



GALAXY 3 MOTHERBOARD MEMORY UPGRADE

RADAR MEMORY USAGE

The RADAR system with the **Galaxy 3 Motherboard** shipped with 4 MB of memory on the motherboard. This memory is used to store both the operating system as well as the data for the file system and data for the playlists of the current project. The operating system takes about 1.5 MB, and the file system takes about 1.2 MB (about 0.4 MB per disk drive), leaving about 1.3 MB for playlist data.

WHY INSTALL MORE MEMORY?

More memory may be needed in RADAR system to use more than 3 drives at a time or if editing a complicated project and receive an **OUT OF MEMORY** message.

WHAT TYPE OF MEMORY CAN BE INSTALLED?

The RADAR **Galaxy 3 Motherboard** uses 72-pin non-parity (32 bit) fastpage SIMM (Single Inline Memory Module) technology. Most memory stores on the web will have these available. Here are the configuration details:

- Pin Count:** 72-pin
- Access Speed:** 60 nanosecond
- Memory Size:**
 - 4 MB x 32 bit SIMM
 - 8 MB x 32 bit SIMM
 - 16 MB x 32 bit SIMM

WHAT ARE THE POSSIBLE MEMORY CONFIGURATIONS?

There are 4 slots for the 72 pin SIMMs on the Galaxy 3 motherboard. However, it is only necessary to use the first 2 slots. These are the possible configurations:

Slot-1	Slot-2	Total Memory
4MB (standard)	- (standard)	4MB (standard)
4MB	4MB	8MB
8MB	8MB	16MB
16MB	16MB	32MB



TO INSTALL EXTRA MEMORY, FOLLOW THESE STEPS:

- 1 Power off RADAR.
- 2 Remove the case lid.
- 3 Locate the memory slots (Slots 1 through 4) on the motherboard. They are on the outer edge of the motherboard.
- 4 Remove any cables in the way. It is only necessary to disconnect the cable connecting the SCSI drives to the CM24.
- 5 Install the extra SIMMs — the new SIMMs should face the same direction as that currently installed. Keep in mind that Slot 1 and 2 are the only slots necessary. Insert each SIMM into its socket by:
 - sliding the bottom SIMM edge into the slot at an angle, so that the top edge can pivot freely, and then;
 - rotate the SIMM until it is completely vertical and the top edge snaps into the holes and the metal clasps lock the SIMM in place.
- 6 Reattach any cables removed in step 4.
- 7 Install a VGA card (if not already present), VGA monitor, and a PC keyboard. Any VGA card will do, and it can be installed in the empty motherboard slot next to the MF3. The PC keyboard attaches on the back panel of RADAR.
- 8 Power on RADAR. The VGA monitor will display the normal PC boot sequence. It should show that the new RAM was installed correctly as it tests all available memory. It will stop with a **MEMORY MISMATCH** or **BAD MEMORY SIZE** message. This message is expected and does not indicate an error.
- 9 After the mismatch message press **F1** to enter the **BIOS SETUP** screen.
- 10 From the main **BIOS SETUP** menu, select **STANDARD CMOS SETUP** and press **ENTER**.
- 11 Don't change anything here. Just press **ESC** to get back to the **MAIN** menu.
- 12 From the main **BIOS SETUP** menu, press **F10** to **SAVE & EXIT**. Press **Y** to confirm the save operation. This operation will record the new memory size into the battery-backed configuration memory.



- 13 The RADAR system will now reboot. This time, no mismatch message will occur and the RADAR system should now boot off the SCSI drives.
- 14 From the RADAR **DIAGNOSTICS** menu select **SHOW FREE RAM**. Verify that the new RAM has been recognized by the RADAR operating system. If upgrading from 4 MB to 8 MB, the system should now be reporting more the 4MB of free ram (it will probably report around 5000 KB free).
- 15 Power off RADAR.
- 16 Remove the VGA card (only if it wasn't previously installed) and keyboard.
- 17 Close the case lid, power on RADAR.