

# EGPS-3401

## M.2 to four SATA III Module

**Customer:**

**Customer**

**Part Number:**

**Innodisk**

**Part Number:**

**Innodisk**

**Model Name:**

**Date:**

---

---

---

---

---

---

---

---

<b>Innodisk</b>	<b>Customer</b>
<b>Approver</b>	<b>Approver</b>

## Table of Contents

<b>TABLE OF CONTENTS</b> .....	<b>I</b>
<b>REVISION HISTORY</b> .....	<b>II</b>
<b>LIST OF TABLES</b> .....	<b>1</b>
<b>LIST OF FIGURES</b> .....	<b>2</b>
<b>1. PRODUCT INTRODUCTION</b> .....	<b>3</b>
1.1. OVERVIEW .....	3
1.2. FEATURES .....	3
<b>2. PRODUCT SPECIFICATIONS</b> .....	<b>5</b>
2.1. DEVICE PARAMETERS .....	5
2.2. ELECTRICAL SPECIFICATIONS.....	5
2.2.1.POWER REQUIREMENT.....	5
2.2.2.POWER CONSUMPTION .....	5
2.3. ENVIRONMENTAL SPECIFICATIONS .....	5
2.3.1.TEMPERATURE RANGES.....	5
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 .....	6
2.6. HARDWARE.....	7
2.6.1.LAYOUT.....	7
2.6.2.PIN DEFINE .....	8
2.6.3.EGPS-3401 MECHANICAL DRAWING .....	9
2.6.4.PACKING LIST .....	9
2.7. OS SUPPORT .....	9
<b>3. APPENDIX</b> .....	<b>10</b>

## REVISION HISTORY

Revision	Description	Date
1.0	First Released	Feb, 2026

## List of Tables

<b>TABLE 1: DEVICE PARAMETERS .....</b>	<b>5</b>
<b>TABLE 2: POWER REQUIREMENT.....</b>	<b>5</b>
<b>TABLE 3: POWER CONSUMPTION .....</b>	<b>5</b>
<b>TABLE 4: TEMPERATURE RANGES.....</b>	<b>5</b>
<b>TABLE 5: SHOCK AND VIBRATION .....</b>	<b>6</b>
<b>TABLE 6: MEAN TIME BETWEEN FAILURE (MTBF).....</b>	<b>6</b>
<b>TABLE 7: M.2 PCB LAYOUT LEGEND .....</b>	<b>7</b>

**List of Figures**

**FIGURE 1: BLOCK DIAGRAM ..... 3**  
**FIGURE 2: M.2 BOARD PICTURE ..... 4**  
**FIGURE 3: M.2 PIN DEFINE ..... 8**  
**FIGURE 4: EGPS-3401 M.2 BOARD DRAWING..... 9**

# 1. Product Introduction

## 1.1. Overview

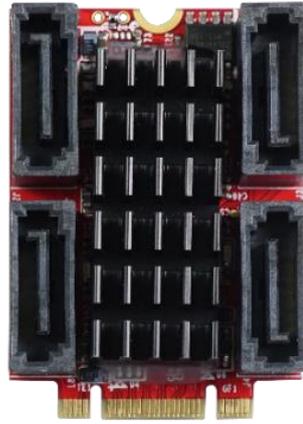
Innodisk EGPS-3401 is designed with standard M.2 form factor, EGPS-3401 supports PCIe Gen 2.0 with a single lane to four independent SATA III ports. EGPS-3401 can be configured as 4 ports SATAIII Hardware striping & mirror & port multiplier functions, optimized for higher performance and ensure data integrity, which brings you a flexible expansion solution for embedded systems.



**Figure 1: Block Diagram**

## 1.2. Features

- PCI Express 2.0 to four SATA III ports.
- Supports AHCI, Port-multiplier.
- Supports Native Command Queuing.
- Supports error reporting, recovery and correction.
- 30μ" golden finger, 3-year warranty.
- Industrial design, manufactured in Innodisk Taiwan.



