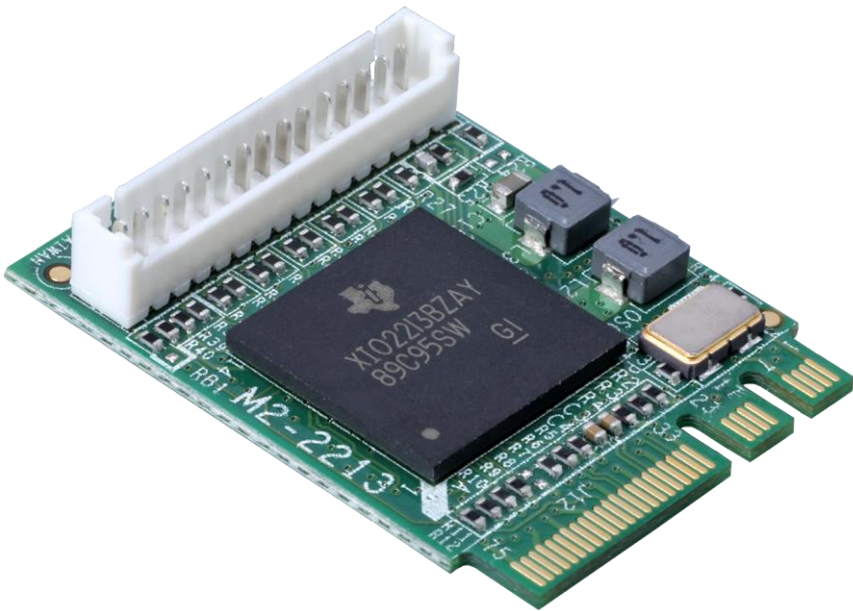


M2-2213

Support IEEE 1394a & 1394b Mini Card

User's Manual

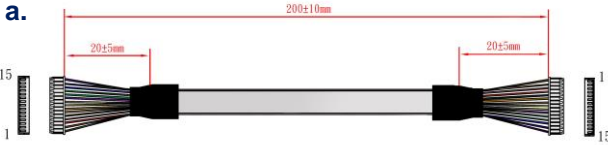
Edition 1.0
2021/04/23



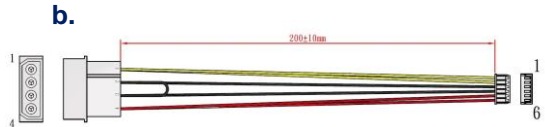
Packing List:

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

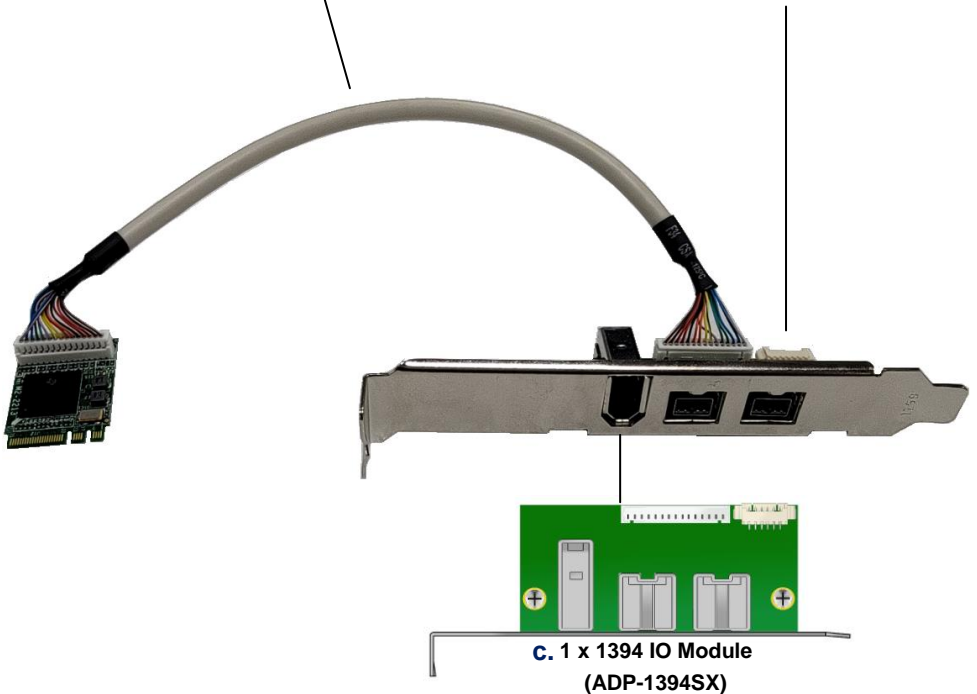
a. 1x1394 Cable; b. 1x4Pin HSG to 6Pin Power Cable; c. 1x1394 I/O module.



