

## Removing the Primary System Memory (RAM)

The computer has **four** memory sockets for 204 pin Small Outline Dual In-line (SO-DIMM) **DDR III (DDR3)** type memory modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

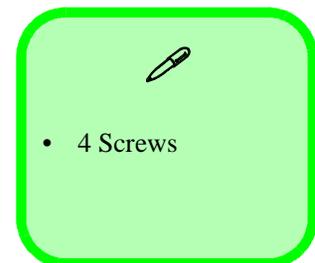
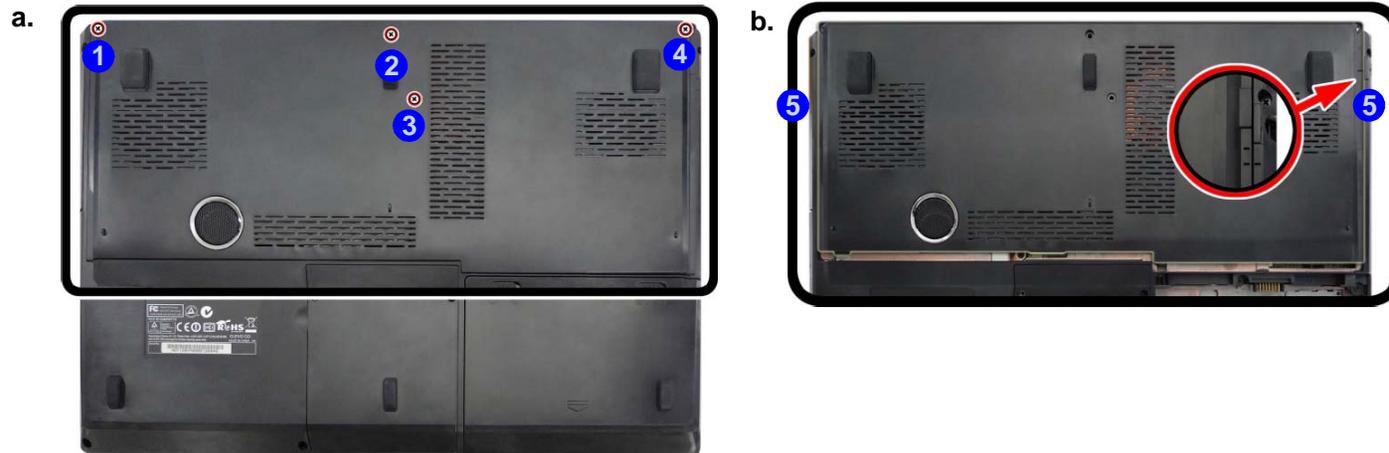
Note that **four SO-DIMMs are only supported by Quad-Core CPUs; Dual-Core CPUs support two SO-DIMMs maximum.**

**Two primary memory sockets are located under component bay cover (the bottom case cover), and two secondary memory sockets are located under the keyboard (not user upgradable). If you are installing only two RAM modules then they should be installed in the primary memory sockets under the component bay cover.**

Note that the RAM located under the keyboard is not user upgradable. Contact your service center for more information if you wish to upgrade the memory in the secondary memory sockets.

### Memory Upgrade Process

1. Turn **off** the computer, and turn it over, remove the battery ([page 2 - 5](#)).
2. Remove screws **1** - **4** ([Figure 7a](#)).
3. Slide the bottom cover until the cover and case indicators **5** are aligned ([Figure 7b](#)).



*Figure 7*  
**RAM Module Removal**

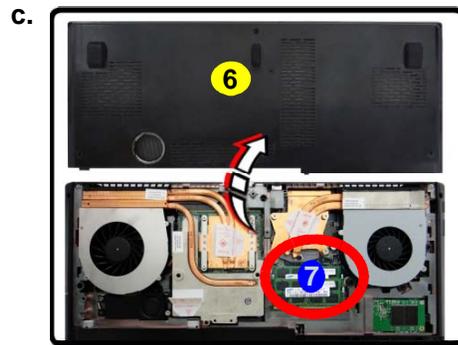
- a. Remove the screws.
- b. Slide the bottom cover until the cover and case indicators are aligned.

