5
Memory and Microprocessor Configuration

For higher system speed or greater throughput, you can upgrade SDRAM memory by replacing DIMMs with those of greater size.

When configuring or upgrading SDRAM, observe the following rules:

- Each DIMM must be a 168-bit unbuffered version and have a frequency of 100 MHz.
- All DIMMs must be of equal size if they are in the same bank.

5.1 Configuring SDRAM Memory

Although not an exhaustive list, Table 5–1 lists the tested SDRAM memory configurations available.

For a list of vendors who supply components and accessories for the AlphaPC 164LX, see Appendix A.

Refer to Figure 2–1 for DIMM connector locations.

Table 5–1 AlphaPC 164LX SDRAM Memory Configurations *(Sheet 1 of 2)*

Total Memory	Bank 0 (J8 and J9)	Bank 1 (J10 and J11)	SEC DIMM Part Number
32MB(Min)	Two of 2Mb x 72	None	KMM374S203BTL
64MB	Two of 2Mb x 72	Two of 2Mb x 72	KMM374S203BTL
	Two of 4Mb x 72	None	KMM374S403BTL
96MB	Two of 4Mb x 72	Two of 2Mb x 72	KMM374S403BTL

Table 5–1 AlphaPC 164LX SDRAM Memory Configurations *(Sheet 2 of 2)*

Total Memory	Bank 0 (J8 and J9)	Bank 1 (J10 and J11)	SEC DIMM Part Number
128MB	Two of 4Mb x 72	Two of 4Mb x 72	KMM374S403BTL
	Two of 8Mb x 72	None	KMM374S823BTL
160MB	Two of 8Mb x 72	Two of 2Mb x 72	KMM374S823BTL
192MB	Two of 8Mb x 72	Two of 4Mb x 72	KMM374S823BTL
256MB	Two of 8Mb x 72	Two of 8Mb x 72	KMM374S823BTL
	Two of 16Mb x 72	None	KMM374S1623ATL
384MB	Two of 16Mb x 72	Two of 8M x 72	KMM374S1623ATL
512MB	Two of 16Mb x 72	Two of 16Mb x 72	KMM374S1623ATL

Note: The table above lists some basic memory configurations for reference. There are additional configurations not listed and BIOS will detect memory sizes automatically.

- 1Mb x 72 is not supported because required minimum memory density is 32MB.
- Each DIMM must be 168-pin unbuffered version with frequency of 100MHz
- All DIMMs in a common bank must be of equal size.
- Each bank must contain two DIMMs because the memory controller requires a 128bit data width.

5.2 Upgrading SDRAM Memory

You can upgrade memory in the AlphaPC 164LX by adding more DIMMs or replacing the ones that you have with a greater size. Refer to Figure 2–1 for DIMM connector locations.

Use the following general guidelines:

1. ***Observe antistatic precautions.*** Handle DIMMs only at the edges to prevent damage.
2. Remove power from the system.
3. Open levers and align the DIMM.
4. Firmly push the module into the connector. Ensure that the DIMM snaps into the plastic locking levers on both ends.
5. Restore power to the system.