



**Features**

- MLC-NAND flash technology
- Built with DRAM cache
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Support S.M.A.R.T. command set and utility
- Support Power Loss Protection
- Capacities from 64GB up to 2TB

**Specification**

- **Compatibility** SATA Revision 3.2  
ATA-8 ACS2 command set
- **Declarations** RoHS & REACH compliant
- **Flash technology** MLC-NAND flash technology
- **Form-factor** Rugged Metal 2.5" 7mm 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** 565 MB/sec (Max.)
  - **Sequential write** 501 MB/sec (Max.)
  - **4KB random read** 76K IOPS (Max.)
  - **4KB random write** 80K 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** 80 Hz to 2K Hz, 20G, 3axes
  - **Shock** 0.5ms, 1500G, 3 axes
  - **Altitude** 70,000 feet

- **Power consumption**
  - **Power requirement** +5V ± 5%
  - **Reading mode** 3,150 mW (Max.)
  - **Writing mode** 5,500 mW (Max.)
  - **Idle mode** 190 mW (Max.)
- **Reliability**
  - **Wear-leveling** Static and Dynamic wear-leveling algorithms
  - **TBW** Up to 4,114 TBW at 2TB Capacity (Sequential Write)
  - **Erase counts** Up to 3,000 times
  - **ECC** 120 bits per 2K bytes block
- **Physical specification**
  - **Weight (Max.)** 65g
  - **Dimension (WxLxH)** 69.90 x 100.00 x 7.00 (mm)
- **Conformal coating** Optional
- **Warranty** 2 years or within 3,000 erasing counts

**Part Number List**

Capacity	0°C~+70°C	Capacity	-40°C~+85°C
64GB	SR7SR064G-PHCTMB	64GB	WR7SR064G-PHCTMB-C
128GB	SR7SR128G-PHCTMB	128GB	WR7SR128G-PHCTMB-C
256GB	SR7SR256G-PHCTMB	256GB	WR7SR256G-PHCTMB-C
512GB	SR7SR512G-PHCTMB	512GB	WR7SR512G-PHCTMB-C
1TB	SR7SR001T-PHCTMB	1TB	WR7SR001T-PHCTMB-C
2TB	SR7SR002T-PHCTMB	2TB	WR7SR002T-PHCTMB-C

**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	7	S	R	0	0	2	T	-	P	H	C	T	M	B	-	C		

- 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**  
R : Rugged metal casing
- X3 X4 X5 Product category**  
7SR : 2.5" 7 mm height SATA III SSD with DRAM cache
- X6 X7 X8 X9 Capacity**  
064G : 64GB      512G : 512GB  
128G : 128GB    001T : 1TB  
256G : 256GB    002T : 2TB
- 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 MLC Technology**  
B : Toshiba 15nm MLC
- X18 X19 X20 Reserved for specific requirements**  
C : Conformal coating (optional)

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