innodisk

EGPV-1101

M.2 to Single HDMI or DVI-D Module

M.2 to 24/48bit LVDS Module

Customer: _____

Customer Part Number: _____

Innodisk Part Number: _____

Innodisk Model Name: _____

Date: _____

Innodisk Approver	Customer Approver

Total Solution For Embedded Peripherals

Table of Contents

REVISION HISTORY

Revision	Description	Date
1.0	First Released	Dec, 2018
1.1	Correct M.2 pin define in 2.6.2	May, 2019
1.2	Correct M.2 device configure pin define	Sep, 2022
1.3	Modify LVDS description	Jun, 2023
1.4	Add C/W information in 2.3.1	Apr, 2025

List of Tables

List of Figures

1. Product Introduction

1.1. Overview

Innodisk EGPV-1101 is designed with M.2 2280 form factor with B/M key, EGPV-1101 supports PCIe Gen 2.0 with a dual lane to HDMI 1.4 or DVI, 24/48bit LVDS channel, optimized for higher performance and lower power, which brings you a flexible expansion solution for embedded systems.

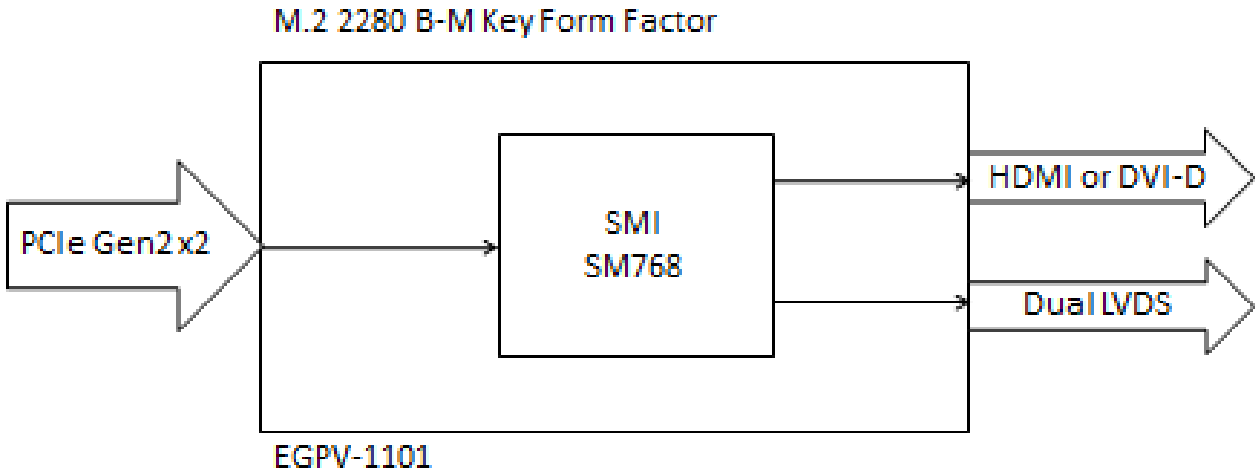


Figure 1: Block Diagram

1.2. Features

- Support display output of HDMI 1.4 or DVI-D, 24 or 48bit LVDS channel
- Single HDMI display resolution up to 4K UHD (3840x2160@30p)
- Single DVI-D display resolution up to FHD (1920x1080@60p)
- LVDS display resolution up to FHD (1920x1080@60p)
- HW video decoder supports multiple formats H264\AVC\DIVX\XVID\MPEG-4\MPEG-2
- Built-in 256MB DDR 3 memory
- Industrial temperature -40 ºC to 85 ºC
- 30μ" golden finger, 3-year warranty

Figure 2: EGPV-1101-C1/W1 HDMI/DVI-D M.2 Board Picture

Figure 3: EGPV-1101-C2/W2 24/48bit LVDS M.2 Board Picture

2. Product Specifications

2.1. Device Parameters

Table 1: Device Parameters

Form Factor	M.2 2280 B-M
Input I/F	PCI Express 2.0 x 2
Output I/F	HDMI or DVI-D Dual 24bit LVDS Channel
Output Connector	P1.25mm 20pin x 1 (HDMI), 20pin x 2 (LVDS)
Dimension (WxLxH)	22 x 80 x 7.1 mm

