

MPX-4232

USB Mini_PCl_e Card

User's Manual

Edition 1.01

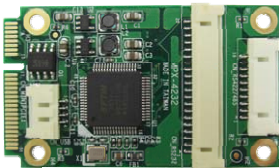
2025/01/07



Packing List:

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

Hardware:



1 X MPX-4232

Cable Kit:

a.



**RS232/RS422/RS485 Cable x 1
(OALES-BKU3-H14)**

b.



**1 x 4 DF14 to 1 x 4 P=2.54 HSG
(OALUSB-H4)(1040431) **Optional****

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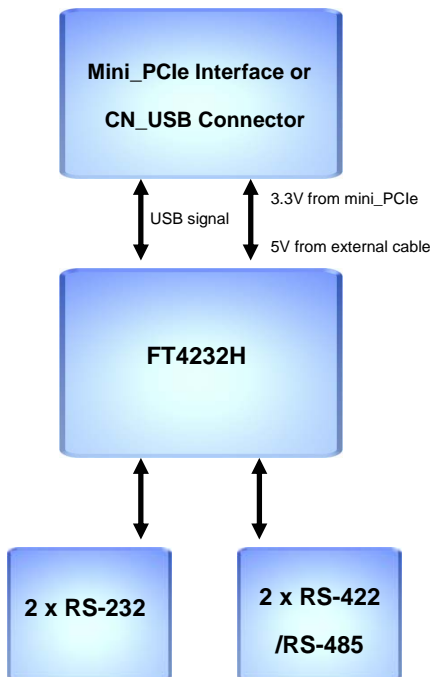
1 <Product Overview>

MPX-4232 base on FT4232H controller which is a USB 2.0 High Speed (480Mb/s) to UART/MPSSE ICs.

MPX-4232 has four independent configurable interfaces. Two of these interfaces configured as RS-232, Two of interfaces configured as RS-422/485,.

2 <Features>

- Supports 2 x RS-232, 2 x RS-422 or 2 x RS-485
- USB 2.0 High Speed (480Mbits/Second) and Full Speed (12Mbits/Second) compatible.
- RS-232/RS-422/RS-485 UART Transfer Data Rate up to 12Mbaud.

3 <Block Diagram>

4 <Product Specifications>

Product Description

Host Interface	Mini PCI-Express
Controller	FT4232H
USB	USB 2.0 Full Speed <ul style="list-style-type: none">• Via USB interface within Mini-PCle slot or• Via USB host pin header
Internal Port	2 x RS232 , 2 x RS422/RS485
Dimension	30.00mm x 50.95mm

Operating Conditions

Power Requirement	+3.3V from Mini PCle +5V from external cable
Temperature	0~60°C
Storage Temperature	-40~+85°C

General Specifications

From factor	Mini-PCI Express with 52-pin interface
Accessories	1 x RS-232/RS-422/RS-485 cable(OALES-BKU3-H14) 1 x 4P DF14 TO 4P HSG(OALUSB-H4)Optional
Transfer Rate	RS-232/RS-422/RS-485 UART Transfer Data Rate up to 12Mbaud.

5 <Pin-out Definition>

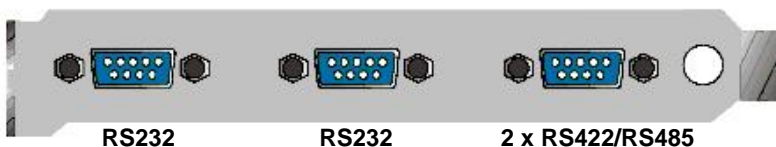
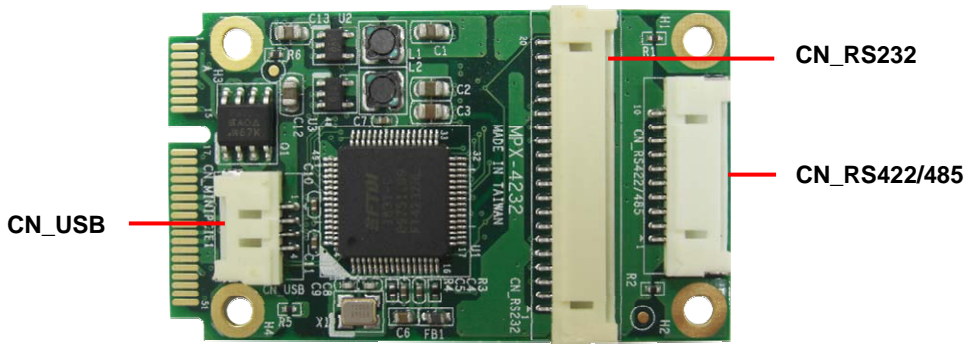
Pin No.	Definition	Basic Description	Type
1	NC	Floating Pin, No connect to anything.	
2	3.3V/3.3VAUX	3.3V/3.3AUX power supply	VCC
3	NC	Floating Pin, No connect to anything.	
4	GND	Ground.	GND
5	NC	Floating Pin, No connect to anything.	
6	1.5V	1.5V power supply	VCC
7	NC	Floating Pin, No connect to anything.	
8	NC	Floating Pin, No connect to anything.	
9	GND	Ground.	GND
10	NC	Floating Pin, No connect to anything.	
11	NC	Floating Pin, No connect to anything.	
12	NC	Floating Pin, No connect to anything.	
13	NC	Floating Pin, No connect to anything.	
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	NC	Floating Pin, No connect to anything.	
23	NC	Floating Pin, No connect to anything.	
24	3.3VAUX	3.3AUX power supply.	VCC
25	NC	Floating Pin, No connect to anything.	
26	GND	Ground.	GND
27	GND	Ground.	GND
28	1.5V	1.5V power supply	VCC
29	GND	Reference	
30	NC	Floating Pin, No connect to anything.	
31	NC	Floating Pin, No connect to anything.	
32	NC	Floating Pin, No connect to anything.	
33	NC	Floating Pin, No connect to anything.	

