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How To: Installing an Airport Extreme Card in an Intel Mac Pro

by Earl Moore on July 18, 2007

in [Apple Mac](#), [Hardware](#), [How To](#)

Installing an Apple Airport Extreme Card in a Intel Mac Pro is not considered by Apple to be a user installed option so you'll find little or no instructional help from Apple.

It's not a job for the timid. You'll need a steady hand and patience. It will also help if you have small fingers. It's difficult mainly due to the cramped space and small parts involved.

I purchased my intel Mac Pro from Apple as a refurbished unit and it didn't have the 802.11b/g/n Airport Extreme Card installed as a factory option. I wanted this capability, so I purchased a compatible Airport Extreme (802.11n) from [FastMac](#) and did it myself.
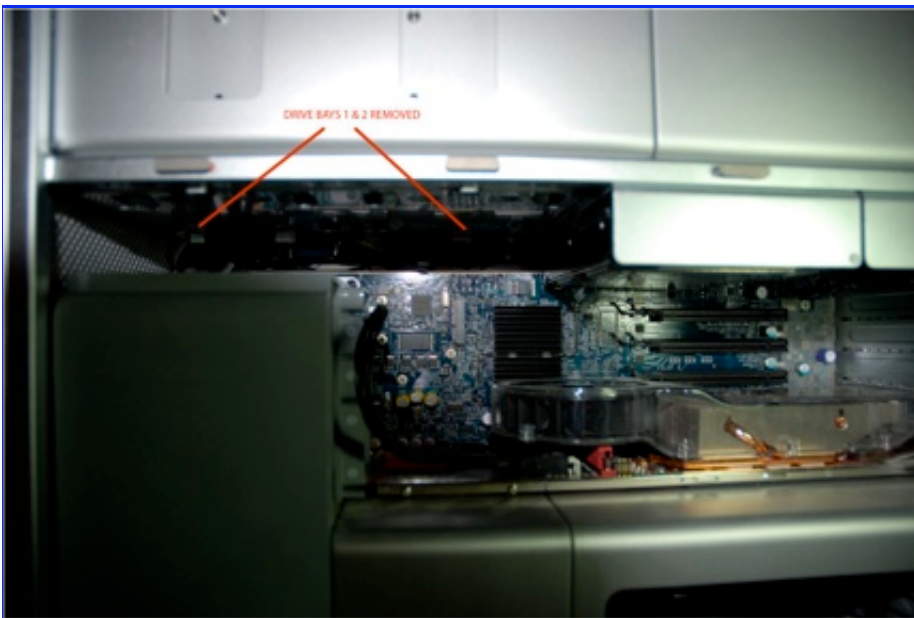
Disclaimer: Here's the procedures I followed. Use them at your own risk. It worked for me but I'm not responsible for any damages you might do to your computer.

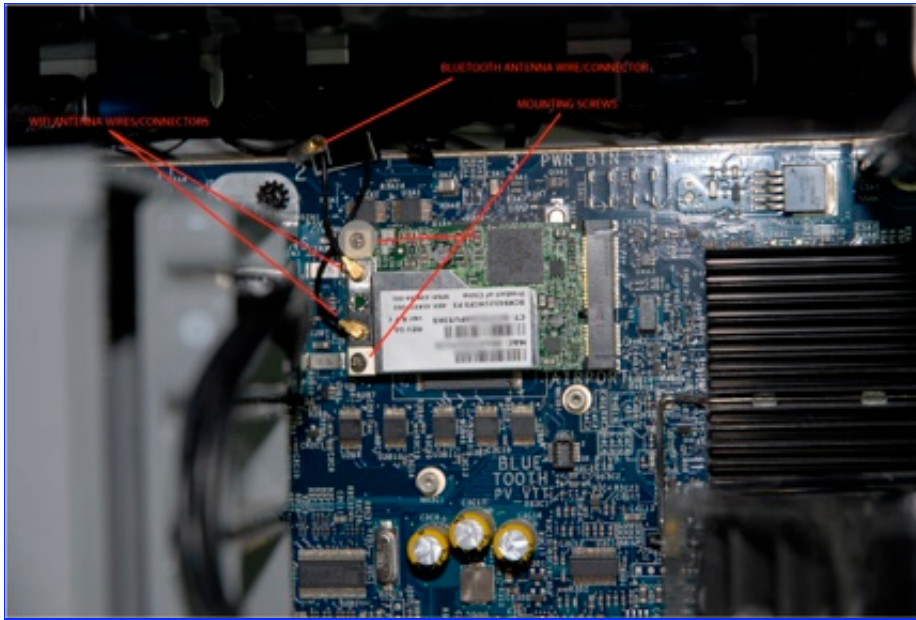**Instructions for Installing a Airport Extreme Card in an Intel Mac Pro:**

1. Lift the rear latch and remove the side panel of the Mac Pro.

2. Place the Mac Pro on it's side on a desk or workbench where you can have easy access. Note the location where the new Airport Extreme Card will be installed.

3. Remove hard drive bays 1 & 2 to give yourself some extra room. The latch in the back that was used to remove the side panel will have to remained released to remove the drives bays. The drive bays pull straight out once this latch is released.
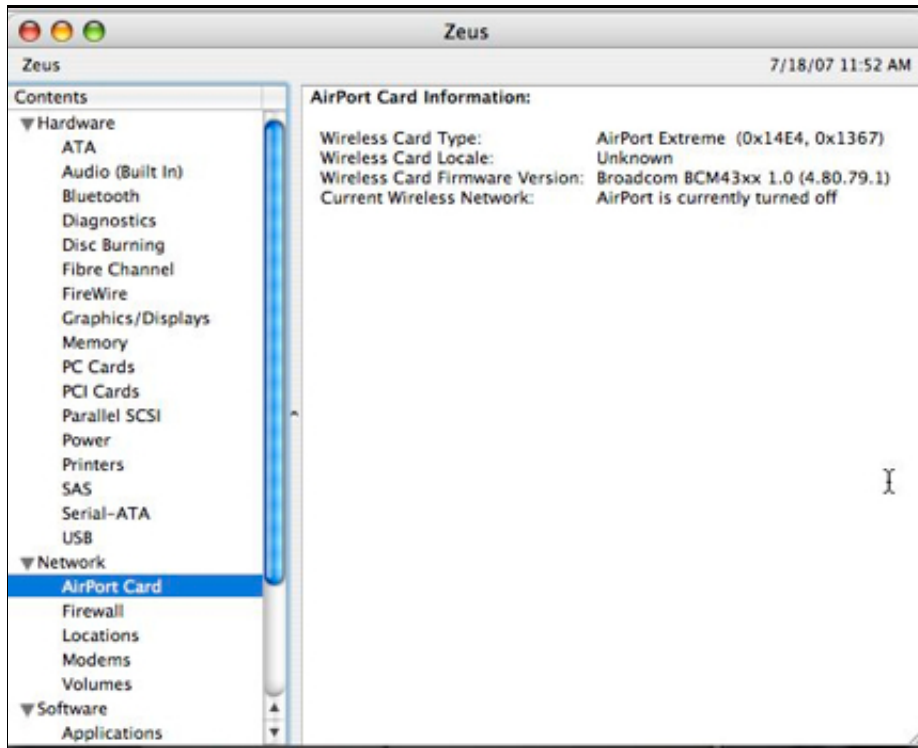

4. Note the mounting points for the Airport Extreme Card. The card slot is spring loaded so when you put the card in the rear of the card will be elevated above the two rear mounting tabs.

