MPX-350

Dual Gigabit Ethernet Mini Card

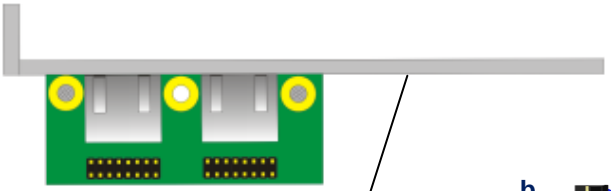
User's Manual

Edition 1.4
2019/08/06

Packing List:

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

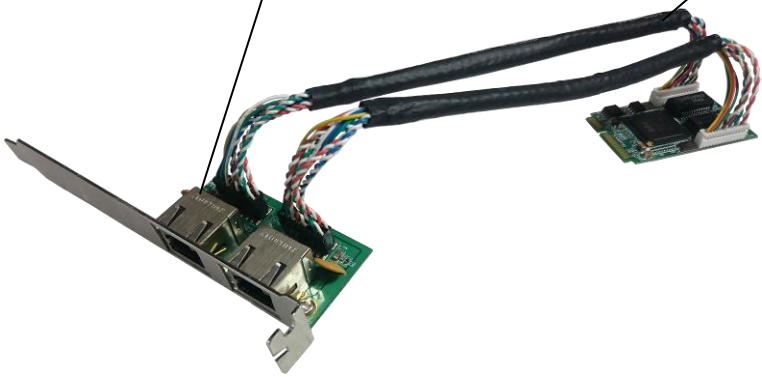
a.



1 x Dual LAN Adapter
(BADPGLAND2_A / 4120007021)
(Include Bracket)

b.

2 x Adapter LAN Cable
(OALGLAN-A-20 / 1040617)
(L=200mm)



c.

1 x CD Driver

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1 <Product Overview>

MPX-350 IEEE IEEE* 802.3* PCIE module is the dual-port gigabit Ethernet solution with multiple interface options to let users. It enables a high performance, cost effective, low power.

Compliant with the standard IEEE 802.3 Ethernet interface for 1000BASE-T, 100BASE-TX, and 10BASE-T applications (802.3, 802.3u, and 802.3ab)

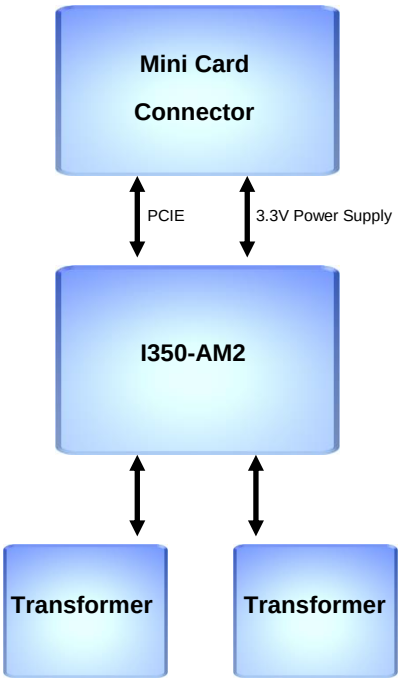
MPX-350 run up to two 1GbE ports with enhanced power-saving and market-leading flexible I/O virtualization, including Virtual Machine Device Queues (VMDQ) and single root I/O virtualization (SR-IOV). Intel's software drivers and support are unmatched for virtual or non-virtualized environments.

MPX-350 module adopts Intel® Ethernet Controller I350 Family solution. The module design is based on the Intel® Ethernet Controller I350-AM2 .

