

12+6 - 30pin Molex Adapter v2

15inch, 17inch (A1286, A1297) Installation Instructions

Thanks for purchasing a 12+6 adapter please follow the instructions below to install your adapter, if you have any issues or questions please contact <u>Support</u> or check the <u>FAQs</u>

Please carefully read the <u>Compatibility Guide</u> before starting installation

Time

The installation of the adapter is intricate, and will take at least 1.5Hrs.

Preparation

Make sure you have a clean well lit workspace and have taken the appropriate anti-static precautions. Please read all the instructions carefully before proceeding.

You will need:

- 12+6 30pin Kit (you should have the adapter, 4 IPEX adapters, a piece of 3m VHB tape and 3 sizes of heat shrink)
- Suitable 12+6 WiFi Card
- Tape (kapton or thin electrical tape)
- This guide, preferably on another device

You will need the following tools:

- #00 Phillips screwdriver
- Plastic Spudger
- Metal file
- A hot air gun or hairdryer
- Scalpel or knife

It is always good practice to back up your data and make sure your machine has been shut down properly before you start any work. This is a DIY unsupported modification to your laptop that you are undertaking at your own risk and intriguing industries will take no responsibly for any damage or data loss

The 15inch,17inch (A1286,A1297) are virtually identical apart from size and none of the differences will affect the installation of the adapter

1. Remove the bottom cover and the existing WiFi card

Follow the great *iFixit instructions* to remove the bottom case and wifi card and cage.

Particului Autoritation Same Bit Same Control Control Control et Hacterick Pric 15************************************				O Va	action Pro 15" Unitedy	Mid 2012 AirPor	Sunton't Board Repla	canent - iFist Repair G	Duide				
Australe No 15° Unabody Mid 2012 AirPort/Bluetooth Board Replacement MacBook Pro 15° Unibody Mid 2012 AirPort/Bluetooth Board Replacement Withing Andree Onters Goldword Seriel Serie Conducted Oreane 13 Oreane 13 Oreane 13 Oreane 1	T Pa	Your Stuff	Right to Repuir	Stare	🗮 CAP 🔻	Q 50	uh.					I	2
MacBook Pro 15° Unibody Mid 2012 AirPort/Bluetooth Board Replacement Unibudy Andree Onters Goldheart and Facement 20 Concernen 21 Concerne 21 Concernen 21 Concernen 21 Concer		e Ma	cliccé Pro 15° Unibad	ly Mid 2012				ta: 🖉	FullScreen []	Optio	rn		
Withinfy Arbert Opfins Goldheart Land 1 and ar set fundamental Converse 113 Printing R Completions 26 Contract Configuration 20 Contract Configuration 20 Configuration 20		N	MacBook Pr	o 15" l	Unibody Mi	id 2012	AirPort/Bl	uetooth Be	oard Replac	ement	t		
O Diffusty O					Written By: Andr Comments: 11	ew Optimus (15 🟫 Fa	Adheart (and 5 othe oritos: 24 🚽	rcontributors) Completions: 38					
E Steps 15 Time Regulard 30 minutes-1.bear E Steters 4 10		0, 0	0			A	Nifficulty			— Mode	erate		
© Tiee RegArd 30 minutes -11 eer □ Steters 4 1				ZL	diment of	=	iteps				15		
□ Sections 4 ≥			10		Der.	0	lime Required		30 m	inutes - 1	hour		
		13	~	1	A	R	lections			4	\$		
A Plats 0 8		-	-		~		lags			0			
Tools Parts		Tools					Parts						
Parta		0	Phillips #00 Screwdrin 04.97	er.		Buy	MacBook P Bracket Not for sale	n 15° Unibody (Earl	ly 2011) Airport/Blue	looth	View		
Pris Pris Pris Mode and Print's Unitedy Early 2010 Argon (Bertrach Instant Bertrache													

2. (Optional) Remove and modify the cable retention bracket

If you are using a wider WiFi card from a iMac/Mac Pro you will need to file the bracket down slightly so the card will fit. This is held in place by one phillips #00. Replace the bracket after modification.





3. Insulate the installation area

Insulate the installation area shown on both the bottom cover and DVD drive with either Kapton or electrical tape.