5. Gently push the Airport Extreme Card into the mounting slot leaving the rear slightly elevated.

6. Carefully press down the rear of the card and insert the two mounting screws. A small magnetic screwdriver may be of help here. Locate the two WiFi antenna leads stored in the area above the cards mounting location and attached them to the two antenna post on the card. There will also be a bluetooth antenna lead in that same area. Inserting these screws and attaching the antenna leads is the most difficult part of this install due to the limited space and the small size of the parts involved. Be patience and careful not to force things.

7. Slide the two hard drive bays back into their correct slots. Double check everything and remount the side panel.

8. Reconnect the Mac Pro to the keyboard, mouse, monitor and network and boot. On the Apple Menu check "About this Mac" to confirm that the Airport Extreme card is being recognized.

9. Go to System Preferenced/Network and configure your new Airport Extreme card.

10. [Download] and install the Airport Extreme Enabler from Apple in order to use the card in 802.11n mode. Reboot you Mac Pro.

11. You're finished! Enjoy your new WiFi capabilities.

Technorati Tags: [airport], [airport+extreme], [mac], [mac+pro], [apple], [install]

{ 103 comments… read them below or [add one] }

[1] David Ng 07.27.07 at 11:10 pm

You missed to mention about the bundles of cables. Bundle 1 contain 3 wires labeled as [1], [2] and [3] ; and the BT wire.

The extreme card should be wired up with bundle 1 - cable [2] and [3]; leaving [1] unconnected. And the bluetooth should be wired with the BT wire.

Hope this help the reader.

Cheers.

[2] [Earl Moore] 07.27.07 at 11:23 pm

David,

Thanks for the tip.

On my Mac Pro the wires were not bundled. The BT wire was totally separate from the two WiFi wires and they were simply folded above the motherboard near the extreme card mounting point.

Readers should be aware they could find either situation.

3 Jeff 09.06.07 at 9:37 pm

Too bad CompUSA tech's aren't required to know about APPLE hardware.

I bought an AirPort Extreme Card to upgrade my 3-day-old-purchase MacPro to have AirPort capability…

After 20 minutes of studying them in the store, looking for compatible product indicators, *N mentions, etc., asking the tech dept., looking online via MacBooks with AirPort, they insisted that the card will work in the MacPro.

Revealed here, on this site, the cards do not look anything alike…?!

So, where do I buy the correct card?

Thank you.

Jeff
jeff@hobywa.org

4 Earl Moore 09.06.07 at 9:53 pm

Jeff,

As mentioned and linked in the post, I got my card from "FastMac.com". I'm sure there are probably other places as well but I had a good experience with FastMac.

Good Luck!

5 mike 09.10.07 at 10:33 pm

Is it possible that my PowerMac does not even have the cables for the Airport? Everything was going smoothly on the install but I can't find the cables. I already have BT installed and the cable for that is easy to see and runs up and around the mother board. But the other two cables are no where to be found.

6 Earl Moore 09.11.07 at 5:13 pm

Mike,
I guess anythings possible but it would be highly unusual if your Mac Pro (not PowerMac right?)

didn't have the Wi-Fi antenna cables.

Be sure they aren't tucked up under some of the other boards and components.

I'm not sure what you would need to do if your machine doesn't have them….

7 aaron 09.14.07 at 3:33 pm

so, dave said to hook up wires 2 and 3 (leaving 1 unconnected). And you have wires 1 and 2 hooked up with 3 unconnected. Is there a wrong way to do this?

8 Earl Moore 09.14.07 at 9:47 pm

Aaron,

My Mac Pro is reconditioned and as such I didn't find my cables bundled as Dave did.

I think it's a fairly simple matter of getting the right ones in any case.

Good Luck

9 Tom 09.29.07 at 7:41 pm

Funny, I saw 3 cables PLUS the BT cable, I hooked up cable 1 and 2 and left 3 uninstalled. By the time I saw the later note about installing cable 3 instead of 1 it was too late.

Still works like a charm.
Anyone know what the 3rd cable is for? (either 1 or 3)

Thx

10 Tim 11.19.07 at 2:58 pm

thnx!
this has been very helpful!
greetz Tim

11 nicolas 11.20.07 at 7:35 am

hi
i have the same problems like mike. i can't find wifi antenna cable.
have you an idée to dismantle the fan blowck in order to find them ?
or if they are not installed, does another solution exist ?

Regards
Nicolas

12 Earl Moore 11.20.07 at 7:56 am

Nicolas:

I don't know why some Mac Pro machines would have the antenna cables and some would not. My understanding is that all should have the cables even if they do not have the WIFI installed from the factory.

Does anyone else know the reason for this?

If you don't have the cables then I'm not sure at this time what would be the best choice. Getting the cables and installing them from Apple may not be possible and I don't know if any third-party companies have a similar item that would work. I'll do some research and if I find a good work-around I'll post it here as an amendment to the the original post.

13 nicolas 11.20.07 at 8:01 am

thanks for the reply

at least, does a dismantling tutorial exist for the mac ? maybe antenna are just hide well !

nicolas

14 Earl Moore 11.20.07 at 8:49 am

Nicolas: I don't know of any good dismantling instructions or tutorial for the Mac Pro.

I did find the photo's of a Mac Pro take apart at the web archive link below:

http://web.archive.org/web/20060813082700/http://www.powermax.com/articles_reviews/article.php?id=33

15 tim 11.21.07 at 6:12 pm

@ nicolas:

They are very well hidden indeed! look at the upper left BEHIND the board. and pull them out (its a bundle of 3 wires)kept together with a wrap. but be careful! just feel if its loose with a pen (TO BE SURE YOU HAVE THE RIGHT WIRES), then pull the wrap out that keeps the wires together and voila the wires/antenna's will pop out.

but then the real difficult part begins. clicking the two wires/antenna's on the card. Took me 1 hour …

16 Doug 12.21.07 at 11:24 am

1. Is there any information regarding the "T" antenna that needs to be attached to the back of my Mac

Pro

2. Will my Mac Pro still achieve wireless connectivity if I do not attach an antenna to the back of the tower?

3. Will it be harmful to install the AirPort card, hook-up its wires, and not have an antenna to affix to the rear?

4. Confusion exists as to which wires should be connected to the card once it is seated on the montherboard, is there a way to be sure of which wires to hook-up to the card?

