

Quick Start Guide

Viglen Product Description: D975XBX

Viglen Order Code: PMPBX001

Viglen System: Genie Pro (S775)

- **Product photo**



Product specification.

Motherboard Form Factor	D975XBX: ATX (12.0 inches by 9.60 inches [304.80 millimetres by 243.84 millimetres])																																
Motherboard chipset	Intel® 975X Express Chipset consisting of: <ul style="list-style-type: none"> • Intel® 82975X Memory Controller Hub (MCH) with Direct Media Interface • Intel® 82801GR I/O Controller Hub (ICH7R) or Intel® 82801GH I/O Controller Hub (ICH7DH) supporting Intel® Matrix Storage Technology 																																
CPU connector type (s370, slot1 etc)	775																																
Number of CPUs supported	1																																
If >1 does it require a terminator?	N/A																																
Supported CPU types (C, P3 or P4 etc)	Celeron D, Pentium, Pentium D, Conroe (Core 2)																																
Supported CPU speeds	<table border="1"> <thead> <tr> <th><u>CPU No.</u></th> <th><u>CPU speed</u></th> <th><u>FSB</u></th> <th><u>L2 cache</u></th> </tr> </thead> <tbody> <tr> <td>E6300- E6700</td> <td>1.86 – 2.66GHz</td> <td>1066MHz</td> <td>4MB</td> </tr> <tr> <td>955-965 EE</td> <td>3.46 – 3.73 GHz</td> <td>1066MHz</td> <td>2 x 2MB</td> </tr> <tr> <td>920-960</td> <td>3.00 – 3.46 GHz</td> <td>800 MHz</td> <td>2 x 2MB</td> </tr> <tr> <td>805-840</td> <td>2.80 - 3.20 GHz</td> <td>800 MHz</td> <td>2 MB</td> </tr> <tr> <td>620-670</td> <td>2.80 - 3.80 GHz</td> <td>800 MHz</td> <td>2 MB</td> </tr> <tr> <td>520-570</td> <td>2.80 - 3.80 GHz</td> <td>800 MHz</td> <td>1 MB</td> </tr> <tr> <td>310-355</td> <td>2.13 - 3.33 GHz</td> <td>533 MHz</td> <td>256KB</td> </tr> </tbody> </table>	<u>CPU No.</u>	<u>CPU speed</u>	<u>FSB</u>	<u>L2 cache</u>	E6300- E6700	1.86 – 2.66GHz	1066MHz	4MB	955-965 EE	3.46 – 3.73 GHz	1066MHz	2 x 2MB	920-960	3.00 – 3.46 GHz	800 MHz	2 x 2MB	805-840	2.80 - 3.20 GHz	800 MHz	2 MB	620-670	2.80 - 3.80 GHz	800 MHz	2 MB	520-570	2.80 - 3.80 GHz	800 MHz	1 MB	310-355	2.13 - 3.33 GHz	533 MHz	256KB
<u>CPU No.</u>	<u>CPU speed</u>	<u>FSB</u>	<u>L2 cache</u>																														
E6300- E6700	1.86 – 2.66GHz	1066MHz	4MB																														
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805-840	2.80 - 3.20 GHz	800 MHz	2 MB																														
620-670	2.80 - 3.80 GHz	800 MHz	2 MB																														
520-570	2.80 - 3.80 GHz	800 MHz	1 MB																														
310-355	2.13 - 3.33 GHz	533 MHz	256KB																														
Front side bus speed	800MHz and 1066MHz																																
Number of PCI slots	2																																
PCI slot speeds	33MHz																																
Number of PCI-E slots	1 x PCI-e x16 (electrical x16 or x8) 1 x PCI-e x16 (electrical x8) 1 x PCI-e x16 (electrical x4)																																
Number of AGP slots	0																																
Number of AMR slots	0																																
Additional slots	3 x PCI-e 16																																
On board video fitted? Type	N/A																																
Ram size?	N/A																																
Upgradeable?	N/A																																
Onboard audio fitted? Type	<ul style="list-style-type: none"> • Intel® High Definition Audio codec (SigmaTel* STAC9221D) • Up to 8-channel audio with jack sensing 																																
Front facing audio header and type	Yes																																
Audio Upgradeable?	Yes via PCI/PCI-E																																
Onboard network fitted? Type	Gigabit (10/100/1000 Mbits/sec) LAN subsystem using the Intel® 82573E/82573L Gigabit Ethernet Controller																																
Number of network connections?	1																																
Upgradeable?	Yes via PCI or PCI-E slot																																
Onboard SCSI fitted? Type	No																																
No of channels?	N/A																																
Manufacturer?	N/A																																
Model Number?	N/A																																

