

EGPL-G401

M.2 to Four

Isolated GbE LAN Module

Customer:

Customer

Part Number:

Innodisk

Part Number:

Innodisk

Model Name:

Date:

Innodisk	Customer
Approver	Approver

Total Solution For
Embedded Peripherals

Table of Contents

TABLE OF CONTENTS	I
REVISION HISTORY	II
LIST OF TABLES	1
LIST OF FIGURES	2
1. PRODUCT INTRODUCTION	3
1.1. OVERVIEW	3
1.2. FEATURES	3
2. PRODUCT SPECIFICATIONS	5
2.1. DEVICE PARAMETERS	5
2.2. ELECTRICAL SPECIFICATIONS	5
2.2.1. POWER REQUIREMENT	5
2.2.2. POWER CONSUMPTION	6
2.3. ENVIRONMENTAL SPECIFICATIONS	6
2.3.1. TEMPERATURE RANGES	6
2.3.2. HUMIDITY	6
2.3.3. SHOCK AND VIBRATION	6
2.3.4. MEAN TIME BETWEEN FAILURE (MTBF)	6
2.4. CE AND FCC COMPATIBILITY	6
2.5. ROHS COMPLIANCE	7
2.6. HARDWARE	7
2.6.1. PIN DEFINE	7
2.6.2. EGPL-G401 MECHANICAL DRAWING	8
2.6.3. PACKING LIST	10
2.7. SOFTWARE SUPPORT	10
3. INSTALLATION GUIDE	10
4. APPENDIX	12
CONTACT US	18

REVISION HISTORY

Revision	Description	Date
1.0	First Released	Sep, 2024

List of Tables

TABLE 1: DEVICE PARAMETERS 5

TABLE 2: POWER REQUIREMENT..... 5

TABLE 3: POWER CONSUMPTION 6

TABLE 4: TEMPERATURE RANGES..... 6

TABLE 5: SHOCK AND VIBRATION 6

TABLE 6: MEAN TIME BETWEEN FAILURE (MTBF)..... 6

TABLE 7: RJ45 LAN LED TABLE 10

List of Figures

FIGURE 1: BLOCK DIAGRAM 3

FIGURE 2: M.2 2280 BOARD PICTURE..... 4

FIGURE 3: MOUNTING HOLE DAUGHTER BOARD PICTURE (EGPL-G401-C1) 4

FIGURE 4: PCIe LOW-PROFILE BRACKET DAUGHTER BOARD PICTURE (EGPL-G401-C2)..... 4

FIGURE 5: PCIe STANDARD BRACKET DAUGHTER BOARD PICTURE (EGPL-G401-C3)..... 4

FIGURE 6: M.2 B-M KEY PIN DEFINE 7

FIGURE 7: EGPL-G401 M.2 BOARD DRAWING 8

FIGURE 8: EGPL-G401 DAUGHTER BOARD WITH MOUNTING HOLE DRAWING..... 8

FIGURE 9: EGPL-G401 DAUGHTER BOARD WITH STANDARD BRACKET DRAWING 9

FIGURE 10: EGPL-G401 DAUGHTER BOARD WITH LOW-PROFILE BRACKET DRAWING 9

1. Product Introduction

1.1. Overview

Innodisk EGPL-G401 is designed with Standard M.2 2280 form factor, EGPL-G401 supports PCIe Gen 2.1 with a single LAN to four GbE LAN ports, optimized for higher performance and lower power, which brings you a flexible expansion solution for embedded systems.

