

Original URL: http://www.theregister.co.uk/2009/02/19/aa1_memory_upgrade/

How to upgrade an Acer Aspire One netbook's memory

Screwdriver at the ready

By **Tony Smith**

Posted in [Hardware](#), 19th February 2009 14:46 GMT

Acer's Aspire One A110/A150 may have been knocked off the top of the totem pole by [Samsung's NC10](#), and it may be on the verge of being superseded by its new big brother, the [10in version](#), but it's proved a hugely popular netbook.

Lots of folk own one, lots of folk use one and lots of folk reckon the base model doesn't have enough memory.

The bundled Linux distro, Linpus, will work happily in 512MB, but if you want to replace it with a more capable, less limited version of the open source OS, we'd say upping the memory to 1GB isn't a bad idea, not least given how inexpensive extra Ram is these days. If it's Windows you prefer, you probably want to go the whole hog and take the memory complement to 1.5GB, the maximum the machine can cope with.



Inside the Acer Aspire One

But, unlike some other netbooks, the Aspire One hasn't been designed with easy upgrading in mind. The first 512MB is soldered to the motherboard, but there is a

DIMM slot for more, and it's facing the base of the machine. The only snag: Acer's engineers didn't put a hatch above it to make the slot easily reachable.

Instead, you have to disassemble the machine and remove the motherboard. That may sound a daunting task, and we'd not recommend it for everyone, but it's not hard to do. What follows, then, is our step-by-step guide.

First, though, the obligatory cautionary note: taking your AA1 - or someone else's - to bits will invalidate your warranty, make it easier for you to kill the machine and might turn your hair quite white. Proceed at your own risk. Get it wrong and you'll have no recourse here. You have been warned.

You'll also need the following tools: a small-blade philips screwdriver, a small-blade flat screwdriver and a credit card.

1. Turn the AA1 off and disconnect it. Lay it lid down. We always do this on a sheet to minimise the risk of scratching the case, and to help avoid losing screws - they're less likely to roll off the table. We also recommend placing the removed screws in pattern that matches the holes they'll go back into.

2. Remove the following screws.



3. Take off the battery and remove the three marked screws.



Nb. Yes, we know this shot shows two previously removed screws still in place. The photographer's been sent to the Moderatrix for discipline...

4. Two further screws are hidden by the AA1's rear rubber feet. The feet are held in place with a light adhesive and can be easily (gently does it) prized off with a flat-blade screwdriver. Then remove the screw beneath each foot.



5. Turn the AA1 over and open the lid. You need to remove the keyboard next. It's held in place with three spring-loaded clips, marked below. Using the screwdriver, gently press each one in and it'll release the keyboard. You have to push hard, but be careful not to slip and scratch your AA1. You can use the corner of a credit card instead, which should minimise the risk of scratching, but makes it harder to push in the clips.

As each clip gets pushed in, it should raise the keyboard enough to get either the flat-blade screwdriver or card in to hold it open - albeit only a tiny amount.

Once it's free at the back, lift the keyboard gently forward and two side clips will come free allowing you to remove it. Take care not to yank it off - there's a cable underneath you need to remove first.