2 <Features>

- Low power consumption and high performance
- One PCIe lane to Dual Gigabit LAN
- Support Mini card PCI-E 1.1 & 1.2 standard specification

3 <Block Diagram>



4 <Product Specifications>

Product Description

Host Interface	PCI-E
Controller	Intel® I350-AM2 Dual Gigabit Ethernet Controller
Dimension	30.00mm x 50.95mm
Weight	3g

Operating Conditions

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

General Specifications

From factor	Mini-PCI Express with 52-pin interface
Compliance	IEEE 802.3 Ethernet interface for 1000Base-T, 100Base-TX, and 10Base-T applications (802.3, 802.3u, 802.3ab).
Transfer Rate	1000 Mb/s, 100 Mb/s, or 10 Mb/s
Support OS	Win7 x32&x64, Win8 x32&x64, Win8.1 x32&x64, Win10 x32&x64, Win server 2012 R2. Linux (kernel versions 2.6.30 or newer)

4.1 < Recommended Operating Conditions >

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

4.2 < Power Consumption >

Test Bed		COMMELL LV-67M
Test OS		Windows 7 Ultimate x64
Test AP		Iperf
Driver version		12.13.27.0
Test voltage		3.3V
Connect AP	MAX	1.2W

5 <Pin-out Definition>

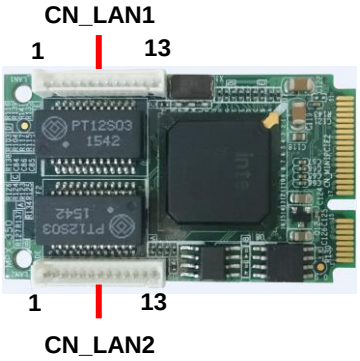
Pin No.	Definition	Basic Description	Type
1	**WAKE#**	Power management event : open drain, active low Use to reactivate the PCI Express slot's main power rails and reference clocks. Connected internally to I350-AM2.	O/D
2	**3.3V/3.3VAUX**	3.3V/3.3AUX power supply	VCC
3	**NC**	Floating Pin, No connect to anything.	
4	**GND**	Ground.	GND
5	**NC**	Floating Pin, No connect to anything.	
6	**NC**	Floating Pin, No connect to anything.	
7	**NC**	Reference clock request	
8	**NC**	Floating Pin, No connect to anything.	
9	**GND**	Ground.	GND
10	**NC**	Floating Pin, No connect to anything.	
11	**REFCLK-**	Differential reference clock.	Input
12	**NC**	Floating Pin, No connect to anything.	
13	**REFCLK+**	Differential reference clock.	Input
14	**NC**	Floating Pin, No connect to anything.	
15	**GND**	Ground.	GND
16	**NC**	Floating Pin, No connect to anything.	
17	**NC**	Floating Pin, No connect to anything.	
18	**GND**	Ground.	GND
19	**NC**	Floating Pin, No connect to anything.	
20	**NC**	Floating Pin, No connect to anything.	
21	**GND**	Ground.	GND
22	**PERST#**	PCI express fundamental reset.	Input
23	**HSIN0**	Differential transmit.	Output
24	**3.3VAUX**	3.3AUX power supply.	VCC
25	**HSIP0**	Differential transmit.	Output
26	**GND**	Ground.	GND
27	**GND**	Ground.	GND
28	**NC**	Floating Pin, No connect to anything.	

29	**GND**	Ground.	GND
30	**SMBCLK**	SMBus clock signal.	Input
31	**HSON0**	Differential receive.	Input
32	**SMB_DATA**	SMBus data signal.	Input
33	**HSOP0**	Differential receive.	Input
34	**GND**	Ground.	GND
35	**GND**	Ground.	GND
36	**NC**	Floating Pin, No connect to anything.	
37	**GND**	Ground.	GND
38	**NC**	Floating Pin, No connect to anything.	
39	**3.3VAUX**	3.3AUX power supply.	
40	**GND**	Ground.	GND
41	**3.3VAUX**	3.3AUX power supply.	
42	**NC**	Floating Pin, No connect to anything.	
43	**GND**	Ground.	GND
44	**NC**	Floating Pin, No connect to anything.	
45	**NC**	Floating Pin, No connect to anything.	
46	**NC**	Floating Pin, No connect to anything.	
47	**NC**	Floating Pin, No connect to anything.	
48	**NC**	Floating Pin, No connect to anything.	
49	**NC**	Floating Pin, No connect to anything.	
50	**GND**	Ground.	GND
51	**NC**	Floating Pin, No connect to anything.	
52	**3.3V/3.3AUX**	3.3V/3.3AUX power supply	VCC