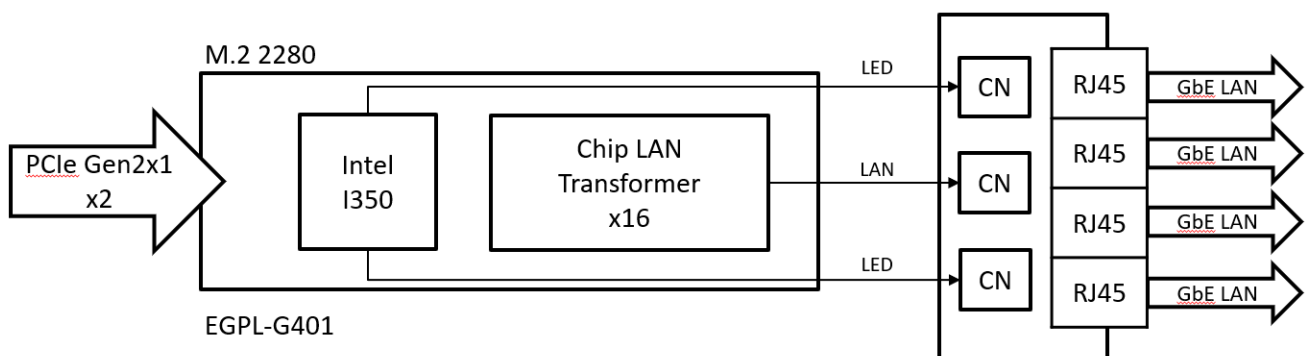


Figure 1: Block Diagram

1.2. Features

- Intel i350 controller, support four GbE LAN ports
- Support PCIe low-profile bracket
- Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 1kV HiPOT protection
- Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV
- Optional Industrial Temperature (-40°C to +85°C) support
- 30μ" golden finger, 3-year warranty
- Industrial design, manufactured in innodisk Taiwan



Figure 2: M.2 2280 Board Picture



Figure 3: Mounting Hole Daughter Board Picture (EGPL-G401-C1)



Figure 4: PCIe Low-profile Bracket Daughter Board Picture (EGPL-G401-C2)



Figure 5: PCIe Standard Bracket Daughter Board Picture (EGPL-G401-C3)

2. Product Specifications

2.1. Device Parameters

Table 1: Device Parameters

Form Factor	Low-Profile PCIe
Input I/F	PCI Express 2.1 x 4
Output I/F	GbE LAN x 4
Output Connector	RJ45 x 4
Dimension (WxLxH)	22 x 80 x 15.3 mm

2.2. Electrical Specifications

2.2.1. Power Requirement

Table 2: Power Requirement

Item	Connector	Rating
Input voltage	PCIex2 Golden Finger	+3.3 DC +-5%

2.2.2. Power Consumption

Table 3: Power Consumption

Max (W)	Voltage(V)	Max (mA)
3.8	3.3	1151

2.3. Environmental Specifications

2.3.1. Temperature Ranges

Table 4: Temperature Ranges

Temperature	Range
Operating	0°C to +55°
Storage	-55°C to +95°

2.3.2. Humidity

Relative Humidity: 10-95%, non-condensing

2.3.3. Shock and Vibration

Table 5: Shock and Vibration

Reliability	Test Conditions	Reference Standards
Vibration	7 Hz to 2K Hz, 20G, 3 axes	IEC 68-2-6
Mechanical Shock	Duration: 0.5ms, 1500 G, 3 axes	IEC 68-2-27

2.3.4. Mean Time between Failure (MTBF)

Reliability prediction methodology provides the basis for reliability evaluation and analysis. The purpose of the prediction is to predict the life time of the product in units of failure rate and MTBF.

Table 6: Mean Time between Failure (MTBF)

Product	Condition	MTBF (Hours)
EGPL-G401-C1/C2/C3	The analysis is at 25°C ambient temperature by Telcordia SR-332, Issues 4, Method I, Case 3 under Ground Benign, Controlled environment, 50% operation stress	1,317,881

2.4. CE and FCC Compatibility

EGPL-G401 conforms to CE and FCC requirements.

