

N2202

Product Specification

- Support SATA interface rate of 6Gb/s
- The new form factor standard for ultra book
- Ultra thin designed
- Increasing capacity by length

Revision History

Version	Data	Description
1.0	Mar. 2019	First Release
1.1	Apr. 2020	Amenddimension figure

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1. Introduction

1.1 Overview

The N2202 series product uses advanced 4 channel SSD controller and 3D NAND Flash, available with M.2 2280 form factors, this SSD integrates easily in existing storage infrastructures.

The N2202 SSD product electrically complies with the SATA-III standards and is electrically compatible with a serial ATA disk drive. In order to meet the high quality, the N2202 SSD products utilize Trinary Level Cell (TLC) NAND Flash Memory. Moreover, to ensure the data integrity, many advanced technologies are used such as dynamic bad block management, dynamic and static wear-leveling, and error correction code (ECC). The N2202 SSD drastically outperforms conventional Hard Disk Drives. In addition, the N2202 Series could also provide rugged features in industrial PC under an extreme environment with a high MTBF.

1.2 Product Information

Model Name	Part Number	Capacity
N2202	CNF82GS2402-064	64GB
	CNF82GS2402-128	128GB
	CNF82GS2402-256	256GB
	CNF82GS2402-512	512GB

2. Product Specifications

This section provides details on the Biwin SSD N2202 Series product specifications.

2.1 Specification

Product Model	Capacity	Form Factor	NAND Flash	Dimensions (mm) (L x W x H)	Weight (g)	Interface	Operating Temperature (°C)	Storage Temperature (°C)
N2202	64GB-512GG	M.2	TLC	80x22x2.2	≤5.4	SATA III	0 to +70	-40 to +85

2.2 Performance Details

Product Model	Capacity	CDM (MB/s)		AS SSD (MB/s)			
		Max Seq. Read / Write		Max Seq. Read / Write		Max 4K Read / Write	
N2202	64GB	385	130	371	108	13	24
	128GB	562	405	529	384	34	121
	256GB	561	516	528	481	32	119
	512GB	561	522	528	490	32	122

2.3 Power Consumption

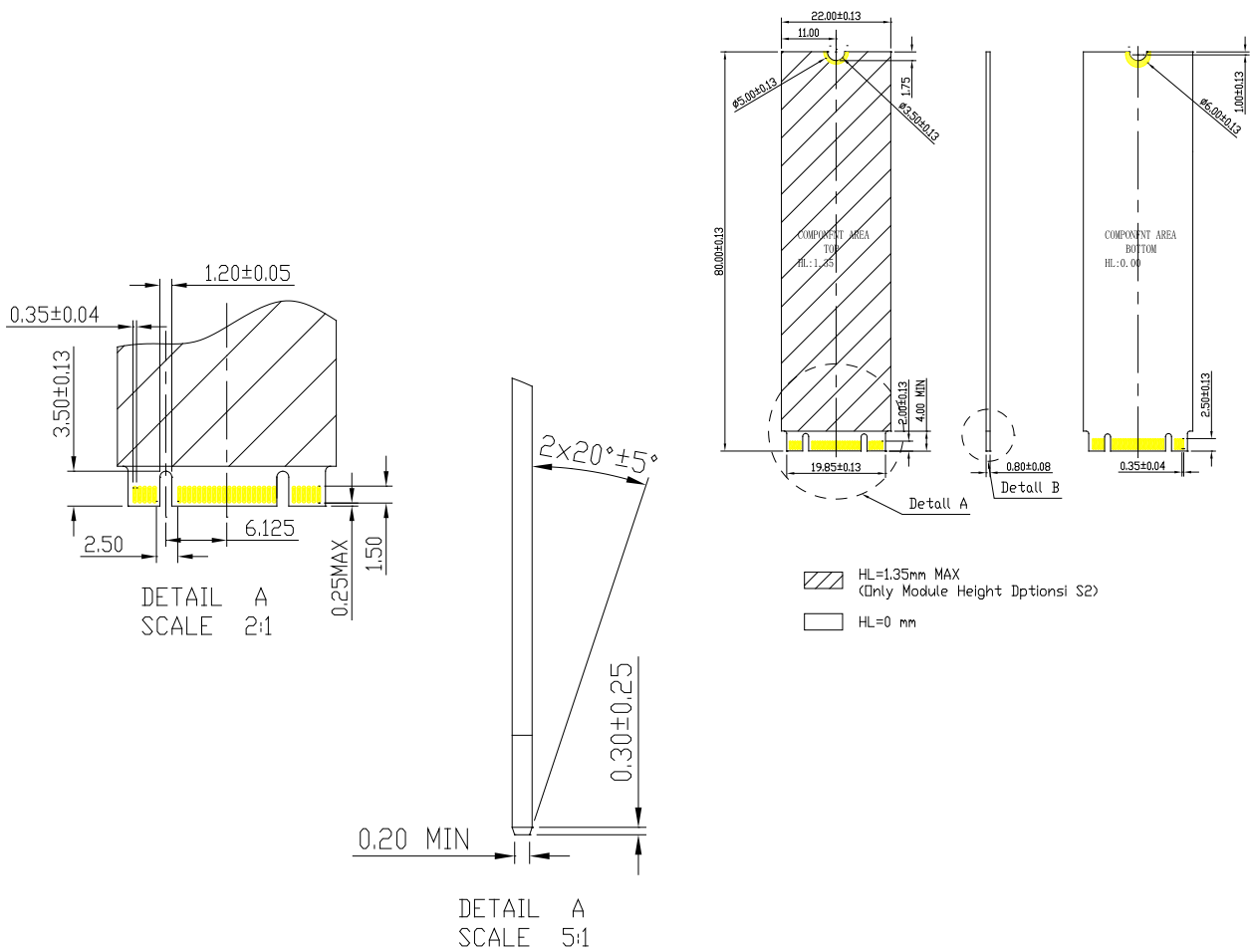
Product Model	Capacity	Idle	Sleep	Read	Write	Unit
N2202	64GB	0.32	0.32	1.16	1.32	W
	128GB	0.39	0.39	1.36	1.96	W
	256GB	0.39	0.39	1.36	1.97	W
	512GB	0.39	0.39	1.48	2.14	W