34	GND	Ground.	GND
35	GND	Ground.	GND
36	USB_D-	Data-	Input/ Output
37	GND	Ground.	GND
38	USB_D+	Data+	Input/ Output
39	3.3VAUX	3.3AUX power supply.	VCC
40	GND	Ground.	GND
41	3.3VAUX	3.3AUX power supply.	VCC
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	1.5V	1.5V power supply	VCC
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-4232:



Connector: CN_RS232

Type: H14H-20PIN



Pin	Description	Pin	Description
1	-mDCD1	2	mRXD1
3	mTXD1	4	-mDTR1
5	GND	6	-mDSR1
7	-mRTS1	8	-mCTS1
9	-mRI1	10	NC
11	-mDCD2	12	mRXD2
13	mTXD2	14	-mDTR2
15	GND	16	-mDSR2
17	-mRTS2	18	-mCTS2
19	-mRI2	20	NC

Connector: CN_RS422/485

Type: H14H-10PIN
(RS-422)



Pin	Description	Pin	Description
1	-m422RXD3	2	+m422RXD3
3	+m422TXD3	4	-m422TXD3
5	GND	6	-m422RXD4
7	+m422RXD4	8	+m422TXD4
9	-m422TXD4	10	GND

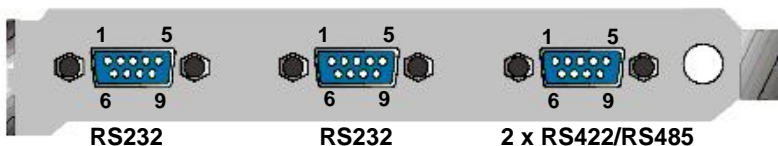
(RS-485)

Com3 RTX- Data- : short Pin1& Pin4

Com3 RTX+ Data+ : short Pin2& Pin3

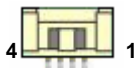
Com4 RTX- Data- : short Pin6& Pin9

Com4 RTX+ Data+ : short Pin7& Pin8



Connector: CN_USB

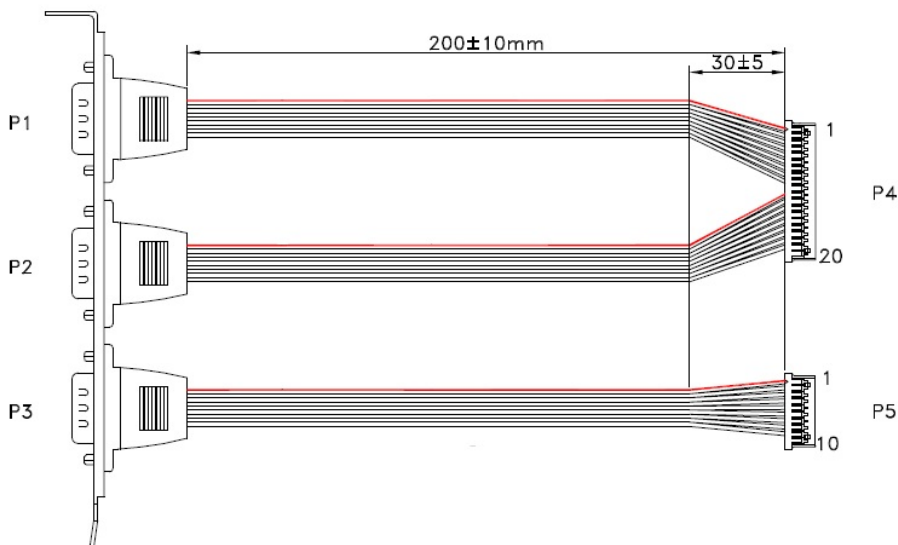
Type: DF14 4-pin pitch=1.25mm



Pin	Description	Pin	Description
1	5V	2	D-
3	D+	4	GND

6.2 < Cable connection >

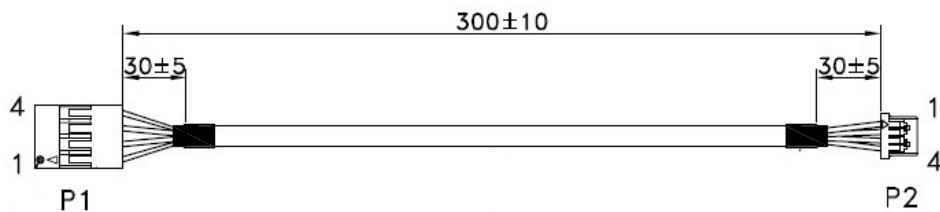
OALES-BKU3-H14



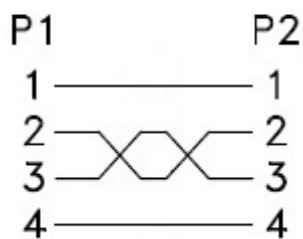
PIN OUT

P1	RED LINE	P4	P2	RED LINE	P4	P3	RED LINE	P5
1		1	1		11	1		1
2		2	2		12	2		2
3		3	3		13	3		3
4		4	4		14	4		4
5		5	5		15	5		5
6		6	6		16	6		6
7		7	7		17	7		7
8		8	8		18	8		8
9		9	9		19	9		9

OALUSB-H4



PIN OUT



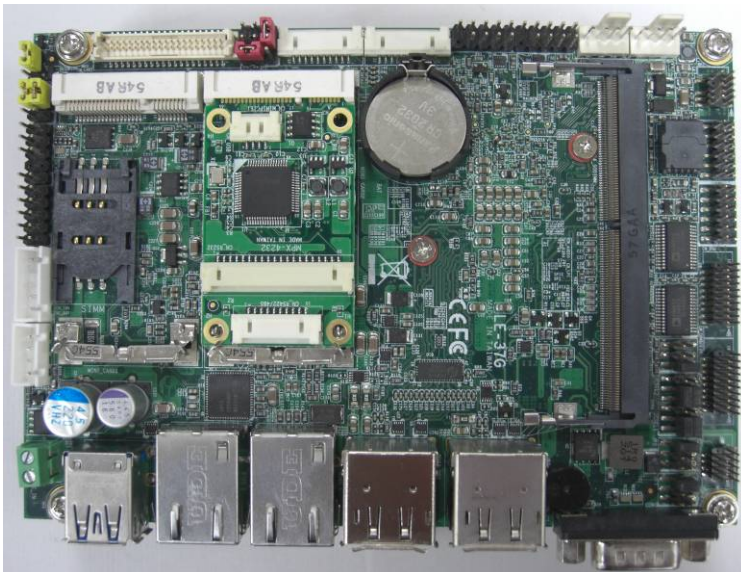
7 <Installation instructions>

7.1 < Connect to USB Host via Mini_PClE Slot >

One of the two ways to connect to a USB host is inserting the MPX-4232 card into a Mini_PClE slot.