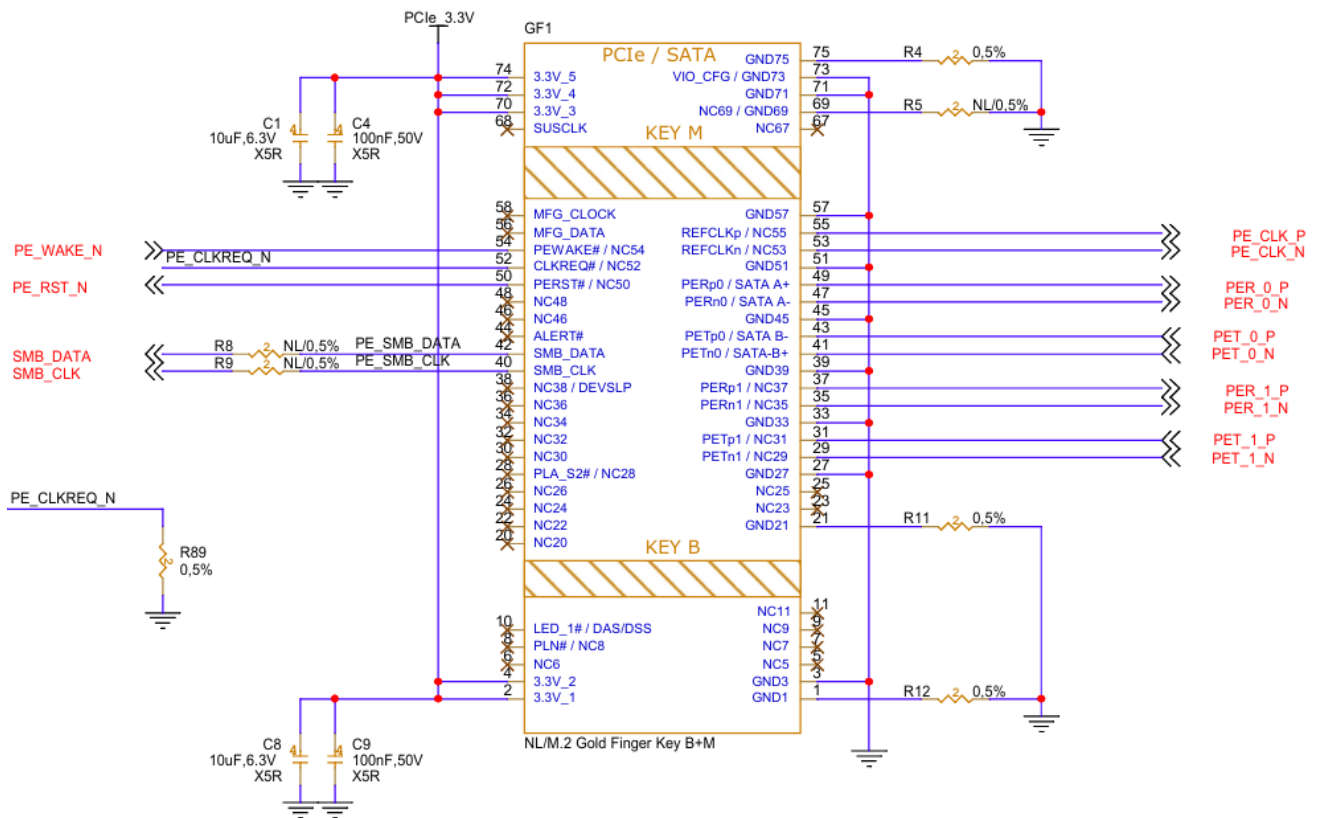
2.5. RoHS Compliance

EGPL-G401 is fully compliant with RoHS directive.