**Figure 2: M.2 Board Picture**

## 2. Product Specifications

### 2.1. Device Parameters

**Table 1: Device Parameters**

<b>Form Factor</b>	M.2 3042
<b>Input I/F</b>	PCI Express 2.0 x 1
<b>Output I/F</b>	SATA III
<b>Output Connector</b>	SATA 7-pin
<b>Dimension (WxLxH)</b>	M.2 2230: 30.0 x 42 x 11 mm

### 2.2. Electrical Specifications

#### 2.2.1. Power Requirement

**Table 2: Power Requirement**

<b>Item</b>	<b>Connector</b>	<b>Rating</b>
Input voltage	M.2 Golden Finger	+3.3 DC +-5%

#### 2.2.2. Power Consumption

**Table 3: Power Consumption**

<b>Full Load (mA)</b>	<b>Voltage (V)</b>
834	3.3

### 2.3. Environmental Specifications

#### 2.3.1. Temperature Ranges

**Table 4: Temperature Ranges**

<b>Temperature</b>	<b>Range</b>
Operating	Standard Grade: 0°C to +70°C
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)
EGPS-3401-C1	The analysis is at 25°C ambient temperature by Telcordia SR-332, Issues 3, Method I, Case 3 under Ground Benign, Controlled environment, 50% operation stress	11,037,663

### 2.4. CE and FCC Compatibility

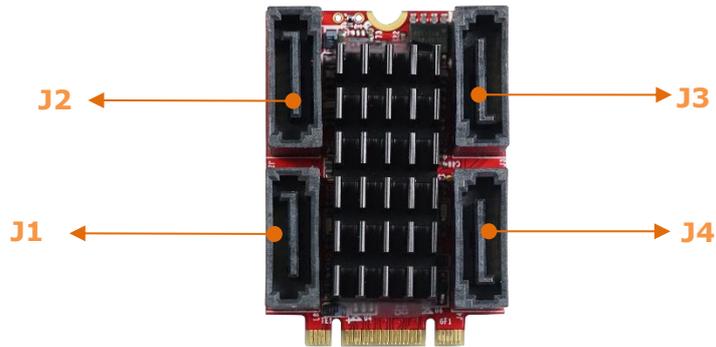
EGPS-3401 conforms to CE and FCC requirements.

### 2.5. RoHS Compliance

EGPS-3401 is fully compliant with RoHS directive.

## 2.6. Hardware

### 2.6.1. Layout



**Table 7: M.2 PCB Layout Legend**

Label	Connector Type	Function
<b>J1</b>	Wire to board SATA 7P 180°	SATA III Signal
<b>J2</b>	Wire to board SATA 7P 180°	SATA III Signal
<b>J3</b>	Wire to board SATA 7P 180°	SATA III Signal
<b>J4</b>	Wire to board SATA 7P 180°	SATA III Signal

