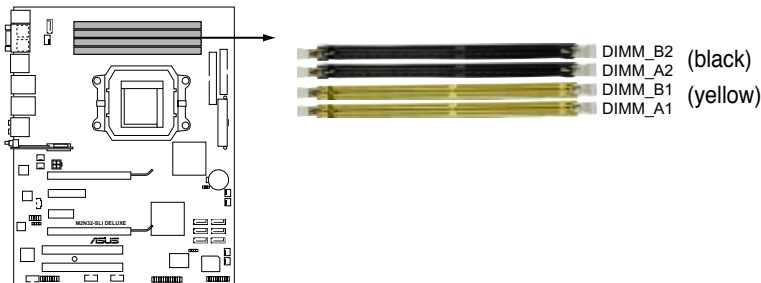# 2.4 System memory

2.4.1 Overview

The motherboard comes with four Double Data Rate 2 (DDR2) Dual Inline Memory Modules (DIMM) sockets.

A DDR2 module has the same physical dimensions as a DDR DIMM but has a 240-pin footprint compared to the 184-pin DDR DIMM. DDR2 DIMMs are notched differently to prevent installation on a DDR DIMM socket.

The figure illustrates the location of the DDR2 DIMM sockets:

M2N32-SLI DELUXE
240-pin DDR2 DIMM Sockets

Channel	Sockets
Channel A	DIMM_A1 and DIMM_A2
Channel B	DIMM_B1 and DIMM_B2

2.4.2 Memory configurations

You may install 256 MB, 512 MB, 1 GB, and 2GB unbuffered ECC/non-ECC DDR2 DIMMs into the DIMM sockets.

Recommended Memory Configurations

Mode	Sockets			
	DIMM_A1	DIMM_B1	DIMM_A2	DIMM_B2
Single-Channel	-	Populated	-	-
	Populated	-	-	-
Dual-channel (1)	Populated	Populated	-	-
Dual-channel (2)	Populated	Populated	Populated	Populated

- When using only one memory module, start installing the DDR2 DIMMs from slot DIMM_A1 or DIMM_B1 for better overclocking capability.
- For dual-channel configuration (2), you may:
  - install identical DIMMs in all four sockets OR
  - install identical DIMM pair in DIMM_A1 and DIMM_B1 (yellow sockets) and another identical DIMM pair in DIMM_A2 and DIMM_B2 (black sockets)
- Always use identical DDR2 DIMM pairs for dual channel mode. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor. Visit the ASUS website (www.asus.com) for the latest Qualified Vendors list.

Important notice on installing Windows® XP 32-bit version

If you install Windows® XP 32-bit version Operating System (OS), the limitation of this OS version is that it may reserve a certain amount of memory space for system devices. We recommend that you install less than 3 GB system memory if you would like to work under Windows® XP 32-bit version OS. The excess memory installation will not cause any usage problem, but it will not give users the benefit of manipulating this excess memory space.

Visit the ASUS FAQ site for further explanation:
http://support.asus.com/faq/faq.aspx?SLanguage=en-us
Under **General Search**, make the selections as shown, then click **Search**. Click the article titled "**4GB memory installed but less memory size detected.**"

You also may check the URLs below for third party comments on this issue:
http://dlsvr01.asus.com/pub/ASUS/mb/4GB_Rev1.pdf
http://www.intel.com/support/motherboards/server/sb/cs-016594.htm

This motherboard can support 8 GB physical memory on the operating systems listed below. You may install a maximum of 2 GB DIMMs on each slot.

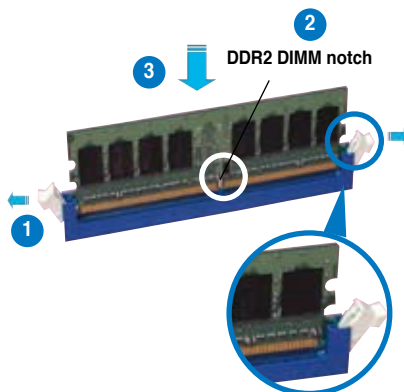| 32-bit	64-bit
Windows® 2000 Advanced Server Windows® Server 2003 Enterprise Edition	Windows® Server 2003 Standard x64 Edition Windows® XP Professional x64 Edition Windows® Server 2003 Enterprise x64 Edition

2.4.3   Installing a DIMM

⚠️ Unplug the power supply before adding or removing DIMMs or other system components. Failure to do so can cause severe damage to both the motherboard and the components.

To install a DIMM:

1. Unlock a DIMM socket by pressing the retaining clips outward.

2. Align a DIMM on the socket such that the notch on the DIMM matches the break on the socket.

3. Firmly insert the DIMM into the socket until the retaining clips snap back in place and the DIMM is properly seated.

DDR2 DIMM notch

Unlocked retaining clip

✎
- A DDR2 DIMM is keyed with a notch so that it fits in only one direction. Do not force a DIMM into a socket to avoid damaging the DIMM.

