

3 Installing Add-On Peripherals and System Memory

Options are available to improve performance on the JX30WB. These options are Local Bus peripherals, SIMMs, an enhanced processor chip, and level 2 cache memory.

Before adding or removing any peripherals, make sure you have a clear work space and that you adhere to all anti-static precautions. Micronics recommends only trained technicians operate on the system board. Damage that occurs to the board while adding or removing peripherals may void the warranty.

If problems arise when installing peripherals, contact the computer outlet where you purchased the peripherals or Micronics' Technical Support.

Installing a VL-Bus Card

The VL-Bus slots accommodate all VESA local bus compatible cards. Complete the following steps to install a VL-Bus card:

1. Power off the computer system and remove the computer cover.
2. Choose an unused VL-Bus slot.
3. Insert the card with the bottom edge level. **Never insert the card at an angle.**

Installing a VL-Bus Card (Cont'd)

4. Carefully push the card straight down, making sure the card is fully inserted.
5. Replace the screw that holds the card into place.
6. Replace the computer cover.

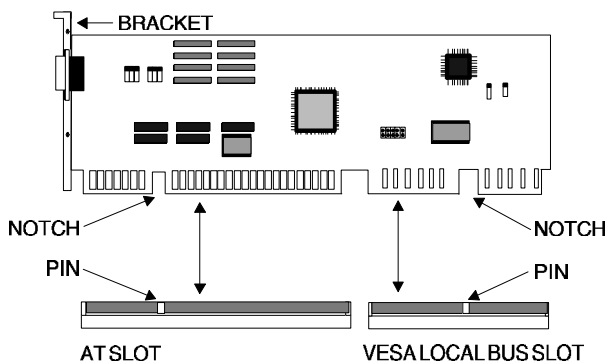


Figure 3-1. Inserting a VESA Local Bus Card

NOTE: Always refer to the computer user guide for additional instructions concerning installation. Make sure the VESA Local Bus card is configured to accommodate the computer.

Cache Memory

The JX30WB supports 8K or 16K of level 1 write-through/write-back cache depending on the specific 486 processor installed. Options are available to support 128K, 256K, 512K, or 1MB of level 2 write-through/write-back cache.

System Memory

The JX30WB has four banks of DRAM, which provide a maximum of 128MB using 1Mx36, 2Mx36, 4Mx36, or 8Mx36 SIMMs. The system board also supports x32-bit non-parity SIMMs without need for additional jumper or BIOS change.

Installing the SIMMs

To install the SIMMs, first locate the four memory banks on the system board. Start with the bank marked "0", then work your way up (0, 1, 2, 3).

Perform the following steps to install the SIMMs:

1. Hold the SIMM so that the NOTCHED edge is pointing toward the ISA slots (refer to Figure 2-1).
2. Insert the SIMM at a 45 degree angle.
3. Gently push the SIMM to an upright position until it "snaps" into place (past the release tabs).

The SIMM is ready to operate when it is firmly seated in the socket.

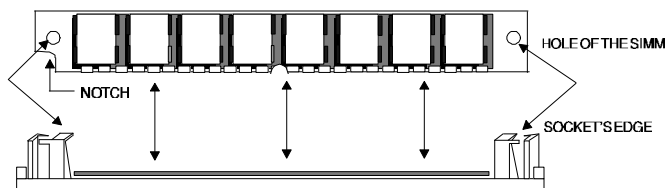


Figure 3-2. Installing the SIMM

Removing the SIMMs

Perform the following steps to remove the SIMMs:

1. With both thumbs (or fingers), press the release tabs away from the socket. The SIMM should now be free from the release tabs.
2. Lift the module straight up.

Memory Configuration

Table 3-1 lists the possible memory size configurations. The BIOS automatically detects the amount of memory installed.