Speed?	N/A	
Number of IDE channels	1	
Maximum number of disks	2	
Number of SATA Channels	<p>Four Serial ATA ports via integrated RAID controller</p> <ul style="list-style-type: none"> • 3.0 Gb/s • Support for Native Command Queuing (NCQ) • Intel® Matrix Storage Technology • Support for RAID and non-RAID drive configuration <p>Four Serial ATA ports via on-board discrete RAID controller</p> <ul style="list-style-type: none"> • 1.5 Gb/s • Support for RAID drive configuration only 	
Rear I/O connectors	4 x USB 2.0 port	1 x MIC
	1 x Parallel Port	1 x Audio Out
	1 x Serial Port	1 x Audio In
	1 x RJ045 LAN Port	1 x S/PDIF
	2 x PS/2 Keyboard & Mouse ports	Note: 2 x USB 2.0 Internal Headers (2 USB devices per header)
	1 x IEEE 1394 port	Note: 1 x IEEE1394 Port through internal header
Memory type	DDR2 (ECC and Non ECC) registered memory is not supported	
For RIMMs install CRIMM in empty sockets	N/A	
Number of memory sockets	Four 240-pin DDR2 SDRAM DIMM sockets	
Maximum memory support	Support for up to 8 GB of system memory	
Supported memory speed	DDR2 533MHz and DDR667MHz	
MTBF	99,721 hours	

Upgrading and ESD precautions

WARNING

Unplug the system before carrying out the procedures described in this document. Failure to disconnect power before you open the system can result in personal injury or equipment damage. Hazardous voltage, current, and energy levels are present in this product. Power switch terminals can have hazardous Voltages present even when the power switch is off.

The procedures assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.

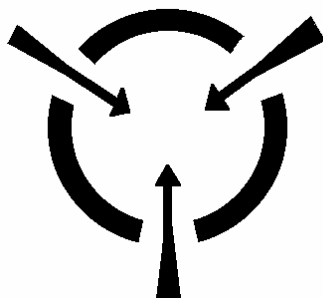
Do not operate the system with the cover removed. Always replace the cover before turning on the system.

As the colours of the wires in the mains lead of this computer may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter **E** or by the safety Earth symbol Ω or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter **N** or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter **L** or coloured red.



CAUTION!

The Viglen D955XBK motherboard and associated components are sensitive electronic devices. A small static shock from your body can cause expensive damage to your equipment.

Make sure you are earthed and free of static charge before you open the computer case. If you are unsure about upgrading your computer, return it to Viglen so a qualified engineer can perform the upgrade.

STEPS TO TAKE TO PREVENT STATIC DISCHARGE:

1. The best way to prevent static discharge is to buy an anti-static strap from your local electrical shop. While you are wearing the strap and it is earthed, static charge will be harmlessly bled to ground.
2. Do not remove the component from its anti-static protective packaging until you are about to install it.
3. Hold boards by the edges - try not to touch components / interface strips etc.

Note:

We recommend that you return your computer to the service department for upgrading. Any work carried out is fully guaranteed. Upgrades should only be carried out by persons who are familiar with handling IC's, as incorrect installation will invalidate the guarantee.