2.6. Hardware

2.6.1. Pin Define

Figure 6: M.2 B-M Key Pin Define



2.6.2. EGPL-G401 Mechanical Drawing

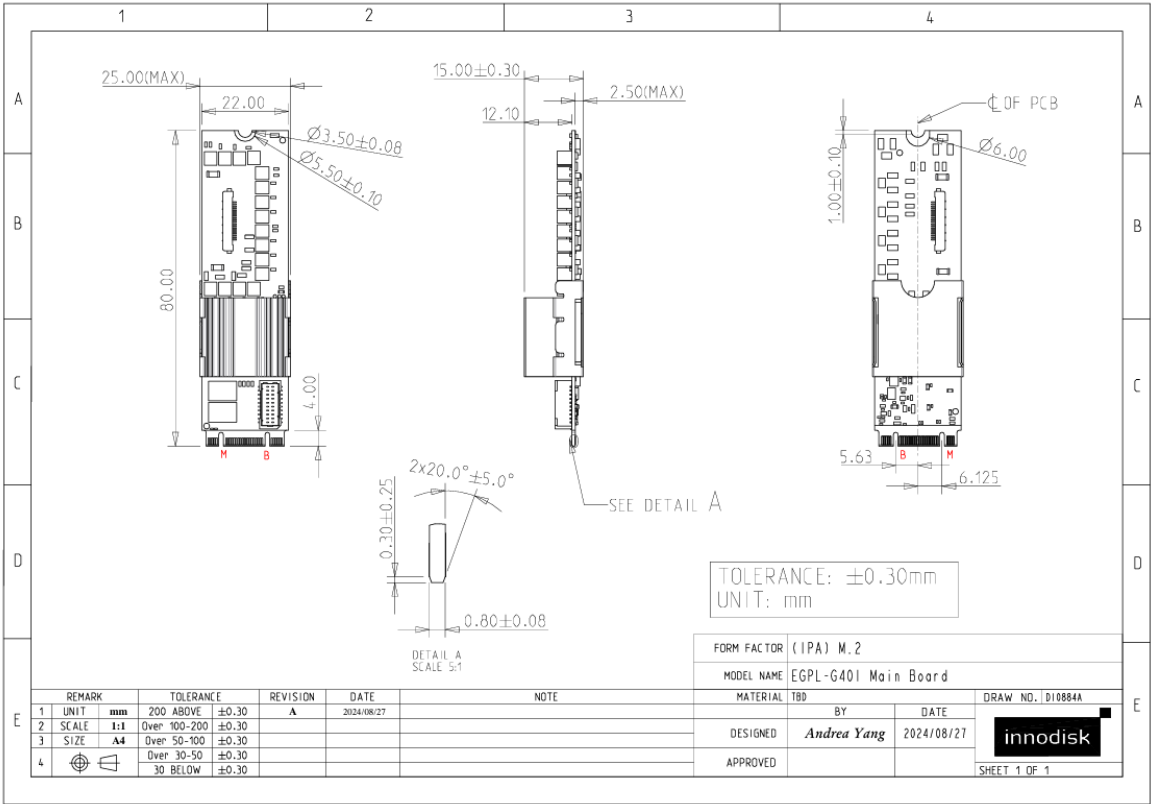


Figure 7: EGPL-G401 M.2 Board Drawing

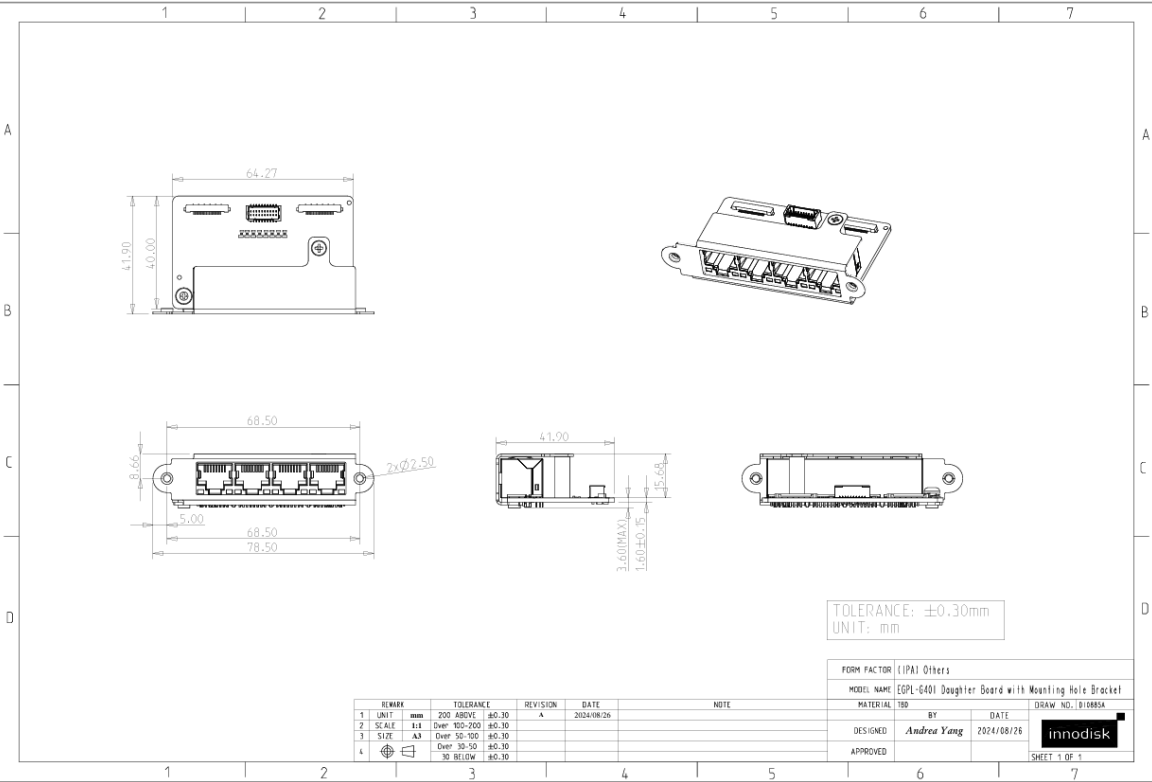


Figure 8: EGPL-G401 Daughter Board with Mounting Hole Drawing

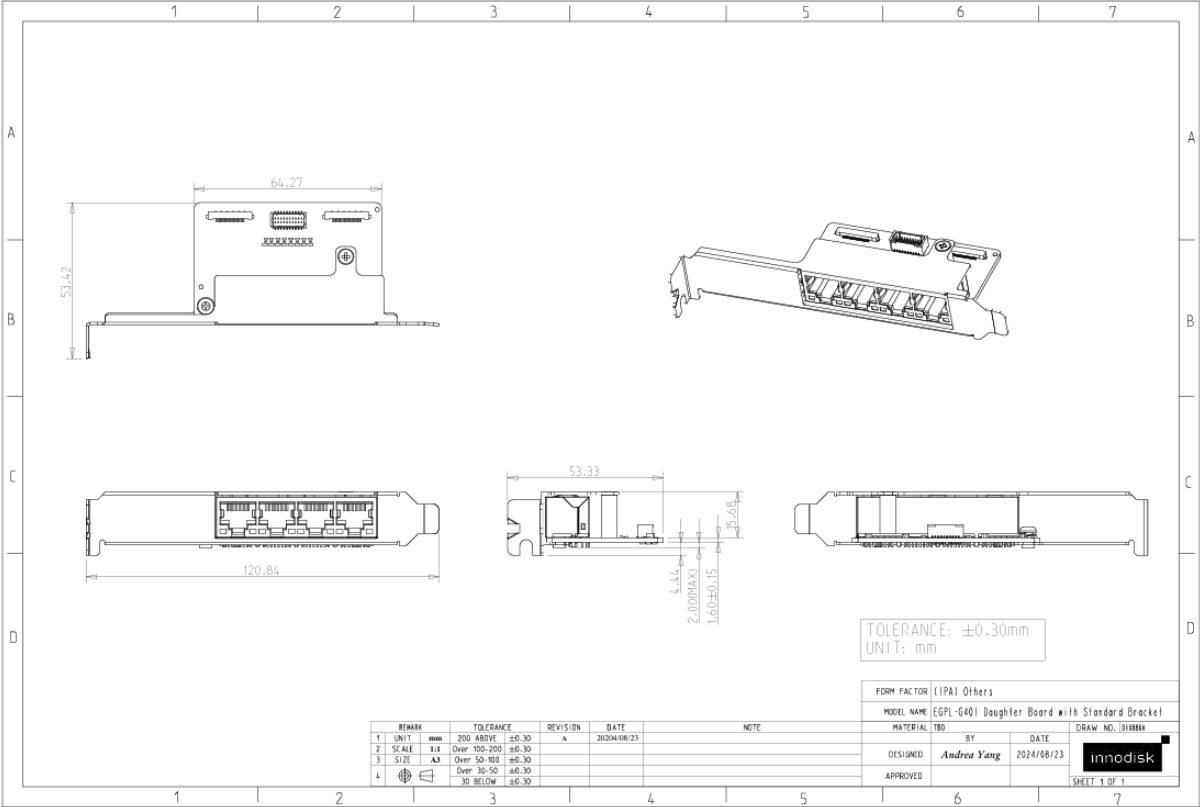