2.2. Electrical Specifications

2.2.1. Power Requirement

Table 2: Power Requirement

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

2.2.2. Power Consumption

Table 3: Power Consumption

Full Load (mA)	Voltage (V)
843	3.3

2.3. Environmental Specifications

2.3.1. Temperature Ranges

Table 4: Temperature Ranges

Temperature	Range
Operating	Standard Grade (C): 0°C to +70° Industrial Grade (W): -40°C to +85°
Storage	-55°C to +95°

2.3.2. Humidity

Relative Humidity: 10-95%, non-condensing

2.3.3. Shock and Vibration

Table 4: 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 5: Mean Time between Failure (MTBF)

Product	Condition	MTBF (Hours)
EGPV-1101-C1	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	17,814,485
EGPV-1101-W1	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	18,301,614

2.4. CE and FCC Compatibility

EGPV-1101 conforms to CE and FCC requirements.

2.5. RoHS Compliance

EGPV-1101 is fully compliant with RoHS directive.

2.6. Hardware

2.6.1. Layout

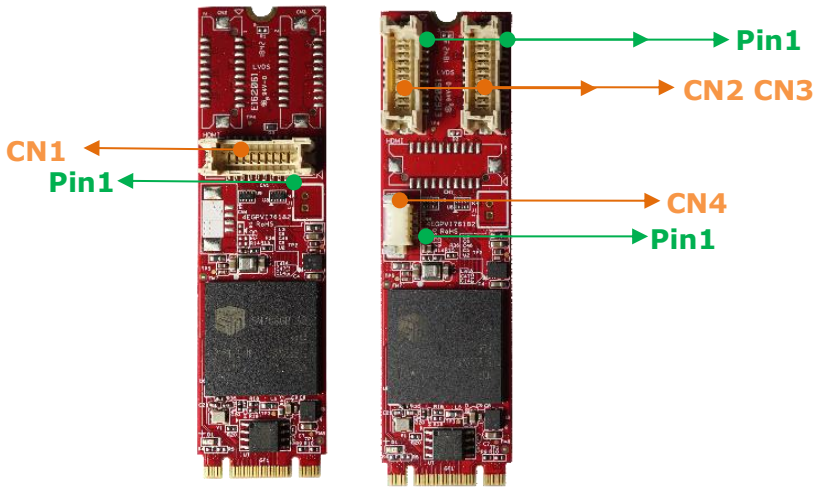


Table 6: PCB Layout Legend

Label	Connector Type	Function
CN1	Wire to board SMD 2*10P 180° P:1.25mm H:4.8mm	HDMI or DVI-D Port
CN2	Wire to board SMD 2*10P 180° P:1.25mm H:4.8mm	24bit LVDS Port Channel 1
CN3	Wire to board SMD 2*10P 180° P:1.25mm H:4.8mm	24bit LVDS Port Channel 2
CN4	Wire to board SMD 1*4P 90° P:1.25mm	LVDS 5V Power Input

2.6.2. Pin Define

Table 7: M.2 B-M Key Pin Define

Signal Name	Pin #	Pin #	Signal Name
		75	GND
3.3V	**74**	**73**	GND
3.3V	**72**	**71**	GND
3.3V	**70**	**69**	NC
NC	**68**	**67**	NC
Module Key M			
NC	**58**		
NC	**56**	**57**	GND
NC	**54**	**55**	CLK+
GND	**52**	**53**	CLK-
RST	**50**	**51**	GND
NC	**48**	**49**	RX0+
NC	**46**	**47**	RX0-
NC	**44**	**45**	GND
NC	**42**	**43**	TX0+

NC	**40**	**41**	TX0-
NC	**38**	**39**	GND
NC	**36**	**37**	RX1+
NC	**34**	**35**	RX1-
NC	**32**	**33**	GND
NC	**30**	**31**	TX1+
NC	**28**	**29**	TX1-
NC	**26**	**27**	GND
NC	**24**	**25**	NC
NC	**22**	**23**	NC
NC	**20**	**21**	GND
Module Key B			
NC	**10**	**11**	NC
NC	**8**	**9**	NC
NC	**6**	**7**	NC
3.3V	**4**	**5**	NC
3.3V	**2**	**3**	GND
		1	GND