- **System Board Components**

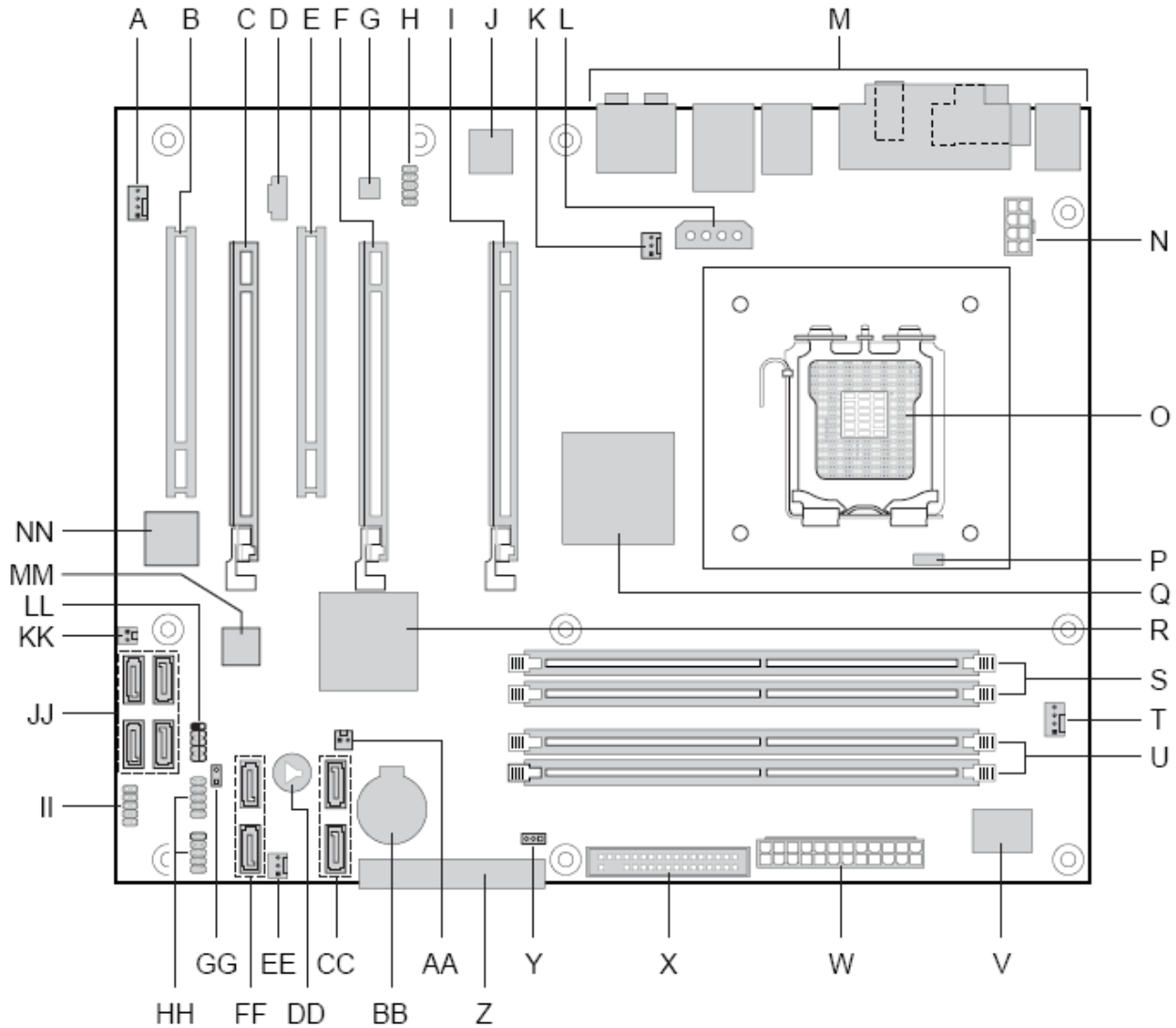


Figure 1. Motherboard Layout & Components

Table 2.

Item	Description	Item	Description
A	Auxiliary rear fan connector	V	Legacy I/O
B	PCI Conventional bus add-in card connector	W	Main Power Connector
C	PCI Express x16 (electrical x4) add-in card connector	X	Diskette drive connector
D	ATAPI CD-ROM Connector (Optional)	Y	BIOS Setup Configuration Jumper Block
E	PCI Conventional Bus Add-in Card Connector	Z	Parallel ATE IDE Connector
F	Secondary PCI-Express x16 (electrical x8) bus add-in card connector	AA	Chassis intrusion connector
G	Audio Codec	BB	Battery
H	Front Panel Audio connector	CC	Serial ATA Connectors (ICH7-R/ICH7-DH RAID) [2]
I	Primary PCI Express x16 (electrical x 16 or x8) bus add-in card connector	DD	Speaker
J	Gigabit Ethernet Controller	EE	Front Chassis Fan Connector
K	Rear Chassis fan connector	FF	Serial ATA Connectors (ICH7-R/ICH7-DH RAID) [2]
L	Auxillary PCI Express Graphics Power	GG	Auxiliary front panel power LED connector

	Connector (optional)		
M	Back Panel Connectors	HH	Front panel USB Connectors
N	Processor fan connector	II	IEEE-1394a front panel connectors
O	LGA775 Processor Socket	JJ	Serial ATA RAID Connectors (Discrete RAID) (optional) [4]
P	Hardware monitoring and Fan Control ASIC	KK	SCSI Hard Drive Activity LED Connector (optional)
Q	Intel 82975X MCH	LL	Front Panel Connector
R	Intel 82801G I/O Controller Hub (ICH7-R or ICH7-DH)	MM	IEEE-1394a Controller (optional)
S	DIMM Channel A Sockets [2]	NN	Serial ATA RAID Controller (Discrete RAID) (Optional)
T	Processor Fan Connector		
U	DIMM Channel B Sockets [2]		

- **Back Panel Connectors 7.1 Sigmatel audio 9221**

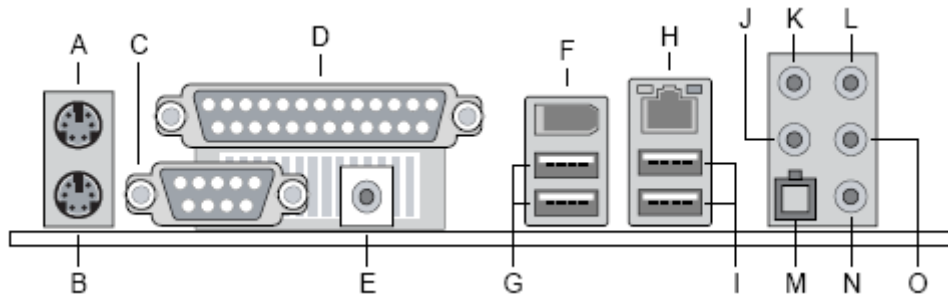


Figure 2. Back Panel Connectors.

Table 3.

Item	Description	Item	Description
A	PS/2* mouse port (Green)	I	USB ports (two)
B	PS/2 keyboard port (Purple)	J	Center channel and LFE (subwoofer) audio out/ Retasking Jack G [Orange]
C	Serial port A (Teal)	K	Surround left/right channel audio out/Retasking Jack H [Black]
D	Parallel port (Burgundy)	L	Audio line in/Retasking Jack C [Blue]
E	Digital audio out coaxial	M	Digital audio out optical
F	IEEE-1394a connector	N	Mic in/Retasking Jack B [Pink]
G	USB ports (two)	O	Front left/right channel audio out/Two channel audio line out/Retasking Jack D [Lime green]
H	LAN	-	-

Note: The back panel audio line out connector is designed to power headphones or amplified speakers only. Poor audio quality occurs if passive (non-amplified) speakers are connected to this output.

