`Erledigt` M.2 key M to M.2 key A(+E) for WIFI + BT adapter

Beitrag von „influenist" vom 31. März 2018, 18:44

Hi all,

Vor allem Entschuldigung für mein Englisch. Ich öffne dieses Thema, da es scheint, dass ich nicht in anderen Hackintosh Foren posten darf, daher würde ich gerne Ihre Meinung zu der Angelegenheit unten lesen.

As a Xiaomi Notebook Air 12.5 (2017) Hackintosh owner with INTEL WIFI I wish to find an internal solution for WIFI & BT. In my laptop I have a second M.2 slot. Which is M.2 Key M and is a PCIE type. Thus it theoretically allows us to use 4x PCI lanes for a M.2 Key A(or E) WIFI+BT module from e.g. Boardcom. With a converter Key M to Key A(or E). Currently I an OOB module (DW1930) and a converter board being shipped. Sadly I noticed the DW1930 is wider then a standard M.2 SSD module, so I ordered a DW1560 to be sure. Be aware of this in case you have limited space like my 12.5. As I'm writing this post I noticed that @dodvip123 (on another forum) has covered this part also and seemingly failed with his converting adapter. As my modules will come in soon, I will verify this.

USB lanes
It seems the pitfall here is the BT function. This uses the USB 2.0(or 3.0) lanes of the KEY A(E), something which the M.2 KEY M does not have. This can be overcome by using an internal USB connector as is done with this converter board. Sadly this board expands in hight and most likely will not fit in our laptops. Yet it will allow us to check the plausibility for designing a custom low profile adapter.

Connector
For the Xioami 12.5 air the Webcam port seems for me the most plausible option as it is directly on the USB bus. Hence a splitter in between for the connection of the adapter would allow to keep using the webcam at the same time. Hence as I'm not a connector expert, your advice on the other ports would be more then welcome. A last resort would be soldering the pins on the USB C port (not preferable).

Input from other laptop owners on their connectors (mainly webcam)
Since the Xiaomi Notebook Air 12.5 and 13.3 aren't the only laptops out here with an internal INTEL wifi chipset and an open M.2 Key M PCIE port. I wish to gather some input on other devices. Mainly the internal available connectors which are present to see if we can use a standardised port and develop a low profile converter with USB capabilities.

@Xioami Notebook Air 13.3 & Notebook Pro users, does any one have a picture of the webcam connector or can anybody provide it?
@OtheR laptop users with solded unsuported wIfi chipset and an open M.2 Key M PCIE slot. Please also provide a picture of your webcam connector and include the Latops brand & type

Ihre Eingabe zu diesem Thema wird sehr geschätzt!

Beitrag von „influenist" vom 26. Mai 2018, 18:32

Ok, I got an update on this matter and can confirm this is working on NoteBook Pro and as Notebook Air has the same NVME port is should also work.

M.2 Key M > M.2 Key A + E
I got an converter board, which does not seem to connect my DW1830 or being recognized. It could be the converter board itself or the DW1830 board as it is not connected to the USB bus. Yet I found a different board developed by Wdxxfu. This method is confirmed to be working as your can see in the attachment. Yet again for bluethooth we need USB bus (someone now soldered on the open slot M.2 Key B (LTE) as also shown attached.

The option is to leave out BT or connect a splitter cable. Wdxxfu can do this for us, but we need a "PIN-OUT" of the connector. Has anyone here the knowledge to PIN-OUT a connector and has his / her hands on a Mi Notebook Air or Pro? The connector is as followed

Pin:

1 = Grey

2 = Green

3 = Yellow

4 = Orange

5 = Red

6 = Brown

7 = Black

8 = White

Your input is much appreciated in this matter. As soon as we have a Pinout, we have an internal WIFI with Bluetooth solution for MacOS for Notebook Air, Notebook Pro and mostlikely Mi Gaming Laptop.

Beitrag von „nickl" vom 27. Mai 2018, 21:34

Very interesting.
I have a mi air 12.
How I can help to make it possible to use WiFi and Bluetooth
What for a connector is that ? Is it the webcam connector ?

Beitrag von „influenist" vom 28. Mai 2018, 13:42

Hi @nickl

At this point we need to figure out which color is D+ and which color is D-. After the module should work by connecting to this interface. Wdxxfu has already the connector in stock, so only the color / pin for D+ and D- are important.

