2.5" SATA SSD ASD+S2D Series

2.5" SATA DDR4 SSD for Industrial Embedded Applications

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:
  C-grade : 0°C ~ 70°C
  I-grade : -40°C ~ 85°C
- Hardware Power Loss Protection (HW PLP)
- MTBF of more than 1,500,000 hours
- Vibration and shock resistance
- RoHS compliant

Introduction

ADLINK's industrial 2.5" SATA SSD ASD+S2D Series delivers all the advantages of today's flash disk technologies with SATA 6Gb/ s interface power loss protection, and is fully compliant with the standard 2.5" 7mm form factor. Capacities of 256GB to 8TB are available and read/write speeds of up to 550MB/s and 520MB/s respectively are supported.

Ordering Information

ASDS25SCC-2TBT0	2.5" SATA SSD ASD+S2D Series, BiCS5 3D TLC, 2TB, 0℃ ~ 70℃
ASDS25SCC-4TBT0	2.5" SATA SSD ASD+S2D Series, BICS5 3D TLC, 4TB, 0℃ ~ 70℃
ASDS25SCC-8TBT0	2.5" SATA SSD ASD+S2D Series, BiCS5 3D TLC, 8TB, 0℃ ~ 70℃
ASDS25SCI-2TBT0	2.5" SATA SSD ASD+S2D Series, BiCS5 3D TLC, 2TB, -40℃ ~ 85℃
ASDS25SCI-4TBT0	2.5" SATA SSD ASD+S2D Series, BiCS5 3D TLC, 4TB, -40℃ ~ 85℃
ASDS25SCI-8TBT0	2.5" SATA SSD ASD+S2D Series, BiCS5 3D TLC, 8TB, -40℃ ~ 85℃
ASDS25SCC-256GTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 256GB, 0℃ ~ 70℃
ASDS25SCC-512GTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 512GB, 0℃ ~ 70℃
ASDS25SCC-1TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 1TB, 0℃ ~ 70℃
ASDS25SCC-2TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 2TB, 0℃ ~ 70℃
ASDS25SCC-4TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 4TB, 0℃ ~ 70℃
ASDS25SCC-8TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 8TB, 0℃ ~ 70℃
ASDS25SCI-256GTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 256GB, -40℃ ~ 85℃
ASDS25SCI-512GTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 512GB, -40℃ ~ 85℃
ASDS25SCI-1TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 1TB, -40℃ ~ 85℃
ASDS25SCI-2TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 2TB, -40℃ ~ 85℃
ASDS25SCI-4TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 4TB, -40℃ ~ 85℃
ASDS25SCI-8TBTF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BICS5 3D TLC, 8TB, -40℃ ~ 85℃
ASDS25SCC-64GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 64GB, 0℃ ~ 70℃
ASDS25SCC-128GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 128GB, 0℃ ~ 70℃
ASDS25SCC-256GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 256GB, 0℃ ~ 70℃
ASDS25SCC-512GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 512GB, 0℃ ~ 70℃
ASDS25SCC-1TBP0	2.5" SATA SSD ASD+S2D Series, BICS5 pSLC, 1TB, 0℃ ~ 70℃
ASDS25SCC-2TBP0	2.5" SATA SSD ASD+S2D Series, BICS5 pSLC, 2TB, 0℃ ~ 70℃
ASDS25SCI-64GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 64GB, -40℃ ~ 85℃
ASDS25SCI-128GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 128GB, -40℃ ~ 85℃
ASDS25SCI-256GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 256B, -40℃ ~ 85℃
ASDS25SCI-512GP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 512GB, -40℃ ~ 85℃
ASDS25SCI-1TBP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 1TB, -40℃ ~ 85℃
ASDS25SCI-2TBP0	2.5" SATA SSD ASD+S2D Series, BiCS5 pSLC, 2TB, -40℃ ~ 85℃
ASDS25SCC-64GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 64GB, 0℃ ~ 70℃
ASDS25SCC-128GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 128GB, 0℃ ~ 70℃
ASDS25SCC-256GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 256GB, 0℃ ~ 70℃
ASDS25SCC-512GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 512GB, 0℃ ~ 70℃
ASDS25SCC-1TBPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 1TB, 0℃ ~ 70℃
ASDS25SCC-2TBPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 2TB, 0℃ ~ 70℃
ASDS25SCI-64GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 64GB, -40℃ ~ 85℃
ASDS25SCI-128GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 128GB, -40℃ ~ 85℃
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ASDS25SCI-512GPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 512GB, -40℃ ~ 85℃
ASDS25SCI-1TBPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 1TB, -40℃ ~ 85℃
ASDS25SCI-2TBPF	2.5" SATA SSD ASD+S2D Series, with P-Fail, BiCS5 pSLC, 2TB, -40℃ ~ 85℃

Specifications

Model	ASD+S2D Series			
Capacity[1]	2TB to 8TB	256GB to 8TB	64GB to 2TB	
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 520 MB/s Random 4K Read: > 98K IOPS Random 4K Write: > 88K IOPS		Read: up to 550 MB/s Write: up to 530 MB/s Random 4K Read: > 98K IOPS Random 4K Write: > 88K IOPS	
Power Consumption	Active Write: <= 3,900 mW Active Read: <= 2,600 mW Idle mode: <=1,600mW		Active Write: <= 2,900 mW Active Read: <= 2,600 mW Idle mode: <=1,500mW	
MTBF	More than 1,500,000 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)	Secure Erase Write Protect Crypto Erase Physical Presence SID (PSID) Power Loss Protection (PLP)	Secure Erase Write Protect Crypto Erase Physical Presence SID (PSID)	Secure Erase Write Protect Crypto Erase Physical Presence SID (PSID) Power Loss Protection (PLP)
Temperature Range[2] — Operating[3]	C-grade : 0°C ~ 70°C I-grade : -40°C ~ 85°C			
Temperature Range[2] — 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:
1. Other capacities may be supported in the future.
2. As measured by SMART temperature. Active airflow is recommended within the system for maintaining proper device operating temperature on heavier workloads.
3. Actual operating temperature specification may vary by model.
4. Performance benchmarked by CrystalDiskMark.

Read: up to 550 MB/s Write: up to 520 MB/s
Random 4K Read: > 98K IOPS Random 4K Write: > 88K IOPS