- **Front panel connections**

The following are all connectors situated along the front edge of the motherboard. They are often connected to buttons and LED's situated on the front panel.

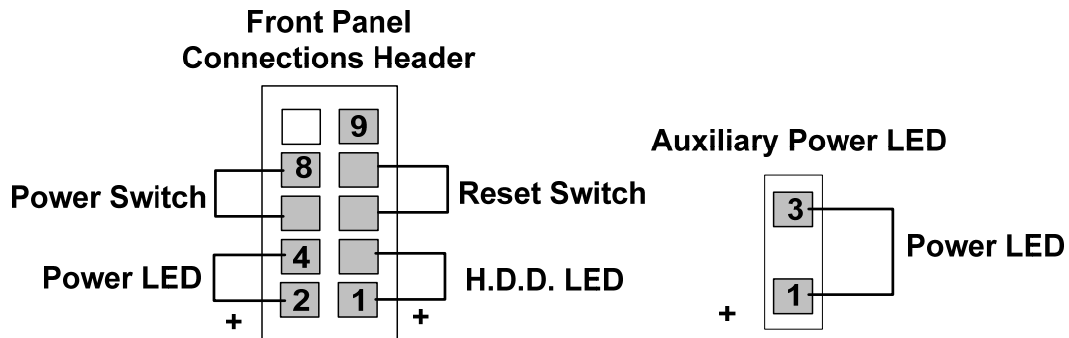


Figure 3. Front panel connectors

A- Hard Disk L.E.D. Connector

This goes to the Hard Disk L.E.D. on the front panel, which lights up when the IDE Hard Disk is in use.

B - Reset switch connector

When these pins are shorted, it will cause the computer to perform a cold reboot.

C - Power L.E.D.

This attaches to the power L.E.D on the front panel, to display if the computer is active or not.

D- Power On/Off

When these pins are shorted it turns the computer on and off.

- **Motherboard Connectors**

There are connectors on the motherboard for FAN, IDE, Power supply, CD audio, Floppy, IDE, & Front Panel Connectors. The location and/or details of these connections are shown below.