2.6.3. I/O Connector Mechanical Drawing & Pin Defines

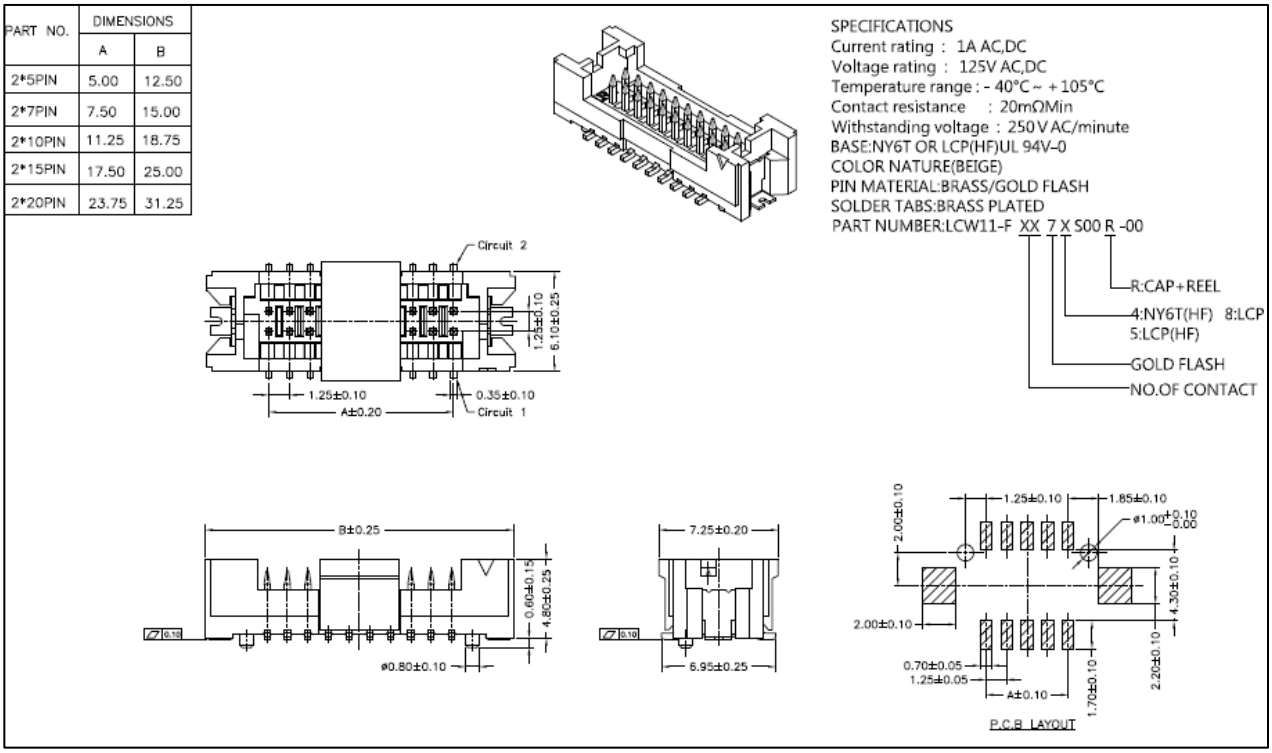


Figure 4: Wire to Board SMD 2*10P Connector Drawing (CN1/CN2/CN3)

Table 8: Wire to Board SMD 2*10P Connector Pin Define (CN1)