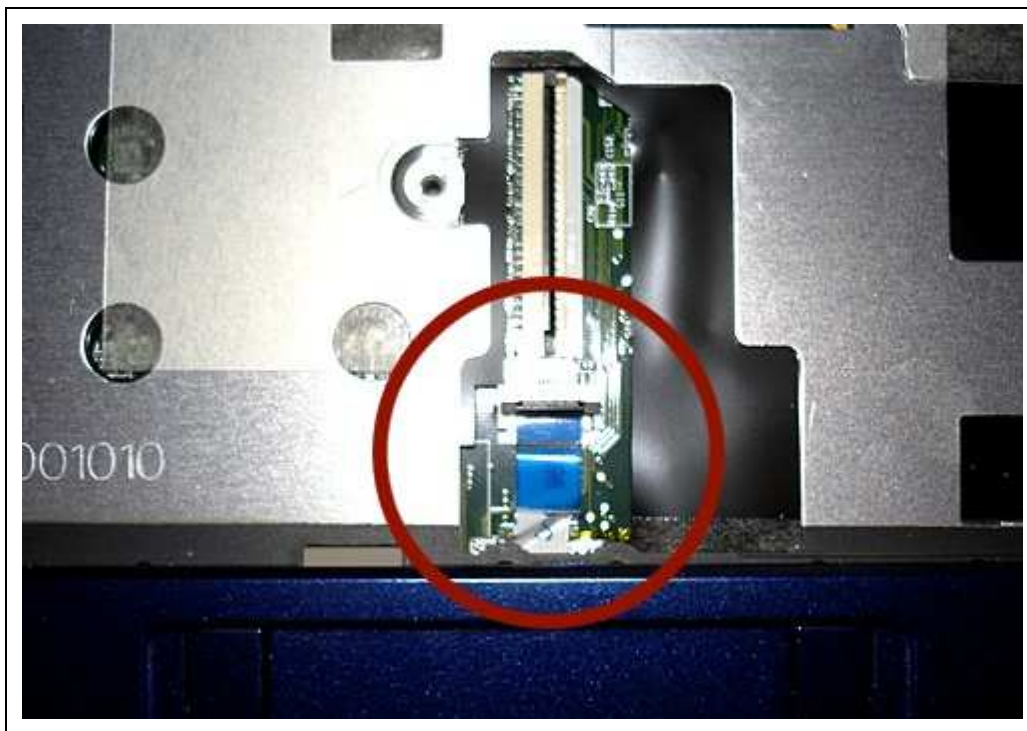
6. The keyboard cable's attached to the AA1 with a simple clip: just flip up the black clip with your fingernail and you'll be able to slide the keyboard cable out.



7. Remove the marked screws.



8. Below the keyboard connector, you'll see a similar but smaller attachment for the trackpad cable. Again, flip up the black catch to release the cable.



9. Starting with the rear right edge, slide your card or (gently) the flat-blade screwdriver into the casing between the lower black section and the upper blue or white plastic. Slowly move the tool forward and, as you do, you'll hear the case's clips pop open.

Do the two sides first and then the front, which is a little trickier to do - so take your time. Again, the credit card is the best choice of tool here, as it'll minimise scratching.



