

2.5" SATA SSD ASD+S7T Series

2.5" SATA SSD for Industrial Embedded Applications

Preliminary



Features

- Advanced Flash Management including static and dynamic wear leveling, bad block management, TRIM, SMART, over-provision, and firmware update
- TCG OPAL-activated SSD supports PSID
- Low Power Management including DEVSLP mode (optional) and DIPM/HIPM mode
- Operating temperature range: up to -25°C to 85°C
- MTBF of more than 3,000,000 hours
- Vibration and shock resistance
- RoHS compliant

Introduction

ADLINK's industrial 2.5" SATA SSD Series delivers all the advantages of today's flash disk technologies with SATA 6Gb/s interface, and is fully compliant with the standard 2.5" 7mm form factor. Capacities of 128GB to 2TB are available and read/write speeds of up to 550MB/s and 510MB/s respectively are supported.

Ordering Information

| | |
|------------------|---|
| ASDS25SHE-128GT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 128GB, -25°C ~ 85°C |
| ASDS25SHE-256GT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 256GB, -25°C ~ 85°C |
| ASDS25SHE-512GT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 512GB, -25°C ~ 85°C |
| ASDS25SHE-1TBT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 1TB, -25°C ~ 85°C |
| ASDS25SHE-2TBT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 2TB, -25°C ~ 85°C |
| ASDS25SHI-128GT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 128GB, -40°C ~ 85°C |
| ASDS25SHI-256GT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 256GB, -40°C ~ 85°C |
| ASDS25SHI-512GT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 512GB, -40°C ~ 85°C |
| ASDS25SHI-1TBT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 1TB, -40°C ~ 85°C |
| ASDS25SHI-2TBT0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 3D TLC, 2TB, -40°C ~ 85°C |

Ordering Information

| | |
|------------------|---|
| ASDS25SHE-32GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 32GB, -25°C ~ 85°C |
| ASDS25SHE-64GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 64GB, -25°C ~ 85°C |
| ASDS25SHE-128GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 128GB, -25°C ~ 85°C |
| ASDS25SHE-256GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 256GB, -25°C ~ 85°C |
| ASDS25SHE-512GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 512GB, -25°C ~ 85°C |
| ASDS25SHI-32GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 32GB, -40°C ~ 85°C |
| ASDS25SHI-64GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 64GB, -40°C ~ 85°C |
| ASDS25SHI-128GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 128GB, -40°C ~ 85°C |
| ASDS25SHI-256GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 256GB, -40°C ~ 85°C |
| ASDS25SHI-512GP0 | 2.5" SATA SSD ASD+S7T Series, BiCS5 pSLC, 512GB, -40°C ~ 85°C |

Specifications

| Model | ASD+S7T Series | |
|--------------------------------|--|--|
| Capacity ¹ | 128GB to 2TB | 32GB to 512GB |
| Form Factor | 2.5" SATA 100.00mm(L) x 69.85mm(W) x 7.00mm(H) | |
| SATA Interface | SATA Revision 3.1 SATA 1.5Gb/s, 3Gb/s, and 6Gb/s interface | |
| Flash Type | BiCS5 3D TLC | BiCS5 pSLC |
| Performance ⁴ | Read: up to 550 MB/s Write: up to 510 MB/s Random 4K Read: > 44,500 IOPS Random 4K Write: > 78,500 IOPS | Read: up to 550 MB/s Write: up to 510 MB/s Random 4K Read: > 49,500 IOPS Random 4K Write: > 78,500 IOPS |
| Power Consumption | Active mode: <=1750mW Idle mode: <=215mW | |
| MTBF | More than 3,000,000 hours | |
| Advanced Flash Management | Advanced Wear Leveling Bad Block Management TRIM S.M.A.R.T Over Provision Firmware Update | |
| Security | Secure Erase Write Protect Crypto Erase Physical Presence SID (PSID) | |
| Low Power Management | DEVSLP Mode (Optional) DIPM/HIPM Mode | |
| Temperature Range ² | Operating ³ | -25°C to 85°C |
| | Storage | -40°C to 85°C |
| Environment | Vibration: 20Hz to 80Hz / 1.52mm 80Hz to 2000Hz / 20Gp-p Shock (operation/non-operating): 1500G @0.5ms | |
| RoHS compliant | Yes | |

Notes:

- Other capacities may be supported in the future.
- As measured by SMART temperature. Active airflow is recommended within the system for maintaining proper device operating temperature on heavier workloads.
- Actual operating temperature specification may vary by model.
- Performance benchmarked by CrystalDiskMark