1 x 1394 Cable
(OAL13942T-L20 / 1040675)



1 x 4PIN HSG to 6PIN Power Cable
(OAL4P-6 / 1040284)



c. 1 x 1394 IO Module
(ADP-1394SX)

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1 <Product Overview>

M2-2213 M.2 (NGFF) card, the 1394b OHCI controller function is fully compatible with IEEE Std 1394b and the latest 1394 Open Host Controller Interface (OHCI) Specification.

M2-2213 capable of transferring data between the PCIe bus and the 1394 bus at 100M bit/s, 200M bit/s, 400M bit/s, and 800M bit/s.

M2-2213 provides full PCIe and 1394b functionality and performance.

2 <Features>

- ◇ **2230 M.2 Card dimension**

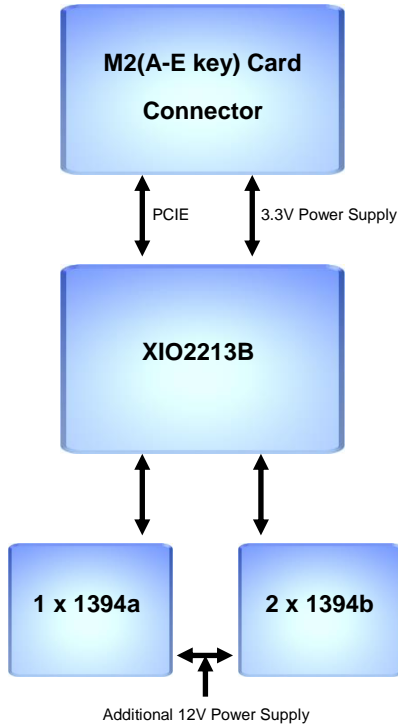
- ◇ **M.2 Key A-E Card Type**

- ◇ **Fully Compliant With PCI Express Base Specification, Revision 1.1**

- ◇ **Supports Provisions of IEEE Std P1394b- 2002 and IEEE Std 1394-1995 for IEEE Std 1394a-2000**

- ◇ **Fully Compliant With 1394 Open Host States Controller Interface (OHCI) Specification, Revision 1.1 and Revision 1.2 Draft**

3 <Block Diagram>



4 <Product Specifications>

Product Description

Host Interface	M.2
Controller	XIO2213B
M.2 key type	A-E key PCIe Interface
Dimension	22mm x 30mm x 7mm

Operating Conditions

Power Requirement	+3.3V
Temperature	0~70°C
Storage Temperature	-40~+85°C

General Specifications

Compliance	IEEE 1394a (Firewire 400) x1 IEEE 1394b (Firewire 800) x2
Accessories	1 x IEEE1394 IO module 1 x 15PIN cable for 1394 IO module (OAL13942T-L20) 1 x DC input cable (OAL4P-6)
Transfer Rate	100M bits/s, 200M bits/s, 400M bits/s, and 800M bits/s (IEEE 1394b).