10. Lift off the lid to reveal the AA1's motherboard, wireless card and, to the right, daughterboard.

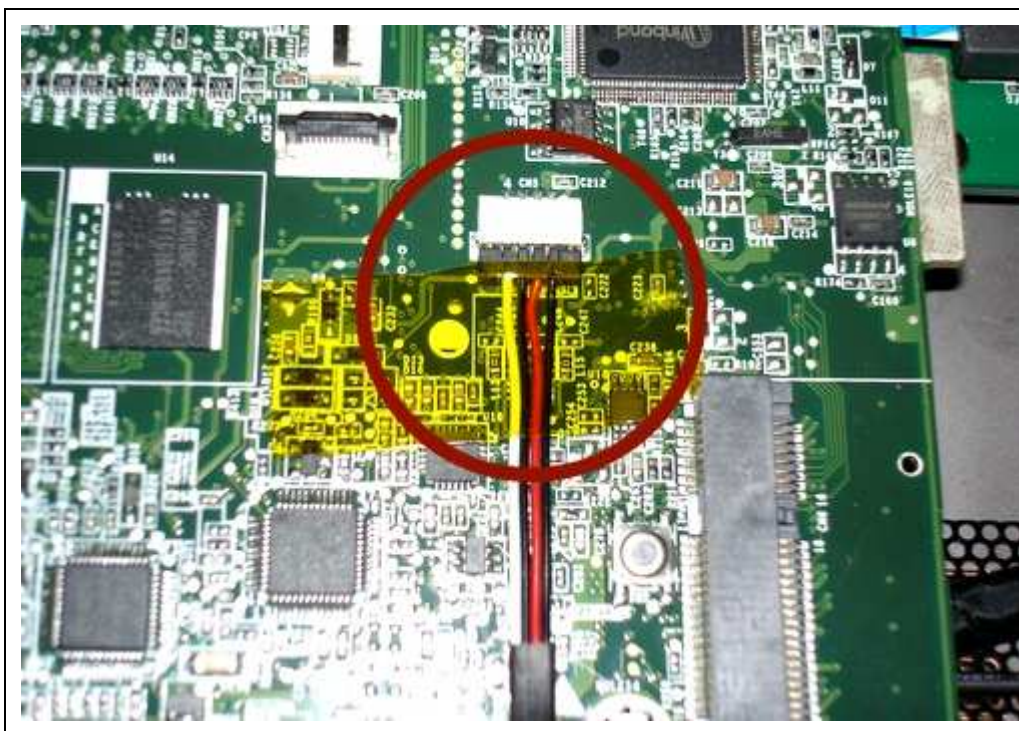


11. Remove the marked screws. The one on the right holds the wireless card in place - once free, the card will spring up and you can slide it out of its slot and move it to the rear of the case.

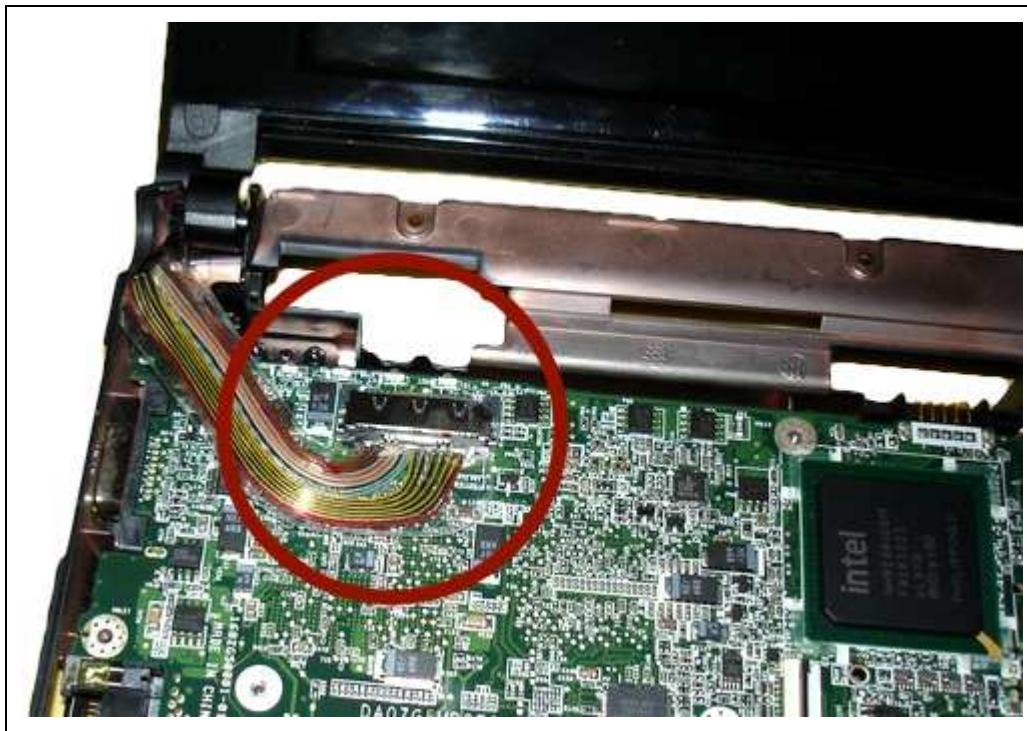
Take care with the screw on the left. It's in tight, and we nearly stripped the head getting it out. If you don't have a screwdriver that fits the screw's head, don't proceed until you have one that does.



