Intel® Desktop Board D815EGEW

Universal Platforms for 370-pin Processors

Quick Reference

This guide is written for technically qualified personnel with experience installing and configuring desktop boards.

Items on the CD-ROM

- Product warranty
- Intel® Express Installer
- *Intel® Desktop Board D815EGEW Product Guide*
- Software utilities and drivers
- Software license agreement
- Readme file

Part number: A70496-001

Getting Help

View or download product support information from Intel's World Wide Web site:

http://support.intel.com/support/motherboards/desktop/

Follow the link to your Intel® Desktop Board for the following information:

- *Known Issues and Solutions*
- *Software and Drivers (latest BIOS and driver updates)*
- *Compatibility (supported Intel® processors and memory information)*
- *Product Documentation*
  - *Technical Product Specification*
  - *Specification Update*

If you can't find the information you need on the Web, contact your point of purchase. The Intel Web site also includes telephone numbers and billing charges, if applicable, for Intel customer support.

Before You Begin

Warnings and Cautions

WARNING

Disconnect the desktop board's power supply from its ac power source before you connect or disconnect cables, or install or remove any desktop board components. Failure to do this can result in personal injury or equipment damage. Some circuitry on the desktop board can continue to operate even though the front panel power switch is off.

CAUTION

Electrostatic Discharge (ESD) can damage desktop board components. Install the desktop board at an ESD-controlled workstation. If such a workstation is not available, wear an antistatic wrist strap.

Safety and Regulatory Requirements

See the *Intel® Desktop Board D815EGEW Product Guide* for all applicable regulatory compliance statements, product certification markings, and safety and electromagnetic compatibility (EMC) standards and regulations the desktop board is compliant with.

Replacement battery warning label provided: Place the label inside the chassis in an easy-to-see location near the battery but not on the board itself.

Intended uses: This product was evaluated as information technology equipment (I.T.E.) for home or office use when installed in an appropriate computer chassis. Other end uses or locations may require further evaluation.

Supported Components

Processors

The Intel Desktop Board D815EGEW supports the following processors:

Processor Type	Designation (GHz)	Designation (MHz)	System Bus Frequency (MHz)
Intel® Pentium® III processors (FC-PGA2 socket)	1.2 and 1.13	N/A	133
Intel Pentium III processors (FC-PGA socket)	1.0	933, 866, 800EB, 733, 667, 600EB, and 533EB	133
	N/A	850, 800, 750, 700, 650, 600E, 550E, and 500E	100
Intel® Celeron™ processors (FC-PGA2 socket)	1.2	N/A	100
Intel Celeron processors (FC-PGA socket)	1.1 and 1.0	950, 900, 850, and 800	100
Intel Celeron processors (FC-PGA socket)	N/A	766, 733, 700, 667, 633, 600, 566, and 533A	66

For the latest information on processors supported by the board, refer to the Intel customer support World Wide Web site:

http://support.intel.com/support/motherboards/desktop/

Memory Modules

NOTE

The D815EGEW board uses 1 MB of system memory at boot up for video, specifically for legacy VGA graphics. Once the operating system boots, this 1 MB memory is not visible to the operating system.

The two DIMM sockets on the board support the following memory features:

- 3.3 V, 168-pin SDRAM Dual Inline Memory Modules (DIMMs) with gold-plated contacts
- Unbuffered single or double-sided DIMM configurations
- 100 MHz PC100 SDRAM (all system bus frequencies)
- 133 MHz PC133 SDRAM (only supported with 133 MHz system bus)

- Minimum system memory: 64 MB
- Maximum system memory: 512 MB
- Non-SPD defaults at 100 MHz
- Mixed speed DIMM configuration will default to the slowest speed DIMM installed

Processor and Memory Module Combinations

The D815EGEW board supports the processor and memory module combinations shown below.

