  - TRIM
- **NAND Flash Type:** 3D NAND
- **MTBF:** >1,500,000 hours
- **Endurance (in Terabytes Written: TBW)**
  - 512GB: 300 TBW
  - 1TB: 600 TBW
  - 2TB: 1200 TBW
  - 4TB: 1200 TBW
- **Temperature Range**
  - Operating: 0°C to 70°C
  - Storage: -40°C to 85°C
- **Supply Voltage**
  - 3.3V ± 5%
- **Power Consumption<sup>1</sup>**
  - Active mode (Max.): 5400 mW
  - Idle mode: 850 mW
- **Connector Type**
  - 75-pin M.2 module pinout
- **Physical Characteristics**
  - Form factor: M.2 2280
  - Dimensions (unit: mm):
    - Single-sided: (L)80.00 x (W)22.00 x (H)2.25<sub>(max.)</sub>
    - Double-sided: (L)80.00 x (W)22.00 x (H)3.5<sub>(max.)</sub>
  - Net weight (unit: g ± 5%):
    - Single-sided: 7.6
    - Double-sided: 10.2
- **Shock & Vibration<sup>2</sup>**
  - Shock: 1,500 G
  - Vibration:
    - Frequency/Displacement: 20Hz~80Hz/1.52mm
    - Frequency/Acceleration: 80Hz~2000Hz/20G
- **RoHS Compliant**

Notes:

1. Varies from capacities. The values for performances and power consumptions presented are typical and may vary depending on flash configurations or platform settings.
2. Non-operating

## Product Ordering Information

Capacity	Bulk P/N	Retail P/N
512GB	AP512GAS2280Q4X	AP512GAS2280Q4X-1
1TB	AP1TBAS2280Q4X	AP1TBAS2280Q4X-1
2TB	AP2TBAS2280Q4X	AP2TBAS2280Q4X-1
4TB	AP4TBAS2280Q4X	AP4TBAS2280Q4X-1

# Revision History

Revision	Description	Date
1.0	Initial release	1/2/2024

## Global Presence

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