

# M2-225

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M.2(NGFF) 2.5 Gigabit Ethernet Card

## User's Manual

Edition 1.0  
2021/04/23



## Packing List:

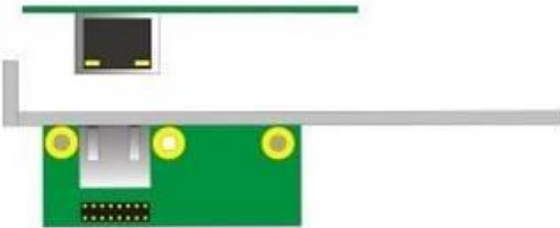
Please check the package content before you starting using the card.



1 x M2-225 card



1 x Adapter LAN Cable  
(OALGLAN-A-20 / 1040617)



1 x LAN Adapter  
(BADPGLAND\_A / 4120007011)  
(Include Bracket)



1 x CD Driver

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# 1 <Product Specifications>

## Product Description

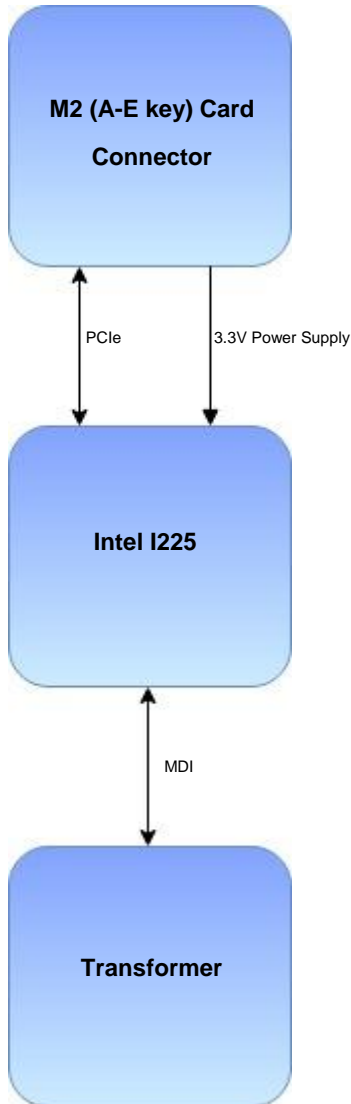
Host Interface	M.2
Controller	Intel® Ethernet Controller I225
M.2 key type	A-E key PCIe interface
Dimension	22mm x 30mm x 7mm

## Operating Conditions

Voltage	3.3V +/-5%
Temperature	0~55°C
Storage Temperature	-40~+85°C

## General Specifications

Compliance	IEEE 802.3 Ethernet interface for 2500BASE-T 1000BASE-T, 100BASE-TX, and 10BASE-T applications (802.3, 802.3u, 802.3ab).
Transfer Rate	2500 Mb/s, 1000 Mb/s, 100 Mb/s, or 10 Mb/s
Support OS	Win10 RS5+ x64, Linux kernel 5.7