4.1 < Recommended Operating Conditions >

Symbol	Parameter	Rating	Unit
Vdd33	I/O voltage	3.135~3.465	V

4.2 < Power Consumption >

Transmitting data	MAX
Power (W)	
1.2	

5 <Pin-out Definition>

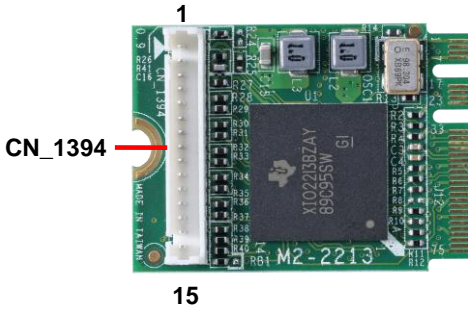
Pin No.	Definition	Definition	Pin No.
1	GND		
3	NC	3.3V	2
5	NC	3.3V	4
7	GND	NC	6
	Key A	Key A	
	Key A	Key A	
	Key A	Key A	
	Key A	Key A	
17	NC	NC	16
19	NC	GND	18
21	NC	NC	20
23	NC	NC	22
	Key E	Key E	
	Key E	Key E	
	Key E	Key E	
	Key E	Key E	
33	GND	NC	32
35	PERp0	NC	34
37	PERn0	NC	36
39	GND	NC	38
41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

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

6 <Component Placement>

6.1 < Connector Reference >

M2-2213:



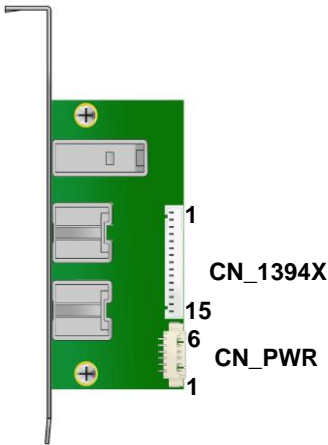
Connector: CN_1394

Connector Type:

BOX Header 15-Pin, pitch: 1.25 mm, DIP type
Straight P.C.B Connector



Pin	Description(LAN1)	Pin	Description(LAN2)
1	TPB0-	2	TPB0+
3	TPA0-	4	TPA0+
5	GND	6	TPB1-
7	TPB1+	8	TPA1-
9	TPA1+	10	GND
11	TPB2-	12	TPB2+
13	TPA2-	14	TPA2+
15	GND		



Connector: CN_PWR

Connector Type:

1252 6-Pin, pitch: 1.25 mm



Pin	Description(LAN1)	Pin	Description(LAN2)
1	+12V	2	+12V
3	GND	4	GND
5	NC	6	NC

Connector: CN_1394X

Connector Type:

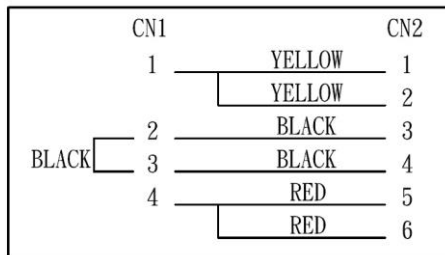
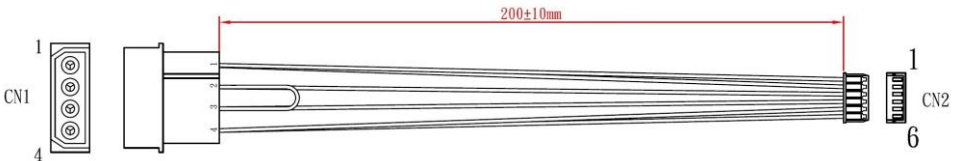
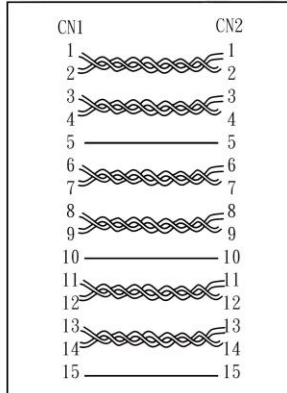
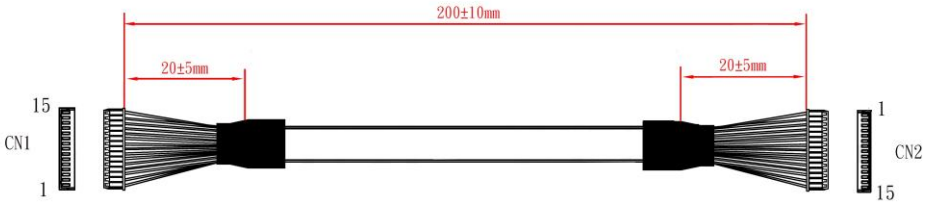
BOX Header 15-Pin, pitch: 1.25 mm, DIP type