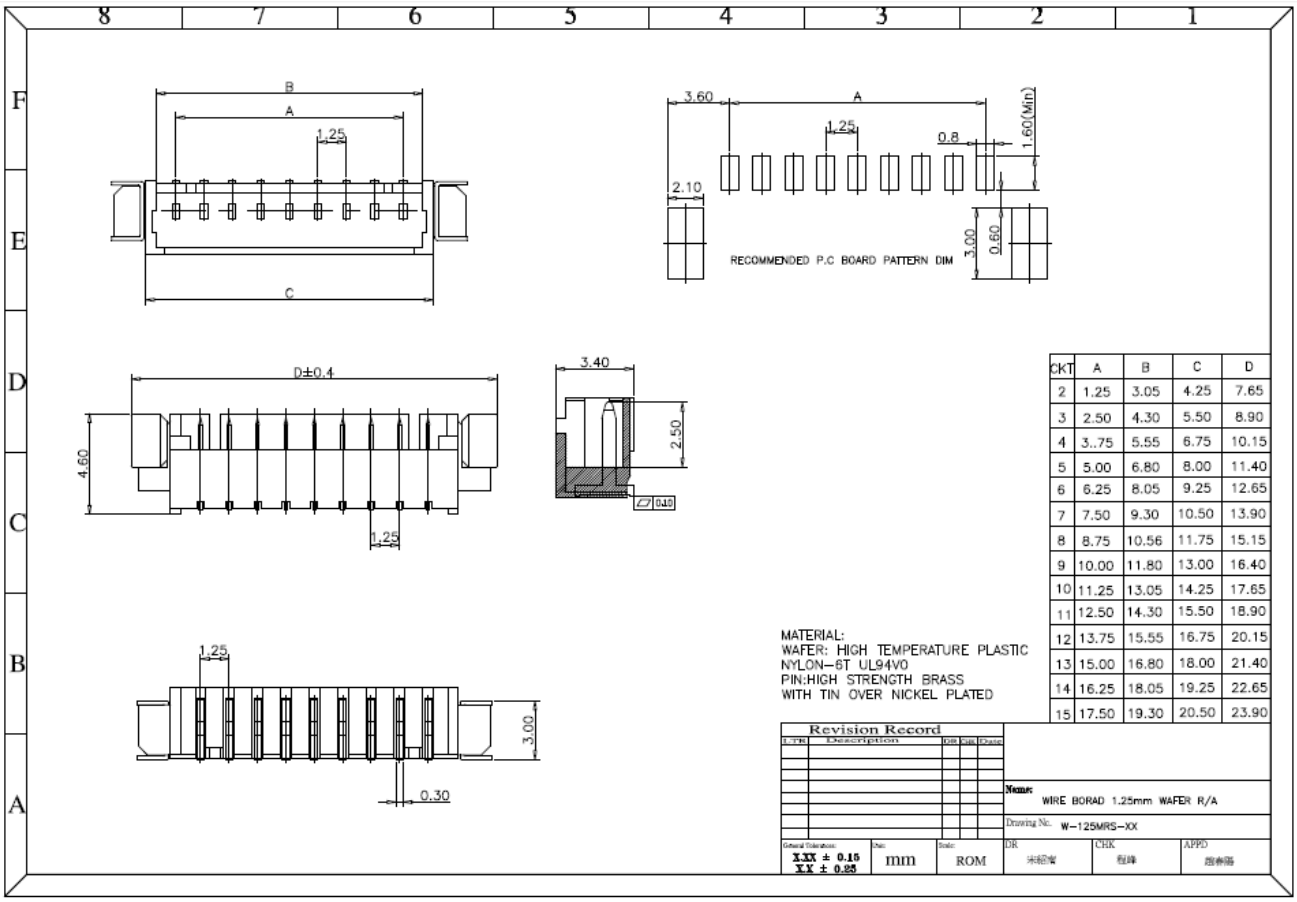
Signal Name	Pin #	Pin #	Signal Name
GND	**2**	**1**	TXC-
+5V	**4**	**3**	TXC+
GND	**6**	**5**	GND
DDC_SCL	**8**	**7**	TX0-
DDC_SDA	**10**	**9**	TX0+
GND	**12**	**11**	TX1-
HPD	**14**	**13**	TX1+
GND	**16**	**15**	TX2-
CEC	**18**	**17**	TX2+
DDC/CEC GND	**20**	**19**	GND

Table 9: Wire to Board SMD 2*10P Connector Pin Define (CN2)

Signal Name	Pin #	Pin #	Signal Name
GND	**2**	**1**	A3+
A0+	**4**	**3**	A3-
A0-	**6**	**5**	GND
GND	**8**	**7**	CLK+
A1+	**10**	**9**	CLK-
A1-	**12**	**11**	GND
GND	**14**	**13**	EXT_5V
A2+	**16**	**15**	EXT_5V
A2-	**18**	**17**	EN
GND	**20**	**19**	ADJ