D+ and D- needed to determined by a multimeter.

Beitrag von „nickl" vom 28. Mai 2018, 16:01

Maybe it is like USB so data - is white and data + is green
have you a link to this adapter?

Beitrag von „nabster" vom 29. Mai 2018, 23:09

@influenist Just for understanding.. with this one couldn't use NVMe SSDs anymore?

Beitrag von „influenist" vom 30. Mai 2018, 11:59

General update:

The M.2 Key M to M.2 Key A-E seems also to work with DL1530 on Mi NoteBook Pro (as noted by Kingfoot on the NoteBook Pro topic at TM). As I tested this converter with DL1830, it did not work on NoteBook Air in the PCIE slot. I have the same DL1530 which Kingfoot uses waiting at my other home (live in 3 countries). So I'll need to recheck this matter at the end of this week. None-the-less, the M.2 Key M to native Apple module from Wdxxfu is a better option. As it should be supported without any adjuestments and together with an connecting using the webcam port, it should offer Wifi and BT out to the box. The M.2 Key M to M.2 Key A+E will never have BT.

> ### Zitat von nickl
>
> Maybe it is like USB so data - is white and data + is green
> have you a link to this adapter?

Could be, yet we need to first verify the USB lanes of course unless you like to brick your logic board or webcam? (-;

Link to the module:https://item.taobao.com/item.h...e5-496b-8eac-41be004559df

> [Zitat von nabster](#)
>
> [@influenist](#) Just for understanding.. with this one couldn't use NVMe SSDs anymore?

Yes, this will replace NVME. Yet SATA port SSD is faster as confirmed, so I would propose to upgrade your SATA SSD to 512MB or 1TB and have internal wifi + bt out of the box.

Off topic, I recently thrown away my nano USB during one of my flights. On the earlier builds I wanted to see is sleep would function without it. Hence I placed it in the sandwich box and lost it as the cabin crew got it as garbage. Since I use temporarily my Android using RNDIS / USB tether (which works better IMHO).

Beitrag von „FighterSchrauber" vom 20. Juni 2018, 12:06

[@influenist](#) hey what is that for an dongle? Can I use WLAN and bt with that and how does it work?

Beitrag von „etrock" vom 13. Juli 2018, 10:47

http://www.miui.com/thread-10556125-1-1.html

USB from Type-C, there are two groups.

Beitrag von „influenist" vom 14. August 2018, 10:54

Hi guys, a fast update. Currently a lot is going on in my private life (in a good way), therefor I haven't found much time to update my github and you on this forum.

Regarding this matter. The past two months I have been running MacOS with internal wifi. I'll update you asap on this matter when I find more time to post more in-dept info on the solution.

Beitrag von „jn13" vom 26. Oktober 2018, 14:01

influenist I have xiaomi mi air 2018 https://github.com/johnnync13/Xiaomi-Mi-Air and I have BCM94352Z with a ngff to m.2 but in my m.2 nvme not works..

Beitrag von „influenist" vom 26. Oktober 2018, 15:10

Hi John, thanks for your input. I can confirm the m.2 ngff to m.2 adapters are not working on the Mi air 12.5. I have tested a couple myself. This option DOES work with the Mi Pro line.

For the air line the only working solution is an m.2 to Apple slot adapter with stock Apple BMC wifi card available. This is the following card: https://item.taobao.com/item.h...e5-496b-8eac-41be004559df

I'm using this card right now for a couple of months. The only issue is that you need different extension cables as the one designed for the Macbook Pro will not fit within the chasis of the Mi Air. The extension cable you will need to found here: https://www.ebay.com/itm/2pcs-...35245?hash=item2f1c54148d

For the Mi Air you will need to contact the seller custom length cables. With the Mi Air 12.5 40 cm was more then sufficient.

@[jn13](jn13) Off topic. How about merging your project into mine and develop wider support?

Beitrag von „jn13" vom 26. Oktober 2018, 17:33

influenist I'm from Barcelona. I have Xiaomi mi air i7-8550u and 12,5 m3-6y30 I have a some mhf4 but not works. Can I buy from china? And yes we can develope together but my laptop is 6y30

Beitrag von „influenist" vom 27. Oktober 2018, 21:57

> [Zitat von jn13](jn13)

> **Edit by al6042 -> Please do not quote posts, which are located directly before your post...**

I have one extra, could possibly send it to you. Yet the seller on taobao has WeChat and ships rapid fast. Please see my cabling attached.