Straight P.C.B Connector



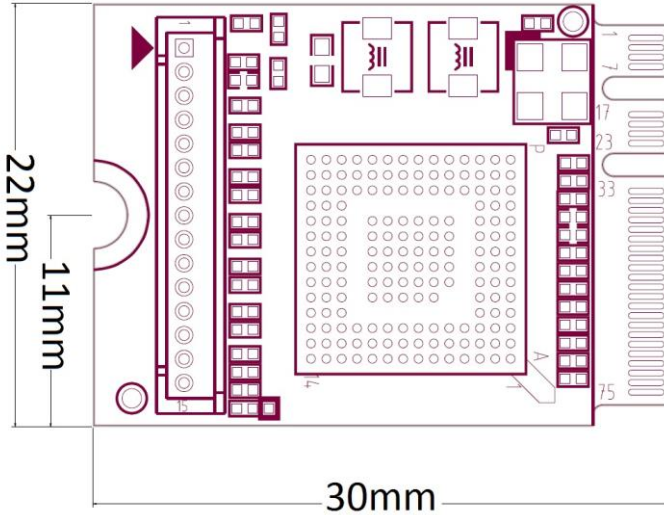
Pin	Description(LAN1)	Pin	Description(LAN2)
1	TPB0-	2	TPB0+
3	TPA0-	4	TPA0+
5	GND	6	TPB1-
7	TPB1+	8	TPA1-
9	TPA1+	10	GND
11	TPB2-	12	TPB2+
13	TPA2-	14	TPA2+
15	GND		