Figure 9: EGPL-G401 Daughter Board with Standard Bracket Drawing

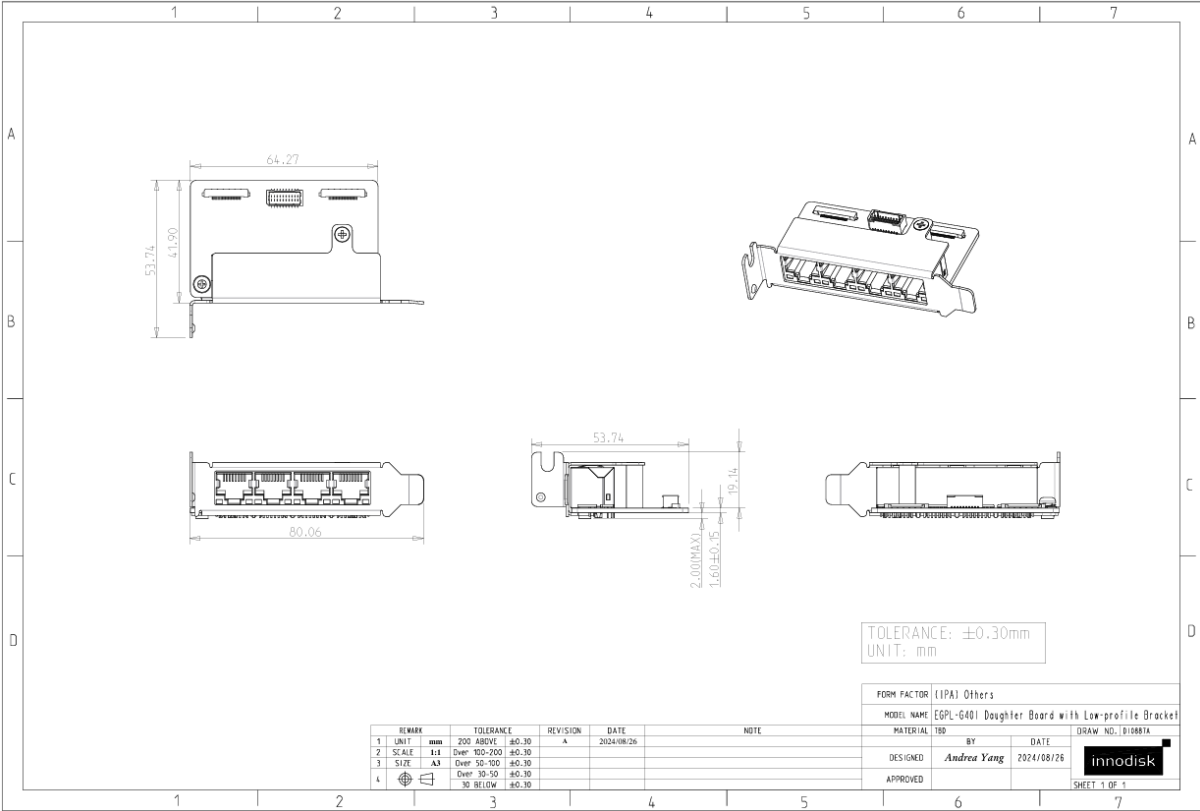
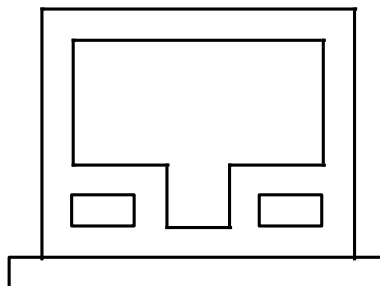


Figure 10: EGPL-G401 Daughter Board with Low-profile Bracket Drawing

Table 7: RJ45 LAN LED Table


Orange

Orange
/Green

Speed LED	
10M	OFF
100M	Green
1G	Orange
Link-Activity LED	
Link-up	Orange
Tx/Rx Activity	Blinking Orange

2.6.3. Packing List

- EGPL-G401 PCIe Board x 1
- EGPL-G401 Daughter Board x 1
- Board to Board LAN Cable x 1

2.7. Software Support

- Windows: XP(32bit), 7(32/64bit), 8/8.1(32/64 bit), 10(32/64bit), 11
- Linux (igb): kernel 2.4 and above.