6 <Component Placement>

6.1 < Connector Reference >

MPX-350:



Connector: CN_LAN1&2

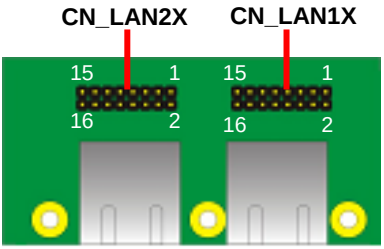
Connector Type:

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

Straight P.C.B Connector

Pin	Description(LAN1)	Pin	Description(LAN2)
1	RTD00+	1	RTD10+
2	RTD00-	2	RTD10-
3	RTD01+	3	RTD11+
4	RTD01-	4	RTD11-
5	RTD02+	5	RTD12+
6	RTD02-	6	RTD12-
7	RTD03+	7	RTD13+
8	RTD03-	8	RTD13-
9	GND	9	GND
10	RLINK1G0-	10	RLINK1G1-
11	RLINK1H0-	11	RLINK1H1-
12	RACTLED0-	12	RACTLED1-
13	RLINK0-	13	RLINK1-

LAN Adapter :

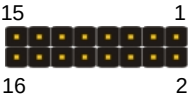


(Include Bracket)

CN_LAN1X/CN_LAN2X

Connector Type:

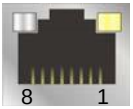
16-pin (8 x 2) 2.0 x 2.0 mm Straight Type Header