## Disassembly

### Figure 8 RAM Module Removal (cont'd.)

- c. Lift the component bay cover off the computer case. The modules will be visible at point 7.
- d. Gently pull the two release latches (8 & 9) on the sides of the memory socket(s) in the direction indicated below.
- e. The RAM module will pop-up, and you can remove it.

4. Lift the component bay cover 6 off the computer case. The modules will be visible at point 7 (Figure 8c).
5. Gently pull the two release latches (8 & 9) on the sides of the memory socket(s) in the direction indicated below (Figure 8d).
6. The RAM module 10 will pop-up, and you can remove it (Figure 8e).
7. Pull the latches to release the second module if necessary.
8. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
9. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE the module; it should fit without much pressure.
10. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
11. Replace the bay cover and screws.
12. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.



6. Component Bay Cover  
10. RAM Module



#### Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

## Removing the System Memory (RAM) from Under the Keyboard

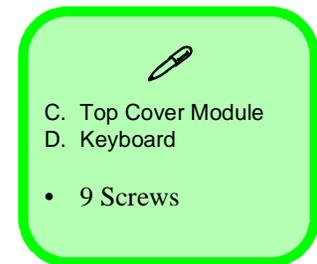
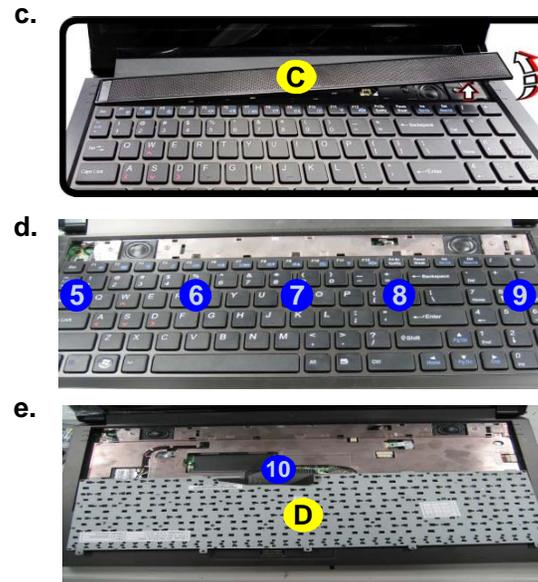
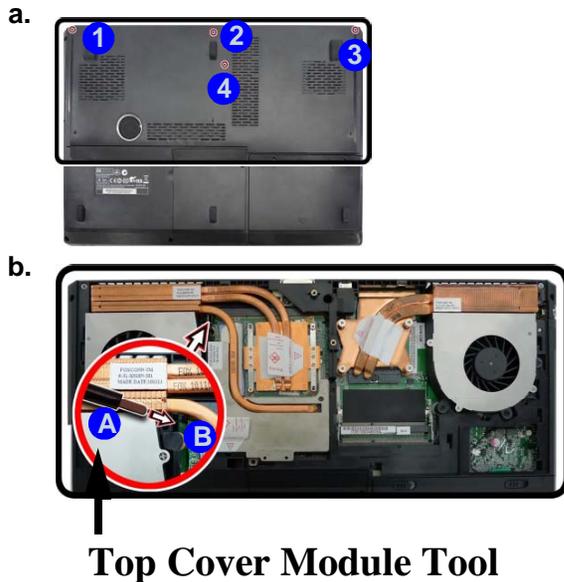
The computer has **four** memory sockets for 204 pin Small Outline Dual In-line (SO-DIMM) **DDR III (DDR3)** type memory modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Note that **four SO-DIMMs are only supported by Quad-Core CPUs; Dual-Core CPUs support two SO-DIMMs maximum.**

**Two primary memory sockets are located under component bay cover (the bottom case cover), and two secondary memory sockets are located under the keyboard. If you are installing only two RAM modules then they should be installed in the primary memory sockets under the component bay cover.**

### Memory Upgrade Process

1. Remove screws **1** - **4**.
2. Use the small tool **A** provided (see picture below) to carefully push out the top cover module at point **B**.
3. Remove the top cover module **C** and remove screws **5** - **9**.
4. Carefully lift the keyboard **D** up, being careful not to bend the keyboard ribbon cable **10**.