Beitrag von „jn13" vom 28. Oktober 2018, 23:37

influenist thanks! It is possible that I sell my xiaomi Mi Air 8550u and change it to xiaomi pro gtx (800$), because I wanted to use NVME... because recently I bought 970 evo 500gb. I buy wifi by yoybuy(taobao) too.

Beitrag von „jn13" vom 16. Dezember 2018, 00:57

on mi air not works, has a whitelist in BIOS...

Beitrag von „Marshal" vom 1. Januar 2019, 23:36

Edit by derHackfan: Vollzitat entfernt

influenist Hello. Please help me find this module in other stores like aliexpress

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Beitrag von „influenist" vom 7. Januar 2019, 17:58

Edit by derHackfan: Vollzitat entfernt

Its only listed at Taobao. You can buy it from the seller on the TaoBao site as he ships directly to Wordwide buyers.

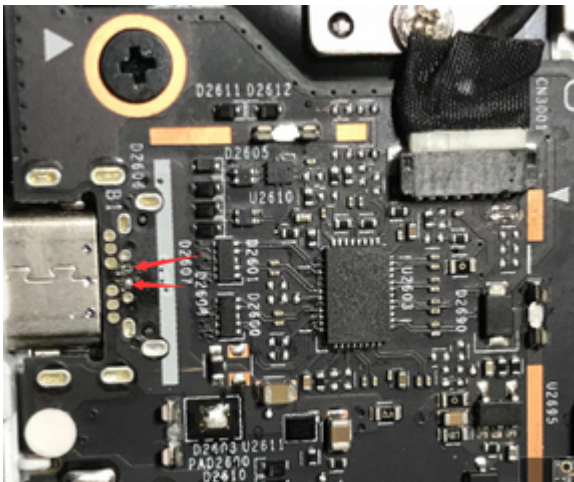**Beitrag von „etrock" vom 12. Februar 2019, 11:29**

Here is the USB port.

null d+(d-) d-(d+)...... up to down at this connecter.

i add a usb wifi(RTL8188) here, work fine. but abandon webcam.

so i want to add a usb-hub, but broke the PCB pads, very very bad luck 😆

so i find the second usb, it work, but usb type-c the power plug   need always plug in?

finally, i used here add the usb hub.....remove inductance and lead wire.

Beitrag von „influenist" vom 25. Februar 2019, 21:04

> [Zitat von etrock](#)
>
> finally, i used here add the usb hub.....remove inductance and lead wire.

Many thanks for your input!

Option 1, you couldnt use both the webcam and the wifi module?

Could you provide a picture of your results on option 3 ?

Beitrag von „etrock" vom 27. Februar 2019, 06:25

> [Zitat von influenist](#)

Many thanks for your input!

Option 1, you couldnt use both the webcam and the wifi module?

Could you provide a picture of your results on option 3 ?

Option1==> I broke the solder pad, so my this port, game over.

Option3,

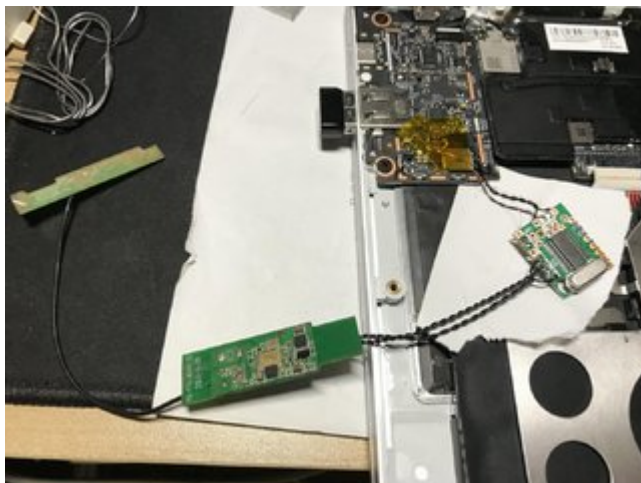add a USB-HUB ,then usb wifi put inside.