You simply insert the MPX-4232 card golden finger portion into an industrial standard Mini_PClE slot makes this MPX-4232 card connecting to a USB host.

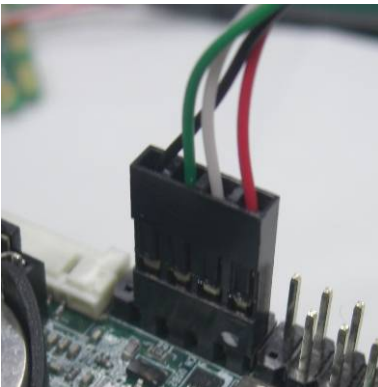
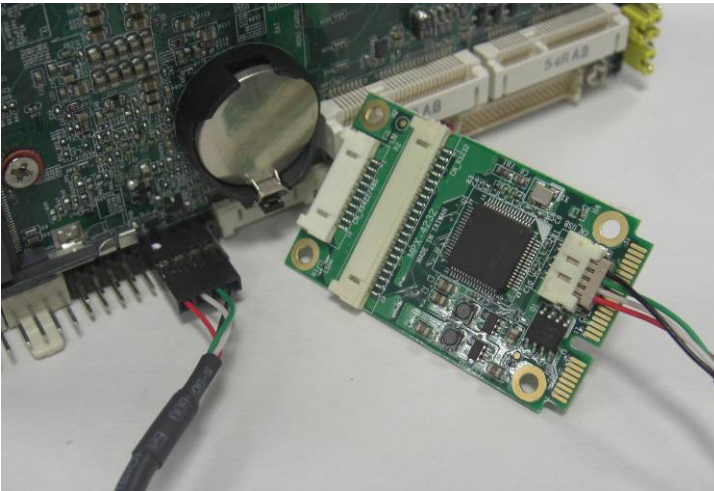
The following figure shows of how to insert MPX-4232 card into a Mini_PClE slot so that it connects to a USB host.



7.2 < Connect to USB Host via cable >

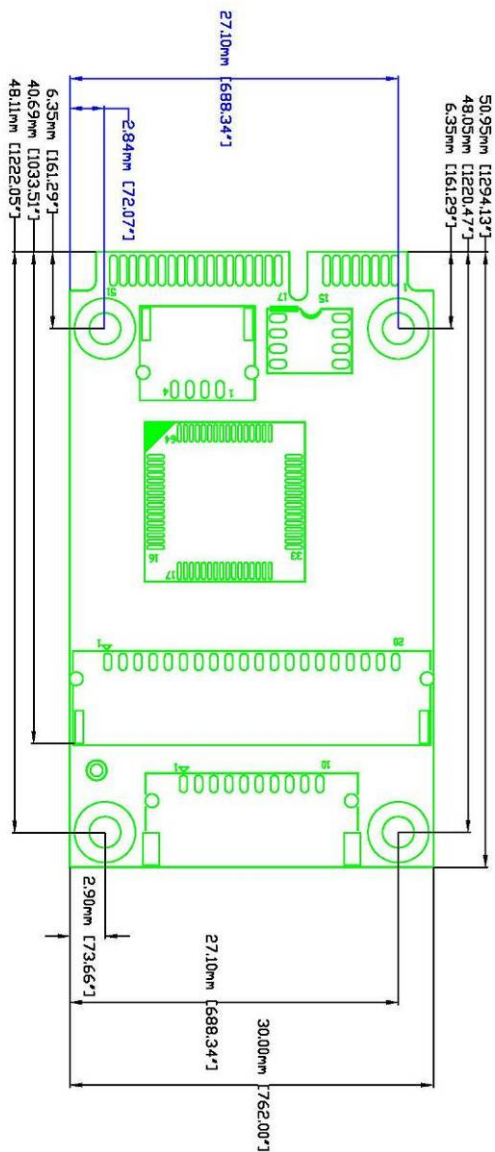
You can connect the MPX-4232 card to a USB host by using OALUSB-H4 cable alternatively if a Mini-PCle slot is not available your motherboard (like most Commell motherboards) that has USB Host pin header.

The following figure shows how to use the OALUSB-H4 cable to connect MPX-4232 card to a USB host pin header on a motherboard.