Processor Type (System Bus Frequency)	PC100 Memory Modules…	PC133 Memory Modules…
Intel Celeron processor (66 MHz)	…will operate at 100 MHz	…will operate at 100 MHz
Intel Celeron processor (100 MHz)	…will operate at 100 MHz	…will operate at 100 MHz
Intel Pentium III processor (100 MHz)	…will operate at 100 MHz	…will operate at 100 MHz
Intel Pentium III processor (133 MHz)	…will operate at 100 MHz	…will operate at 133 MHz

NOTES

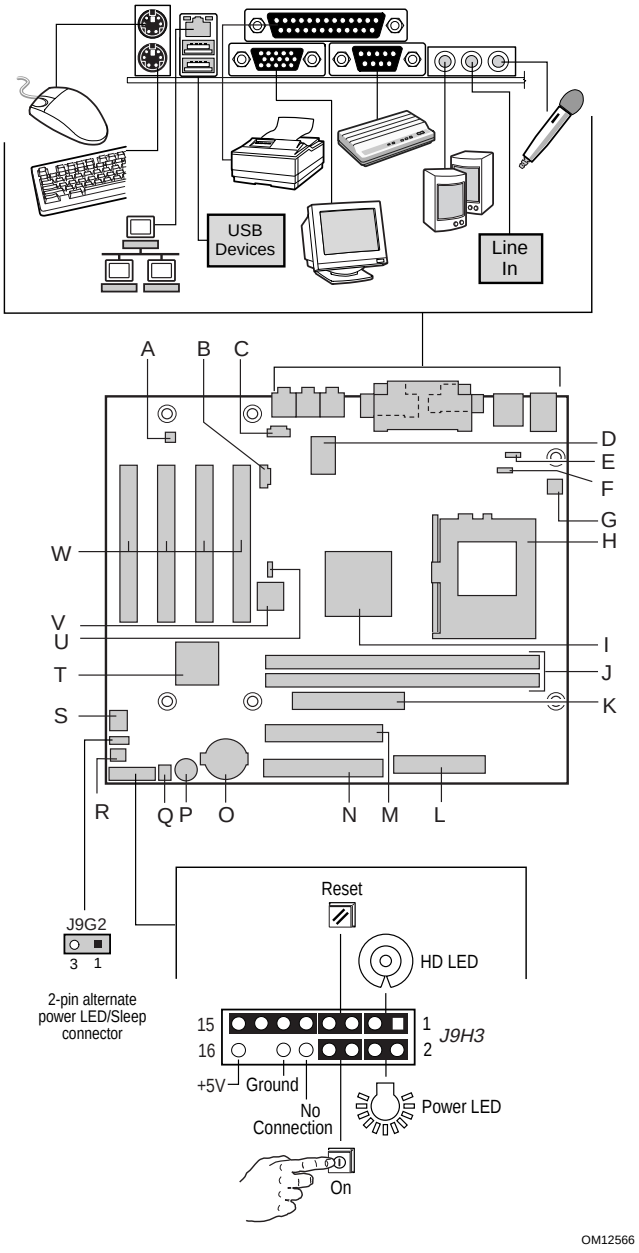
All memory components and DIMMs used with the desktop boards must comply with the PC SDRAM specifications. These include the PC SDRAM Specification (memory component specific), the PC Unbuffered DIMM Specification, and the PC Registered DIMM Specification. To view or download these specifications, refer to this Intel World Wide Web site:

http://www.intel.com/technology/memory/pcsdram/

For information about vendors that support these memory requirements, refer to the D815EGEW link on the Intel customer support World Wide Web site:

http://support.intel.com/support/motherboards/desktop/

Desktop Board Components for D815EGEW



D815EGEW Desktop Board Components

A ADI AD1885 audio codec
B Auxiliary line in connector
C CD-ROM connector
D National PC87360 Super I/O controller
E PS/2† port wake configuration jumper block
F USB port wake configuration jumper block
G Processor fan connector (fan 1)
H Processor socket
I Intel® 82815EG Graphics and Memory Controller Hub (GMCH)
J DIMM sockets
K Diskette drive connector
L Power connector
M Secondary IDE connector
N Primary IDE connector
O Battery
P Speaker
Q SCSI hard drive activity LED connector
R Chassis intrusion connector
S Chassis fan connector (fan 2)
T Intel® 82801BA I/O Controller Hub (ICH2)
U BIOS configuration jumper block
V Firmware hub (FWH)
W PCI bus add-in card connectors

CAUTION

Many of the internal desktop board connectors provide operating voltage (+5 V dc and +12 V dc, for example) to devices inside the computer chassis, such as fans and internal peripherals. These connectors are not overcurrent protected. Do not use these connectors for powering devices external to the computer chassis. A fault in the load presented by the external devices could cause damage to the computer, the interconnecting cables, and the external devices themselves.