17 Earl Moore 12.21.07 at 11:38 am

@Doug

1. With the older G5 Mac Pros there was a T-antenna that plugged into the back. However, for the newer Intel Mac Pro's I believe Apple did away with that solution and instead went with an internal antenna.
2. N/A for Intel Mac Pros, see (1) above. The older G5 Mac Pros, which I also have one, will achieve connectivity without the T-antenna, but with reduced range.
3. N/A for Intel Mac Pros, see (1) above. On the older G5 Mac Pros, it will not harm the AirPort card without the T-antenna connected.
4. Once I looked closely at the wires I didn't have a problem telling which ones to hook up to the Airport card. I can't remember specifics but it was clear when I looked closely.

If anyone can provide more information please do so.

Hope this helped.

18 George Rudd 12.29.07 at 6:18 am

@ Tim

"but then the real difficult part begins. clicking the two wires/antenna's on the card. Took me 1 hour …"

Only an hour Tim? 😃

I assume they give you an extra antenna wire because most people rip one out in frustration while trying to attached them.

19 Jonathan 01.13.08 at 5:35 pm

I went through this issue too, here is what I learned (for what it is worth). There seems to have been some issues with regard to cable labeling.

Some Mac Pros (Intel machines) have wires 1,2,3 in a bundle with a small piece of black fabric tape

around them stuck to the bottom of the super drive bay underneath HD drive one. (You must remove HD 1 and 2 in order to see it.)

Systems with this three wire bundle have a separate wire in the same vacinity tucked under the other cables labled 'BT' (or not labeled at all). all of the wires have a plastic cover over the connectors.

Some systems have four wires together. at any rate, wires 2 and 3 go the the aircard. Some people have reported that wire 1 goes to Bluetooth… for my system, this was incorrect, so you will need to experiment if you are installing a BT card too.

as far as connecting the leads, its not too hard with the correct tool.

I took a small duckbill set of pliers, and covered the "duck bill"s with "Duct" Tape for padding, then I GENTLY pressed the wires over the connectors and squezed them with the duckbill pliers…. DELICATELY… but it only took about a minute per wire. which is better then wrestling with them for hours….

What ever you do, BE VERY GENTLE!!!!! these wires are attached to the bottom of the mother board and to the antenna. if you break them , you are out of luck!

It really helps to remove the fan duct (the grey plastic thing that runs between the superdrive area to the bottom of the case along the front edge of the case. Removing it is trickey, but once done, getting to everything is a snap. IF you are not sure, don't remove it. its pretty trickey…

This may seem obvious but it bears mentioning, Install the wires FIRST… before you mount the card. otherwize you may mess up the motherboard when you are trying to attach the wires. The temptation is there to mount the card and then press the wires on to make it easier… DONT DO IT! as hard as it is to get the wires on, you will undoubtedly reach a 'boiling' point and press too hard, and kabluie… you are replacing your mother board. BE Safe.

Anyway, Hope this helps, I know I could have used this advice before I dove in…

regards all
Trauncher..

[20] max 01.30.08 at 7:41 pm

So you all know - the cards shipping now have three wire-connectors. That clears a lot of things up..

[21] Hunter 02.02.08 at 1:58 pm

Well, thanks all for the advice from everyone. I have just finished installing mine, and found the BT cable was already connected to the Bluetooth card (makes sense) and connected wires 2 & 3 after many trials with pudgy paws onto the card (before screwing it down).

All in all, I would recommend having the store do it, if they can fit you in. I couldn't wait!

22 orlando 02.10.08 at 4:23 pm

hey max,

what do you mean the cards shipping now have 3 wire connectors???
can you give more info..i thought i purchased the NEW CARD and it doesn't have 3 connectors..part# M363Z/A…

AGAIN MORE INFO ON THIS MATTER WOULD BE GREATLY APPRECIATED

23 James Winspear 02.19.08 at 6:42 pm

Hi Earl,

I found this site via google, and I'm rather glad I did.

Just to say thanks for your guide to install an airport card into a G5. I managed to find the 2 tiny wi-fi wires after farting around inside the guts of my mac and then took about 20mins to get the ends of the wires on to the (again) tiny posts on the card. This should of been done by the muppets in the mac store in London where I bought it over a year ago (don't ask). Thanks again, I now have wire-less internet!!

Kind Regards,

James

24 Earl Moore 02.19.08 at 7:53 pm

@James :

Glad this post was of some help to you and that your efforts were successful. I appreaciate your kind words.

Connecting the wires to the card is definitely the most tedious part of the process.

Congrats!

25 John Franks 02.23.08 at 8:36 pm

Just finished installing the card in my new Mac Pro. The card is easy, attaching the wires was certainly the worst part.

Tried installing the card and attaching the wires and this is NOT possible unless you have some special tool.

A good light helps and a lot of patience.

26 Patricia 02.28.08 at 3:12 pm

Earl,
I want to personally thank you for this thread AND the pictures you generously posted. The install was a snap (I have small hands and am used to handling tiny parts…from my jewelry designing days), so no problems there. I wanted to report, I purchased my Mac Pro recently (2 weeks ago)and the cards a week ago. The airport card was purchased at the retail mac store, the BT card was on line. The antenna wires are still mislabeled. I installed #1 in the bluetooth, #2&3 for the airport and left BT uninstalled.
Thanks again Earl-you are terrific.
Patricia

27 Earl Moore 02.28.08 at 3:30 pm

@Patricia :

Thank you for your comment and the kind words. I'm happy this post was of some help and that your install went so well. Having small hands would certainly be a blessing connecting those wires.

Best Regards

28 John 03.04.08 at 2:51 am

Yes, the card I got had 3 antenna connections. The proposed N standard provides for multiple inputs (up to 4 if I'm not mistaken). With all the confusion about what wires go where I decided to just match the numbers (the antenna posts on the card are labelled "1 3 2″. Seems to work. I might substitute BT for 1 if I get ambitious, just to see. I don't have a bluetooth card. I purchase another 802.11n card to put into our early 2006 Macbook Pro. In that case I treated the original 2 wires as 1 and 2, and left post 3 empty. FastMac concurred this was the proper way to go. Now we've got N on the MBP as well! I figured the antenna connections would be a snap on the laptop with the card sitting right in front of me. Haha - NOT. Patience eventually pays off. Don't force it!

29 amdMcBook 03.08.08 at 5:14 pm

Hmmm…I tried using the Linksys Sireless Gaming Adapter (WGA54g) that essentially converts wireless to ethernet conectivity. But it was a bitch to setup. It claims to support WPA, but it really does not. It only suppoerts WES encryption…which is cumbersome to use and easy to hack. Moreover the new TimeCapsule (802.11n) doesnt even support WES 128 bit. I probably shouldnt have bought a refurb MacPro knowing it did not have wireless 🙁

Thanks for your article. I'm thinking about trying the airport express card option. But does anyone know if Apple provides the drivers for the card for Windows XP/Vista?? I have a dual boot setup and would hate to find out I have wireless access only on OS X and not on Vista. Any ideas?