Table 10: Wire to Board SMD 2*10P Connector Pin Define (CN3)

Signal Name	Pin #	Pin #	Signal Name
GND	**2**	**1**	A7+
A4+	**4**	**3**	A7-
A4-	**6**	**5**	GND
GND	**8**	**7**	CLK2+
A5+	**10**	**9**	CLK2-
A5-	**12**	**11**	GND
GND	**14**	**13**	EXT_5V
A6+	**16**	**15**	EXT_5V
A6-	**18**	**17**	EXT_5V
GND	**20**	**19**	EXT_5V



CKT	A	B	C	D
2	1.25	3.05	4.25	7.65
3	2.50	4.30	5.50	8.90
4	3..75	5.55	6.75	10.15
5	5.00	6.80	8.00	11.40
6	6.25	8.05	9.25	12.65
7	7.50	9.30	10.50	13.90
8	8.75	10.56	11.75	15.15
9	10.00	11.80	13.00	16.40
10	11.25	13.05	14.25	17.65
11	12.50	14.30	15.50	18.90
12	13.75	15.55	16.75	20.15
13	15.00	16.80	18.00	21.40
14	16.25	18.05	19.25	22.65
15	17.50	19.30	20.50	23.90

Figure 5: Wire to board SMD 1*4P 90° Connector Drawing (CN4)

Table 11: Wire to board SMD 1*4P 90° Connector Pin Define (CN4)