3. Installation Guide

Please download driver from Intel official website.

Or you can download Intel i210 chip driver from Intel official web site directly.

<https://www.intel.com/content/www/us/en/products/details/ethernet/gigabit-controllers/i210-controllers/downloads.html>

4. Appendix



Statement of Conformity

Issued Date: Oct. 16, 2024
Report No. : 2490218R-0E3012100115-A

This is to certify that the following designated product

Product : M.2 2280 to four GbE LAN
Trademark : Innodisk
Model Number : EGPL-G401
Company Name : Innodisk Corporation

This product, which has been issued the test report listed as above in DEKRA Testing and Certification Co., Ltd. Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

EN 55032:2015/A1:2020, Class B	EN 55035:2017/A11:2020
	IEC 61000-4-2 Ed. 2.0:2008
	IEC 61000-4-3 Ed. 4.0:2020
	IEC 61000-4-4 Ed. 3.0:2012
	IEC 61000-4-6 Ed. 5.0:2023
	IEC 61000-4-8 Ed. 2.0:2009

TEST LABORATORY



Vincent Lin / Director

DEKRA Testing and Certification Co., Ltd.
No. 5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan
TEL: +886-2-8601-3788 FAX: +886-2-8601-3789 Email: info.tw@dekra.com <http://www.dekra.com.tw>



Statement of Conformity

Issued Date: Oct. 16, 2024
Report No. : 2490218R-OE3012100115-A

This is to certify that the following designated product

Product : M.2 2280 to four GbE LAN
Trademark : Innodisk
Model Number : EGPL-G401
Company Name : Innodisk Corporation

This product, which has been issued the test report listed as above in DEKRA Testing and Certification Co., Ltd. Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

BS EN 55032:2015+A1:2020, Class B **BS EN 55035:2017+A11:2020**
BS EN 61000-4-2:2009
BS EN IEC 61000-4-3:2020
BS EN 61000-4-4:2012
BS EN IEC 61000-4-6:2023
BS EN 61000-4-8:2010

TEST LABORATORY

A handwritten signature in black ink, appearing to read 'Vincent Lin', is written over a horizontal line.

Vincent Lin / Director

DEKRA Testing and Certification Co., Ltd.

No. 5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan
TEL: +886-2-8601-3788 FAX: +886-2-8601-3789 Email: info.tw@dekra.com <http://www.dekra.com.tw>



Statement of Conformity

Issued Date: Oct. 16, 2024
Report No. : 2490218R-0E3012110014-A

This is to certify that the following designated product

Product : M.2 2280 to four GbE LAN
Trademark : Innodisk
Model Number : EGPL-G401
Company Name : Innodisk Corporation

This product, which has been issued the test report listed as above in DEKRA Testing and Certification Co., Ltd. Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

FCC CFR Title 47 Part 15 Subpart B:2023, Class B

TEST LABORATORY

A handwritten signature in black ink, appearing to read 'Vincent Lin', is written over a horizontal line.

Vincent Lin / Director

DEKRA Testing and Certification Co., Ltd.

No. 5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan
TEL: +886-2-8601-3788 FAX: +886-2-8601-3789 Email: info.tw@dekra.com <http://www.dekra.com.tw>



Statement of Conformity

Issued Date: Oct. 16, 2024

Report No. : 2490218R-0E3012150009-A

This is to certify that the following designated product

Product : M.2 2280 to four GbE LAN
Trademark : Innodisk
Model Number : EGPL-G401
Company Name : Innodisk Corporation

This product, which has been issued the test report listed as above in DEKRA Testing and Certification Co., Ltd. Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

ICES-003 Issue 7:2020, Class B

TEST LABORATORY

A handwritten signature in black ink, appearing to read 'Vincent Lin', is written over a horizontal line.

Vincent Lin / Director

DEKRA Testing and Certification Co., Ltd.