6.2 < Cable connection >

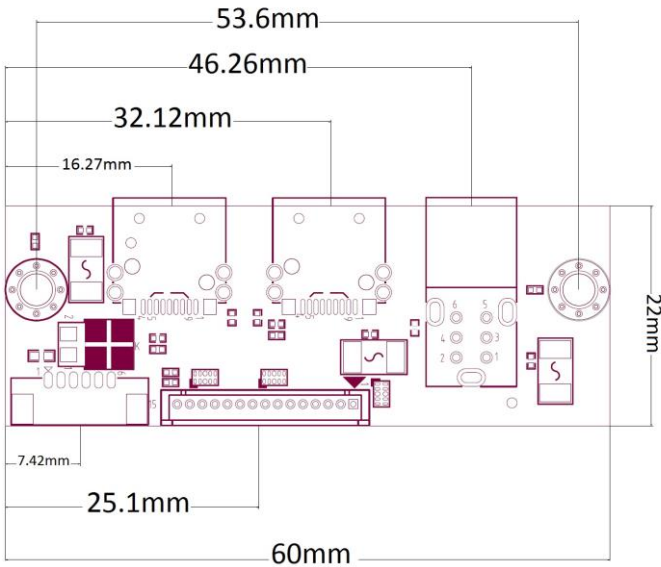


7 <Mechanical Drawing>

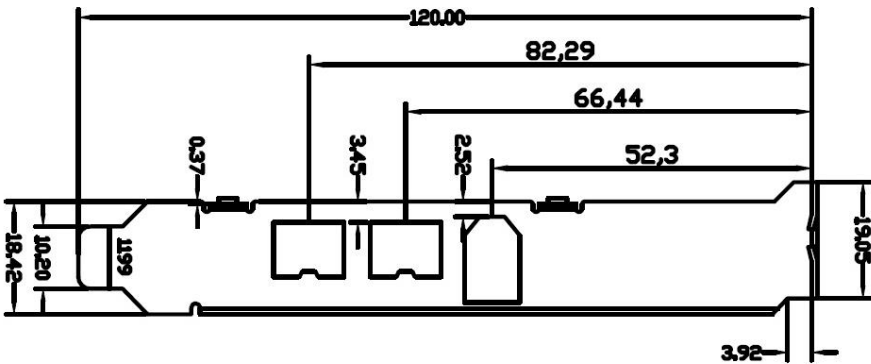
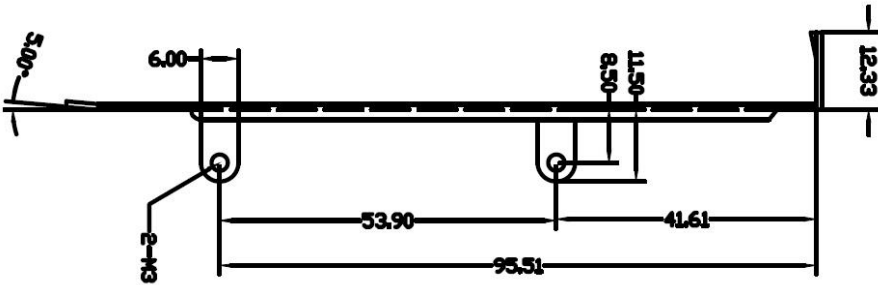
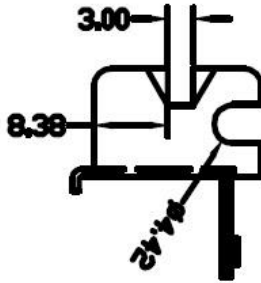
M2-2213: (Units: mm)



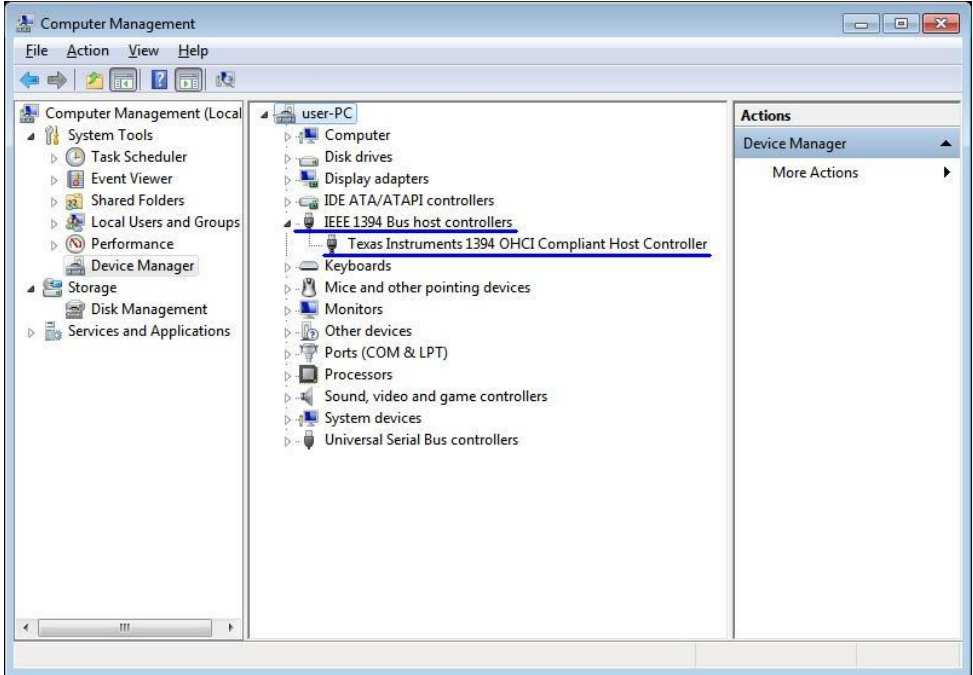
1394 Module: (Units: mm)



Bracket: (Units: mm)



6.3 < Device Manager List >



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.

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