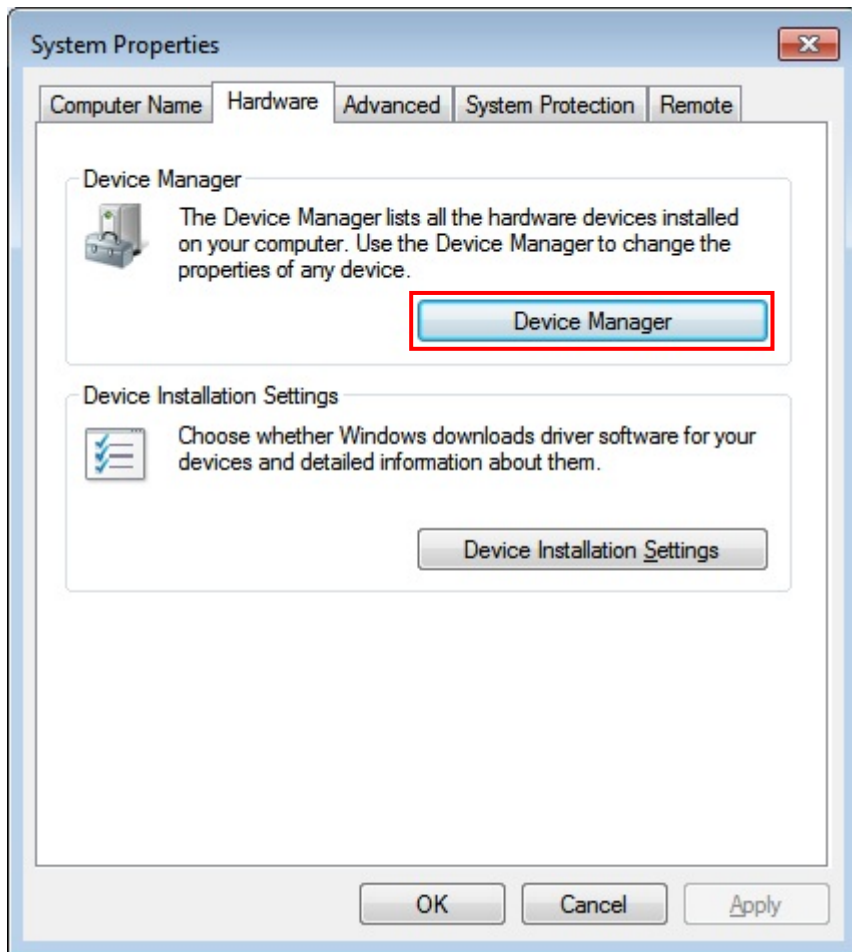
8 <Mechanical Drawing>

MPX-4232: (Units:mm /inch)

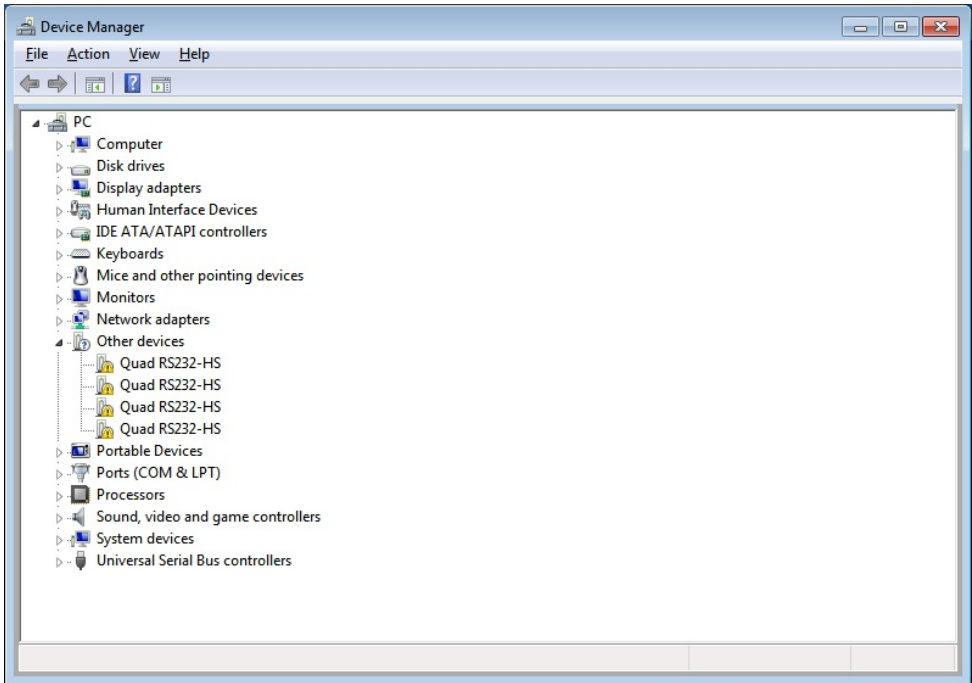


9 <Driver Setting >

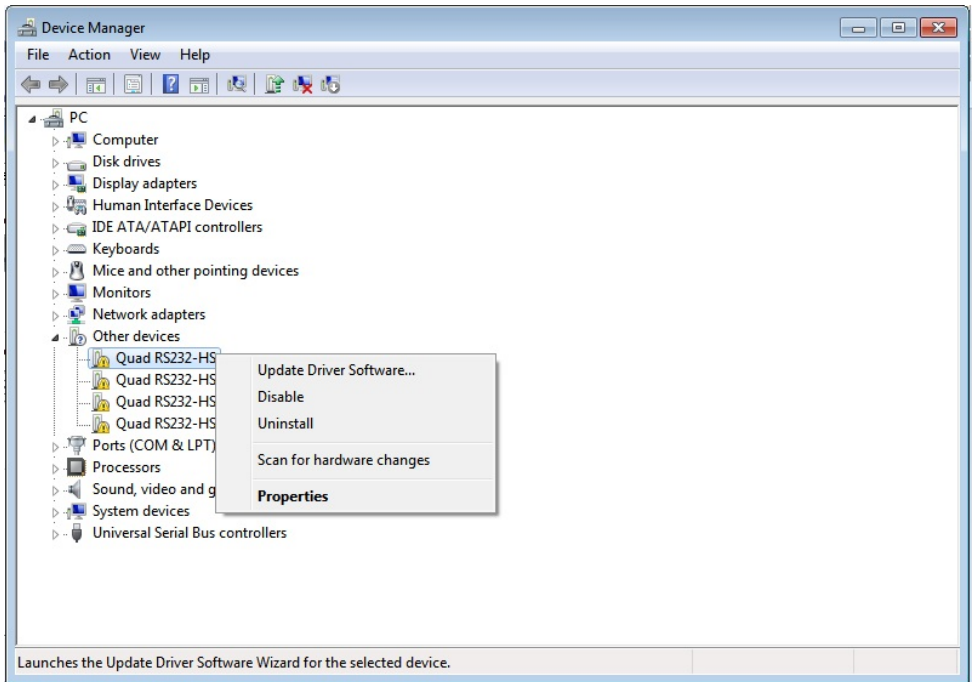
1. Copy the CD Driver folder to disk, Ex: C:\ , D:\ ...
2. Please choose “**Device Manager**”