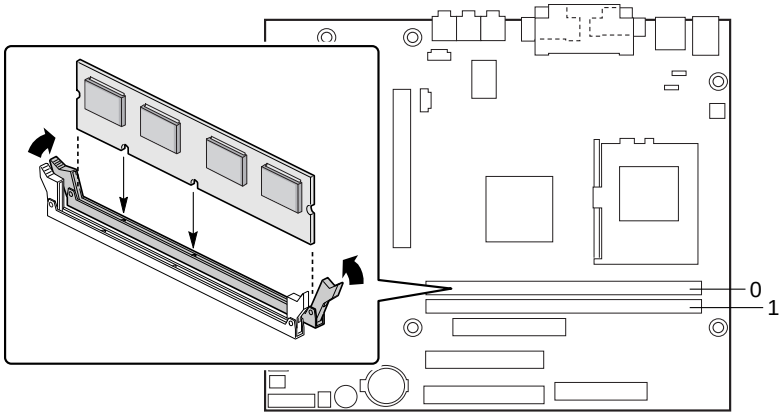
Installation Steps

1 Installing Memory Modules

CAUTION

Devices in PCI slot 1 may interfere with the memory retention mechanism. Remove the device from PCI slot 1 before adding or removing memory.

The D815EGEW board requires that DIMMs be installed as shown in the figure below. The two DIMM sockets are arranged as banks 0 and 1 as shown below. If installing a single DIMM, install it in bank 0.



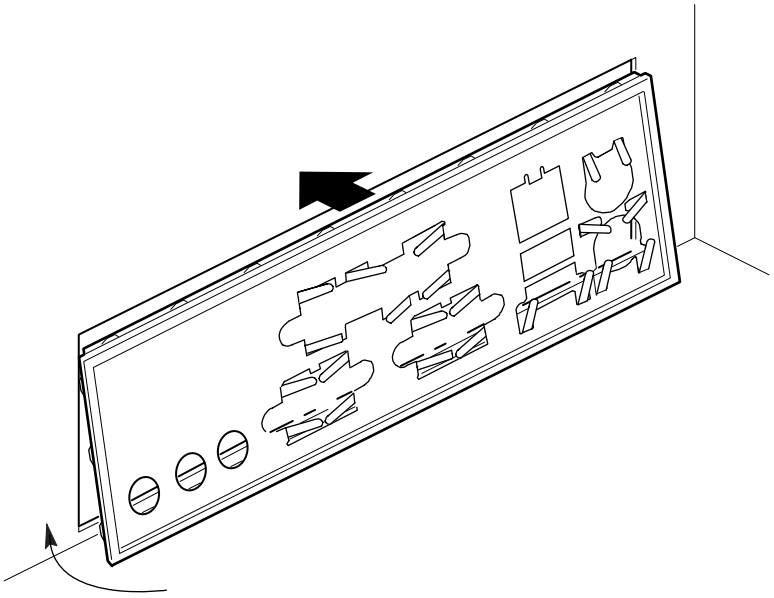
To install DIMMs, follow these steps:

1. Observe the precautions in "Before You Begin" (see page 3).
2. Turn off all peripheral devices connected to the computer. Turn off and unplug the computer.
3. Remove the computer cover and locate the DIMM sockets.
4. Holding the DIMM by the edges, remove it from its antistatic package.
5. Make sure the clips at either end of the socket are pushed away from the socket as shown above.
6. Position the DIMM above the socket. Align the two small notches in the bottom edge of the DIMM with the keys in the socket.
7. Insert the bottom edge of the DIMM into the socket.
8. When the DIMM is inserted, push down on the top edge of the DIMM until the retaining clips snap into place. Make sure the clips are firmly in place.
9. Replace the computer cover.

2 Installing the I/O Shield

The desktop board comes with an I/O shield. When installed in the chassis, the shield blocks radio frequency transmissions, protects internal components from dust and foreign objects, and promotes correct airflow within the chassis.

Install the I/O shield before installing the desktop board in the chassis. Place the shield inside the chassis as shown in the following figure. Press the shield into place so that it fits tightly and securely. If the shield doesn't fit, obtain a properly-sized shield from the chassis supplier.



