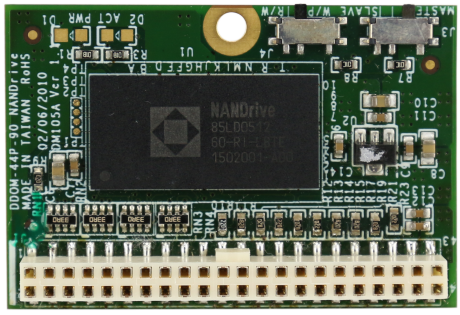

DDOM-SST-XG-44P Manual

Version 3.0
February. 2022

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Trademarks Acknowledgement

Revision History

Revision	Date	Remark
1.0	June 2008	First version release
2.0	August 2008	Update Datasheet
3.0	February 2022	Capacities update

Table of Contents

1 Product Information

Dependable and Secure

Designed with advanced IDE flash controller technology, DDOM-SST-XG-44P is 100% compatible with the standard IDE/ATA storage interface without the need for special device driver. This advanced multi-tasking IDE flash controller's integrated error-detection, error-correction, re-mapping and wear-leveling technologies with power hold-up circuit greatly improves data reliability. Its low-power requirement, advanced PIO modes, multi-sector transfer support and LBA addressing can satisfy application with high performance and reliability requirements.

Anti Shock & Anti Vibration

Using advanced solid-state storage technology, without moving parts, DDOM-SST-44P is able to perform all of its designated function without being affected by shock and vibration.

Wide Operating Temperature

DDOM-SST-XG-44P is designed to support commercial and industrial applications operating in environment exposed to extreme temperature range. The DDOM-SST-XG-44P series supports **-40ºC to +85ºC** operating temperature.

1.1 Features

- -40 ºC to +85ºC extreme temp range
- Power & Active LEDs, easy to check work status
- RoHS Compliant
- Industrial grade connector, avoid inaccuracy connection
- Write Protect
- Low power operation
- Fixed hole layout
- Unitized 44 pin IDE
- ECC for exceptional data reliability
- Completely solid state – no moving parts
- Entirely bootable for current embedded O/S
- 50G/10ms operating shock
- 5G(7~2000Mz) operating vibration
- 30 MB/s burst R/W rate
- 10 years data integrity

1.2 Specifications

IDE Transfer Mode	PIO Mode 0-6 / MwDMA Mode 4 / Ultra DMA Mode 0~4
Drive Config.	Switch Master/Slave
Data Transfer Rate	Read 30 Mbytes(Max)/sec Write 20 Mbytes(Max)/sec
Bus Interface	ATA Compatibility
Flash Type	SLC
Connector	44pin IDE/ATA ANSI Standards
Storage Capacity	1GB / 2GB
Sector Size	512 bytes
Drive Number	Drive 0 or 1
Operation Temp.	-40℃~+85℃
Storage Temp.	-65℃~+150℃
Humidity	10%~95% non-condensing
Vibration	5G (7~2000Hz)
Shock	50G/10ms
ECC Technology	High Reliability based on the internal ECC function
MTBF	>3,000,000 hours
R/W Endurance	2,000,000 times
Wear-leveling	Support
Data Integrity	10 years
DC Input Voltage	+3.3V / +5V single power supply operation
Power Mode	Auto Stand-by and sleep mode

1.3 Ordering Information

PART NO.	Capacities	Type	Operation Temp.
DDOM-SST-1G-44P-HL	1GB	Horizontal Right	-40℃~+85℃
DDOM-SST-1G-44P-H	1GB	Horizontal Left	-40℃~+85℃
DDOM-SST-1G-44P-V	1GB	Vertical	-40℃~+85℃
DDOM-SST-2G-44P-HL	2GB	Horizontal Right	-40℃~+85℃
DDOM-SST-2G-44P-H	2GB	Horizontal Left	-40℃~+85℃
DDOM-SST-2G-44P-V	2GB	Vertical	-40℃~+85℃