2.6.2. Pin Define

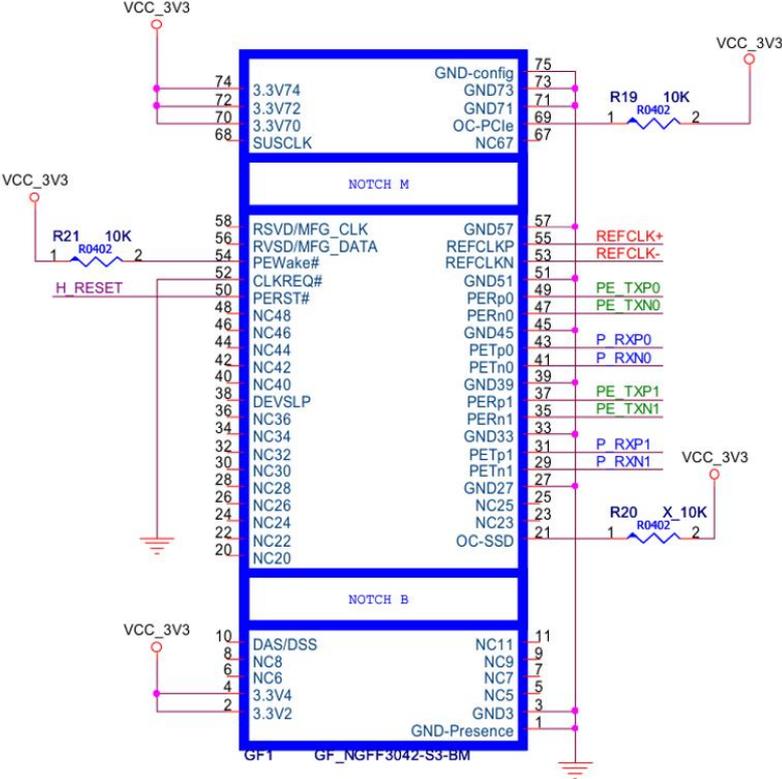


Figure 3: M.2 Pin Define

2.6.3. EGPS-3401 Mechanical Drawing

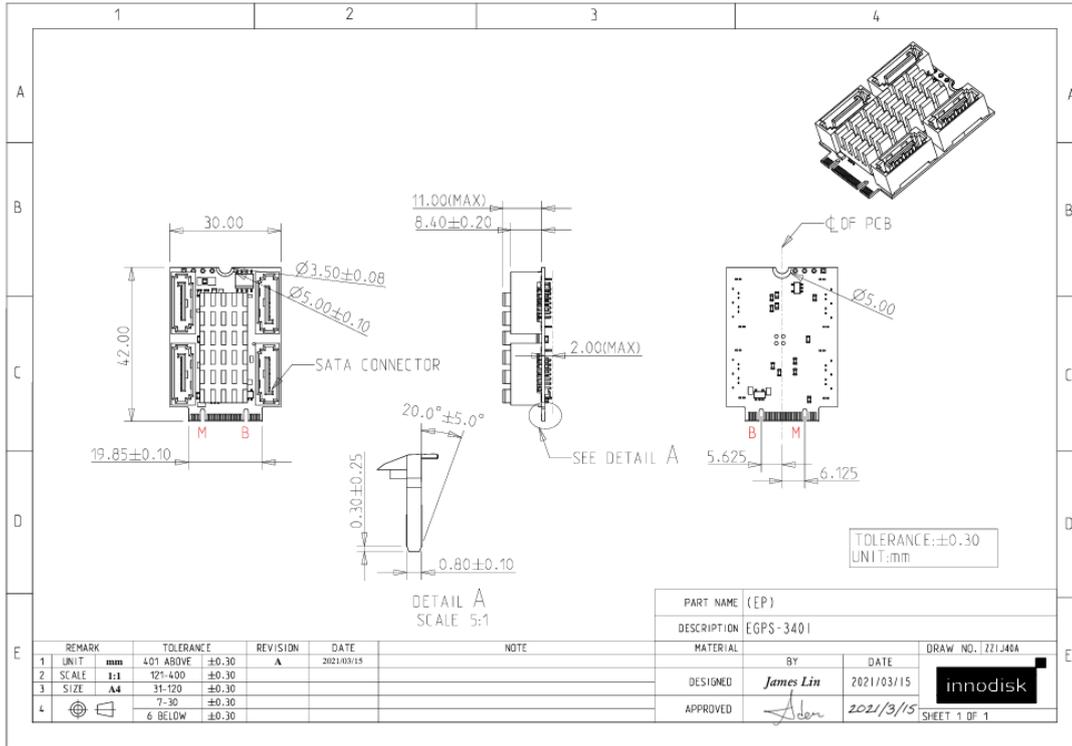


Figure 4: EGPS-3401 M.2 Board Drawing

2.6.4. Packing List

- EGPS-3401 M.2 Board x 1

2.7. OS Support

- Windows: 7(32/64bit), 8/8.1(32/64 bit), 10(32/64bit) and above
- Linux: Kernel 2.6 above.
- Supports operating systems that provide AHCI driver support.

