



Features

- Enhanced MLC-NAND flash by sophisticated aSLC firmware
- M.2 2242 / 2280 form-factor
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Support LDPC (Low Density Parity Check) ECC algorithm.
- Support S.M.A.R.T. command set and utility
- Support Power Loss Protection
- M.2 2242 capacities from 8GB up to 128GB
- M.2 2280 capacities from 8GB up to 256GB

Specification

- **Compatibility** SATA Revision 3.2
ATA-8 ACS4 command set
- **Declarations** RoHS & REACH compliant
- **Flash technology** MLC-NAND flash technology
- **Form-factor** M.2 2242-D3-B-M
M.2 2280-D5-B-M
- **Host interface** Compatible with PCI Express™ M.2 B + M Key
- **Performance**
 - **Data transfer rate** SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s
 - **Sequential read** 550 MB/sec (Max.)
 - **Sequential write** 490 MB/sec (Max.)
- **Environmental**
 - **Operating temp.** STD. 0°C~+70°C/W.T. -40°C~+85°C
 - **Non-operating temp.** STD. -20°C~+80°C/W.T. -50°C~+95°C
 - **Humidity** 10% ~ 95% non-condensing
 - **Vibration** 80 Hz to 2K Hz, 20G, 3axes
 - **Shock** 0.5ms, 1500G, 3 axes
 - **Altitude** 70,000 feet

- **Power consumption**
 - **Power requirement** +3.3V ± 5%
 - **Reading mode** 1,500 mW (Max.)
 - **Writing mode** 2,650 mW (Max.)
 - **Idle mode** 318 mW (Max.)
- **Reliability**
 - **Wear-leveling** Static and Dynamic wear-leveling algorithms
Up to 1,510 TBW at 256GB Capacity
(Client workload by JESD-219A)
 - **TBW** Up to 3,000 times
- **Erase counts** Up to 3,000 times
- **ECC** LDPC (Low Density Parity Check)
- **Physical specification**
 - **Weight (Max.)** 2242 : 5g
2280 : 8g
 - **Dimension (WxL)** 2242 : 22.00 x 42.00 (mm)
2280 : 22.00 x 80.00 (mm)
- **Conformal coating** Optional
- **Warranty** 2 years or within 20,000 erasing counts

Part Number List

M.2 2242 SATA Module			M.2 2280 SATA Module		
Capacity	0°C~+70°C	-40°C~+85°C	Capacity	0°C~+70°C	-40°C~+85°C
8GB	SBMDS008G-PKCTMAS4BM	WBMDS008G-PKCTMAS4BMC	8GB	SBMDS008G-PKCTMAS8BM	WBMDS008G-PKCTMAS8BMC
16GB	SBMDS016G-PKCTMAS4BM	WBMDS016G-PKCTMAS4BMC	16GB	SBMDS016G-PKCTMAS8BM	WBMDS016G-PKCTMAS8BMC
32GB	SBMDS032G-PKCTMAS4BM	WBMDS032G-PKCTMAS4BMC	32GB	SBMDS032G-PKCTMAS8BM	WBMDS032G-PKCTMAS8BMC
64GB	SBMDS064G-PKCTMAS4BM	WBMDS064G-PKCTMAS4BMC	64GB	SBMDS064G-PKCTMAS8BM	WBMDS064G-PKCTMAS8BMC
128GB	SBMDS128G-PKCTMAS4BM	WBMDS128G-PKCTMAS4BMC	128GB	SBMDS128G-PKCTMAS8BM	WBMDS128G-PKCTMAS8BMC
			256GB	SBMDS256G-PKCTMAS8BM	WBMDS256G-PKCTMAS8BMC

Part Number Decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
W	B	M	D	S	1	2	8	G	—	P	K	C	T	M	A	S	4	B	M
W	B	M	D	S	2	5	6	G	—	P	K	C	T	M	A	S	8	B	M

- X1 Grade**
S : Standard grade operating temp. 0°C~+70°C
W : Wide temp. grade operating temp. -40°C~+85°C
- X2 The material of casing**
B : Bare (without casing)
- X3 X4 X5 Product category**
MDS : M.2 SATA SSD
- X6 X7 X8 X9 Capacity**
008G : 8GB 064G : 64GB
016G : 16GB 128G : 128GB
032G : 32GB 256G : 256GB
- X11 Controller**
P : PHANES Series
- X12 Controller version**
A, B, C, D.....
- X13 Controller grade**
C : Commercial grade
- X14 Flash IC brand**
T : Toshiba NAND flash IC
- X15 Flash IC type**
M : MLC-NAND flash IC
- X16 X17 aSLC Technology**
AS : aSLC Technology extends MLC products' lifespan
- X18 X19 X20 Form-factor type**
4 : 2242 form factor
8 : 2280 form factor
BM : B + M Key
- X21 Reserved for specific requirements**
Blank : Standard product w/o thermal sensor and conformal-coating
T : Thermal Sensor (optional)
C : Conformal coating (optional)

SLC
aSLC
MLC
3D-NAND
DRAM Module
Adapter
Card-drive