Pin1	Pin2	Pin3	Pin4
EXT_5V	EXT_5V	GND	GND

2.6.4. EGPV-1101 Mechanical Drawing

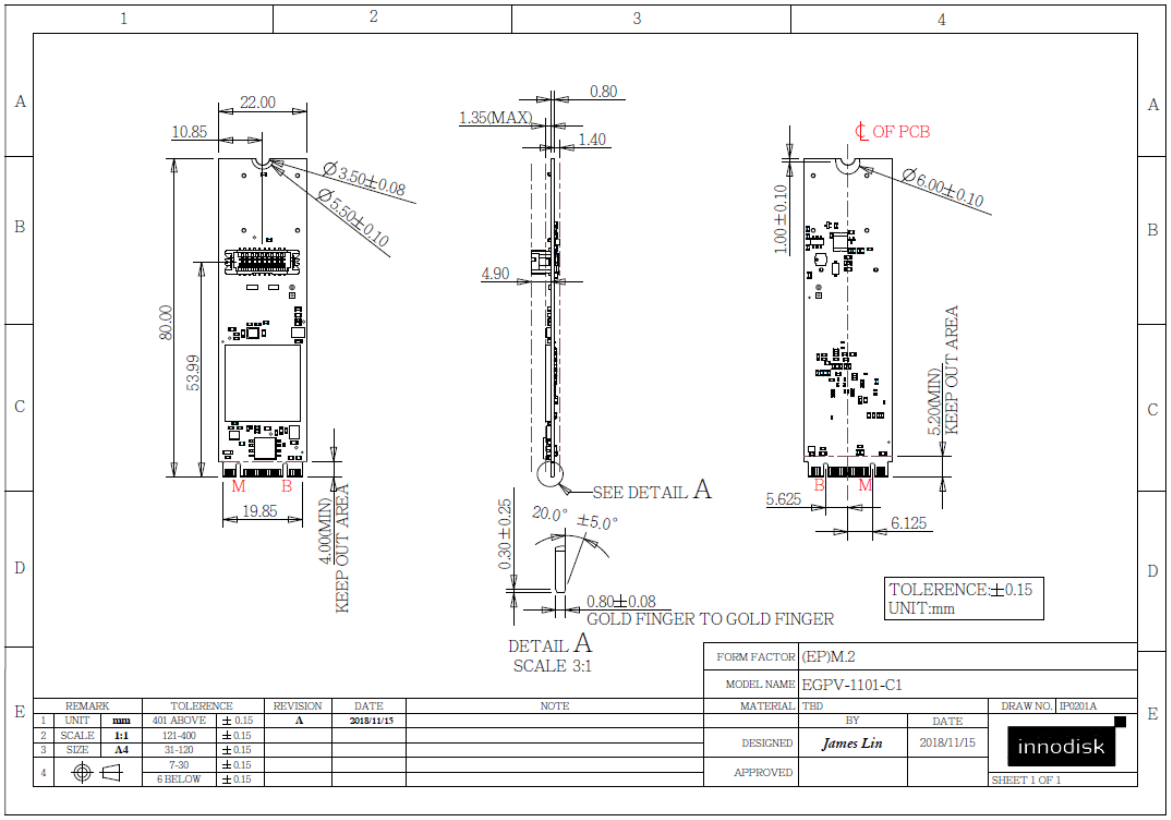


Figure 6: EGPV-1101-C1/W1 Drawing

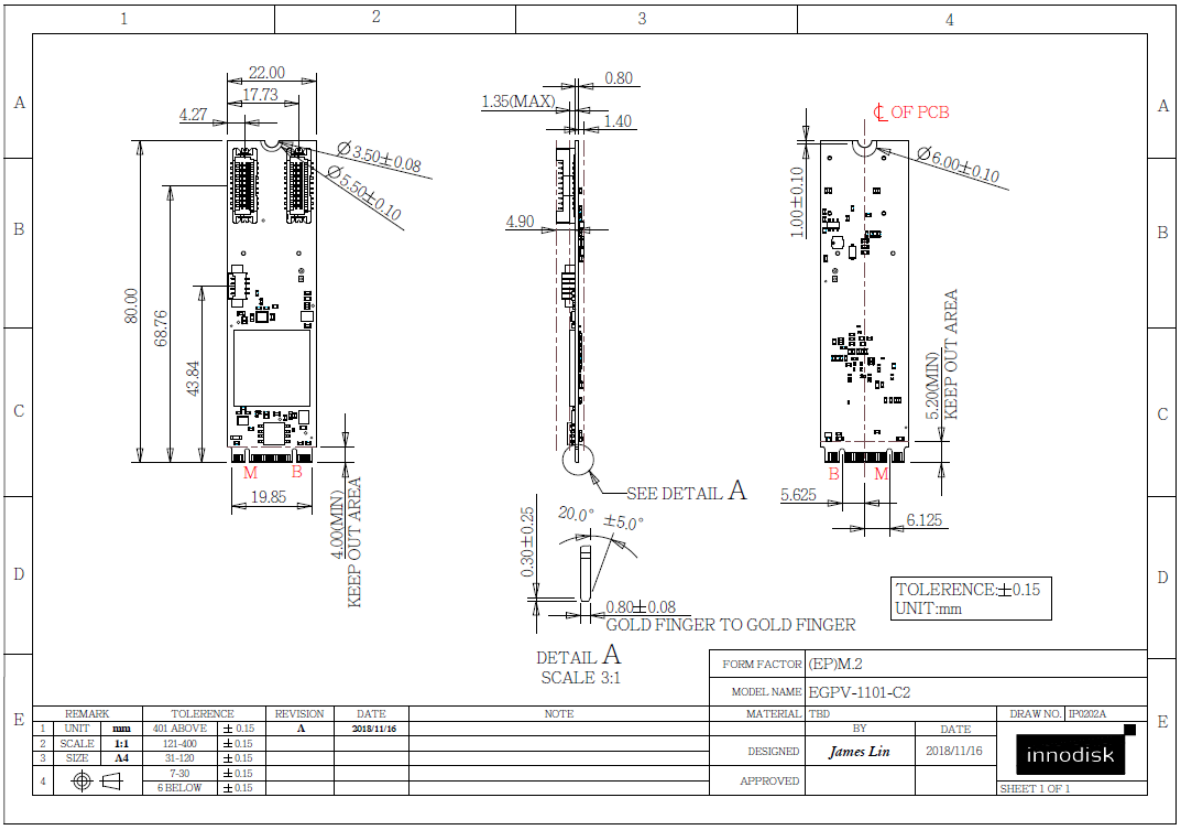


Figure 7: EGPV-1101-C2/W2 Drawing

2.6.5. Cable Mechanical Drawing & Pin defines

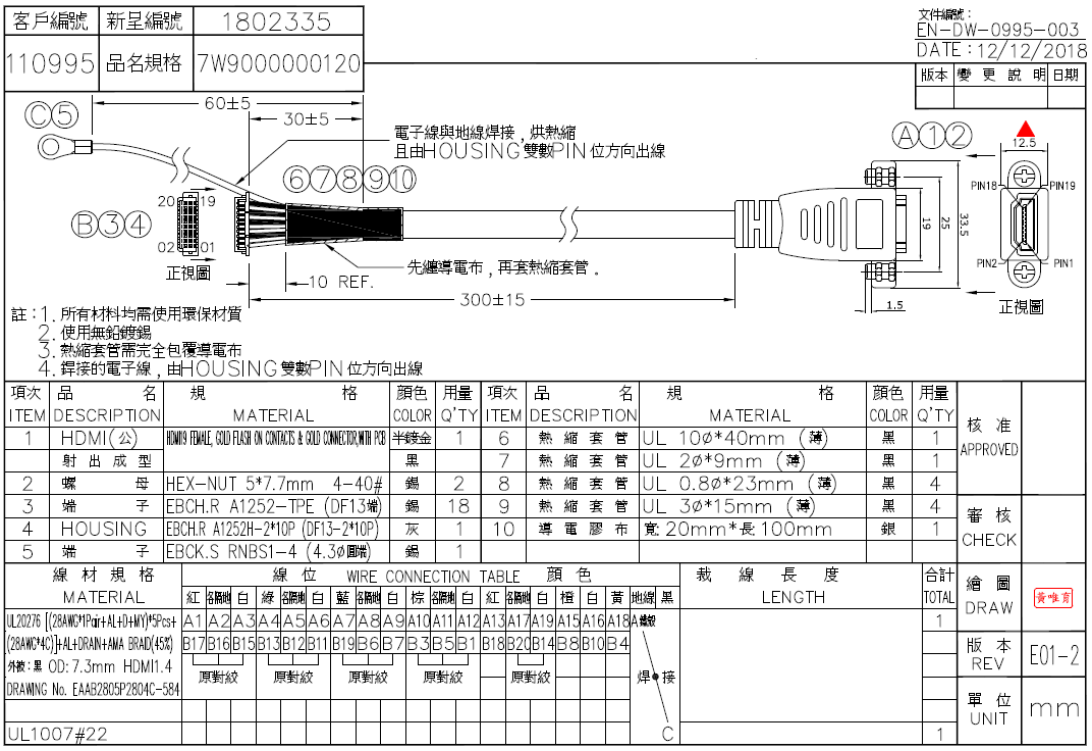


Figure 8: HDMI Cable Drawing

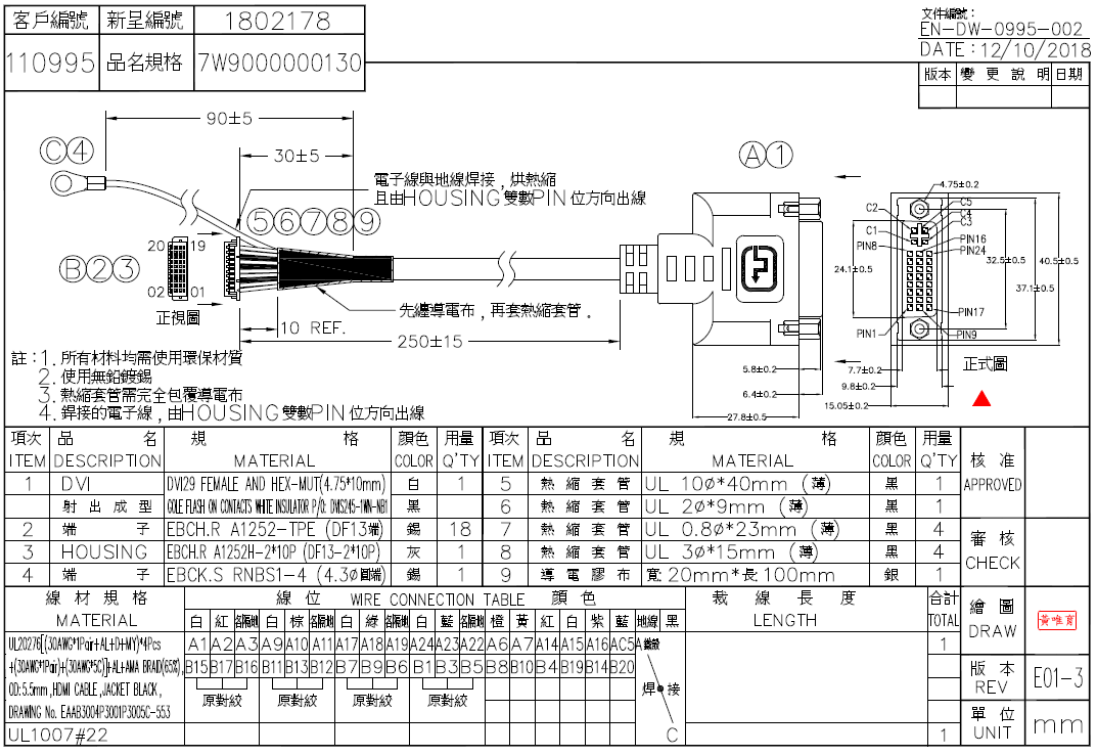


Figure 9: DVI-D Cable Drawing

2.6.6. Packing List

- EGPV-1101 x1

2.7. Software Support

- Windows: 10 32/64bit
- Linux: kernel 3.13- 4.15. (Provide driver source code)

3. Installation Guide

Please download driver and user manual from Myinnodisk web site.
https://myinnodisk.innodisk.com/myinnodisk/Login.aspx

4. Appedix

innodisk

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

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

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 191 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 & B.

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：2018 / 07 / 27

1

宜鼎國際股份有限公司
Innodisk Corporation
Tel:(02)7703-3000 Fax:(02) 7703-3555 Internet: http://www.innodisk.com/

RoHS 自我宣告書(RoHS Declaration of Conformity)