4. Install the IPEX antenna adapters

These are fragile please be careful ! Try not to pull or bend at the conector, a spare is supplied with the kit if you have any issues. Once in the heat shrink they are much stronger

***If you are using a wider WiFi card from a iMac/Mac Pro that has IPEX 1 connectors you can skip this step ***

If you are using a BCM943602CDP complete the modification guide <u>HERE</u> first

Skip step a. if you only have 3 antenna cables (Mid 2010 A1286/A1297)

a. You will have 4 antenna cables, take the longest (This is not needed as the Bluetooth antenna design changed in the newer WiFi cards.) and run it down the grove along the edge of the DVD drive and secure it out of the way with some tape. Depending on you choice of WiFi card you may also only need 2 of the antenna cables, if this is the case take the next longest cable and also tape it out of the way.



b. Carefully attach the square end of the IPEX adapters to the remaining antenna cables. This is best done by using your thumb and fore finger and carefully compressing them together. If the antenna cables have never been removed and reattached before they will be quite stiff. Be careful as the square end is very fragile and will break easily. Try not to bend the cables at the point they attach together. If one breaks they can be removed with the careful use of a set of tweezers or a knife, don't pull them out push the square end out



c. Carefully slide the heat shrink over the connectors and shrink them either using a hot air gun or hair dryer.



www.intriguingindustries.co.uk



5. Insulate the Long USB/Camera cable

The covering of this cable is conductive, if it makes contact with components on the WiFi card it may cause a short. It will also help protect it from abrasion with the routing that will be needed. Take the **RED** heat shrink and cut it too 10cm and slide it down the cable until it is just before where the cable bends into the hinge (Squashing the heat shrink as you move the connector down it will make it easier). Shrink it either using a hot air gun or hair dryer . Don't worry to much about the exact position as it will slide up and down the cable.





6. Install the 12+6 card into the adapter and attach the 30pin flex cable

Carefully install your Wifi card into the adapter it is keyed and will only fit one way make sure it is fully seated and attach the flex cable.



7. Insulate the WiFi Card and adapter

Using the **Orange** heat shrink cut it to 5cm or 4.5cm for a BCM94360CS2 slide it over the card and adapter and shrink it either using a hot air gun or hair dryer. For this heat shrink start on a low temperature and slowly increase it until it has conformed to the shape the card and adapter.





8. Attach the antenna cables to the WiFi card

Carefully attach the antenna cables to the card these will be stiff, again compress them between your thumb and forefinger, trying not to bend them. The order is important, as it will make it easier to route and pack in the cables if they are done in order of shortest to longest working away from the hinge. This is important. These connectors will be tight you may find compressing them with the flat end of a spudger will help you attach them.

***If using a WiFi card from an iMac/Mac Pro that has IPEX 1 connectors the longer bluetooth antenna cable is connected to the connector labelled A3 ***

9. Attach the 30pin cable between the adapter and the Logic board and test fit

Test fit the adapter in the laptop the 30 pin cable should be sitting nearly flat. The Mid 2010 A1286/A1297 have a longer flex cable if you are using the original flex cable you will need to loose some of the excess in-between the DVD Burner and logic board by forming a U and also when the cable drops down to connect to the Adaptor, at these points you should add an extra layer of tape to the edge of the drive to stop any chance of abrasion.



10. Apply the 3M VHB tape to the adapter and card

Depending of the card used and the difference in height across the bottom oaf the adapter and card cut a small piece of the double-sided tape about 20mm15mm and stick it to the back of the adapter. Use the remaining tape to build up a layer of tape on the WiFi card so in will sit flat when installed. This will vary depending on the type of card used.



11. Remove the tape backing and carefully stick the adapter and card in place

The tape is activated by pressure and time so if you are careful you will be able to readjust it slightly quite easily. If you have issues with the fit and need to readjust latter you may find it easier to peal the tape of taking the whole assembly with it and readjusting.

12. Route and secure the antenna cables and USB/Camera cable

Route the antenna cables and USB/Camera cable in the space remaining, this will vary depending on your card choice and the number of antenna cables required. (Be careful to not put them where they will be squashed when the case is closed). Secure them in place with tape. Test fit with the bottom case in place. This will take some time and patience, see the photo for ideas of how to route the excess.



13. Reassemble the laptop

Reassemble the laptop using the <u>iFixit Guide</u> in reverse. Be very careful that the antenna cables are not squashed. The fit is tight, as the space is so limited but the case should close properly. Don't forget to Screw the WiFi cage screw back in place so it is not lost, and the screw which held the cage to the hinge bracket.

14. Test the card

Before testing be sure to Reset the Pram and Reset the SMC

You should be able to now connect via WiFi and Bluetooth as normal with the new features available with the card of your choice.

There is a small chance that you will have software issues because this will vary by OS etc they are out of the scope of this guide if so please contact <u>Support</u> and we will do our best to help you

Troubleshooting Links

Continuity System Requirements

Apple Watch Unlocking

Handoff Support

Continuity Activation Tool

Pram Reset

SMC Reset

Change Log

v1 - Initial version v2- added photos v2.2 updated notes for Mid 2010 A1286/A1297 v2.4 Fixed and added Troubleshooting Links v2.5 Added BCM943602CDP Links