30 marmeloni 03.29.08 at 4:18 pm

Thank you so much! This saved me a lot of despair, the waiting line in the next Apple Store and the money for the service. I never thought that plugging those antennas in would be that difficult. But my wife eventually managed to do it with her filigree fingers.

31 Andrew 04.01.08 at 7:52 pm

HERE IS EXACTLY WHAT TO DO:

Before you want to kill yourself (like me), read this.

Start by pulling out HD bays 1 & 2.

I had the new 2008 mac pro, so there was already a BT cable connected. If you are like me, follow the BT cable to the top left of the motherboard. You will be able to pull out the wires with a thin tool - I used eye brow pucklers. They are the only wires that are somewhat loose but it is still difficult.

Once you pull out the wires, get a thin plier and cover the plier heads with tape (as another comment suggested). Put the connector in place over the card, and squeeze it together by placing one head over the connector and the other head under the card. It doesn't take much to make it click. It can be somewhat hard to position yourself because the wires are short, but keep trying.

Once you get both wires connected, place in the card and screw it to the board. For me, this was super easy. Card slides in very smoothly at top with little force.

If you do everything in this order, you could be done in 15 minutes. During my install, I had the card screwed in and was trying to push in the connectors… I think this is almost impossible. And super frustrating. So, I removed the card connected the wires with pliers. Easy. Kinda.

Good Luck!

32 gooffer 04.09.08 at 10:15 am

Some very good tips here, specially about installing this card. I have also found that installing the antennas before putting it onto the logic board is the way to go and not vise versa.

Something about cards…. I have never seen a 3 antenna card…

1. old Mac Pro's MA688z/B or A

2. new Mac Pro's MB363z/A (looks identical to the other one with only 2 connectors….looking at one right here)

33 Mike 04.09.08 at 1:40 pm

Hi,

I ve installed wirless card with no big problem, some issue was inserting antena cable, but now I cant

see in sys info my wirless card, i havent rip any cables, or crashed motherboard… does anybody has any idea about that ? i have mac pro quad 2×2.8.

[34](#) Chris 04.09.08 at 7:24 pm

I got both wires connected in two minutes… after 28 minutes of figuring out how to finish the first one 😊 I had the advantage of a pair of mini "bent nose" pliers. The "business end" has no grooves, (just flat surface), so I didn't need to wrap them with tape. I succeeded when I held the pliers nearly vertical in my right hand, flat against the drive bays. I held the card vertical on its side edge (relative to the motherboard). My #3 wire was longer, so I attached that to the farther connector.

Besides maneuvering in the tight area, I thought the hardest part was making sure the jittery connector was perfectly aligned before exerting force. It's basically a tiny coax, and the center is illusive. I'm sure you could ruin the connector easily if it wasn't aligned before you squeezed. It didn't take much force, but my attempt to squeeze with my fingernails alone (no pliers) failed. You get rewarded with a nice click that you can feel, and somewhat hear.

I actually got the first one connected right away, but I twisted the card around too much maneuvering for the second one, and it popped off. It took a long time to repeat the success. The next time, I carefully rotated the circular connector to a safe angle, then paid attention not to put stress on it as I continued.

Here's a link to buy the same set of pliers I have. The last pliers in the set were the ones I needed. The long needle-nose were also useful in fishing out the wires at the beginning.

http://www.sears.com/shc/s/p_10153_12605_00945671000P?
vName=Tools&cName=Hand+Tools%2C+General+Purpose&sName=Pliers&filter=Style%7CMini

If the link doesn't work, try this navigation at sears.com: Tools > Hand Tools > Pliers > Style=Mini

[35](#) amdMcBook 04.12.08 at 10:01 pm

I finally took the plunge and bought a wireless card from fastmac. I agree installing it is a pain… especially getting those antennas to hook up and stay in place.

It took me at least 30-45 mins to get the damn antennas on. Only after attaching the antennas did I put the card in the slot and screw it in. The other way around is probably not possible due to the congested space.

Has anyone been able to find Vista 64 drivers for the airport card? I have it working on OS X fine, but not on Vista.

[36](#) Scott Hungarter 04.23.08 at 6:37 pm

Fantastic resource! Thanks for this! You got me up and running in no time flat. I wouldn't have had a clue.

37 Eric Ortega 04.28.08 at 11:49 pm

Awesome!! We´ve saved like 60 bucks thanx to you bud!!

Thanx again, and greetings from Mexico City

Gracias

38 Peter Payne 05.04.08 at 9:57 am

Just wanted to say a big THANK YOU for making this page available. For some ridiculous reason, this is the ONLY PAGE on the entire net that offered help in getting the card installed.

39 Mark Ponsonby 05.10.08 at 8:01 am

Hi,
Ive just purchased the airport extreme card direct from Mac online. My MacPro is less than a year old. This card does not fit the slot! Its not even the same card as in these pics. Why would MAc send me a card that doesnt fit my machine? Does anyone know of a thread that explains how to istall this larger Card?

40 Earl Moore 05.10.08 at 8:59 am

@Mark : From you description it sounds like you received the wrong card. If the slot is as shown in the photos above but the card you received will not fit it then there is no way to install it. I would contact those who you purchased the card from and work it out with them. Good luck!

41 Leif Jason 05.25.08 at 2:58 pm

Thanks tons, this guide did the exact trick. I went through the whole
1) 'buy a refurb tower + an airport extreme card'
2) FRAK the card doesn't fit
3) google the issue
4) find this blog
5) order the right part
6) install as explained below

Thanks again!

42 Quentin 06.04.08 at 1:54 pm

Wait, I noticed you said that you bought an airport card from a third party.

I just bought a refurbished airport card from Apple and it looks nothing like yours. In fact, the Apple card is encased in metal and all you can see are the tips.

I'm thinking you just slide this puppy in without messing with screws, antennas, etc…

Am I right?

43 Earl Moore 06.04.08 at 2:03 pm

@Quentin:

There are different types of airport cards depending upon the model of computer they're intended for.

I would say that if your card doesn't look like the ones in the photo you may not have the right card. Are you sure it was for an Intel Mac Pro?

44 Quentin 06.04.08 at 3:02 pm

@Earl

Yes, it's a Mac Pro refurbished unit–purchased 10 days ago–and the Airport Extreme card was purchased from the Apple Store online.

http://store.apple.com/1-800-MY-APPLE/WebObjects/AppleStore.woa/wa/RSLID?mco=MTg5Njg&fnode=home/shop_mac/mac_accessories/networking&nplm=M8881LL/A

I just opened up the computer and there is no way that this card fits.