2.4 Reliability

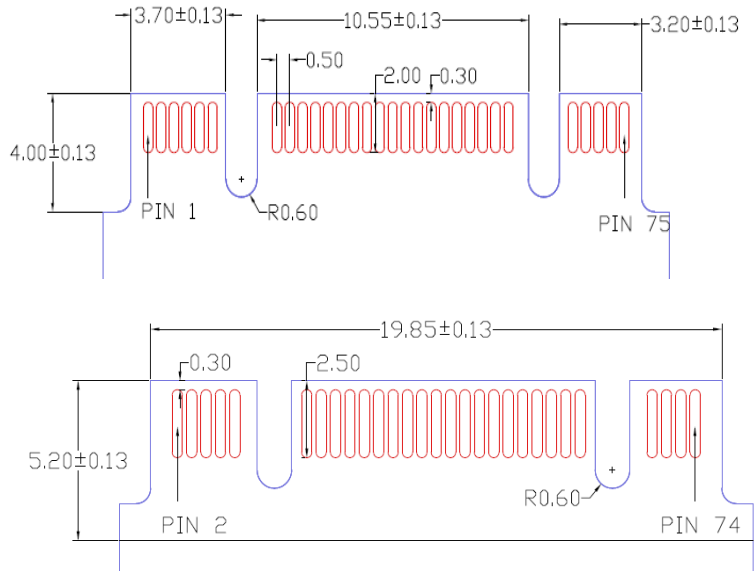
Product Model	Capacity	Endurance: Total Bytes Written (TBW)*	Data Retention	MTBF	Warranty
N2202	64GB	Up to 44 TB	at 25°C: >10years	2 million hours	3 years
	128GB	Up to 89 TB			
	256GB	Up to 178 TB			
	512GB	Up to 356 TB			

*Total bytes written=[(Flash P/E cycle)x(number of bits in drive)] / WAI (WAI=2.1)

3. Dimensional Drawings (Unit: mm)



4. Interface Description



5. Pin Assignment

Pin#	Assignment	Description	Pin#	Assignment	Description
1	CONFIG_3	Defines module type	39	GND	Return Current Path
2	+3.3V	3.3V source	40	N/A	N/A
3	GND	Return Current Path	41	SATA-B+/PERn0	Host receiver differential signal pair
4	+3.3V	3.3V source	42	N/A	N/A
5	N/A	N/A	43	SATA-B-/PERp0	Host receiver differential signal pair
6	N/A	N/A	44	N/A	N/A
7	N/A	N/A	45	GND	Return Current Path
8	N/A	N/A	46	N/A	N/A
9	N/A	N/A	47	SATA-A-/PETn0	Host transmitter differential signal pair
10	N/A	N/A	48	N/A	N/A
11	N/A	N/A	49	SATA-A+/PETp0	Host transmitter differential signal pair
12	(removed for key)	Mechanical Notch B	50	N/A	N/A
13	(removed for key)	Mechanical Notch B	51	GND	Return Current Path
14	(removed for key)	Mechanical Notch B	52	N/A	N/A
15	(removed for key)	Mechanical Notch B	53	N/A	N/A
16	(removed for key)	Mechanical Notch B	54	N/A	N/A
17	(removed for key)	Mechanical Notch B	55	N/A	N/A
18	(removed for key)	Mechanical Notch B	56	N/A	N/A
19	(removed for key)	Mechanical Notch B	57	GND	Return Current Path
20	N/A	N/A	58	N/A	N/A
21	CONFIG_0	Defines module type	59	NOTCH	Mechanical Notch M
22	N/A	N/A	60	NOTCH	Mechanical Notch M
23	N/A	N/A	61	NOTCH	Mechanical Notch M
24	N/A	N/A	62	NOTCH	Mechanical Notch M
25	N/A	N/A	63	NOTCH	Mechanical Notch M
26	N/A	N/A	64	NOTCH	Mechanical Notch M
27	GND	Return Current Path	65	NOTCH	Mechanical Notch M
28	N/A	N/A	66	NOTCH	Mechanical Notch M
29	N/A	N/A	67	N/A	N/A
30	N/A	N/A	68	N/A	N/A
31	N/A	N/A	69	CONFIG_1	Defines module type
32	N/A	N/A	70	+3.3V	3.3V source
33	GND	Return Current Path	71	GND	Return Current Path
34	N/A	N/A	72	+3.3V	3.3V source
35	N/A	N/A	73	GND	Return Current Path
36	N/A	N/A	74	+3.3V	3.3V source
37	N/A	N/A	75	CONFIG_2	Defines module type
38	DEVSLP	Device Sleep, Input.			

6. Certifications and Declarations

Certification	Description
CE Compliant	Indicates conformity with the essential health and safety requirements set out in European Directives Low Voltage Directive and EMC Directive.
RoHS Compliant	Restriction of Hazardous Substance Directive