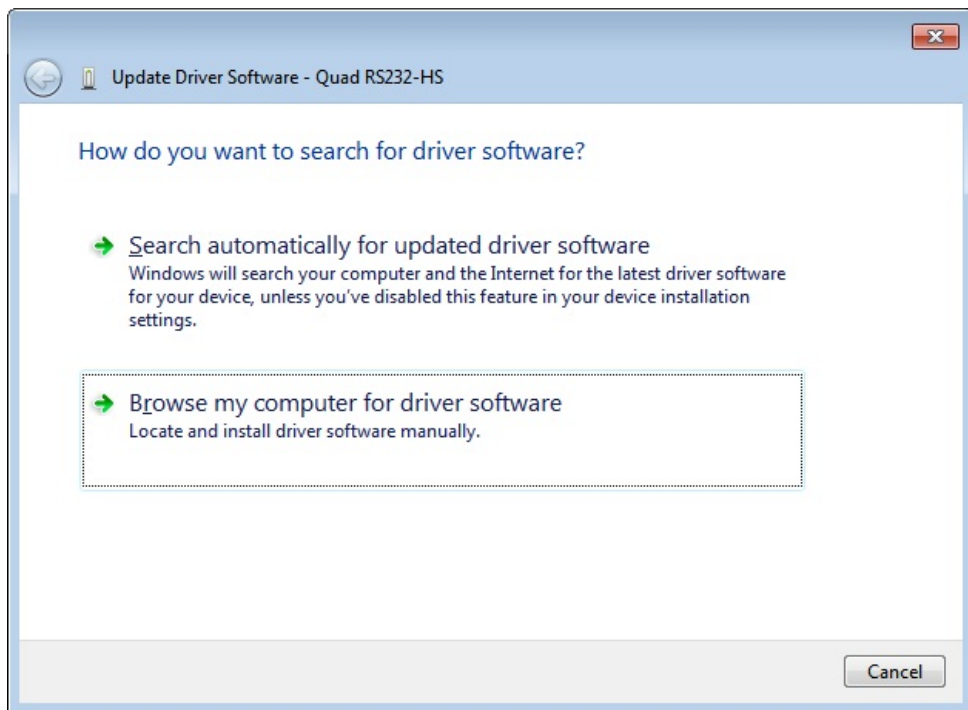


3. You can see other devices "Quad RS232-HS"



4. Right click on the other device to bring up a menu as shown below and select **“Update Driver Software...”**

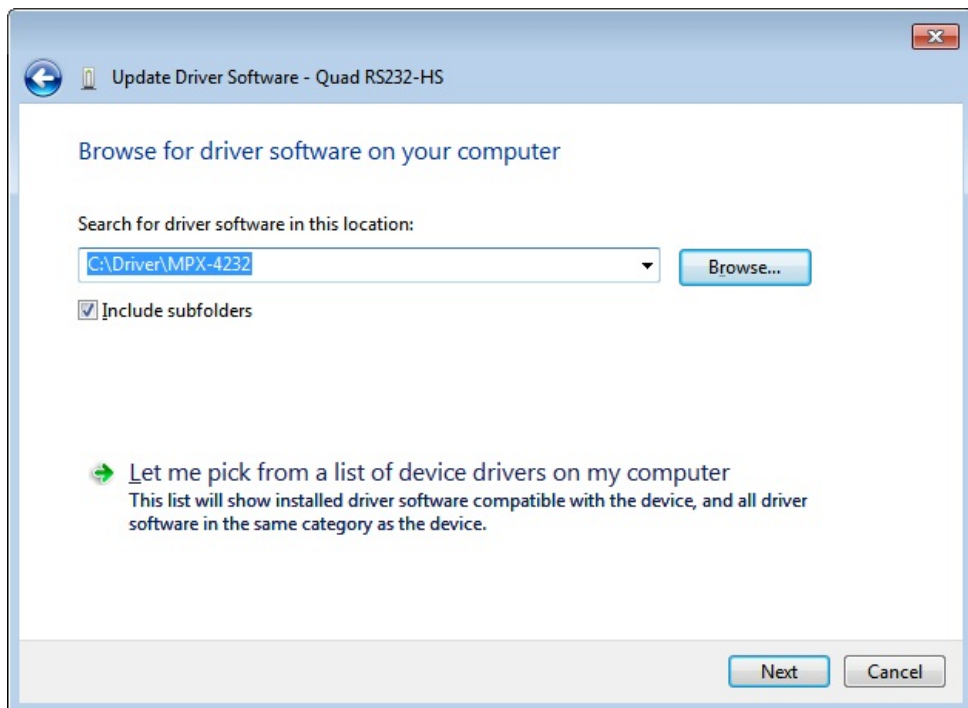


5. Select the second option to browse manually

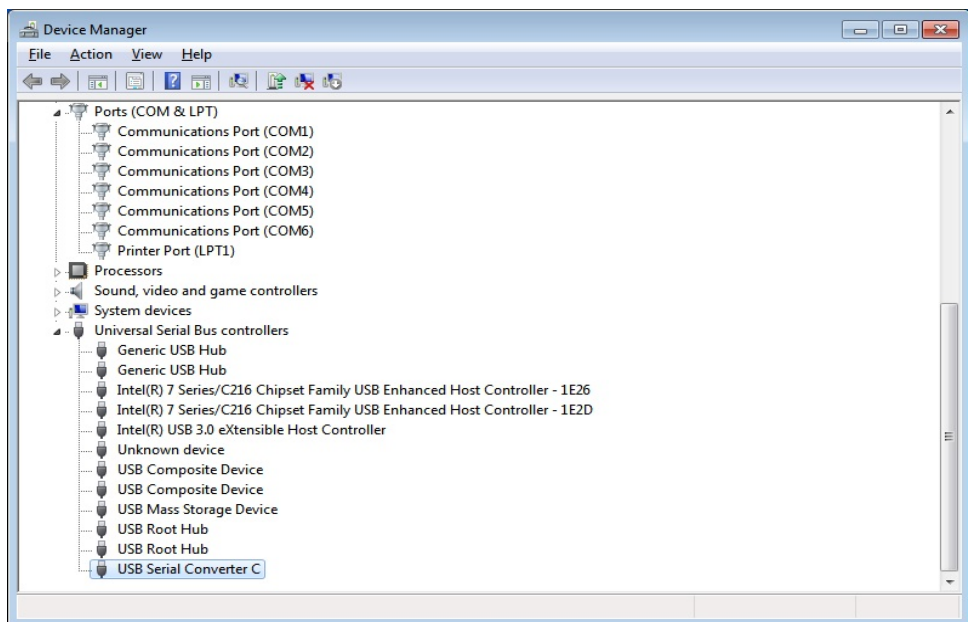
6. Please choose “Search for the driver software in this location”