I might have to bite the bullet and take it in.

45 Quentin 06.06.08 at 9:48 pm

Okay, I bit it, and went to the Apple Store. The card itself is an "upgrade" card. The Apple Store online does not sell it–you have to go to an actual Apple Store to get it–it must be installed onsite or they will not sell it to you.

It's just like the one they offer at fastmac.com but it's a certified Apple product. The card sells for 89.99 on fastmac, I got it from Apple for 43$ INSTALLED! It took 10 minutes.

I'm a happy camper!

46 Earl Moore 06.06.08 at 9:55 pm

@Quentin - Hey, glad it worked out for you!

47 ArtK 06.20.08 at 11:57 am

For those of you with the "wrong" card. There are three AirPort cards. The original AirPort (802.11b), the first AirPort Extreme card (802.11b & g) and the newest AirPort Extreme card (802.11b, g and n.)

The first card fits in older G4 Macs using a PCMCIA slot. The second (old AirPort Extreme) fits in a slot that looks like a PCMCIA spot but is somewhat shorter. The third one is what we're talking about here.

What's important when ordering the card is to make sure that it's an AirPort Extreme for the Mac Pro, otherwise you get something that won't work.

[48](#) Ben Weiss 06.20.08 at 8:04 pm

Thanks so much for the instructions! At first I tried to attach the card, then clip on the wires, but that didn't work… It was much easier to clip the wires (using fingernails for pressure) when I unhooked the card and held it in midair, so I could press from both sides. Took many tries, but satisfying when they finally clicked! Works like a charm now!

[49](#) [Earl Moore](#) 06.21.08 at 4:14 pm

@ArtK - Thanks for clarifying the cards available. There has been some confusion as to which cards will work.

@Ben Weiss - I hear several people say they had better luck attaching the wires first. Glad you got it and that you found these instructions to be of some here. Enjoy your wireless connection!

[50](#) Smokee 07.16.08 at 6:15 pm

I need help with it…!

I installed my card carefully step-by-step in 8 core Intel Mac Pro running Leopard and… in System Profiler it is said that "no information found" about Airport card.

I tried all the System Updates, looked for help across the web and still nothing!

My Airport is an Atheros AR5008E-3NX device, is there a problem with such drivers?

[51](#) Yetanotherguy 07.19.08 at 8:09 pm

Thank you, thank you! I installed the card on my quad 2.66 Mac Pro, like alot of people here, it took me sometime to find the wires.. I finally pushed the mini screwdriver with the kit, down the side of the PCB and just kept fishing, following the bluetooth cable.. finally I found them… then the only other point of difficulty was to get them to clip on the jacks.. they are sooooo small, I was sure I was going to crush them.. it finally took more pressure than I though it would, and they all popped on no problem (but be carefully) . My advise is start with very little pressure until you are 100% sure you know you have them aligned then press a little harder.. After that.. all is good thanks so much for this or I never would have gotten it..

[52](#) [Earl Moore](#) 07.19.08 at 9:59 pm

@Smokee: Is you airport card an Apple Airport product…you said it was an Atheros? There may be compatibility issues.

@Yetanotherguy: Hey glad this post was a help. Enjoy you new wireless capabilities!

53 Yetanotherguy 07.20.08 at 12:11 am

Correction about above.. it was an 8 Processor 2.8 Ghz Mac Pro.. I said the wrong one.. thanks again for posting this.. it was a life saver.

54 Smokee 07.20.08 at 5:22 am

@ Earl: Yes, my card is an Apple Airport product, it has an Apple aluminium cover with (c) 2006 and the color is navy blue like Mac's motherboard. The card fits seamlessly in the PCI-e slot…

55 Earl Moore 07.20.08 at 7:39 am

@ Smokie: Of course you've rechecked that it's seated firmly in the slot and all. Have you opened System Preferences / Network, and tryed to add a service to see if by chance the Airport card is being reflected there?

Beyond that I'm at a bit of a loss and would begin to suspect a card incompatibility.

56 Chris Spence 08.03.08 at 3:12 pm

These are fine instructions, thank you so much. I fiddled with the antennae for about 20 minutes before punching a hole in my wall (no joke… granted it was just dry wall in the new office, but it makes for a good story) I'm at the Apple Store now waiting for them to do the cables for me 😃 I figured it was just a matter of time before I directed my anger someplace more expensive. My Macbook Pro hard drive crashed and wiped the night before… so 75% of my pent up aggression was on account of that. Great pictures and instructions though. I just wish I had read through the discussion here first… probably would have put my mind at ease 😃

57 Earl 08.03.08 at 11:17 pm

@Chris Spence: Thanks for the feedback and positive words. Some have no problems with the antenna connectors while others have…..ummm punched holes in walls. 🙂

Yes, the comments have grown to have lots of helpful information in them and I appreciate everyone's contributions.

Regards

58 Smokee 08.08.08 at 10:42 am

Wooow, i finally got my card replaced by the seller (the previous one i had trouble with was dead)! It's working!

As the recompensation for all recent problems, wiring up the card took me about 40 seconds. :)))))

Thanks Earl, greetz.

59 Earl Moore 08.08.08 at 11:47 am

@Smoke: Hey great news! Glad to hear that you got it all worked out. I know it was frustrating having to deal with a dead card.

Enjoy!

60 mike chambers 08.19.08 at 5:54 pm

Thanks for the resource, it really helped me out.

One additional tip. When you get the wires on, make sure they are oriented the correct way and dont cover the screw holes. My first went on pointing the wrong way (covered the screw hole) and so I was only able to put one screw in.

Still works fine.

mike

61 Earl Moore 08.19.08 at 6:23 pm

@Mike: Thanks for the tip!

62 Felix 08.30.08 at 1:36 pm

The Apple Store installed my card for me, but when I got my Mac Pro (2008 model) back from the store, it could not find the system folder (blinking "?" folder on startup) . My guess is that something happened to prevent the computer from reading hard drive bay 1, but I don't know what I should be looking to fix. Any thoughts?

Felix

P.S. Thanks for any help and for providing this page.

63 Earl Moore 08.30.08 at 4:10 pm

@Felix: First I would talk to the Apple store that did the install to see if they did anything that could cause this. Perhaps they pulled the hard drive to give them more space to do the install and didn't get it seated back correctly? They should be willing to look at it.

If not you can try booting from your OS-X CD/DVD by inserting the cd and holding down down the "C" key when you turn the computer on. This will allow you to run the Disk Utility from the CD and check and/or repair the Hard Drive.

64 Felix 08.30.08 at 10:58 pm

Thanks, Earl. I'd booted from CD and run both disk utility (it didn't find the hard drives) and hardware test (it confirmed that none of my other hardware, RAM, etc was bad or acting up).