**2 <Block Diagram>**

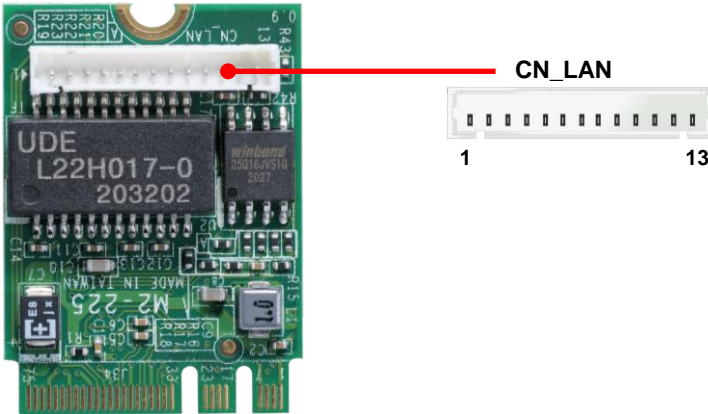
### 3 <Pin-out Definition>

Pin No.	Definition	Definition	Pin No.
1	GND		
3	NC	3.3V	2
5	NC	3.3V	4
7	GND	NC	6
	Key A	Key A	
	Key A	Key A	
	Key A	Key A	
	Key A	Key A	
17	NC	NC	16
19	NC	GND	18
21	NC	NC	20
23	NC	NC	22
	Key E	Key E	
	Key E	Key E	
	Key E	Key E	
	Key E	Key E	
33	GND	NC	32
35	PERp0	NC	34
37	PERn0	NC	36
39	GND	NC	38
41	PETp0	NC	40
43	PETn0	NC	42
45	GND	NC	44
47	REFCLKp0	NC	46
49	REFCLKn0	NC	48
51	GND	NC	50
53	CLKREQ0#	PERST0#	52
55	PEWAKE0#	NC	54
57	GND	NC	56
59	NC	NC	58

<b>Pin No.</b>	<b>Definition</b>	<b>Definition</b>	<b>Pin No.</b>
61	<b>NC</b>	<b>NC</b>	60
63	<b>GND</b>	<b>NC</b>	62
65	<b>NC</b>	<b>NC</b>	64
67	<b>NC</b>	<b>NC</b>	66
69	<b>GND</b>	<b>NC</b>	68
71	<b>NC</b>	<b>NC</b>	70
73	<b>NC</b>	<b>3.3V</b>	72
75	<b>GND</b>	<b>3.3V</b>	74

## 4 <Component Placement>

### 4.1 < Connector Reference >



**Connector: CN\_LAN**

**Connector Type:**

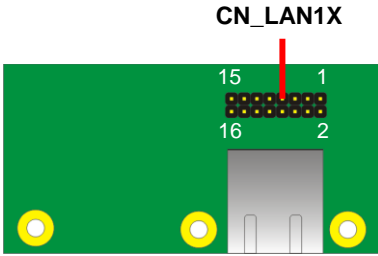
**13-pin (13 x 1), pitch: 1.25 mm, DIP type**

**Straight P.C.B Connector**

Pin	Description	Pin	Description
1	RTD00+	9	GND
2	RTD00-	10	RLINK2.5G0-
3	RTD01+	11	RLINK1G0-
4	RTD01-	12	RLINK0-
5	RTD02+	13	RACTLED0-
6	RTD02-		
7	RTD03+		
8	RTD03-		



## 4.2 < LAN Adapter >



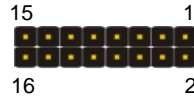
(Include Bracket)



### CN\_LAN1X:

Connector Type:

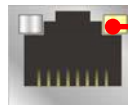
16-pin (8 x 2) 2.0 x 2.0 mm Straight Type Header



Pin	Description	Pin	Description
1	RTD0+	2	RTD1+
3	RTD0-	4	RTD1-
5	NC	6	GND
7	RTD2+	8	RTD3+
9	RTD2-	10	RTD3-
11	GND	12	GND
13	LINK1	14	Link100
15	ACTLED1	16	Link1000

### Adapter LAN Connector: RJ45\_1

RJ45 connector

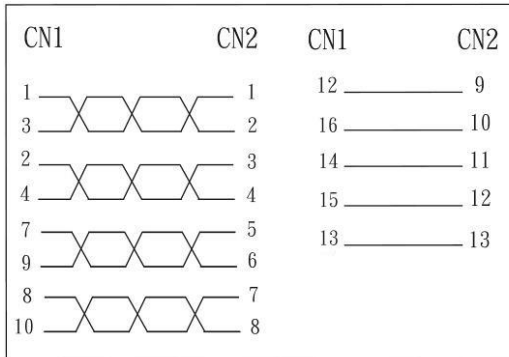
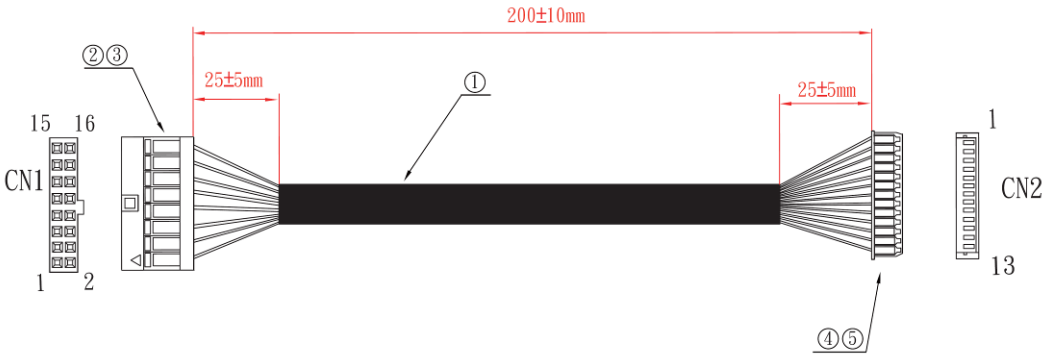