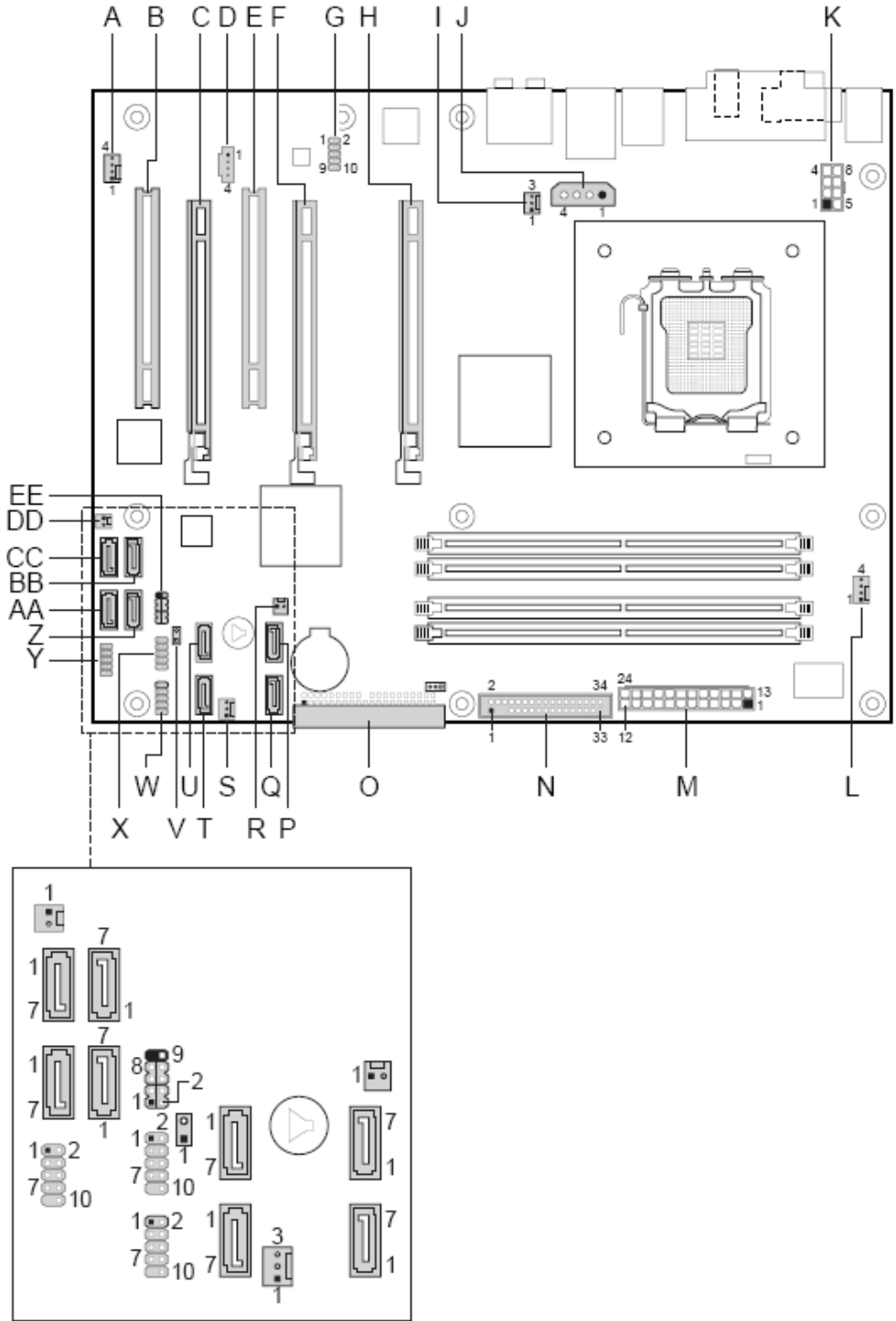


Figure 4: Component Side Connectors

Item	Description	Item	Description
A	Auxiliary rear fan connector	R	Chassis intrusion connector
B	PCI Conventional bus add-in card connector	S	Front Chassis Fan Connector
C	PCI Express x16 (electrical x4) add-in card connector	T	Serial ATA connector 0 (ICH7-R/ICH7-DH RAID)
D	ATAPI CD-ROM Connector (Optional)	U	Serial ATA connector 1 (ICH7-R/ICH7-DH RAID)

E	PCI Conventional Bus Add-in Card Connector	V	Auxiliary front panel power LED connector
F	Secondary PCI-Express x16 (electrical x8) bus add-in card connector	W	Front panel USB Connector
G	Front Panel Audio connector	X	Front panel USB Connectors
H	Primary PCI Express x16 (electrical x 16 or x8) bus add-in card connector	Y	IEEE-1394a front panel connectors (Blue)
I	Rear Chassis fan connector	Z	Serial ATA Connector 7 (Discrete RAID)
J	Auxiliary PCI Express Graphics Power Connector (optional)	AA	Serial ATA Connector 6 (Discrete RAID)
K	Processor Power Connector	BB	Serial ATA Connector 5 (Discrete RAID)
L	Processor fan connector	CC	Serial ATA Connector 4 (Discrete RAID)
M	Main Power Connector	DD	SCSI Hard Drive Activity LED Connector (optional)
N	Diskette drive connector	EE	Front Panel Connector
O	Parallel ATE IDE Connector		
P	Serial ATA connector 2 (ICH7-R/ICH7-DH RAID)		
Q	Serial ATA connector 3 (ICH7-R/ICH7-DH RAID)		

- **Jumper settings**

CAUTION Do not move any jumpers with the power on. Always turn off the power and unplug the power cord from the computer before changing a jumper setting. Otherwise, the board could be damaged.

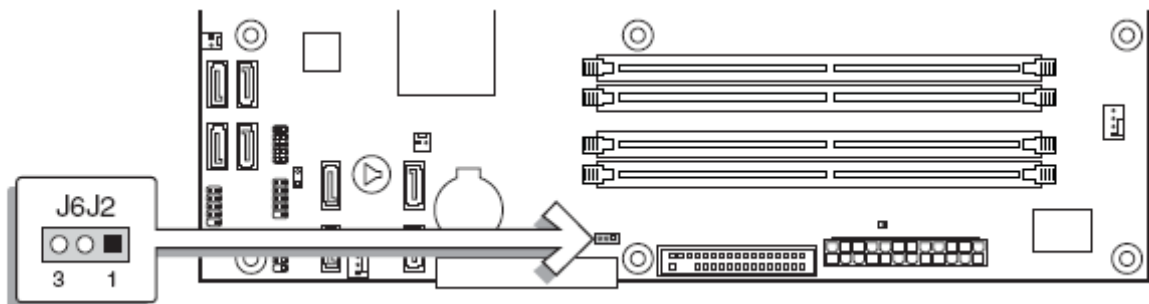

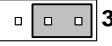
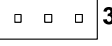


Figure 5. Motherboard jumper

BIOS Setup Configuration Jumper (J6J2) Settings

The 3-pin jumper block determines the BIOS Setup program's mode. The table below describes the jumper settings for the three modes: normal, configure, and recovery. When the jumper is set to configure mode and the computer is powered-up, the BIOS compares the processor version and the microcode version in the BIOS and reports if the two match

Function/Mode	Jumper Setting	Configuration
Normal	1-2 1  3	The BIOS uses current configuration information and passwords for booting.
Configure	2-3 1  3	After the POST runs, Setup runs automatically. The maintenance menu is displayed.
Recovery	None 1  3	The BIOS attempts to recover the BIOS configuration. A recovery diskette is required.

System Memory

The boards have four DIMM sockets and support the following memory features:

- 1.8 V and 1.9V DDR2 SDRAM DIMMs with gold-plated contacts.
- Unbuffered, single-sided or double-sided DIMMs with the following restriction: Double-sided DIMMS with x16 organization are not supported.
- 8 GB maximum total system memory total amount of addressable memory.
- Minimum total system memory: 128 MB
- ECC and Non-ECC DIMMs
- Serial Presence Detect
- DDR2 667 MHz or DDR2 533 MHz SDRAM DIMMs

NOTES

- Remove the PCI Express x16 video card before installing or upgrading memory to avoid interference with the memory retention mechanism.
- To be fully compliant with all applicable DDR SDRAM memory specifications, the board should be populated with DIMMs that support the Serial Presence Detect (SPD) data structure. This allows the BIOS to read the SPD data and program the chipset to accurately configure memory settings for optimum performance. If non-SPD memory is installed, the BIOS will attempt to correctly configure the memory settings, but performance and reliability may be impacted or the DIMMs may not function under the determined frequency.