It turned out to be that the Apple store employee who installed the Airport card had removed my RAID card to do the install, or so it appeared. When I examined the computer's interior, it was not seated at all (!) and the iPass cable (connecting HD bays to the RAID card) had not been fastened properly. Once I fixed these two problems, it booted just fine.

Felix

65 Earl Moore 08.30.08 at 11:15 pm

@Felix: That's great, glad it was that simple. 😃

Obviously the Apple Store employee didn't check to see if the wireless card was working after installing it. It he had he would of found he forgot to re-seat the RAID card and connect the iPass cable.

I'd probably call the Apple Store Manager to let them know it was a shoddy piece of work! I hate giving people free passes when they do "crap" like that.

Regards

66 MikeS 09.03.08 at 8:12 pm

Thanks so much for the excellent website, it helped me immensely! Like most of you, I had trouble with the antennas, besides that everything else went fine. The 2008 Mac Pro doesn't need the enabler, it has it already, however when trying to connect to nearby wifi's I am not able to like I was able to with my G5 Airport card, I can only connect to my own wireless router. Do I have to tweak any settings?

67 Earl 09.03.08 at 9:15 pm

@MikeS: Thanks and glad this post has been of help.

I don't know that there any special tweaking to be done. You should set up the new WiFi port and network settings like you would on any Mac.

68 MikeS 09.03.08 at 10:48 pm

The only thing that is really confusing me is which wire goes where. I have a Mac Pro early 2008 2.8ghz quad core with bluetooth already installed. The BT cable is connected to the Bluetooth card, originally I connected cables 2 & 3, 3 in the lower connector and 2 in upper. The card works but it only connects to my wireless router. Other wifi's are shown but can't connect. I tired with cables 1 & 3 and 2 not connected and gave me the same results.

69 Earl 09.03.08 at 11:19 pm

@MikeS: I don't believe it would be a matter of which cables you connected…2 and 3 should work. If it was the cables you wouldn't be able to see the Wifi networks at all, or the signal would be exceptionally weak. It sounds more like some type of configuration or driver issue but I can't think at the moment what it could be.

70 MikeS 09.04.08 at 6:14 pm

Hi Earl,

I came across another website which suggested a different order of connections. The cable#1 to Bluetooth card, cable#2 upper airport module cable#3 lower airport module and BT disconnected. Once I rearranged the connections using this order the airport extreme card worked perfectly. I suppose that if there is no airport card the BT cable is used for the Bluetooth only, if the airoprt card is present then the BT becomes disconnected. Thanks again for replying!

71 Earl Moore 09.04.08 at 6:28 pm

@MikeS: So it was cables 2 & 3 to the airport module with cable one disconnected since you don't have blue tooth? Correct?

That would actually be the way mine was originally hooked connected.

Thanks for getting back and leaving your comments for others to learn from! Take care.

72 MikeS 09.04.08 at 11:05 pm

Yes, cables 2 and 3 were connected to the airport card and cable 1 was connected to the Bluetooth, I just had to disconnect the BT that was originally connected to the bluetooth card.

73 Alessandro Catalano 09.06.08 at 7:00 pm

Wonderful, I had installed AirPort Exstreme Update in only 10 minutes in my Mac Pro 8 Core 2,8 Ghz! Thank for very very clearly instruction.

74 Earl Moore 09.06.08 at 7:05 pm

@Alessandro Catalano: Thanks. I'm glad that these instructions were helpful and that you had great

success!

75 Melody 09.06.08 at 9:56 pm

Thanks a lot for the great installation instruction! I also need to install the card myself. I didn't find any helpful source from Apple, even though I took it over to the store several times and called them to get some support. Anyway, I am not very sure which version of the Airport Extreme Card I need. My Mac Pro is two years old. Hmm… The first version? Here is the spec of the hardware:

Mac Pro 1, 1
Dual-Core Intel Xeon
2.66 GHz
2 Processors
4 Cores
4 MB L2 Cache (per processor)
1 GB Memory
1.33 GHz Bus Speed
MP11.005C.B08 Boot ROM version
1.7f10 SMC version

Thanks for your help at first!

Melody

76 Earl Moore 09.06.08 at 10:24 pm

@Melody: Thanks, glad you're finding these instructions to be of help.

Airport Extreme cards can be gotten from a number of places but you have to be careful to get the correct one. Do a search on Google for "Airport Extreme Card for Mac Pro." Here's a link to what I suspect is a correct card for your computer" http://www.macproonline.com/Shop/Control/Product/fp/SFV/32645/vpid/5636018/vpcsid/0/rid/129150 .

Before purchasing from a retailer call and speak with their technical support giving them your computer information to confirm it'll work. Also make sure they'll take it back if it doesn't fit.

Good Luck!

77 Russell 10.06.08 at 3:26 am

Hi Earl: I realize this post is getting a bit old but… thought I'd add my 2 cents anyway.

Thank you for even bothering to post these instructions. Had I not seen this page, I would have just bought the airport card from the Apple site and THOUGHT I could easily pop it in my Mac Pro like I have several machine before. I'm not sure what Apple's intentions were with this. One of the beautiful things about owning a Mac for me has always been that I can easily upgrade on my own.

Having to lug this heavy thing all the way in to work and then taking a cab to Michigan Ave, (I live in Chicago) seems silly for an airport card. Had I known that it would have been an issue, yes, I would have just ordered it to begin with — live & learn.

Venting aside, I want to assist in the which-wire-is-which debacle. I locate the Mac Pro service manual for the "early 2008″ models (how obnoxious is that label?) Here are some relevant highlights from the AirPort Extreme Card Chapter:

"Important: ….The Bluetooth antenna wire looks similar to the AirPort antenna wires, except that it includes a "BT" label. For proper operation, be careful not to connect the Bluetooth antenna wire to the AirPort card or any AirPort antenna wire to the Bluetooth card. Note: You may connect the AirPort antenna wires to either AirPort card connector.

Important: Be sure to connect the wires that are marked 1 and 3 to the card; the antenna wire that is marked 2 should be taped out of the way."

I read online that Apple had apparently mislabeled these wires at some point. My machine shipped with the BT labeled wire connected to the bluetooth card so I was not about to disconnect that as was suggested in an earlier post. I connected the 1 and 3 wires to my new Airport card (thanks for the info on where to order) and everything is working great. I presume any mislabeling has been rectified at this point.

Finally, about pulling the antenna off the motherboard — the antenna wires are not attached to the motherboard. They are attached to the "AirPort Antenna Board" which lives on at the bottom front of the machine (under the panel label with all the usual icons). From the diagram on the service manual, it looks like you would have to snatch these wires pretty hard to cause any serious damage. They are taped and bracketed many times before they reach the antenna board. So, readers be careful but not neurotic… 🙂

Okay, didn't mean to be such a windbag. I just hope I helped in some little way. I was pretty upset when I realized this installation wasn't as easy as it used to be but this site and the service manual helped assuage my rage. Many Thanks. Russell

[78](Earl) 10.06.08 at 6:54 am

@Russell: Thanks for your comment and the great information you've provided. While this article was originally posted over a year ago it's still receiving many visits each day so I sure what you've shared will help someone. With this post, the wonderful reader comments have become at least as informative as the post itself. I glad you found it to be of use.
Regards

[79] Olivier 10.23.08 at 2:17 pm

Great post thanks!
Impossible without it!

