



**Features**

- SLC-NAND flash technology
- Support power protection via Tantalum Capacitors
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Support Fast Erase and Secure Erase Functions
- Support Full-Drive Encryption
- S.M.A.R.T. command set
- Capacities from 8GB up to 256GB

**Specification**

- **Compatibility**
  - SATA Revision 3.1
  - ATA-8 ACS2 command set
- **Declarations**
  - RoHS & REACH compliant
- **Flash technology**
  - SLC-NAND flash technology
- **Form-factor**
  - Rugged Metal 2.5" 9mm height SATA SSD
- **Host interface**
  - SATA 7-pin (data) + 15-pin (power)
- **Performance**
  - **Data transfer rate**
    - SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s
  - **Sequential read**
    - 173.4 MB/sec (Max.)
  - **Sequential write**
    - 165.8 MB/sec (Max.)
  - **4KB random read**
    - 36K IOPS (Max.)
  - **4KB random write**
    - 40K IOPS (Max.)
- **Environmental**
  - **Operating temp.**
    - STD. 0°C~+70°C/IND. -40°C~+85°C
  - **Non-operating temp.**
    - STD. -20°C~+80°C/IND. -50°C~+95°C
  - **Humidity**
    - 10% ~ 95% non-condensing
  - **Vibration**
    - 70 Hz to 2K Hz, 15G, 3 axes
  - **Shock**
    - 0.5ms, 1500 G, 3 axes
  - **Altitude**
    - 70,000 feet

- **Power consumption**
  - **Power requirement**
    - +5V ± 5%
  - **Reading mode**
    - 350 mA (Max.)
  - **Writing mode**
    - 420 mA (Max.)
  - **Idle mode**
    - 120 mA (Max.)
- **Reliability**
  - **Wear-leveling**
    - Global wear-leveling algorithms
  - **TBW**
    - Up to 1,807.4 TBW at 256GB Capacity (Client workload by JESD-219A)
  - **MTBF**
    - > 3,000,000 hours
  - **Erase counts**
    - Up to 60,000 times
  - **ECC**
    - 66 bits per 1024 bytes block
- **Physical specification**
  - **Weight (Max.)**
    - 100g
  - **Dimension (WxLxH)**
    - 70.00 x 100.00 x 9.20 (mm)
- **Conformal coating**
  - Optional
- **Warranty**
  - **SLC STD. grade**
    - 3 years or within 60,000 erasing counts
  - **SLC IND. grade**
    - 5 years or within 60,000 erasing counts

**Part Number List**

Capacity	0°C~+70°C	Capacity	-40°C~+85°C
8GB	SR2SR008G-MSCTC-UFE(USE)P	8GB	WR2SR008G-MSITIUFE(USE)P
16GB	SR2SR016G-MSCTC-UFE(USE)P	16GB	WR2SR016G-MSITIUFE(USE)P
32GB	SR2SR032G-MSCTC-UFE(USE)P	32GB	WR2SR032G-MSITIUFE(USE)P
64GB	SR2SR064G-MSCTC-UFE(USE)P	64GB	WR2SR064G-MSITIUFE(USE)P
128GB	SR2SR128G-MSCTC-UFE(USE)P	128GB	WR2SR128G-MSITIUFE(USE)P
256GB	SR2SR256G-MSCTC-UFE(USE)P	256GB	WR2SR256G-MSITIUFE(USE)P

**Part Number Decoder**

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
W	R	2	S	R	2	5	6	G	—	M	S	I	T	I	U	F	E	P	C

- **X1 Grade**
  - S : Standard grade operating temp. 0°C~+70°C
  - W : Industrial grade operating temp. -40°C~+85°C
- **X2 The material of casing**
  - R : Rugged metal casing
- **X3 X4 X5 Product category**
  - 2SR : 2.5" 9 mm height SATA III SSD with DRAM cache
- **X6 X7 X8 X9 Capacity**
  - 008G : 8GB      064G : 64GB
  - 016G : 16GB    128G : 128GB
  - 032G : 32GB    256G : 256GB
- **X11 Controller**
  - M : HERCULES Series
- **X12 Controller version**
  - A, B, C, D.....

- **X13 Controller grade**
  - C : Commercial grade
  - I : Industrial grade
- **X14 Flash IC brand**
  - T : Toshiba SLC-NAND flash IC
- **X15 Flash IC grade**
  - C : Commercial grade
  - I : Industrial grade
- **X16 X17 X18 Special function**
  - UFE : Fast Erase function only
  - USE : Secure Erase function (supported by special firmware) & Fast Erase function
- **X19 H/W Encryption**
  - P : Full-Drive Encryption
- **X20 Reserved for specific requirements**
  - C : Conformal coating (optional)

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