No. 5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan

TEL: +886-2-8601-3788 FAX: +886-2-8601-3789 Email: info.tw@dekra.com <http://www.dekra.com.tw>

innodisk

宜鼎國際股份有限公司
Innodisk Corporation
REACH Declaration

Tel: (02) 7703-3000 Fax: (02) 7703-3555 Internet: <https://www.innodisk.com/>

Innodisk Corporation pursues its social responsibility for global environmental preservation by committing to be compliant with REACH regulation (REGULATION (EC) No 1907/2006). We hereby confirm that the product(s),

Scope: Flash Memory, DRAM Module and Embedded Peripherals Products.

- The standard products of **not listed in the Appendix2** meet the requirements of REACH SVHC regulations (SVHCs < 0.1% in Article), as described in the candidate list table currently including 240 substances (release date: 23-JAN-2024) and shown on the ECHA website, <https://echa.europa.eu/candidate-list-table>
- The standard products listed in the **Appendix2** contain(s) one or more hazardous substances or constituents exceeding 0.1 % by weight in article if not otherwise specified in candidate list table.
Where the threshold value is exceeded, the substances in question are to be declared in accompanying, (SVHCs > 0.1% in Article).
- Comply with REACH Annex XVII.



Guarantor

Company name 公司名稱: Innodisk Corporation 宜鼎國際股份有限公司

Company Representative 公司代表人:  Yichuan Chen 陳怡全

Company Representative Title 公司代表人職稱: Quality Assurance Div. SR. Manager 品保處經理

Date 日期: 2024 / 02 / 19

宜鼎國際股份有限公司
Innodisk CorporationTel: (02) 7703-3000 Internet: <https://www.innodisk.com/>

RoHS 自我宣告書 (RoHS Declaration of Conformity)

Manufacturer Products: All Innodisk EM FLASH, DRAM and EP products

- 一、宜鼎國際股份有限公司（以下稱本公司）特此保證售予貴公司之所有產品，皆符合歐盟 2011/65/EU 及 (EU) 2015/863 關於 RoHS 之規範要求。
Innodisk Corporation declares that all products sold to the company, are complied with European Union RoHS Directive (2011/65/EU) and (EU) 2015/863 requirement.
- 二、本公司同意因本保證書或與本保證書相關事宜有所爭議時，雙方宜友好協商，達成協議。
Innodisk Corporation agrees that both parties shall settle any dispute arising from or in connection with this Declaration of Conformity by friendly negotiations.
- 三、本公司聲明我們的產品符合 RoHS 指令的附件中 7(a)、7(c)-I、6(c) 允許豁免。
We declare, our products permitted by the following exemptions specified in the Annex of the RoHS directive.
- ※ 7(a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).
- ※ 7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound.
- ※ 6(c) Copper alloy containing up to 4% lead by weight. (This exemption applies to products that use antennas)

Name of hazardous substance	Limited of RoHS ppm (mg/kg)
鉛 (Pb)	< 1000 ppm
汞 (Hg)	< 1000 ppm
鎘 (Cd)	< 100 ppm
六價鉻 (Cr 6+)	< 1000 ppm
多溴聯苯 (PBBs)	< 1000 ppm
多溴二苯醚 (PBDEs)	< 1000 ppm
鄰苯二甲酸二(2-乙基己基)酯 (DEHP)	< 1000 ppm
鄰苯二甲酸丁酯苯甲酯 (BBP)	< 1000 ppm
鄰苯二甲酸二丁酯 (DBP)	< 1000 ppm
鄰苯二甲酸二異丁酯 (DIBP)	< 1000 ppm

宜鼎國際股份有限公司
Innodisk Corporation

立保證書人 (Guarantor)

Company name 公司名稱: Innodisk Corporation 宜鼎國際股份有限公司

Company Representative 公司代表人: 簡川勝

Company Representative Title 公司代表人職稱: Chairman 董事長

Date 日期: 2023 / 06 / 14

Contact us

Headquarters (Taiwan)

5F., No. 237, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Tel: +886-2-77033000

Email: sales@innodisk.com

Branch Offices:

USA

usasales@innodisk.com

+1-510-770-9421

Europe

eusales@innodisk.com

+31-40-3045-400

Japan

jpsales@innodisk.com

+81-3-6667-0161

China

sales_cn@innodisk.com

+86-755-2167-3689

www.innodisk.com

© 2024 Innodisk Corporation.

All right reserved. Specifications are subject to change without prior notice.

January 29, 2026