Check “Include this subfolders” then press

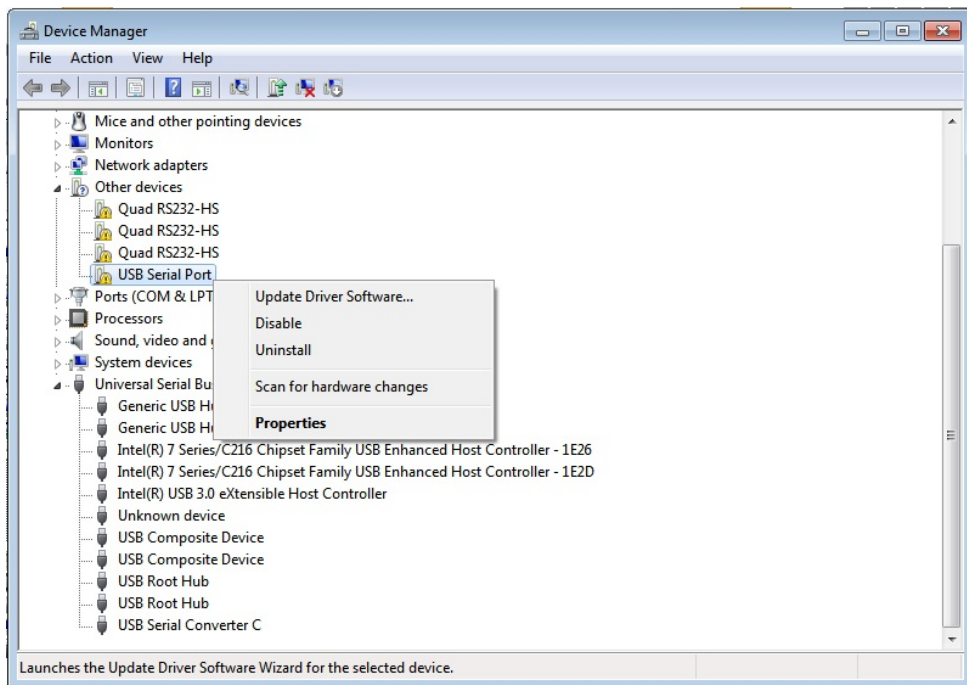
“C:\Driver\MPX-4232”



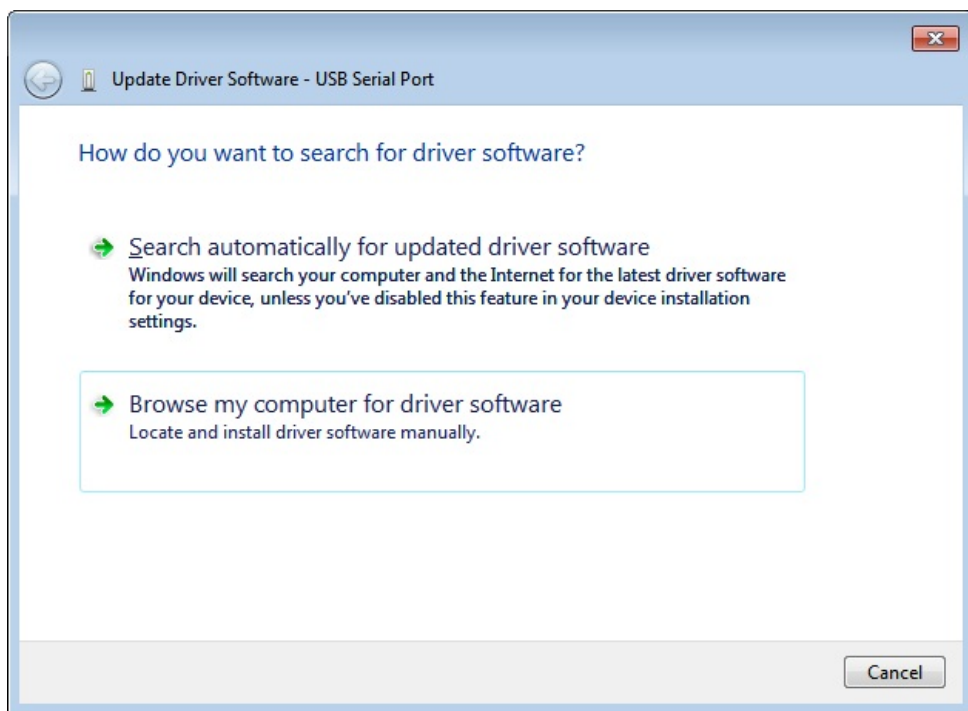
7. Completing the "USB Serial Converter C" updated