I am a recent switcher, and I must say that I was surprised that Apple would make it so hard to add

wireless. The guy at the store told me how to do it, but I would not have guessed the card location without your post!!

Any way, I managed do it fine after about 20 minutes trying: 15 minutes trying with fingers and pliers as suggested, then 4 minutes taking care of baby, then 1 min to put finally both cables on the card!

My suggestion for the trick: push down on the antenna with the tip of your fingernail once you align it right. It pops in with a snap!! Also, once the antenna wires are attached, you can turn them around to orient the wires correctly without unsnapping them.

As the last post suggested, I had 3 wires marked 1,2,3 & one BT (bluetooth) already connected. I connected 1 and 3, and all worked fine.

The store said that the most recent cards are supposed to have 3 connectors for 3 antennas. But mine was still the older design with 2 connectors.

Apple planned in advanced on the latest Mac Pro by installing already 3 antennas, before the cards were available.

Thanks again,
Cheers

80 Earl Moore 10.23.08 at 2:48 pm

@Olivier: Glad you found this article to be of help. You did very well to only take 20 minutes to do the upgrade.

Regards

81 Anonymous 10.25.08 at 8:33 pm

Another successful install!

I have an early '08 MacPro. Upgrade card M363Z/A had 2 wires, installed fine - about 2 minutes with the recommendations.

Thank you.

82 Vlad 11.08.08 at 7:14 am

Thanks a lot for the instructions Earl. Thanks to those, and the comments on this post, I installed the Airport on my dual Quad Core Xeon 3.2 box. Sadly, my big fingers got in the way many times, it aided to connect the antennas (1 + 3) PRIOR to inserting the card into its slot and securing it with the screws.

83 Earl Moore 11.08.08 at 8:22 pm

@vlad: Glad this post and the comments were of help.

84 Angelo 11.10.08 at 10:59 am

Thanks, it was very safe and useful tech notes to me.
I'm wireless on my new mac pro 8 core 2.8Ghz.

Thanks.

85 `GENE 11.21.08 at 7:56 pm

Very helpful thank you

86 Andy 11.22.08 at 9:08 pm

So nice to have this therapy group, I feel much better thank you.

87 Aubrey 11.23.08 at 1:10 am

I just recieved a Mac Pro dual quad core 2.8ghz with an airport extreme pre-installed, but I get a very poor wi-fi signal. Today I purchased the newer Airport Express 802.11n base station to replace an older Airport model in the hope that the increased range would help, but the wireless signal still drops in and out constantly every few seconds. Both base stations were connected to a cable modem.

I figured it may be a loose antenna wire but everything seems to be attached securely.

The computer arrived with wires 1 and 3 connected to the airport extreme card, wire 2 unconnected, and the BT wire connected to the bluetooth card.

According to Russel, the wire (1,3,BT) combo is correct, any suggestions on what could be causing the terrible signal? I was going to go with the wire (2,3) combination many mentioned but now I'm not sure.

A macbook and PS3 both connect to both the old and new Airport Express base stations with no problems. So it's definitely a problem local to my Mac Pro desktop.

Thanks for any help.

88 Earl Moore 11.23.08 at 11:38 am

@Aubrey: The antenna wire combination 1,3 should work but if you're experiencing really poor reception I'd try the 2,3 combination even tho I doubt it'll make any significant difference.

Over-all my experience is that Mac Pro's do not have as good of Wifi reception as most laptops or game consoles but if you Mac Pro has an exceptionally weak signal then you may want to have it check out by Apple as there could be a hardware issue.

Best of luck…

89 Aubrey 11.23.08 at 2:09 pm

Thanks for the response. I tried the 2,3 combo and downgraded firmware to 7.3.1 but it's not much better. The wireless connection is basically useless.

Do you think there would be any use in trying even older versions of the firmware? Or would it be a waste of time?

I guess I'll revert to some kind of wired connection in the mean time. Anyone have any experience with AT&T Elite DSL? I already have an sbc/yahoo/at&t dsl account I was about to cancel with a barely working/dying modem, is it worth the upgrade?

Thanks Earl

90 mike chambers 11.23.08 at 3:21 pm

@Aubrey

Are you absolutely sure you have the correct card? I had the same issues you are having when I accidentally added the wrong wireless card for my model of Mac Pro.

It would work, but speeds were super slow, and the connection would be weak or drop often.

mike

91 Aubrey 11.24.08 at 8:06 am

I'm pretty sure everything is the latest tech.

Two 2.8GHz Quad-Core Intel Xeon

I configured the computer on the Apple website and under wireless options it only gave two choices, none and airport extreme 802.11n

The system profiler says its type 0×14E4, 0×88 and the network utility lists it as (802.11 a/b/g/n)

Strangely enough as of about 7 p.m. last night the connection seemed to stabalize and is still good as of this morning.

The only problem now is when I open Airport Utility the Express is found, but when I click "manual" or "continue" for set up options it just continually tries to read the Airport Express configuration before giving an error.

Probably just need to unplug/plug or reset the Express to solve that problem and hope the connection doesn't start acting up again. If my connection still works after rebooting the base station I'm

wondering if I should risk upgrading the firmware back to 7.3.2 or just stick with 7.3.1 and be glad that I lucked out.

92 Aubrey 11.24.08 at 8:37 am

I think I have all the latest tech. I configured the computer on the Apple website and it had only 2 choices under wireless options, none and 802.11n. The processors are two 2.8GHz Quad-Core Intel Xeons.

The system profiler lists the card as 0×14E4, 0×88 and the network utility has it as 802.11 a/b/g/n

As of about 7 p.m. last night until right now the connection seemed stable. I could click from site to site with no problems. Then I opened Istumbler and the connection dropped out for a while, came back and is now somewhat unstable again. During the stable period everytime I opened Istumbler the connection would drop but come back a second later, now it drops for longer periods.

Another problem is whenever I open Airport Utility the base station can be found, but every time I click "manual" or "continue" the utility continually tries to read the base station's settings before giving an error. The same happens when using a macbook with no connection problems. Hopefully rebooting the Express will fix that at least.

I wish I knew if this was a reception, hardware or software problem.

93 Aubrey 11.24.08 at 8:45 am

Sorry for the repeat post, bad connection made it look like the first message didn't take, but I guess it just took a while.

94 Earl Moore 11.24.08 at 8:52 am

@Aubrey:

I'm not sure that we (I) understood it was a new Mac Pro configured from the factory with wireless. You should have the correct Wifi Adapter.

