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RoHS Compliant

PCI Express Flash Drive

Consumer AS2280P4 Product Specifications

May 23, 2025

Version 1.3

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Specifications Overview:

- **PCIe Interface**
  - Compliant with NVMe 1.3
  - Compatible with PCIe Gen3 x4 interface
- **Capacity**
  - 256, 512 GB
  - 1 TB
- **Performance**[1]
  - Sequential Read/Write
    - 256 GB: Up to 2,100/1,000 MB/s
    - 512 GB: Up to 2,100/1,500 MB/s
    - 1 TB: Up to 3,000/2,000 MB/s
  - 4K Random Read/Write
    - 256 GB: Up to 165K/265K IOPS
    - 512 GB: Up to 300K/420K IOPS
    - 1 TB: Up to 530K/420K IOPS
- **Flash Management**
  - Global Wear Leveling
  - Bad Block Management
  - S.M.A.R.T.
  - Power Failure Management
  - TRIM
- **NAND Flash Type:** 3D TLC
- **MTBF:** 1,500,000 hours
- **Endurance (in Terabytes Written: TBW)**
  - 256 GB: > 200 TBW
  - 512 GB: > 400 TB
  - 1 TB: > 800 TB
- **Temperature Range**
  - Operating : 0°C to 70°C
  - Storage : -40°C to 85°C
- **Supply Voltage**
  - 3.3V ± 5%
- **Power Consumption**[1]
  - Active mode (Max.): 4,000 mW
  - Power State (Max.): 70 mW
- **Connector Type**
  - 75-pin M.2 module pinout
- **Physical Characteristics**
  - Form factor: M.2 2280
  - Dimensions (unit: mm):
    - Single-sided: 80.00 x 22.00 x 2.25(max.)
    - Double-sided: 80.00 x 22.00 x 3.50(max.)
  - Net weight: 6.8g± 5%
- **Shock & Vibration**[2]
  - 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 performance and power consumption presented are typical and may vary depending on flash configurations or platform settings.
2. Non-operating

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Product Ordering Information

Capacity	Bulk P/N	Retail P/N
256GB	AP256GAS2280P4	AP256GAS2280P4-1
512GB	AP512GAS2280P4	AP512GAS2280P4-1
1TB	AP1TBAS2280P4	AP1TBAS2280P4-1

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Revision History

Revision	Description	Date
1.0	Initial release	47/9/2019
1.1	Added 256GB, 512GB, and 1TB support	5/20/2020
1.2	Updated performance for 240GB and 256GB	3/25/2021
1.3	- Removed 240GB and 480GB support - Updated product photo on the cover page - Updated sequential write performance for 256GB - Updated dimensions and weight	5/23/2025

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Global Presence

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