*Figure 9*  
**RAM Module Removal**

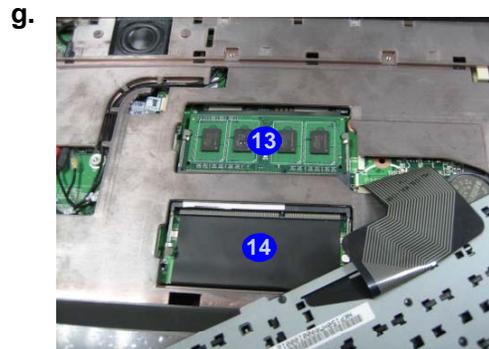
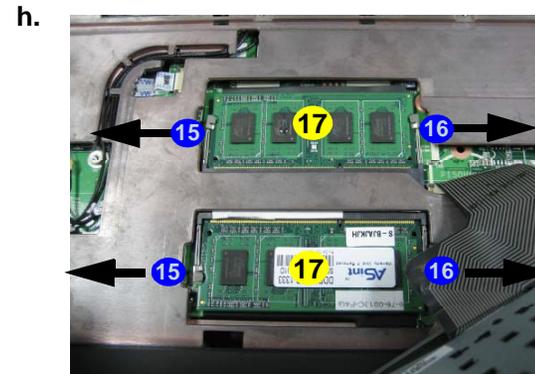
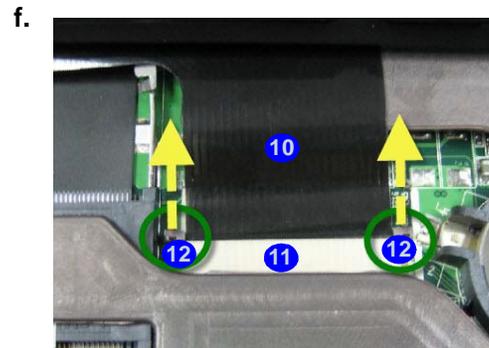
- a. Remove the component bay cover.
- b. Use the small tool provided to carefully push out the top cover module.
- c. Remove the top cover module.
- d. Remove the screws.
- e. Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable.

## Disassembly

### Figure 10 RAM Module Removal (cont'd.)

- f. Disconnect the keyboard ribbon cable from the locking collar socket by using a small flat-head screwdriver to pry the locking collar pins away from the base.
- g. Remove the keyboard and the memory sockets will be visible.
- h. Gently pull the two release latches on the sides of the memory socket(s) in the direction indicated below.

5. Disconnect the keyboard ribbon cable **10** from the locking collar socket **11** by using a small flat-head screwdriver to pry the locking collar pins **12** away from the base. (Figure 10c).
6. Remove the keyboard and the memory sockets **13** & **14** will be visible.
7. Gently pull the two release latches (**15** & **16**) on the sides of the memory socket(s) in the direction indicated below.
8. The RAM module **17** will pop-up, and you can remove it.
9. Pull the latches to release the second module if necessary.
10. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
11. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE the module; it should fit without much pressure.
12. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
13. Replace the bay cover and screws.
14. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.



17. RAM Modules



#### Contact Warning

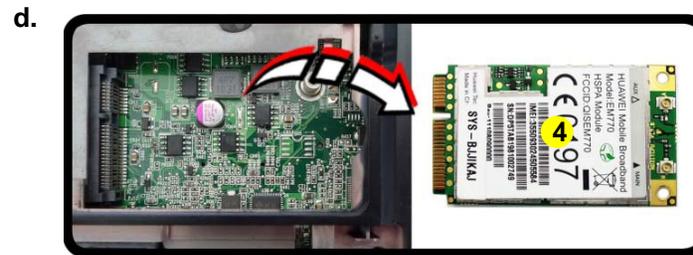
Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

## Removing the MSATA Module

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)), and component bay cover ([page 2 - 11](#)).
2. Locate the module, it is visible at point **1** ([Figure 15a](#)).
3. Carefully disconnect the cable **2** and remove the screw **3** from the module ([Figure 15b](#)).
4. Lift the module **4** up and off the computer ([Figure 15b](#)).

Figure 15  
MSATA Module  
Removal

- a. Remove the screw.
- b. Disconnect the cable and remove the screw.
- c. Lift the 3G module up off the socket.



- 4. 3G Module
- 1 Screw