Table 3-1. DRAM Memory Configuration

Bank 0	Bank 1	Bank 2	Bank 3	Total
4MB				4MB
4MB	4MB			8MB
4MB	4MB	4MB	4MB	16MB
8MB	8MB			16MB
8MB	8MB	4MB	4MB	24MB
8MB	8MB	8MB	8MB	32MB
16MB	16MB			32MB
16MB	16MB	4MB	4MB	40MB
16MB	16MB	8MB	8MB	48MB
16MB	16MB	16MB	16MB	64MB
32MB	32MB			64MB
32MB	32MB	4MB	4MB	72MB
32MB	32MB	8MB	8MB	80MB
32MB	32MB	16MB	16MB	96MB
32MB	32MB	32MB	32MB	128MB

SIMM-Types Supported

The JX30WB supports the following SIMMs:

- 1x36 (4MB) with memory parity bit
- 1x32 (4MB) without memory parity bit
- 2x36 (8MB) with memory parity bit
- 2x32 (8MB) without memory parity bit
- 4x36 (16MB) with memory parity bit
- 4x32 (16MB) without memory parity bit
- 8x36 (32MB) with memory parity bit
- 8x32 (32MB) without memory parity bit

NOTE: For long term reliability, Micronics recommends using SIMMs with tin-plated connectors. Using gold-plated connectors may conflict with the tin alloy of the SIMM socket.

Installing an Enhanced CPU

The JX30WB is designed to support Intel OverDrive™ processors, including 486 DX2, DX4, and Pentium OverDrive versions. A processor upgrade can significantly improve system performance.

Installing an Enhanced CPU (Cont'd)

Complete the following steps to install an upgrade processor:

1. Locate the ZIF socket on the system board (refer to Figure 2-1).
2. Lift the lever of the socket.
3. Insert the new processor into the socket. Make sure pin 1 on the CPU lines up with pin 1 on the socket. Refer to Figure 2-1 for pin 1 location.
4. Push the lever down to its original position.
5. Configure the board using the tables in Chapter 2.

The new CPU is now ready to operate. The system board detects the installed CPU after it is inserted and configured.

WARNING: If the new processor includes a heat sink or cooling fan, be certain to install the device according to the manufacturer's instructions. Failure to provide adequate cooling of the processor may seriously affect system performance or cause permanent damage.

Installing Cache Memory

The JX30WB supports 8K or 16K bytes of level 1 write-through/write-back cache depending on the 486 processor installed. Level 2 write-through/write-back cache is also available to provide 128K, 256K, 512K, or 1MB options.

Installing Cache Memory (cont'd)

128K of Level 2 Cache

Write-Through

For 128K bytes of level 2 cache, install four 32Kx8-20ns SRAMs into sockets U57 through U60. The sockets have four additional pins, or an additional row of pins, to support 128Kx8 SRAMs for 512K and 1MB configurations. After installing the cache, refer to table 2-8 for the correct jumper settings.

Write-Back

For enhanced level 2 performance, add an additional 32Kx8-20ns “dirty bit” SRAM in the U51 socket.

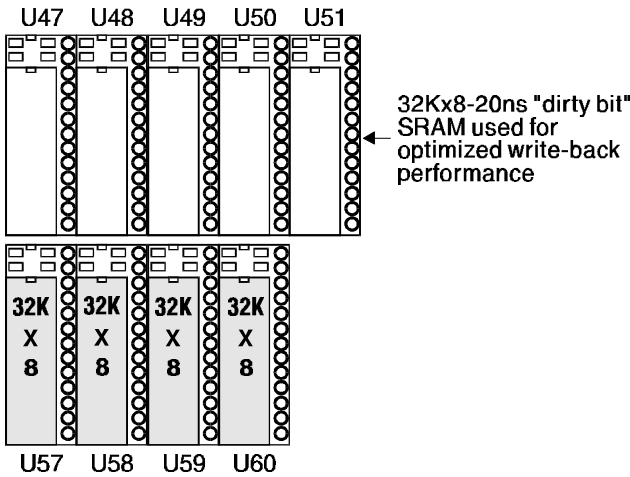


Figure 3-3. Installing 128K of Level 2 Cache

NOTE: Make sure the notches on SRAMs match the notches on the sockets.

Installing Cache Memory (Cont'd)

256K of Level 2 Cache

Write-Through

For 256K bytes of level 2 cache, install eight 32Kx8-20ns SRAMs into sockets U47 through U50 and U57 through U60. The sockets have four additional pins, or an additional row of pins, to support 128Kx8 SRAMs for 512K and 1MB configurations. After installing the cache, refer to table 2-8 for the correct jumper settings.

Write-Back

For enhanced level 2 performance, add an additional 32Kx8-20ns "dirty bit" SRAM in the U51 socket.

