

CANADARAM Guide to Installing RAM:

First step: refer to your owner's manual or manufacturer's website for installation instructions or user documentation. Installation guides for many models can also be found at www.kingston.com/support/install/memory/default.asp

Before doing work of any kind on any computer, back up your important data.

Create a work area, with a clean, non-scratching surface and a secure place to put screws and other small parts. You may want a flashlight for seeing details inside a desktop machine. Laptops will require jeweller's screwdrivers, some machines require Torx or hex drivers.

Turn off and unplug your machine before removing or installing RAM. Unplug all cables, making note of where they were plugged in. Laptops should usually have the main battery removed (consult your manual for specifics). Open your machine and locate the RAM sockets.

Leave RAM modules in the static-safe packaging until ready to install, then handle modules by the outside edges only, do not touch the gold or tin contact pins on the bottom edge. Follow static-electricity precautions; do not touch modules unless you have grounded yourself to drain static charge from your body. Grounding yourself can be done by touching a large metal object like a desk, maintaining skin contact with the metal chassis of the computer while you work on the RAM, or using a conductive grounding strap that attaches to your wrist and connects to a ground.

Observe the pins on the bottom edge of the RAM module, you will see one or more notches cut in the edge. These notches correspond to barriers or "keys" across the slot of the memory socket. Notice that the notches are not centered, but one set of contacts is longer than the other(s), there is only one way that it fits. Align the module so the notches match the keys of the socket and make sure the pins are all within the socket. If the notches do not match the socket, STOP. Either the module is facing the wrong way, or you are not working on a memory socket (there are other similar looking sockets in a machine) or you have the wrong variety of RAM.

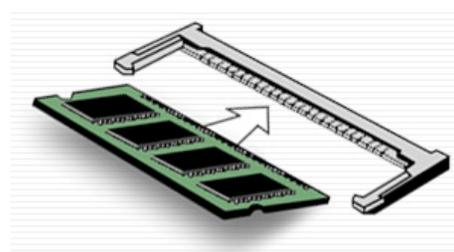
SO-DIMM modules (laptops)

There are two clips on the sides of the socket (metal or plastic) which click into place when the module is brought down to the flat position and properly seated. Be careful not to damage these clips when removing or installing SO-DIMMs.

To remove RAM, gently pull outward on these clips, no more than 1/8", which releases the module to rise up and then it can be pulled back out of the socket

To install RAM, insert the module at a 45 degree angle, connector pins first, into the socket. Make sure the module is square to the socket and push the module,

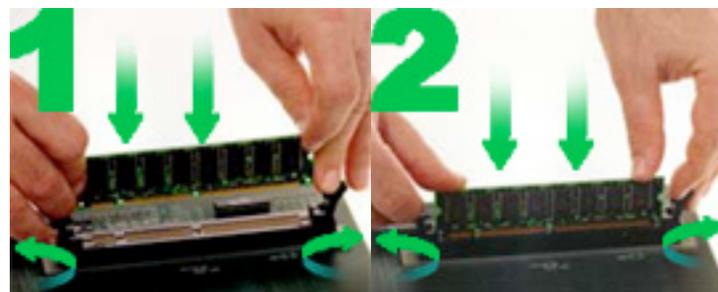
keeping the 45 degree angle, into the socket until the pins inserted as far as they will go with light pressure. There should be no more than 1/16" of the contacts remaining showing. Then angle the module down to the flat position – this should take very little effort. The two side clips will "click" when the module is properly seated. If they do not, it probably means the connector pins are not inserted far enough into the socket.



DIMM and RIMM modules (desktops)

Identify the RAM sockets - Some machines require the sockets to be populated with RAM in a particular order, or in corresponding pairs of sockets – consult your manufacturer's information.

To remove RAM, press the tops of the locking levers down and away from the socket and the module will "pop" up out of the socket.

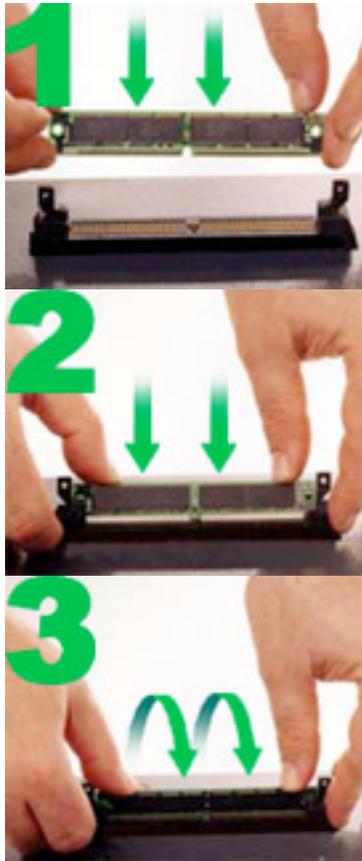


This type of RAM is installed straight downwards, do not angle them into the socket. Open the locking levers at the ends of the socket if necessary by pressing their handles down and away from the socket (1). Align the module with the socket, with the ends in the grooves of the levers. Press evenly down with both thumbs using moderate pressure, you want the module to seat in the socket squarely without angling at all (2). Most RAM sockets will "click" at each end when the module is correctly seated. The levers should pivot to an upright position on the ends of the module. If not, return them to the upright position by hand.

SIMMs (older desktops, laser printers):

To remove RAM - the socket has metal or plastic retaining clips or barbs that hold the module, GENTLY ease the retaining clips off the module by pushing outward with a fingernail, small screwdriver or a pen. Do not push these clips any further than necessary.

To install RAM, angle the module slightly while inserting into the socket, connector edge first (1). Apply light pressure to seat the connectors into the slot evenly and square (2). Once the connectors are engaged, pivot the module to the upright position (3). The retaining clips will click into place at both ends of the module - if they do not, it probably means the connectors are not seated far enough into the socket.



Some machines have SIMM sockets that are angled for lower height – when installed, the modules lay back at an angle. The same concepts apply, slot the connectors in, then pivot the module to its installed position.

Other RAM installation tips:

- Your machine may require a BIOS (or firmware) upgrade to recognize the larger amount of RAM, check with your manufacturer's website (not your printed instruction manual) for the latest BIOS information.
- Increased RAM requires a larger amount of hard drive space for the Swap File or Virtual Memory file. If your hard drive is full, or badly fragmented, the machine may not work with the larger RAM. Clear space and/or run a disk optimizer to clean up the drive.
- A few machines need to have the SETUP information manually changed to adjust for the extra RAM, consult your manual or manufacturer's web site.
- Some machines use "shared memory" for video memory. This means that a machine with 256 Mb of RAM, and 32 Mb of that used for "shared" video memory, will report only 224 Mb of memory installed. This is normal.
- Every machine has a limit on the size (or density) of the memory module that its memory controller can address – larger modules will not be recognized. So even if a machine is specified for "standard" PC133 RAM, it may not be able to recognize a standard 512 Mb PC133 module, or it may require a certain chip configuration of the module in order to be recognized.
- A few machines are designed such that they cannot recognize all of the memory that is possible to physically install, or they recognize larger RAM sizes in certain sockets only, or that do not recognize all available RAM under some versions of Windows. **It is always best to confirm RAM compatibility with a RAM expert at CanadaRAM.com before ordering.**

Email us at sales@canadaram.com for the answers to your RAM requirements