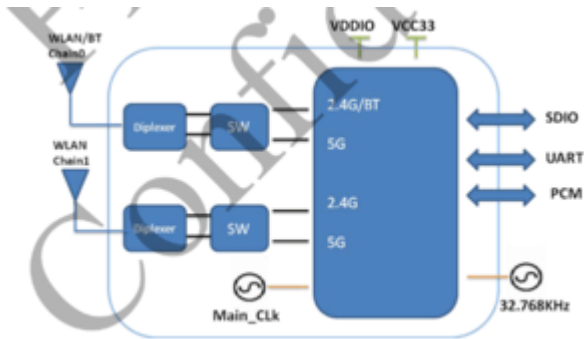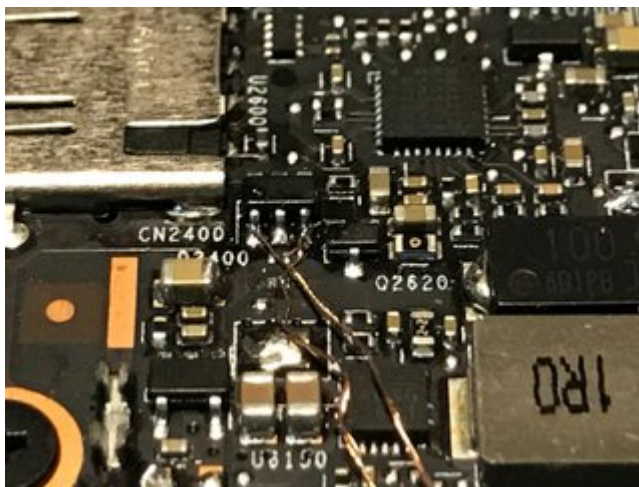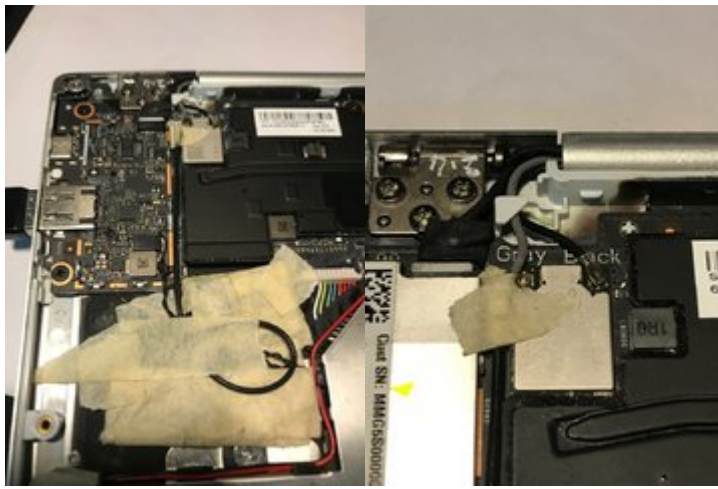Used the gray antenna(Minor antenna) connect to usb wifi.

Leave the main antenna(black) for Win10 used.(intel wifi 5G 877Mbps will down to 433Mbps,and BT will no signal at Win10~)

After this?, usb wifi ?signal work fine when put on the back cover?.??

usb-hub

https://item.taobao.com/item.h...abaDSFITN&id=574744995214

Beitrag von „influenist" vom 4. März 2019, 17:44

Hi @etrock you want to use some isolation on those cables you soldered onto the board. Otherwise you could short circuit the board.

Did you use the m2 module from Taobao? https://item.taobao.com/item.h...e5-496b-8eac-41be004559df

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Beitrag von „etrock" vom 18. März 2019, 08:28

> Zitat von influenist
>
> Hi @etrock you want to use some isolation on those cables you soldered onto the board. Otherwise you could short circuit the board.
>
> Did you use the m2 module from Taobao? https://item.taobao.com/item.h...e5-496b-8eac-41be004559df

No more slots i added a nvme ssd....

943602CS`s WIFI work fine at xiaomi notebook, but Bluetooth need jump wire for USB, xiaomi's nvme solts no usb connections.

Beitrag von „jn13" vom 9. November 2019, 17:31

etrock so, finally what is the best option to solder Bluetooth?