2. Hardware Information

2.1 Pin Assignment

Pin #	Pin Name	Pin Type	Pin #	Pin Name	Pin Type
1	-RESET	I	2	GND	Ground
3	Data 7	I/O	4	Data 8	I/O
5	Data 6	I/O	6	Data 9	I/O
7	Data 5	I/O	8	Data 10	I/O
9	Data 4	I/O	10	Data 11	I/O
11	Data 3	I/O	12	Data 12	I/O
13	Data 2	I/O	14	Data 13	I/O
15	Data 1	I/O	16	Data 14	I/O
17	Data 0	I/O	18	Data 15	I/O
19	Ground	Ground	20	NC	Not connect
21	REQ	--	22	GND	Ground
23	IOW	I	24	GND	Ground
25	IOR	I	26	GND	Ground
27	IORDY	O	28	GND	Ground
29	ACK	--	30	GND	Ground
31	INTRQ	O	32	IOCS16	O
33	SA1	I	34	CBLID	I/O
35	SA0	I	36	SA2	I
37	CS0	I	38	CSI	I
39	LED	I/O	40	GND	Ground
41	VCC	Power	42	VCC	Power
43	GND	Ground	44	NC	Not connect

2.2 Signal Descriptions

Signal Name	Dir.	Pin	Description
RESET	I	1	This pin Host Reset. Reset signal is from the host and it is active low.
Data [15:0]	I/O	3-18	These lines carry Data, Command and Status information between the host and controller.D0 is LSB and D15 is MSB.
IOW	I	23	The I/O Write Storable pulse is used to clock I/O data on the Data bus into the controller registers. The clocking will occur on the negative to the positive edge of the signal (trailing edge).
IOR	I	25	This is an I/O Read strobe generated by the host. This signal gates I/O data into the bus from the controller. The clocking will occur on the negative to the positive edge of the signal (trailing edge).
IRQ	O	31	This is an interrupt request from the controller to host, asking for service. The output of this signal is tri-state when the interrupt are disabled by the host.
A[2:0]	I	33,35,36	A[2:0] are used to select the one of eight registers in the Task File.
CSO,CS	I	37,38	-CSO is the chip select for the task file registers while –CS1 is used to select the Alternate Status Register and the Device Control Register.
IORDY	O	27	This signal is negated to extend the host transfer cycle of any host register access (Read or Write) when the device is not ready to respond to a data transfer request.
IOCS16	O	32	This open drain output signal is asserted low by the controller to indicate to the host the current cycle is a 16-bit (word) data transfer.

PDIAG	I/O	34	This bi-directional open drain signal is asserted by the slave after an Execute Diagnostic command to indicate to the master it has passed its diagnostics.
DASP	I/O	39	This open drain output is asserted low any time the drive is active. In a Master/Slave configuration, this signal is used the slave to inform the master which has slave present.
GND		02,19,22,24,26, 28,30,40,43	Ground
VCC		41,42	+5V or 3.3V Power

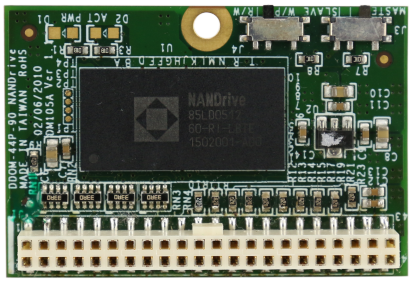
2.3 System Power Consumption

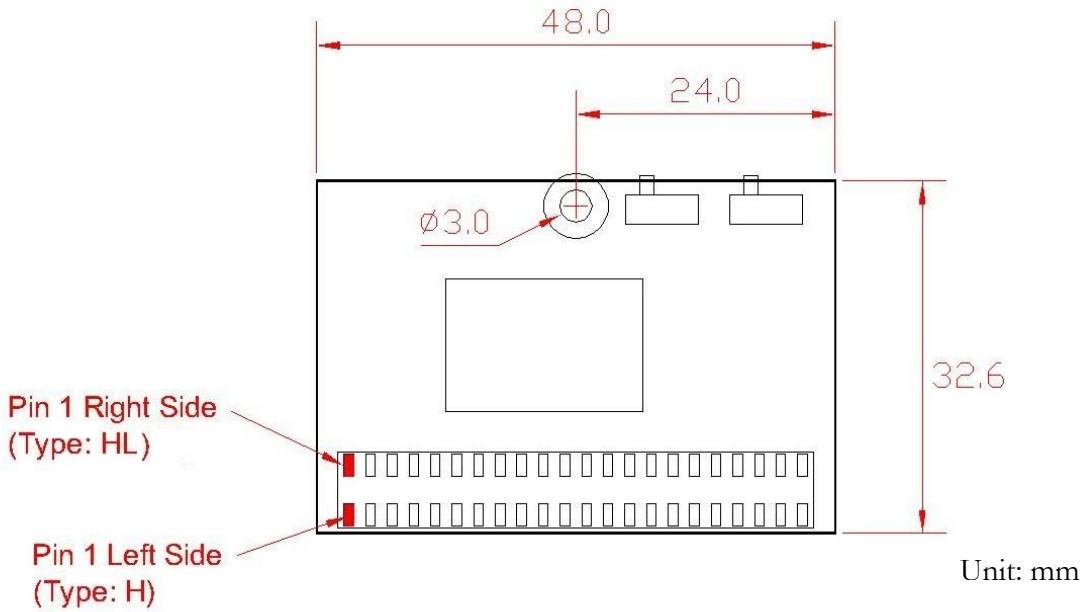
Dc Input Voltage (VCC)		3.3V / 5V ±5%
+5V Current	Maximum active mode:	150mA

