

SLC

aSLC

MLC

3D-NAND

DRAM Module

Adapter

Card-drive



Features

- SLC-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 8GB up to 512GB

Specification

- **Compatibility** SATA Revision 3.2
ATA-8 ACS2 command set
- **Declarations** RoHS & REACH compliant
- **Flash technology** SLC-NAND flash technology
- **Form-factor** Rugged Metal 2.5" 7/9mm 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** 553 MB/sec (Max.)
 - **Sequential write** 523.3 MB/sec (Max.)
 - **4KB random read** 55K IOPS (Max.)
 - **4KB random write** 53K 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** 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** 2,450 mW (Max.)
- **Writing mode** 3,600 mW (Max.)
- **Idle mode** 450 mW (Max.)
- **Reliability**
 - **Wear-leveling** Static and Dynamic wear-leveling algorithms
 - **TBW** Up to 20,560 TBW at 512GB Capacity (Sequential Write)
- **MTBF** > 3,000,000 hours
- **Erase counts** Up to 60,000 times
- **ECC** 120 bits per 2K bytes block
- **Physical specification**
 - **Weight (Max.)** 65g
 - **Dimension (WxLxH)**
 - **7SR** 69.90 x 100.00 x 7.00 (mm)
 - **2SR** 69.90 x 100.00 x 9.50 (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	SR7SR008G-PHCTC	8GB	WR7SR008G-PHITI
16GB	SR7SR016G-PHCTC	16GB	WR7SR016G-PHITI
32GB	SR7SR032G-PHCTC	32GB	WR7SR032G-PHITI
64GB	SR7SR064G-PHCTC	64GB	WR7SR064G-PHITI
128GB	SR7SR128G-PHCTC	128GB	WR7SR128G-PHITI
256GB	SR7SR256G-PHCTC	256GB	WR7SR256G-PHITI
512GB	SR2SR512G-PHCTC	512GB	WR2SR512G-PHITI

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	R	7	S	R	2	5	6	G	-	P	H	I	T	I	-	C			
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--

Example 2

W	R	2	S	R	5	1	2	G	-	P	H	I	T	I	-	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

7SR : 2.5" 7 mm height SATA III SSD with DRAM cache
2SR : 2.5" 9 mm height SATA III SSD with DRAM cache

X6 X7 X8 X9 Capacity

008G : 8GB 128G : 128GB
016G : 16GB 256G : 256GB
032G : 32GB 512G : 512GB
064G : 64GB

X11 Controller

P : PHANES 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

X17 X18 X19 X20 Reserved for specific requirements

C : Conformal coating (optional)