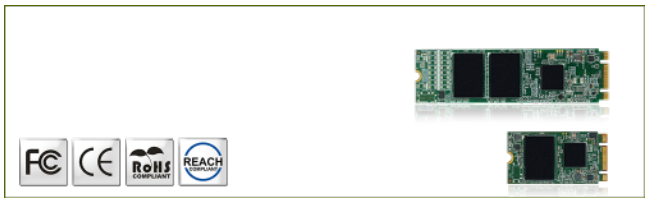

❖ Features

- MLC-NAND flash technology
- M.2 2242 / 2280 form-factor
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Support LDPC (Low Density Parity Check) ECC algorithm.
- Ultra-high random read/write speed
- Support S.M.A.R.T. command set and utility
- M.2 2242 capacities from 32GB up to 256GB
- M.2 2280 capacities from 32GB up to 512GB

❖ Specification

■ **Compatibility**	NVM ExpressTM 1.3 Standard & PCI Express® Base Specification Rev 3.0
■ **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**	M.2 keying notches in B and M positions
■ **Performance**	
➢ **Data transfer rate**	PCI Gen3 x 2 NVMe interface(2242/2280)
➢ **Sequential read**	2242: 1,300 MB/s (Max.); 2280: 1,200 MB/s(Max.)
➢ **Sequential write**	2242: 340 MB/s (Max.); 2280: 480 MB/s(Max.)
➢ **4KB random read**	2242:51K IOPS (Max.); 2280: 51K IOPS (Max.)
➢ **4KB random write**	2242: 47K IOPS (Max.); 2280: 50K IOPS (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**	70 Hz to 2K Hz, 20G, 3 axes
➢ **Shock**	0.5ms, 1500G, 3 axes
➢ **Altitude**	70,000 feet

■ **Power consumption**	
➢ **Power requirement**	+3.3V ± 5%
➢ **Reading mode**	2242 : 755 mA (Max.); 2280 : 845 mA (Max.)
➢ **Writing mode**	2242 : 830 mA (Max.); 2280 : 1,130 mA (Max.)
➢ **Idle mode**	2242 : 365 mA (Max.); 2280 : 380 mA (Max.)
■ **Reliability**	
➢ **Wear-leveling**	Static wear-leveling algorithms
➢ **TBW**	Up to 390 TBW at 512GB Capacity (Client workload by JESD-219A)
➢ **Erase counts**	Up to 3,000 times
➢ **ECC**	LDPC (Low Density Parity Check)
■ **Physical specification**	
➢ **Weight (Max.)**	2242 : 8g 2280 : 10g
➢ **Dimension (WxL)**	2242 : 22.00 x 42.00 (mm) 2280 : 22.00 x 80.00 (mm)
■ **Conformal coating**	Optional
■ **Warranty**	2 years or within 3,000 erasing counts

❖ Part Number List

M.2 2242 PCIe Module			M.2 2280 PCIe Module		
Capacity	**0ºC~+70ºC**	**-40ºC~+85ºC**	**Capacity**	**0ºC~+70ºC**	**-40ºC~+85ºC**
32GB	SBMDP032G-VFCTM-4BM	WBMDP032G-VFCTM-4BMC	**32GB**	SBMDP032G-VFCTM-8BM	WBMDP032G-VFCTM-8BMC
64GB	SBMDP064G-VFCTM-4BM	WBMDP064G-VFCTM-4BMC	**64GB**	SBMDP064G-VFCTM-8BM	WBMDP064G-VFCTM-8BMC
128GB	SBMDP128G-VFCTM-4BM	WBMDP128G-VFCTM-4BMC	**128GB**	SBMDP128G-VFCTM-8BM	WBMDP128G-VFCTM-8BMC
256GB	SBMDP256G-VFCTM-4BM	WBMDP256G-VFCTM-4BMC	**256GB**	SBMDP256G-VFCTM-8BM	WBMDP256G-VFCTM-8BMC
			512GB	SBMDP512G-VFCTM-8BM	WBMDP512G-VFCTM-8BMC

❖ Part Number Decoder

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

X1 Grade

S : Standard grade operating temp. 0ºC~+70ºC
W : Wide temp. grade operating temp. -40ºC~+85ºC

X2 The material of casing

B : Bare (without casing)

X3 X4 X5 Product category

MDS : M.2 PCIe Module

X6 X7 X8 X9 Capacity

032G : 32GB **256G :** 256GB
064G : 64GB **512G :** 512GB
128G : 128GB

X11 Controller

V : MUSE Series

X12 Controller version

A, B, C, D, F.....

X13 Controller grade

C : Commercial grade

X14 Flash IC brand

T : Toshiba NAND flash IC

X15 Form-factor type

M : MLC-NAND flash IC

X17 X18 X19 Form Factor Type

4 : 2242 form factor
8 : 2280 form factor
BM : B + M Key

X20 Reserved for specific requirements

C : Conformal coating (optional)