2500 Mb/s: Orange

10/100/1000 Mb/s: Green

8 1

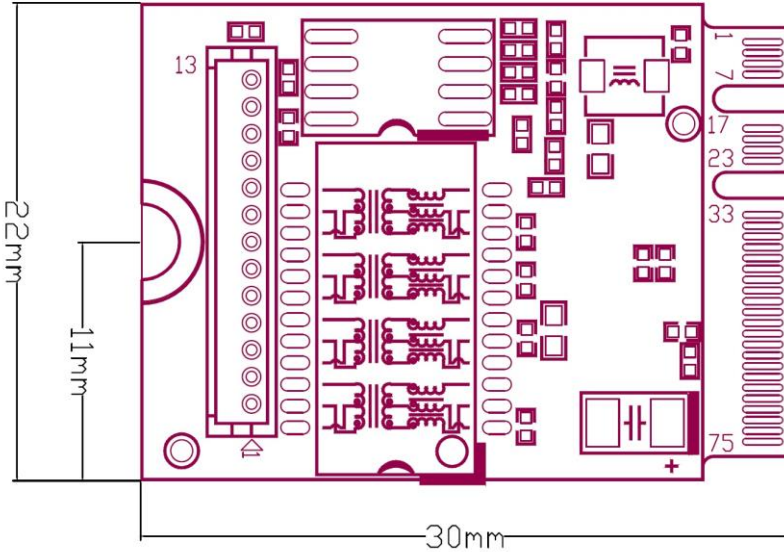
Pin	1	2	3	4	5	6	7	8
Description	MDI0+	MDI0-	MDI1+	MDI2+	MDI2-	MDI1-	MDI3+	MDI3-

**4.3 < Cable connection >**


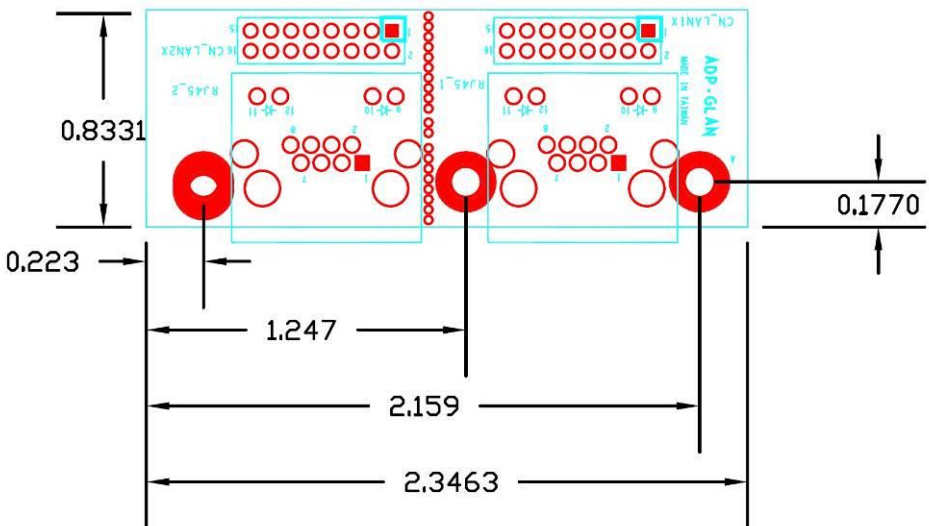
NO	DESCRIPTION	COLOR	Q' TY	UNIT
1	UL1571 28AWG		13	PCS
2	HOUSING DP2.0 2*8P	BLACK	1	PCS
3	TERMINAL DP2.0		13	PCS
4	HOUSING MOLEX1.25 13PIN	WHITE	1	PCS
5	TERMINAL MOLEX 1.25		13	PCS

