

Industrial 3D NAND USB 3.0 Drive

UFD350 SERIES

USB 3.2 Gen 1

3K PE Cycles

3D NAND



PRODUCT FEATURES

- 3D TLC Flash Technology with 3K PE cycles endurance
- Global Wear Leveling, Static & Dynamic Wear Leveling and Early weak block retirement to ensure an even level of wearing out
- LDPC ECC engine with hardware decode, read retry & software decode capable to guarantee 3K PE cycles for 3D NAND
- Auto Read-Refresh, Read retry, Garbage collection to ensure reliability and optimized performance
- SP Toolbox utility program to monitor Overall health status, Power Cycle count, Bad block status including initial bad blocks, later bad blocks and spare blocks, Erase counts, ECC Uncorrectable counts.
- Support CD-ROM mode , password protect and write protect (by request)

PRODUCT SUMMARY

- Capacities : 32GB, 64GB, 128GB, 256GB
- Interface : USB Type-A connector
- Compliance : USB-IF USB 3.2 Gen 1x1
- Performance :

	32GB	64GB	128GB	256GB
Sequential Read (MB/s Max.)	240	240	240	240
Sequential Write (MB/s Max.)	45	45	80	100

* Actual performance may vary based on the specific model and capacity

- Operating Temperature Range :
Normal: 0 °C to 70 °C
- Storage Temperature Range: -55 °C to 95 °C
- Operating Voltage: 5.0 V ± 10%
- Power Consumption (Maximum, unit: mA)

Read : 250mA

Write: 150mA

Idle : 80 mA

Suspend: 2 mA

* Actual value may vary based on the specific model and capacity

- Data Retention @40 °C : 10 Years @ Life Begin; 1 Year @ Life End
- Endurance in Tera Bytes Written (TBW) : (unit: TB)

Workload	32GB	64GB	128GB	256GB
Sequential	72	144	288	577

TBW is estimated by formula $TBW = (Capacity \times PE \text{ Cycles}) \times (1+OP) \times (WLE) / (WAF)$

OP (Over Provision) = (Physical Capacity / Logical Capacity)-1

WAF = Write Amplification Factor

WLE = Wear Leveling Efficiency could be different depended on the workload or usage containing data size and access rate.

Sequential workload: Sequential write workload which is generated by VDBENCH script and tested by VDBENCH

- LDPC ECC engine to ensure reliable 3K PE cycles with 3D TLC NAND Flash
- Mean Time Between Failure: > =2,000,000 hours