3. Product Model and Physical Specification

3.1 44 Pin Horizontal Right Side

Model Name	DDOM-SST-XG-44P-HL

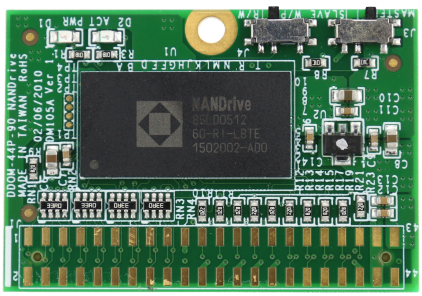


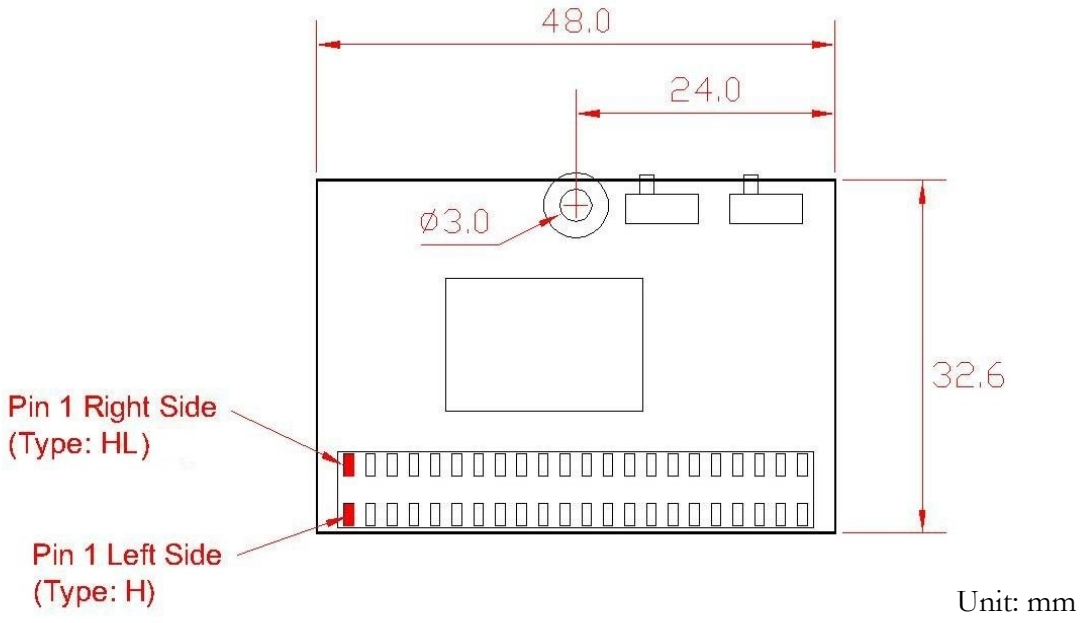


Unit: mm

3.2 44 Pin Horizontal Left Side

Model Name	DDOM-SST-XG-44P-H





Unit: mm

Warranty

This product is warranted to be in good working order for a period of one year (12 months) from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it without additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster. Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, originality to use this product. Vendor will not be liable for any claim made by any other related party. Return authorization must be obtained from the vendor before returned merchandise is accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description. Should you have questions about warranty and RMA service, please contact us directly.

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