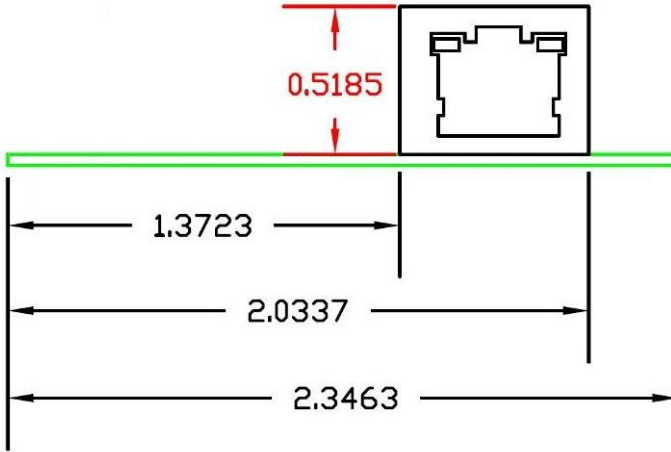
5 <Mechanical Drawing>

M2-225: (Units: mm)

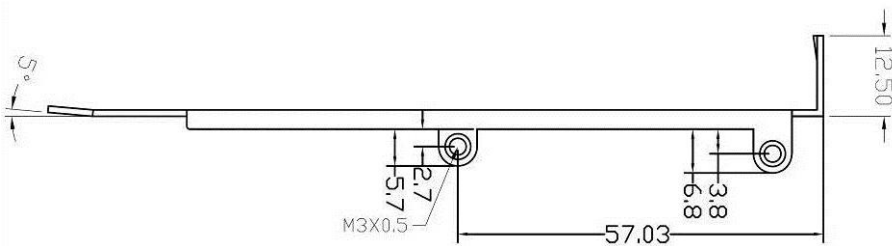
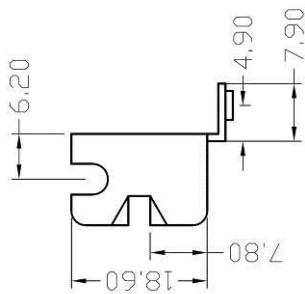


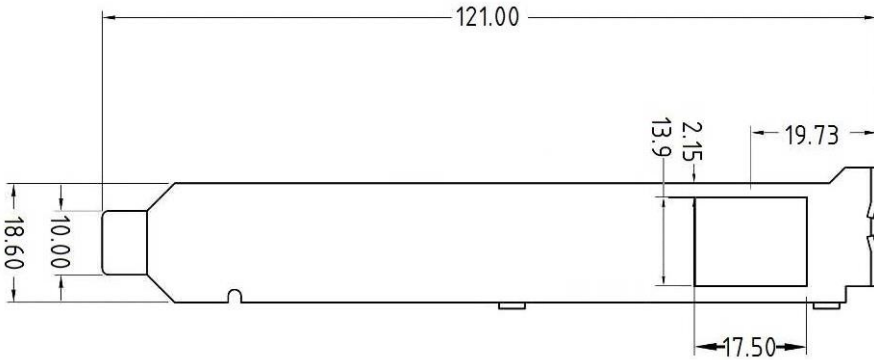
LAN Adapter: (Units: inch)





**Bracket: (Units: mm)**





## Contact information

Any advice or comment about our products and service, or anything we can help you please don't hesitate to contact with us. We will do our best to support you for your products, projects and business.

### Taiwan Commate Computer Inc.

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