Manufacturer Product: All Innodisk 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.

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： 2018 / 07 / 01

CERTIFICATE OF CONFORMITY

Product	:	M.2 Graphics Module
Brand	:	Innodisk
Test Model	:	E%PV-110#
Series Model	:	E%PV-110# <%: 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:PCIe Standard,X:Multi,Z:Others) #: Series: (1~9,A~Z)>
Applicant	:	Innodisk Corporation
Report No.	:	CE181212D15

We, **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, declare that the equipment above has been tested in our facility and found compliance with the requirement limits of applicable standards, in accordance with the Directive 2014/30/EU. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

EN 55032:2015 +AC:2016, Class A
EN 61000-3-2:2014 (Not applicable)
EN 61000-3-3:2013 (Not applicable)
EN 55035:2017
EN 61000-4-2:2009 / IEC 61000-4-2:2008 ED. 2.0
EN 61000-4-3:2006 +A1:2008 +A2:2010 / IEC 61000-4-3:2010 ED. 3.2
EN 61000-4-4:2012 / IEC 61000-4-4:2012 ED. 3.0 (Not applicable)
EN 61000-4-5:2014 / IEC 61000-4-5:2014 ED. 3.0 (Not applicable)
EN 61000-4-6:2014 / IEC 61000-4-6:2013 ED. 4.0 (Not applicable)
EN 61000-4-8:2010 / IEC 61000-4-8:2009 ED. 2.0
EN 61000-4-11:2004 / IEC 61000-4-11:2004 ED. 2.0 (Not applicable)
Broadband impulse noise disturbances (Not applicable)

NOTE: The above EN/IEC basic standards are applied with latest version if customer has no special requirement.

Kenny Meng / Assistant Manager
Dec. 24, 2018

No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
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CERTIFICATE OF CONFORMITY

Product	:	M.2 Graphics Module
Brand	:	Innodisk
Test Model	:	E%PV-110#
Series Model	:	E%PV-110# <%: 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:PCIe Standard,X:Multi,Z:Others) #: Series: (1~9,A~Z)>
Applicant	:	Innodisk Corporation
Report No.	:	FV181212D15

We, **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, declare that the equipment above has been tested in our facility and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

47 CFR FCC Part 15, Subpart B, Class A

ICES-003:2016 Issue 6, Class A

ANSI C63.4:2014

Jim Hsiang / Associate Technical Manager

Dec. 24, 2018

No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
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April 30, 2025