8. Right click on the other device to bring up a menu as shown below and select **“Update Driver Software...”**



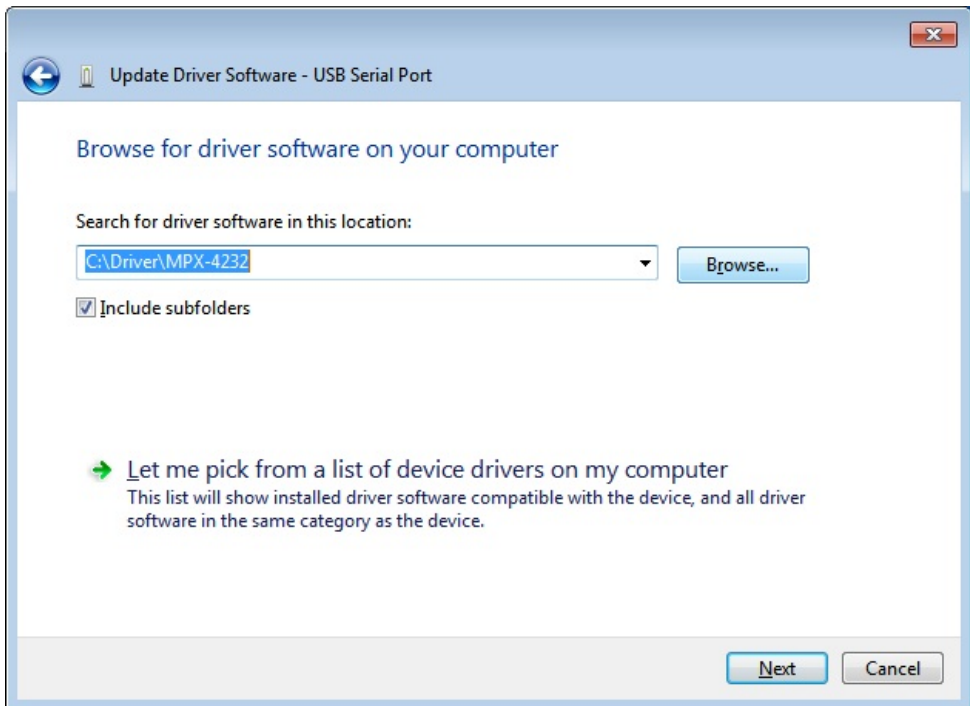
9. Select the second option to browse manually



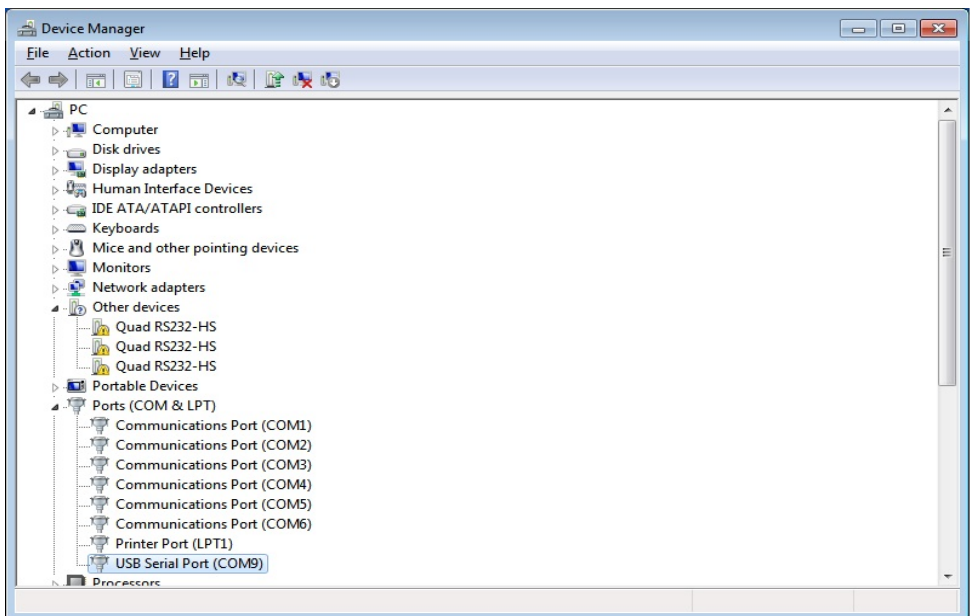
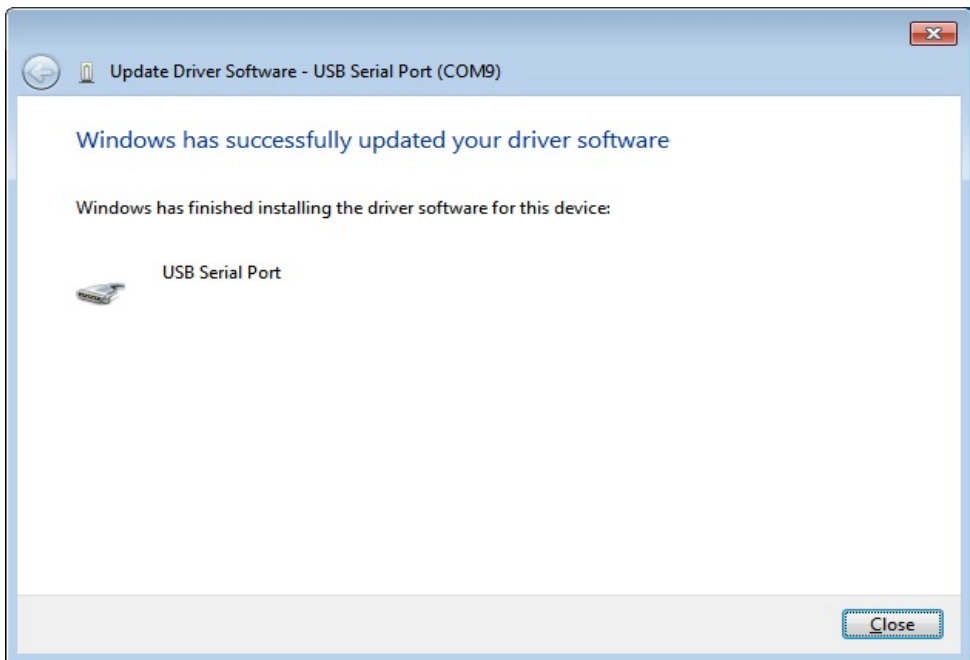
10. Please choose “Search for the driver software in this location”