12. Lift the tape holding this cable down - the wires connect the AA1's speakers to the motherboard - and gently pull out the connector. Use the nails on your two index fingers to pull the connector forward and out. Don't just pull the wires.



13. Toward the back left of the motherboard you'll find the video cable and connector. The cable's held down with sticky tape - lift it up and then, again using two fingernails, pull the connector forward and out.

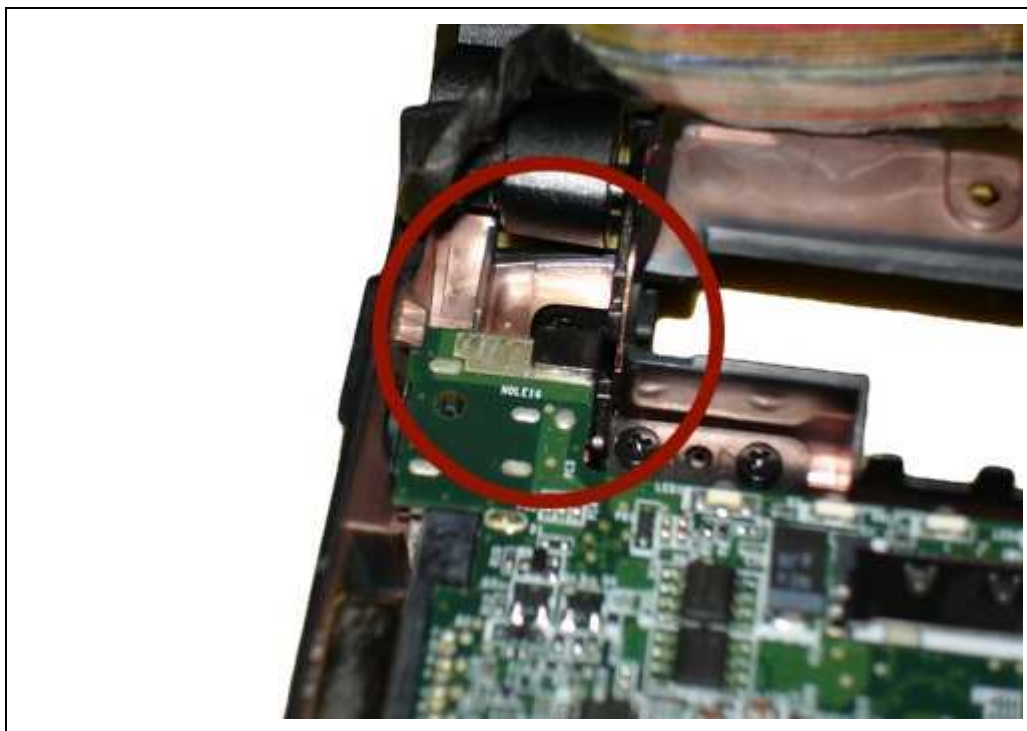


13a. On the right edge of the motherboard, you'll find the SSD connector. It works like the keyboard one: flip up the catch and slip out the cable.