The following table lists the supported DIMM configurations.

Table 6.

DIMM Capacity	Configuration	SDRAM Density	SDRAM Organization Front-side/Back-side	Number of SDRAM Devices
128 MB	SS	256 Mbit	16 M x 16/empty	4
256 MB	SS	256 Mbit	32 M x 8/empty	8
256 MB	SS	512 Mbit	32 M x 16/empty	4
512 MB	DS	256 Mbit	32 M x 8/32 M x 8	16
512 MB	SS	512 Mbit	64 M x 8/empty	8
512 MB	SS	1 Gbit	64 M x 16/empty	4
1024 MB	DS	512 Mbit	64 M x 8/64 M x 8	16
1024 MB	SS	1 Gbit	128 M x 8/empty	8
2048 MB	DS	1 Gbit	128 M x 8/128 M x 8	16

Note: In the second column, "DS" refers to double-sided memory modules (containing two rows of DDR SDRAM) and "SS" refers to single-sided memory modules (containing one row of DDR SDRAM).

- **Memory Configurations**

The Intel 82975X MCH supports two types of memory organization:

- **Dual channel (Interleaved) mode.** This mode offers the highest throughput for real world applications. Dual channel mode is enabled when the installed memory capacities of both DIMM channels are equal. Technology and device width can vary from one channel to the other but the installed memory capacity for each channel must be equal. If different speed DIMMs are used between channels, the slowest memory timing will be used.

- **Single channel (Asymmetric) mode.** This mode is equivalent to single channel bandwidth operation for real world applications. This mode is used when only a single DIMM is installed or the memory capacities are unequal. Technology and device width can vary from one channel to the other. If different speed DIMMs are used between channels, the slowest memory timing will be used.

NOTE

The DIMM0 sockets of both channels are blue. The DIMM1 sockets of both channels are black.

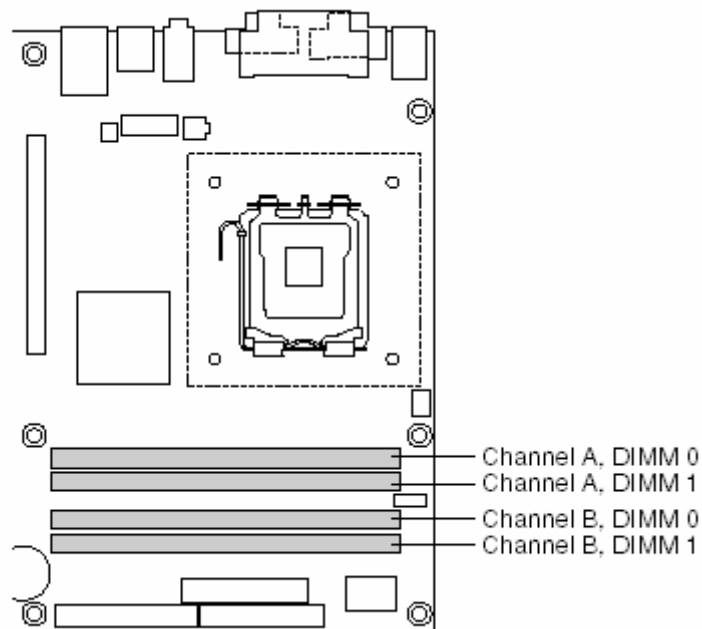


Figure 6. Memory Channel and DIMM Configuration

Dual Channel (Interleaved) Mode Configurations

Figure 7 shows a dual channel configuration using two DIMMs. In this example, the DIMM0 (blue) sockets of both channels are populated with identical DIMMs.

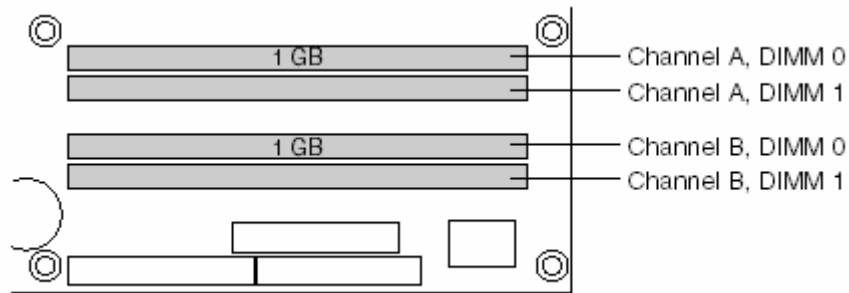


Figure 7. Dual Channel (Interleaved) Mode Configuration with Two DIMMs

Figure 8 shows a dual channel configuration using three DIMMs. In this example, the combined capacity of the two DIMMs in Channel A equal the capacity of the single DIMM in the DIMM0 (blue) socket of Channel B.