Check “Include this subfolders” then press

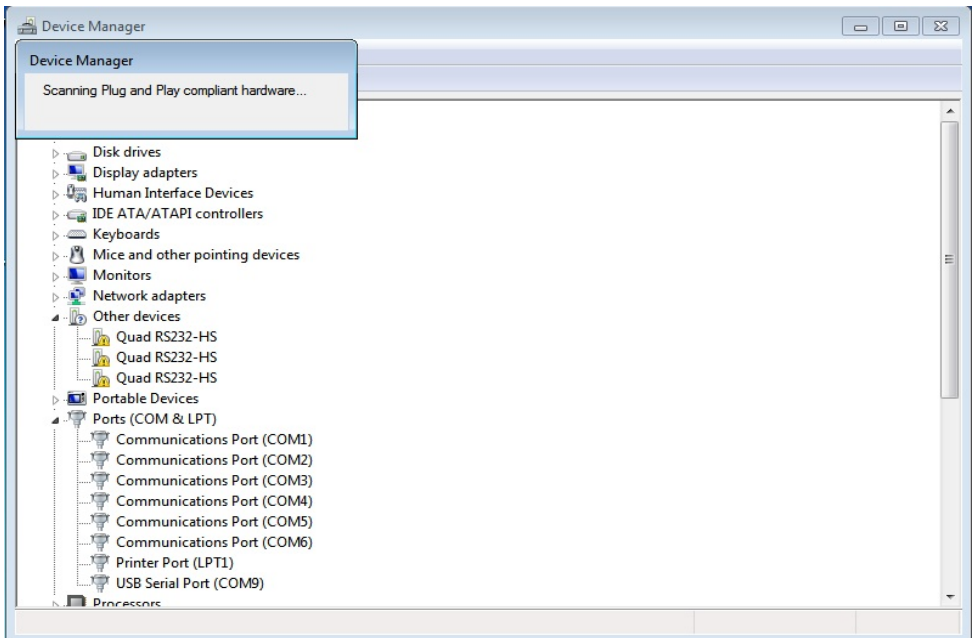
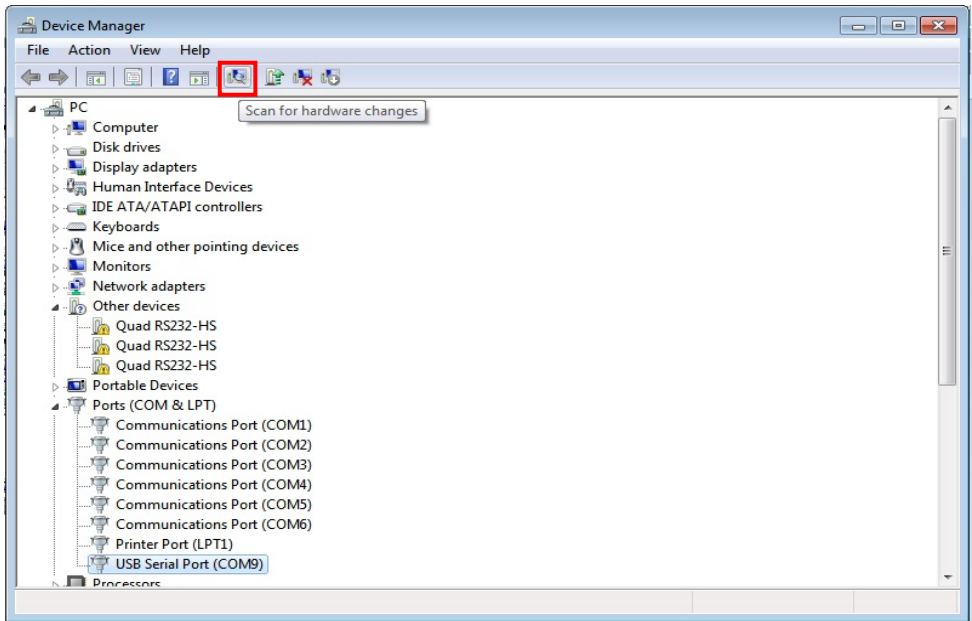
“C:\Driver\MPX-4232”



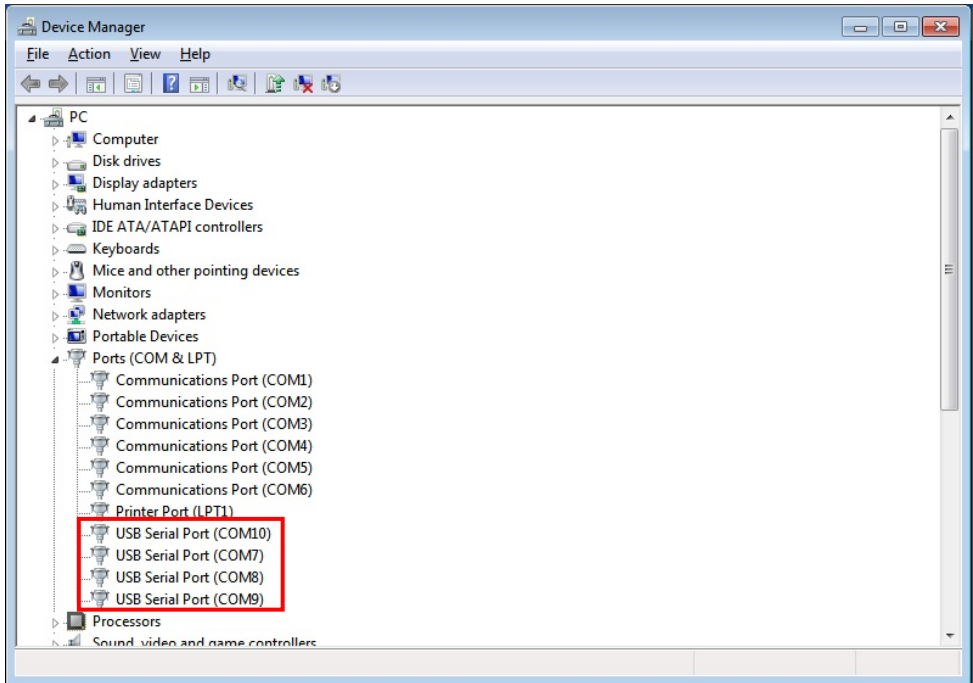
11. Completing the "USB Serial Port" updated



12. Please click “Scan for hardware changes” to finish updated



13. The device is now ready to use



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.

Address	19F., NO.94, Sec. 1, Xintai 5 th Rd., Xizhi Dist., New Taipei City 22102, Taiwan.
TEL	+886-2-26963909
FAX	+886-2-26963911
Website	www.commell.com.tw
E-mail	info@commell.com.tw (General information) tech@commell.com.tw (Technical Support)