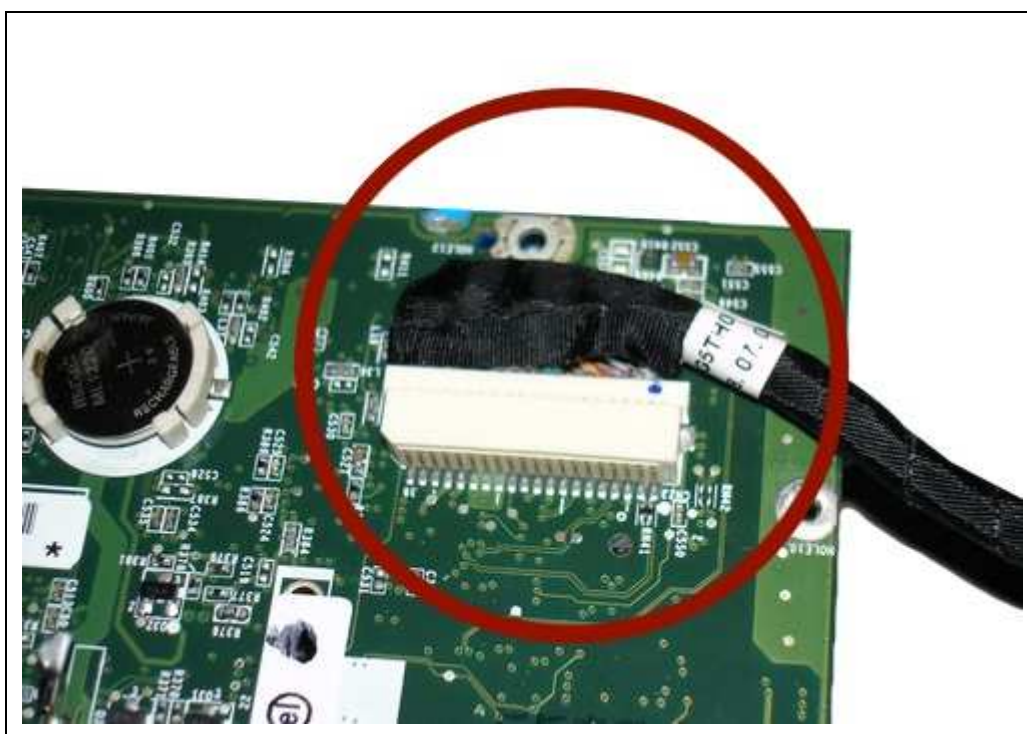


Yes, we missed this earlier. Thanks to reader Owen Carter for putting us right.

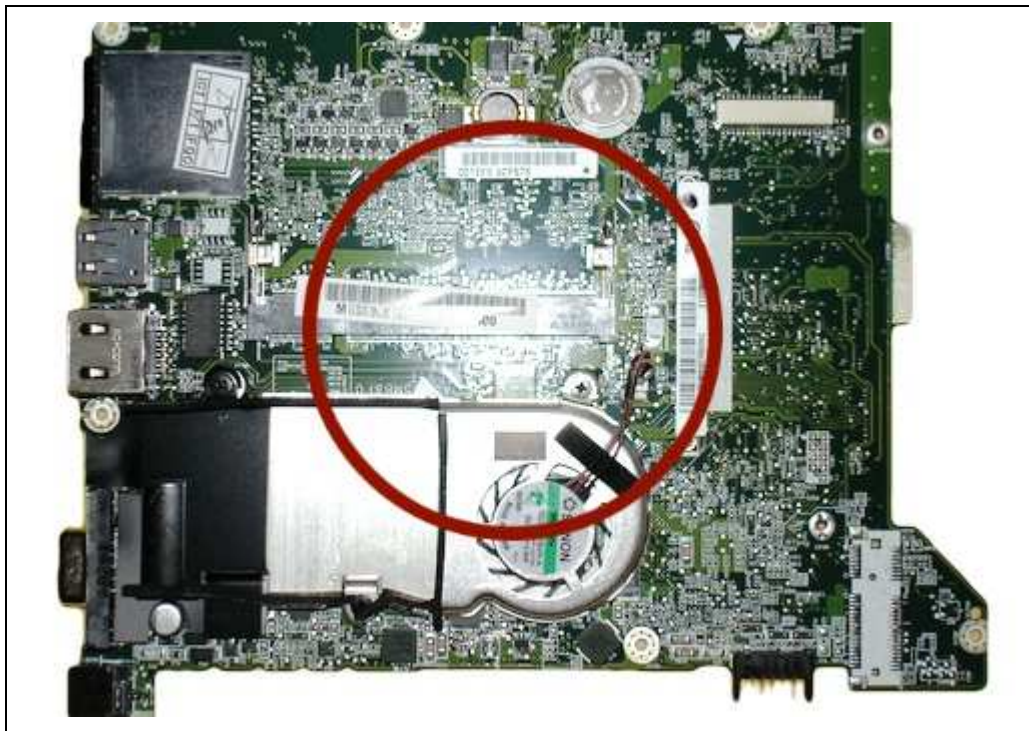
14. At this point, you can gently remove the motherboard. There's a plastic tab on the rear left of the case - under the hinge, see below - that holds the board down, so you need to slide the motherboard simultaneously forward out from under it, and right to move the VGA, Ethernet and USB port out from their holes in the side of the case.