Have you tried plugging the Mac Pro directly into the Airport Base Station using the Mac Pro's Ethernet port(s) to confirm the connection is OK that way?

You've probably already done a search (Google) of "Mac Pro Wifi Issues" and there are also some related discussions on Apple Support. If problems continue and since it is a new Mac Pro, I would call Apple Support. They may be able to walk you through things to check or even offer a fix for it.

Apple Support will probably insist that you upgrade the firmware back to the latest version and since downgrading it didn't immediately solve your problem I doubt it was related.

They may also be able to point to either hardware or software.

95 Aubrey 11.26.08 at 8:42 pm

Lately for some reason the connection seems to have stabilized on it's own for good this time, not from anything I did in particular (there must have been some strong interference coming from somewhere outside the house during the bad period), but other issues have popped up.

For a while Airport Utility on both a Mac Pro and a Macbook(which has no connection problems whatsoever) would lose the ability to read the configuration of the Airport Express after I made a change. I would have to constantly try combinations of unplugging, hard and factory resets to get the computers to read the base station. Seems plugging the station in to either computer directly through ethernet was the best way to get to the configuration menu.

This problem also seems to have cleared up on it's own as I can now remotely access the base station again on a regular basis.

However my Mac Pro only seems to be able to connect when I set radio mode in Airport Utility to 802.11n (80211b/g compatible) My internal card is definitely an N but when I set the radio mode to n/a or n only mode the base station can't be found and I have to reconfigure the radio mode to n/b/g on the Macbook to get the Pro online again.

The mac book connects no matter what I configure radio mode to.

Could switching the factory antenna wire combo of 1,3 on the airport card to 2,3 have anything to do with this? Could antenna #1 be dedicated to the higher frequeny? Maybe I should try switching the antennas back to the way they were.

In the mean time I'll call Apple support. Maybe they could also tell me how to get my 360 connected to the Airport with the orignal Xbox wireless module. I wasn't expecting so many problems with this thing.

Thanks

96 Earl Moore 11.27.08 at 8:41 am

@Aubrey:

Since your Mac Pro came with antenna wire combo 1,3 I would probably try switching it back to that. I would be surprised if that makes much if any difference tho.

Good luck!

97 Tim Clague 12.26.08 at 4:29 am

My own top tip for this was to turn the whole machine upside down first. The reason why connecting the antennas is so hard is that you cant really get your hands in there OR press down on anything. With the machine inverted you can at least rest the card on the metal casing that is revealed when you remove the drives.

Another surprise for me was the long time it may take to boot up first time - but after that it was ok. But it still causes a moment of panic.

[98](#) dave 12.28.08 at 8:53 pm

man..this really gripes my butt. $3k for a new 8-core, and it DOESN"T come with the card for free??? A damn Imac has it. So do all the laptops. Does Apple really think that people that by a Mac Pro don't want Airport???

Grrrr. At least I'm glad I found this website to try and tackle this on my own.

[99](#) [mark](#) 01.06.09 at 12:30 pm

I just installed 2 of these cards on Mac Pro 2008's. I have to concur that it really does help to attach the antenna leads prior to installation.

All-in-all…. it really was a pain. The leads had to be wiggled a little side to side with with my finger tip until they 'snapped' in. It was really difficult to line the leads up properly… at least for me.

Wires 2 and 3 are mounted. All is working fine.

cheers
mark

[100](#) [Katharina](#) 01.06.09 at 3:29 pm

Super, besten Dank! In 10 Minuten war alles erledigt.

Liebe Grüße, Katharina from Cologne

–English Translation–

Super, best thanks! In 10 minutes everything was settled. Love of greetings, Katharina from Cologne

[101](#) Marky 01.16.09 at 6:18 pm

Its certainly not "easy" to fit these cards, as some people in the Apple store will tell you, but it IS possible. I've just done it successfully, but it was a couple of frustrated hours work.

My advice - try and READ MOST OF THIS TREAD before starting - and a lot of people have helped with constructive responses. It helps tremendously.

Here are my tips… I fitted it on a 2×2.66 GHZ Dual Intel

SCREWING DOWN THE CARD
The card screws are TINY, and its easy to lose them behind the board. If you don't have a magnetic screwdriver put a slip of paper at the top of the Motherboard to stop them slipping behind. Put the

first one through the hole in the card first, this might help to position it in place and then screw it in.

LOCATING THE LEADS
For me they were directly above where the card is fitted, but they are quite difficult to find because they are black leads and are TAPED down - find the small black tape first. Obviously be careful not to pull anything too hard because the drive leads are here too. When you find and pull this tape, the leads will pop out, its easier than it looks at first.

CONNECTING THE LEADS
I found that for me it was easier to screw the card in FIRST and then attach the WiFi antenna leads. This was because the leads are very short. For me it worked using leads 2 and 3, so it probably doesn't matter which leads you connect.

Connection can be done by carefully placing the lead connectors (small circular receivers in the side of the wire ends) over the circular areas on the card first. Move them until they make contact with the receiving area, and then try and hold them in place. You do need small hands for this. Then using a screwdriver CAREFULLY apply pressure, keeping the screwdriver at 90 degrees, making sure it doesn't slip. They will click into place with a slight snap.

[102](#) Colin 01.22.09 at 5:03 am

This thread was very helpful.

It took me less just three minutes to install and get it working.

My solution:

1). Remove front fan housing. Two screws need to be removed. One is obvious on the board, the second is near the base of the machine over the cpu's. Its literally just under the lip of the plastic of the the fan housing. This is the key to an effortless and easy install.

2). Clip antenna cables to airport card.

3). Place card in slot and screw down.

4). Replace fan housing with two screws.

5). Connect back up cables and boot up! Bingo…

Cheers,

Colin

This allowed room to use both hands

[103](#) [Rob Edwards](#) 02.04.09 at 10:17 am

Many thanks. The little connectors are hard work, but a small coin on my thumb seems to have done

the job.

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Klaus-Peter Sabotta was an extortionist who sabotaged German railways in 1998. Claiming to represent former employees of the German railway operator Deutsche Bahn, he demanded a ransom of DM10 million. As he attempted to collect the ransom at a filling station in Bavaria, he was ambushed by police and arrested. On February 4, 2000, he was convicted of attempted murder and attempted extortion and was sentenced to life imprisonment. What were the results of Sabotta's acts of tampering? **More...**

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Oscar de la Hoya (1973)

At the age of 19, de la Hoya made his professional debut in the world of boxing, following in the footsteps of his pugilist grandfather, father, and brother. He quickly made a name for himself as an international superstar, earning an Olympic gold medal for the US Boxing Team and winning 38 of 43 professional bouts. When de la Hoya defeated Felix Sturm in 2004,

he became the first boxer in history to win world titles in six different weight divisions. How many punches did he throw in the fight? **More...**

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