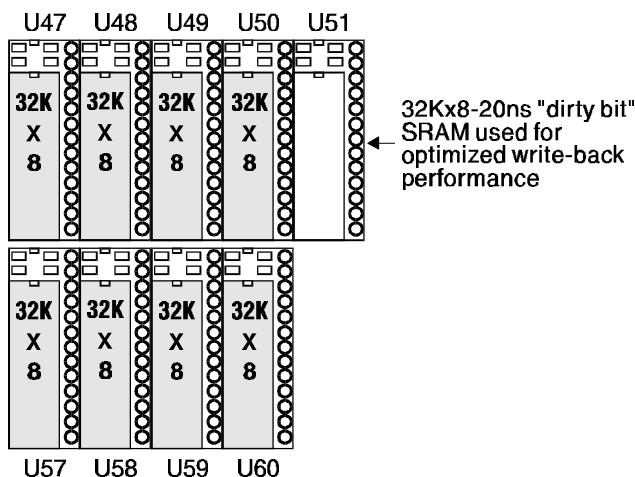


Figure 3-4. Installing 256K of Level 2 Cache

NOTE: Make sure the notches on SRAMs match the notches on the sockets.

Installing Cache Memory (Cont'd)

512K of Level 2 Cache

Write-Through

For 512K bytes of level 2 cache, install four 128Kx8-20ns SRAMs into sockets U53 through U56. After installing the level 2 cache, refer to table 2-8 for the correct jumper settings.

Write-Back

For enhanced level 2 performance, add an additional 128Kx8-20ns “dirty bit” SRAM in the U46 socket.

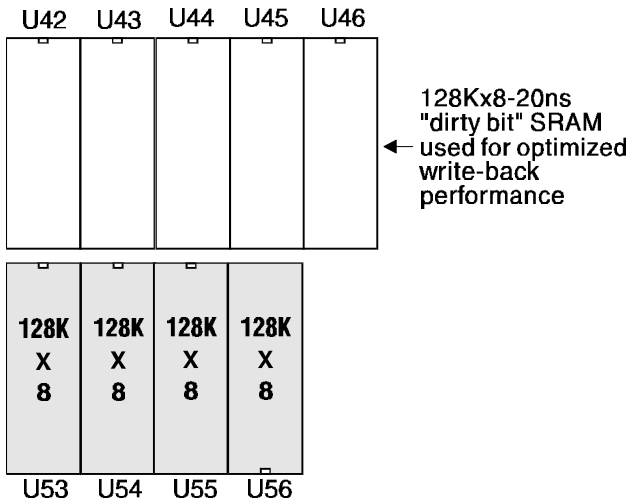


Figure 3-5. Installing 512K of Level 2 Cache

NOTE: Make sure the notches on SRAMs match the notches on the sockets.

Installing Cache Memory (Cont'd)

1MB of Level 2 Cache

Write-Through

For 1MB of level 2 cache install eight 128Kx8-20ns SRAMs into sockets U42 through U45 and U53 through U56. After installing the level 2 cache, refer to table 2-8 for the correct jumper settings.

Write-Back

For enhanced level 2 performance, add an additional 128Kx8-20ns "dirty bit" SRAM in the U46 socket.

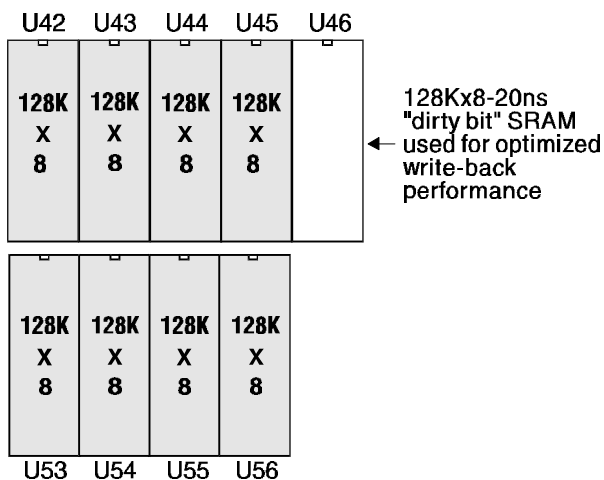


Figure 3-6. Installing 1MB of Level 2 Cache

NOTE: Make sure the notches on SRAMs match the notches on the sockets.

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