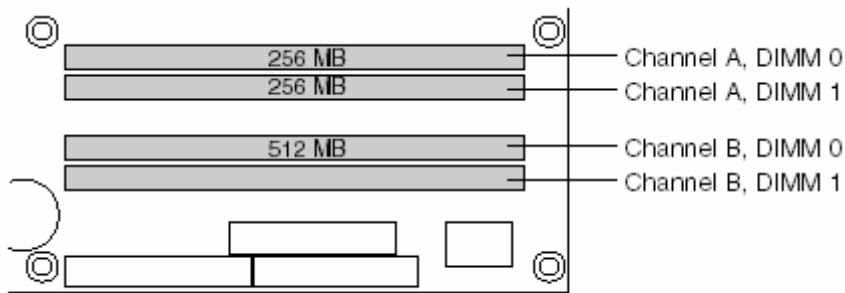


Figure 8. Dual Channel (Interleaved) Mode Configuration with Three DIMMs

Figure 9 shows a dual channel configuration using four DIMMs. In this example, the combined capacity of the two DIMMs in Channel A equal the combined capacity of the two DIMMs in Channel B. Also, the DIMMs are matched between DIMM0 and DIMM1 of both channels.

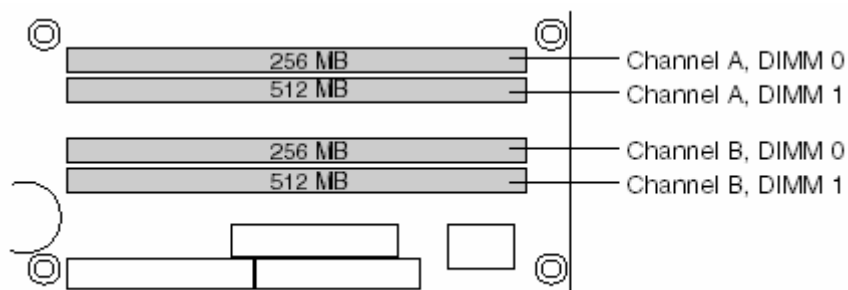


Figure 9. Dual Channel (Interleaved) Mode Configuration with Four DIMMs

Single Channel (Asymmetric) Mode Configurations

NOTE

Dual channel (Interleaved) mode configurations provide the highest memory throughput. Figure 10 shows a single channel configuration using one DIMM. In this example, only the DIMM0 (blue) socket of Channel A is populated. Channel B is not populated.



Figure 10. Single Channel (Asymmetric) Mode Configuration with One DIMM

Figure 11 shows a single channel configuration using three DIMMs. In this example, the combined capacity of the two DIMMs in Channel A does not equal the capacity of the single DIMM in the DIMM0 (blue) socket of Channel B.



Figure 11. Single Channel (Asymmetric) Mode Configuration with Three DIMMs

Installing & Removing DDR2 SDRAM In-line Memory Modules (DIMMs)

Installing Memory

You can install from 128MB to 8GB of memory in the motherboard DIMM sockets.

The board has four 240-pin DDR2 SDRAM DIMM sockets.

The motherboard supports the following memory features:

- 240-pin DIMMs with gold-plated contacts.
- 1.8 V and 1.9V DDR2 SDRAM DIMMs with gold-plated contacts
- ECC (72-bit) and Non-ECC (64-bit).
- 128MB, 256MB, 512MB, 1GB and 2GB modules.

When adding memory, follow these guidelines:

- The BIOS detects the size and type of installed memory.

Note:

DDR SDRAM's must meet the Version 1.0 June 2000 JEDEC Solid State Technology Association specifications for DDR200/266 SDRAM.

To install DIMMs, follow these steps:

1. Observe the precautions in "Upgrading and ESD precautions". Turn off the computer and all peripheral devices.
2. Remove the computer cover and locate the DIMM sockets.
3. Holding the DIMM by the edges, remove it from its antistatic package.
4. Make sure the clips at either end of the socket are pushed away from the socket.
5. Position the DIMM above the socket. Align the two small notches in the bottom edge of the DIMM with the keys in the socket. Insert the bottom edge of the DIMM into the socket.
6. When the DIMM is seated, push down on the top edge of the DIMM until the retaining clips at the ends of the socket snap into place. Make sure the clips are firmly in place.
7. Replace the computer cover.

Removing Memory

To remove a DIMM, follow these steps:

1. Observe the precautions in "Upgrading and ESD precautions".
2. Turn off all peripheral devices connected to the computer. Turn off the computer.
3. Remove the computer cover.
4. Gently spread the retaining clips at each end of the socket. The DIMM pops out of the socket. Hold the DIMM by the edges, lift it away from the socket, and store it in an antistatic package.
5. Reinstall and reconnect any parts you removed or disconnected to reach the DIMM sockets.