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

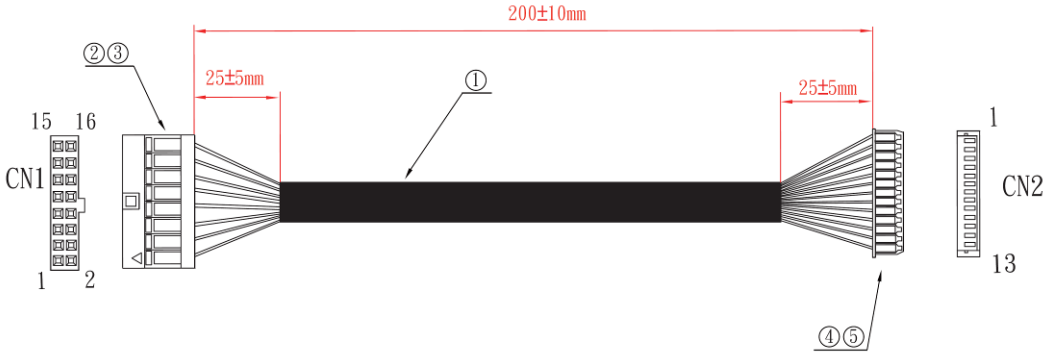
Adapter LAN Connector: RJ45_1/2

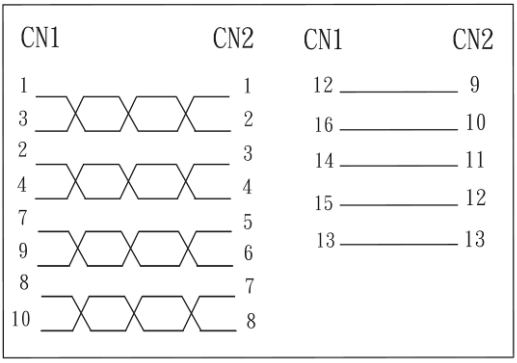
RJ45 10/100/1000Mbps connector



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

6.2 < Cable connection >

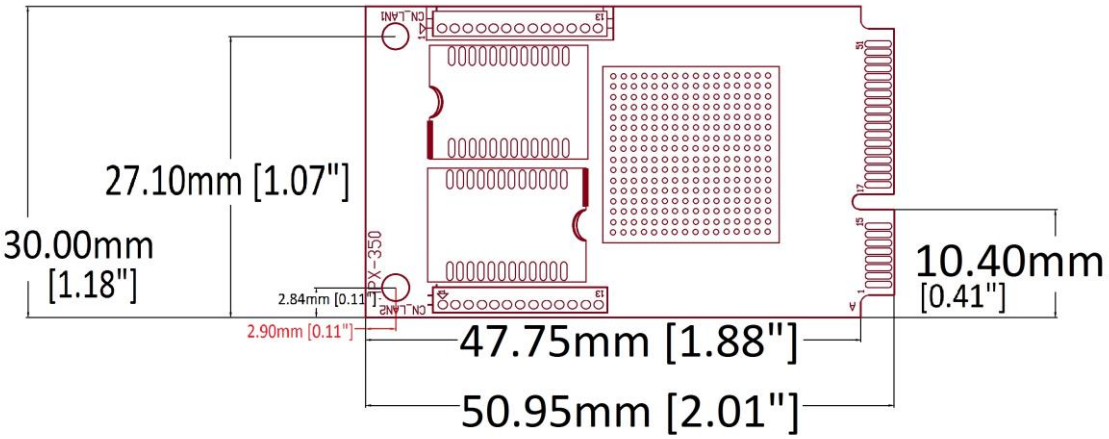




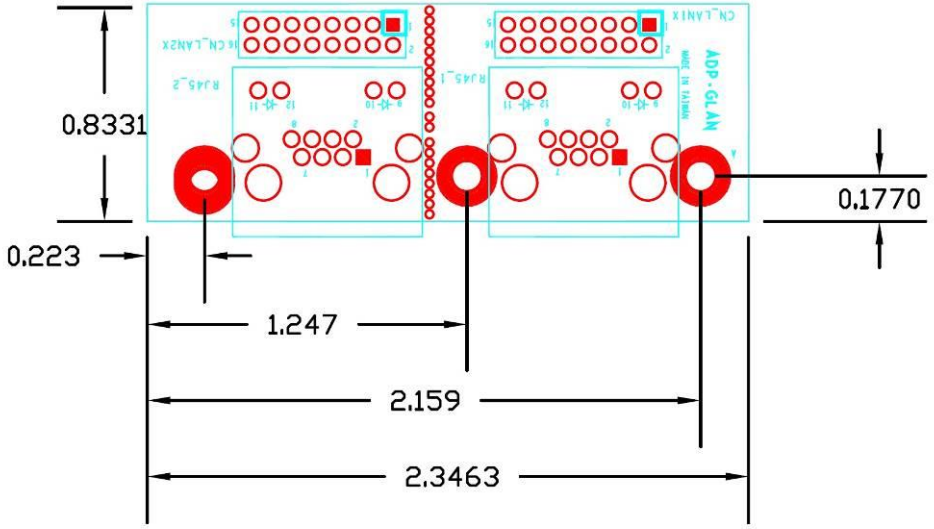
NO	DESCRIPTION	COLOR	Q'TY	UNIT
1	UL1571 28AWG		13	PCS
2	HOUING DP2.0 2*8P	BLACK	1	PCS
3	TERMINAL DP2.0		13	PCS
4	HOUSING MOLEX1.25 13PIN	WHITE	1	PCS
5	TERMINAL MOLEX 1.25		13	PCS