## 3. Appendix

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) delivered to

Innodisk P/N	Description
All Innodisk EP Products	

- contain(s) **no** hazardous substances or constituents exceeding the defined threshold 0.1 % by weight in homogenous material if not otherwise specified, as described in the candidate list table currently including 209 substances and shown on the ECHA website (<http://echa.europa.eu/de/candidate-list-table>).
- contain(s) one or more hazardous substances or constituents exceeding 0.1 % by weight in homogenous material if not otherwise specified in candidate list table. Where the threshold value is exceeded, the substances in question are to be declared in accompanying Appendix A.
- 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： Randy Chien 簡川勝

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

Date 日期： 2020 / 07 / 01

### 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 (7a)、(7c-1) 允許豁免。  
We declare, our products permitted by the following exemptions specified in the Annex of the RoHS directive.
- ※ (7a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).
- ※ (7C-1) 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.

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

#### 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: Randy Chien 簡川勝

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

Date 日期: 2020 / 03 / 03



# Certificate

Issue Date: March 10, 2016  
Ref. Report No. ISL-16LE101CE

Product Name : Mini PCIe to four USB 3.0 Module  
Model : E%PU-3401  
(%: Form factor: ( 2:2.5"SSD, 3:DDR3 DIMM, D:Dongle,  
G:NGFF\_M.2, H:mPCIe Half, L:PCIe Low profile,  
M:mPCIe, S:SATA, X:Multi, Z:Others ))  
Responsible Party : Innodisk Corporation  
Address : 5F., No.237, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221,  
Taiwan (R.O.C.)

We, **International Standards Laboratory**, hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in European Council Directive- EMC Directive 2004/108/EC (marketed before 2016/04/19) 2014/30/EU (marketed after 2016/04/20). The device was passed the test performed according to :



## Standards:

EN 55022: 2010+AC2011 and CISPR 22: 2008 (modified)  
EN 61000-3-2:2014 and IEC 61000-3-2:2014  
EN 61000-3-3: 2013 and IEC 61000-3-3: 2013  
EN 55024: 2010 and CISPR 24: 2010  
EN 61000-4-2: 2009 and IEC 61000-4-2: 2008  
EN 61000-4-3: 2006+A1: 2008 +A2: 2010 and  
IEC 61000-4-3:2006+A1: 2007+A2: 2010  
EN 61000-4-4:2012 and IEC 61000-4-4:2012

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

## International Standards Laboratory

W.H. Chang / Director

### Hsi-Chih LAB:

No. 65, Gu Dai Keng Street, Hsi-Chih Dist.,  
New Taipei City 221, Taiwan  
Tel: 886-2-2646-2550; Fax: 886-2-2646-4641



### Lung-Tan LAB:

No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist.,  
Tao Yuan City 325, Taiwan  
Tel: 886-3-407-1718; Fax: 886-3-407-1738



# Certificate

Issue Date: March 10, 2016  
 Ref. Report No. ISL-16LE101FB

Product Name : Mini PCIe to four USB 3.0 Module  
 Model : E%PU-3401  
 (%: Form factor: ( 2:2.5"SSD, 3:DDR3 DIMM, D:Dongle,  
 G:NGFF\_M.2, H:mPCIe Half, L:PCIe Low profile, M:mPCIe,  
 S:SATA, X:Multi, Z:Others ))

Applicant : Innodisk Corporation  
 Address : 5F., No.237, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221,  
 Taiwan (R.O.C.)

We, **International Standards Laboratory**, hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified. (refer to Test Report if any modifications were made for compliance).



## Standards:

FCC CFR Title 47 Part 15 Subpart B: 2014- Section 15.107 and 15.109  
 ANSI C63.4-2014  
 Industry Canada Interference-Causing Equipment Standard ICES-003 Issue 6: 2016

## Class B

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

## International Standards Laboratory

*W.H. Chang*  
 W.H. Chang / Director

**Hsi-Chih LAB:**  
 No. 65, Gu Dai Keng Street, Hsi-Chih Dist.,  
 New Taipei City 221, Taiwan  
 Tel: 886-2-2646-2550; Fax: 886-2-2646-4641



**Lung-Tan LAB:**  
 No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist.,  
 Tao Yuan City 325, Taiwan  
 Tel: 886-3-407-1718; Fax: 886-3407-1738

