

BON Series

Industrial Rugged Metal 2.5" Dual Controlled SATA II SLC SSD supports Fast Erase and Secure Erase



Product features

- SLC - NAND type flash technology
- Support Fast Erase by Hardware and Software definition
- Support Secure Erase by Software ATA command vendor code
- High performance by disk RAID-0 setting with dual controlled
- Dual controlled capacity from 32GB up to 128GB in 9.5mm casing
- Dual controlled highest capacity from 256GB in 15.3mm casing

Product specifications

Compatibility	➤ SATA 1.0a and SATA 2.6 specification compliance
Flash technology	➤ SLC-NAND type flash based
Form-factor	
Dual controlled	➤ Rugged Metal 2.5" SATA SSD form-factor with 9.5/15.3 mm height
Host Interface	➤ SATA 7-pin (data) + 15-pin (power connector)
Performance	
Data transfer mode	➤ Serial ATA Gen-I and II (1.5Gb/s and 3.0Gb/s)
Sequential read	➤ Dual controlled : 240 MB/sec (Max.)
Sequential write	➤ Dual controlled : 190 MB/sec (Max.)
Average access time	➤ 0.1ms (estimated)

Environmental specification

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
Acoustic noise	➤ 0dB
Vibration	➤ 15G compliance to MIL-STD-810F
Shock	➤ 1,500G compliance to MIL-STD-810F
Altitude	➤ 70,000 feet

Functionality

Hardware	➤ Fast Erase the media data by hardware trigger
Software	➤ Fast Erase the media data by ATA command vendor code Secure Erase the media data by ATA command vendor code
Sanitization Procedure	➤ Default sanitizing by erase block data to 0xFF on file table for Fast Erase Sanitizing Based on NSA Manual 130-2 for Secure Erase Sanitizing Based on USA Air Force AFSSI 5020 for Secure Erase

Power consumption

Power requirement	➤ +5V ± 10%
Reading mode	➤ Dual controlled : 710.0 mA / 3.55W (256GB)
Writing mode	➤ Dual controlled : 800.0 mA / 4W (256GB)
Sleeping mode	➤ Dual controlled : 480.0 mA / 2.4W (256GB)

Reliability

Wear-leveling	➤ Static wear-leveling algorithms
MTBF	➤ > 3,000,000 hours
ECC	➤ Supports BCH ECC 8-bits or 15-bits per 512bytes block
Endurance	➤ > 2,000,000 cycles
Data retention	➤ 10 years

Physical specification

Weight (max.)	➤ 9.5mm : 115g ± 5g / 4.06 oz. 15.3mm : 200g ± 5g / 7.05 oz.
Dimension(W x L x H)	➤ 128GB : 69.90 x 99.70 x 9.5 (mm) 256GB : 69.90 x 99.70 x 15.3 (mm)

Conformal coating ➤ Option for special request

Warranty

Standard grade	➤ 3 years
Industrial grade	➤ 5 years

CF

Industrial CompactFlash Card

CfAst

Industrial CFast Card

ATA

Industrial PCMCIA ATA Card

MIF

Industrial micro IDE Flash Module

MSE

Industrial micro SATA Flash Module

MUM

Industrial micro USB Module

SSD

Industrial Solid State Disk

USB

Industrial Solid State USB Flash Disk

SD

Industrial SD & SDHC Memory Card

AD

Industrial Adapter Card-Drive

CF

Industrial CompactFlash Card

CFast

Industrial CFast Card

ATA

Industrial PCMCIA ATA Card

MIF

Industrial micro IDE Flash Module

MSE

Industrial micro SATA Flash Module

MUM

Industrial micro USB Module

SSD

Industrial Solid State Disk

USB

Industrial Rugged Metal USB Flash Disk

SD

Industrial SD & SDHC Memory Card

AD

Industrial Adapter Card-Drive

Operating temperature supports Standard grade 0°C ~ 70°C and Industrial grade -40°C ~ +85°C

Part number list - Dual Controlled version in 9.5 mm height supports FE/SE

Product Picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	32GB	SR2SD032G-JACSC-UFE	WR2SD032G-JAISI-UFE
	64GB	SR2SD064G-JACSC-UFE	WR2SD064G-JAISI-UFE
	128GB	SR2SD128G-JACSC-UFE	WR2SD128G-JAISI-UFE

Part number list - Dual Controlled version in 15.3 mm height supports FE/SE

Product Picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	256GB	SR2SD256G-JACSC-UFE	WR2SD256G-JAISI-UFE

Remarks:

UFE - Hardware and software ATA command code for Fast Erase function

USE - Secure Erase Procedure by Project Base **(Coming soon!)**

Part number decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	—	X11	X12	X13	X14	X15	—	Z1	Z2	Z3	C	
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Example

S	R	2	S	D	1	2	8	G	—	J	A	C	S	C	—	U	F	E	C	
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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**

2SD : 2.5" Dual controlled SATA II SSD

X6 **X7** **X8** **X9** ⇨ **Capacity**

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

X11 ⇨ **Controller**

J : JMicron (BON Series supports FE/SE)

X12 ⇨ **Controller version**

A,B,C,....

X13 ⇨ **Controller grade**

C : Commercial grade
I : Industrial grade

X14 ⇨ **Flash IC**

S : Samsung SLC-NAND flash IC

X15 ⇨ **Flash IC grade**

C : Commercial grade
I : Industrial grade

Z1 **Z2** **Z3** ⇨ **Special function**

UFE : Hardware and software ATA command Code for Fast Erase function
USE : Secure Erase procedure by project base

C ⇨ **Reserved for specific requirement**

C : Conformal-coating

CF

Industrial CompactFlash Card

CFast

Industrial CFast Card

ATA

Industrial PCMCIA ATA Card

MIF

Industrial micro IDE Flash Module

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Industrial micro SATA Flash Module

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