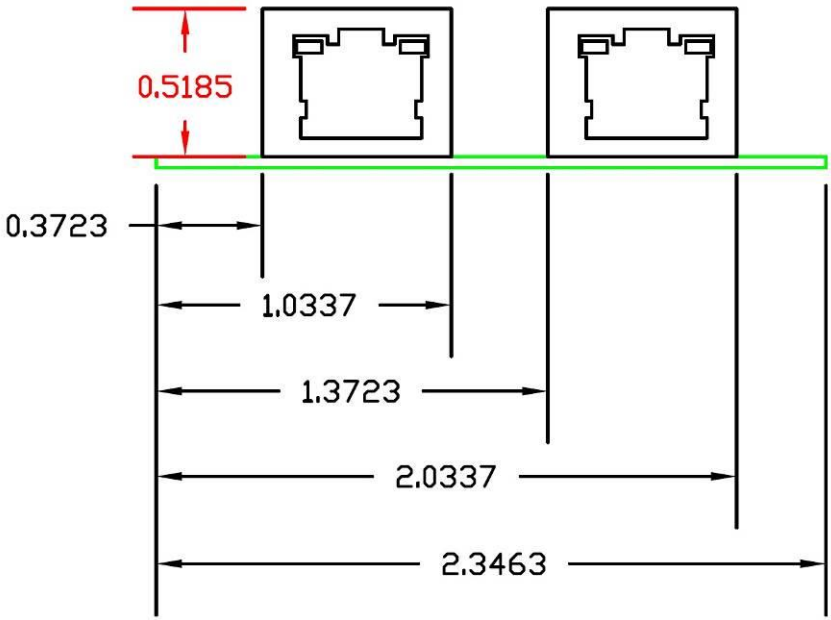
7 <Mechanical Drawing>

MPX-350: (Units:mm /inch)

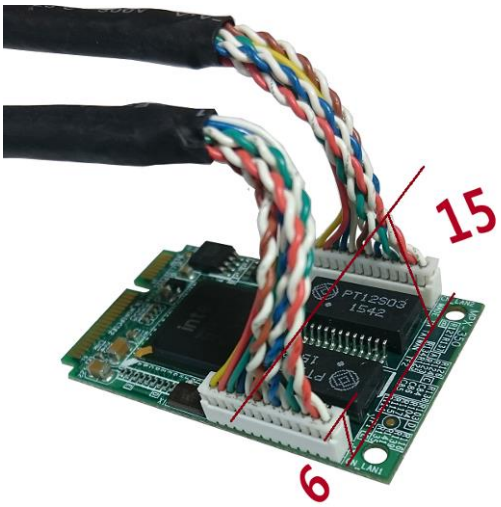


LAN Adapter: (Units:inch)

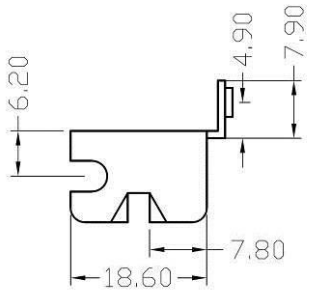


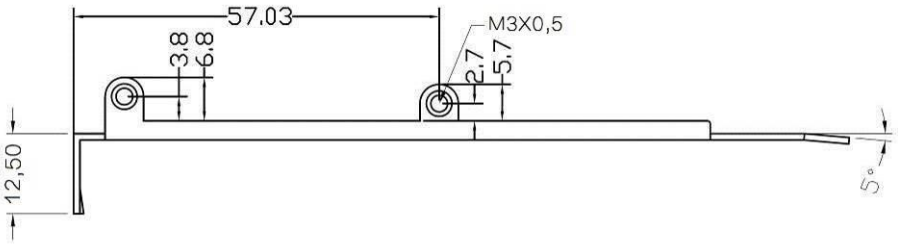


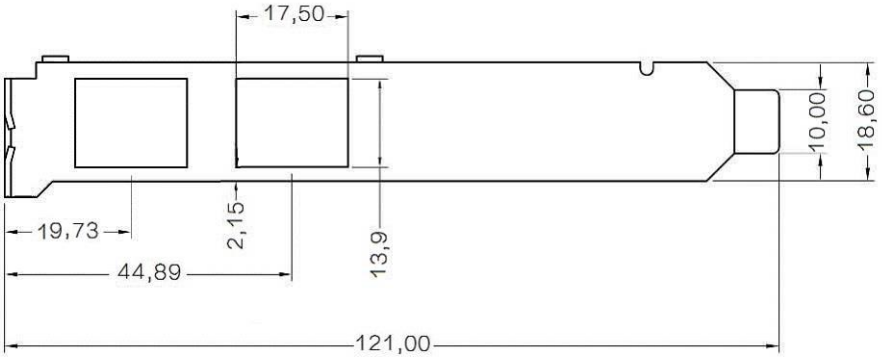
Mechanical height : (Units:mm)



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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