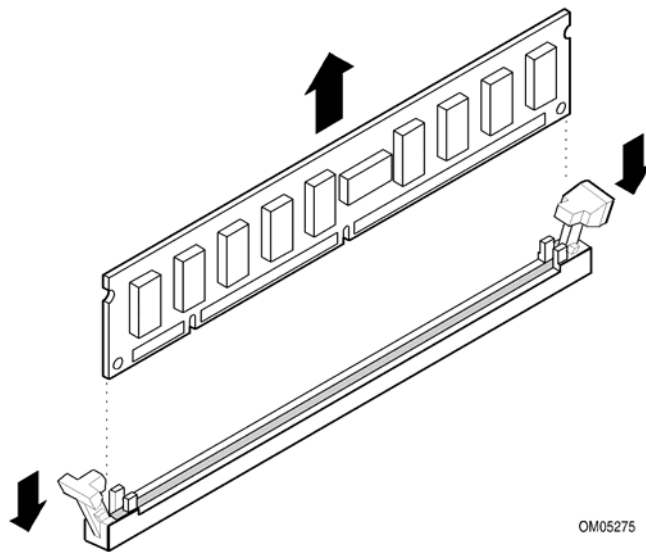


Figure. 11. Removing DIMMs

Intel Serial ATA RAID

The ICH7-R supports the following RAID (Redundant Array of Independent Drives) levels:

- **RAID 0** - data striping. Multiple physical drives can be teamed together to create one logical drive. As data is written or retrieved from the logical drive, both drives operate in parallel, thus increasing the throughput. The ICH7-R allows for more than two drives to be used in a RAID 0 configuration.
- **RAID 1** - data mirroring. Multiple physical drives maintain duplicate sets of all data on separate disk drives. Level 1 provides the highest data reliability because two complete copies of all information are maintained. The ICH7-R allows for two or four drives to be used in a RAID 1 configuration.
- **RAID 0+1 (or RAID 10)** - data striping and mirroring. RAID 0+1 combines multiple mirrored drives (RAID 1) with data striping (RAID 0) into a single array. This provides the highest performance with data protection. Data is striped across all mirrored sets. RAID 0+1 utilizes several drives to stripe data (increased performance) and then makes a copy of the striped drives to provide redundancy. The mirrored disks eliminate the overhead and delay of parity.
- **RAID 5** - distributed parity. RAID Level 5 stripes data at a block level across several drives and distributes parity among the drives; no single disk is devoted to parity. Because parity data is distributed on each drive, read performance tends to be lower than other RAID types. RAID 5 requires the use of three or four drives.

Discrete Serial ATA Interface (Optional)

As a manufacturing option, the board provides a Silicon Image Sil 3114 Serial ATA (SATA) controller and four connectors (that support one device per connector) for SATA devices.

These

connectors are in addition to the four SATA connectors of the ICH7-R SATA interface.

The Sil 3114 controller uses the PCI bus for data transfer and provides a maximum data transfer

rate of up to 1.5 Gbits/sec. The discrete SATA interface supports the following RAID levels:

- RAID 0
- RAID 1
- RAID 0+1

PCI Express Connectors

The board provides the following PCI Express connectors:

- One PCI Express x16 connector. The x16 interface supports simultaneous (full duplex) transfers up to 8 GBytes/sec. Single-ended (half duplex) transfers are supported at up to 4 GBytes/sec.
- One Secondary PCI Express x16/x8 bus add-in card connector: The board provides a PCI Express add-in card connector in the form of a physical x16 connector with electrical routing of x8. It is important to note that this connector is an electrical equivalent of a PCI Express x8 bus
- A third PCI Express x16/x4 bus add-in card connector: The board provides a PCI Express add-in card connector in the form of a physical x16 connector with electrical routing of x4. It is important to note that this connector is an electrical equivalent of a PCI Express x4 bus

BIOS Initial Release.

First boot option set to CD-ROM drive.

BX97510J.86A.1181

Drivers initial release

Windows 98SE, Windows ME, Windows NT4 Drivers are all not supported

Windows* 2000 Drivers

Audio: Sigmatel 9220/9221/ 9223	5.10.4991.0	24.06 MB	25 March 2006
INF: Intel® Chipset Software Installation Utility	7.2.2.1007	945 KB	27 Feb 2006
LAN: Intel® PRO Network Connections	10.4	20.15 MB	10 May 2006
RAID Intel Manager + F6 driver disk	5.5.0.135	287 KB	11 April 2006
RAID Silicon Image + F6 driver disk	1.2.3.1_PV	227 KB	27 Feb 2006

Windows XP* Drivers

Audio: Sigmatel 9220/9221/ 9223	5.10.4991.0	24.06 MB	25 March 2006
INF: Intel® Chipset Software Installation Utility	7.2.2.1007	945 KB	27 Feb 2006
LAN: Intel® PRO Network Connections	10.4	20.15 MB	10 May 2006
RAID Intel Manager + F6 driver disk	5.5.0.135	287 KB	11 April 2006
RAID Silicon Image + F6 driver disk	1.2.3.1_PV	227 KB	27 Feb 2006

Windows* XP64 Drivers

Audio: Sigmatel 9220/9221/ 9223	5.10.4991.0	24.06 MB	25 March 2006
INF: Intel® Chipset Software Installation Utility	7.2.2.1007	945 KB	27 Feb 2006
LAN: Intel® PRO Network Connections	10.4	20.15 MB	10 May 2006
RAID Intel Manager + F6 driver disk	5.5.0.135	287 KB	11 April 2006
RAID Silicon Image + F6 driver disk	1.2.3.1_PV_XP64	271 KB	20 June 2005

Note:- All the above drivers are PC99 certified.