15. Turn the motherboard over, and you'll see the memory slot next to the AA1's air vent and fan. If you want to remove the motherboard entirely, you'll need to disconnect this cable that connects up the daughtercard.



16. Locate the DIMM slot...



17. ...and clip in your memory card. Use an earthing wriststrap if you have one - if not, touch the bare metal of a nearby radiator pipe to discharge any static electricity on you. When handling the memory, try not to touch the chips and wiring.

We used a 512MB 667MHz DDR 2 Dimm that we took out of an Asus Eee PC 701 when we upgraded it to 1GB, so we re-used that, but memory suppliers like Crucial and Kingston will happily sell you a suitable stick of either 1GB or 512MB capacity. The entry-level AA1 can only access 1.5GB of Ram, so don't buy a Dimm that's 2GB or higher.



With the Dimm in place, just run back through the steps in reverse order to re-assemble your AA1. Don't rush - and always check at each stage that you haven't snagged any cables and that you've put back the screws.

Gotchas include not siting the computer's VGA, Ethernet and USB connectors correctly, and not replacing the wireless card. Don't forget that bar at the back of the case - the motherboard goes under it not over. Never force anything into position. Don't forget to re-attach the daughtercard cable if you unhitched it.

Ditto the SSD.

Once the motherboard is back in place, the wireless card re-seated and screwed down, the video cable's connected and the speaker cable in place, tuck the upper case under the hinges then clip it down. Give it a last minute push all round to ensure all the clips have locked in place. If some won't go, replacing the under-keyboard screws will hold the upper case down.

Don't forget to re-attach the trackpad - hold the blue plastic, slide the cable into the slot then snap down the black clip. The cable's wires go face down. Re-connect the keyboard in the same way then tuck it under the front of the case, push it down it the sides, then clip it in place at the back.

At this point, you can connect the AA1 to the power cable, start it up and, when the very first Acer screen appears, press F2 to enter the Bios settings. Look for the memory readout on the Main page to confirm the AA1 can 'see' your memory.

If it can't - or if the AA1 doesn't start up - you'll need to open the case up again and check you have all the connections back in place. One time, for instance, we simply forgot to reconnect the video cable. A cool head is essential in these circumstances - rush in in panic, and you're likely to forget to attach something else or, worse, damage your machine. Nine times out of ten, you'll find you didn't reconnect something.

Want to see it all done on camera? There's a very handy video [here](#). ®

Related stories

[The best netbook-friendly Linux distros](#) (9 June 2009)

http://www.theregister.co.uk/2009/06/09/which_linux_for_netbooks/

[How to backup and restore your netbook](#) (16 March 2009)

http://www.theregister.co.uk/2009/03/16/netbook_backup_tools/

[Acer pushes Gateway back into Europe](#) (20 February 2009)

http://www.theregister.co.ukhttp://www.channelregister.co.uk/2009/02/20/acer_gateway_professional/

[The Netbook Newbie's Guide to Linux](#) (22 January 2009)

http://www.theregister.co.uk/2009/01/22/netbook_linux_guide_4/

[How to customise the Acer Aspire One GUI](#) (4 December 2008)

http://www.theregister.co.uk/2008/12/04/acer_aspire_one_ui_fiddling/

[Ten tweaks for a new Acer Aspire One](#) (5 September 2008)

http://www.theregister.co.uk/2008/09/05/ten_aspire_one_tips/