- The DDR2 DIMM sockets do not support DDR DIMMs. DO not install DDR DIMMs to the DDR2 DIMM sockets.
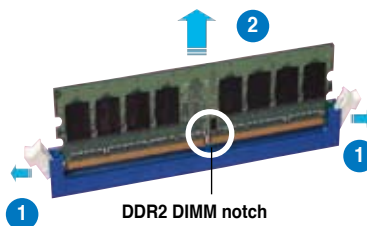
2.4.4   Removing a DIMM

To remove a DIMM:

1. Simultaneously press the retaining clips outward to unlock the DIMM.

✎ Support the DIMM lightly with your fingers when pressing the retaining clips. The DIMM might get damaged when it flips out with extra force.

DDR2 DIMM notch

2. Remove the DIMM from the socket.

M2N32-SLI Deluxe Series Motherboard Qualified Vendors Lists (QVL)

DDR2-800 MHz capability

Size	Vendor	Chip No.	Chip Brand	Side(s)	Part No.	DIMM support A*	B*	C*
512 MB	KINGSTON	Heat-Sink Package	–	SS	KHX6400D2/512	v	v	–
512 MB	KINGSTON	K4T51083QC	–	SS	KVR800D2N5/512	v	–	v
1024 MB	KINGSTON	K4T51083QC	–	DS	KVR800D2N5/1G	v	–	v
256 MB	SAMSUNG	K4T56083QF-ZCE7	–	SS	M378T3253FZ3-CE7	v	v	–
256 MB	SAMSUNG	K4T56083QF-ZCE7(ECC)	–	SS	M391T3253FZ3-CE7	v	v	–
512 MB	SAMSUNG	EDD339XX	–	SS	M378T6553CZ3-CE7	v	v	v
512 MB	Infineon	HYB18T256800AF25	–	DS	HYS64T64520HU-2.5-A	v	v	v
512 MB	Infineon	HYB18T256800AF25F	–	DS	HYS64T64520HU-2.5F-A	v	–	–
512 MB	Hynix	HY5PS12821BFP-S5	–	SS	HYMP564U64BP-S58	v	v	v
1024 MB	Hynix	HY5PS12821BFP-S5	–	DS	HYMP512U64BP-S58	v	v	v
512 MB	MICRON	5JAIZ9DQQ	–	SS	MT8HTF6464AY-80EA3	v	v	v
1024 MB	MICRON	5JAIZ9DQQ	–	DS	MT16HTF12864AY-80EA3	v	v	v
512 MB	MICRON	5ZD22D9GKX	–	SS	MT8HTF6464AY-80ED4	–	v	v
1024 MB	MICRON	5ZD22D9GKX	–	DS	MT16HTF12864AY-80ED4	v	v	–
512 MB	MICRON	6CD22D9GKX	–	SS	MT8HTF6464AY-80ED4	v	v	v
1024 MB	MICRON	6CD22D9GKX	–	DS	MT16HTF12864AY-80ED4	v	v	v
512 MB	CORSAIR	Heat-Sink Package	–	SS	CM2X512A-6400	v	v	–
1024 MB	CORSAIR	Heat-Sink Package	–	DS	CM2X1024A-6400PRO	v	v	v
1024 MB	CORSAIR	Heat-Sink Package	–	DS	CM2X1024A-6400C4	v	v	v
256 MB	A-DATA	E2508AB-GE-E	–	SS	M20EL6F3G3170A1D0Z	v	v	–
256 MB	A-DATA	E2508AB-GE-E	–	SS	M20EL6F3G3160A1D0Z	–	v	v
512 MB	A-DATA	E2508AB-GE-E	–	DS	M20EL6F3H4170A1D0Z	v	v	v
512 MB	Apacer	E2508AB-GE-E	–	DS	78.91091.420	v	v	–
512 MB	Crucial	Heat-Sink Package	–	SS	BL6464AA804.8FA	v	v	–
512 MB	Elixir	N2TU51280AE-25C	–	SS	M2Y51264TU88A2B-25C	v	v	–
1024 MB	NANYA	NT5TU64M8BE-28C	–	DS	NT1GT64U8HB0BY-25C	v	v	–

- A*: Supports one module inserted in any slot as Single-channel memory configuration.

- B*: Supports one pair of modules inserted into either the yellow slots or the black slots as one pair of Dual-channel memory configuration.

- C*: Supports 4 modules inserted into both the yellow and black slots as two pairs of Dual-channel memory configuration.

Visit the ASUS website for the latest DDR2-800/667/533 MHz QVL.