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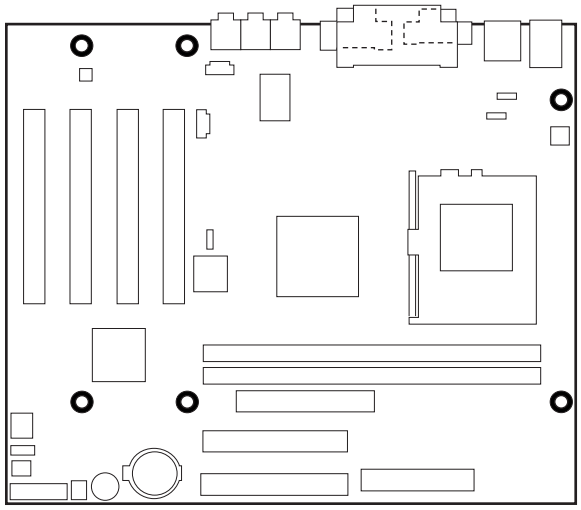
3 Installing the Desktop Board

Refer to your chassis manual for specific instructions on installing and removing the desktop board.

Secure the desktop board to the chassis standoffs using six screws. Insert the screws in the mounting holes shown in the figure below.



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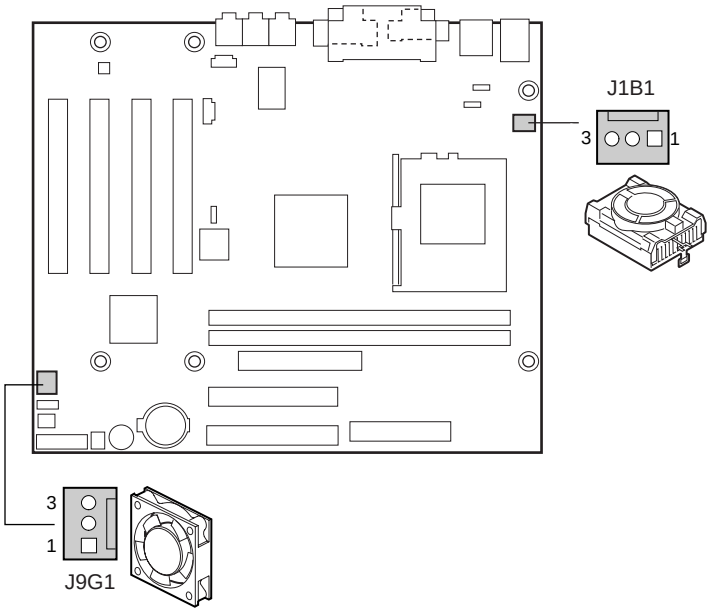
4 Installing the Processor

Follow the instructions included with the boxed processor.

5 Connecting the Fans

The following figure shows the location of the fan connectors. If you are installing a processor with an active fan heatsink, connect the processor's fan cable to the desktop board connector labeled J1B1 (fan 1). Connect the chassis fan cable to the desktop board connector labeled J9G1 (fan 2).



6 Connecting the IDE Drives

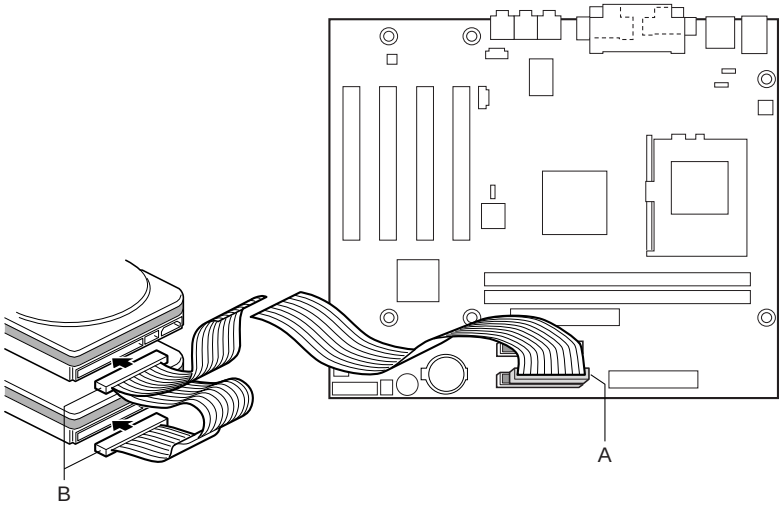
NOTE

If the cable select option is enabled on your IDE drive, the primary drive must be connected to the black connector on the IDE cable.

The Intel® boxed desktop board package includes one IDE cable. The cable can connect two drives to the desktop board. The cable supports the Ultra DMA-33 (40-contact) and ATA-66/100 (40-contact, 80-conductor) transfer protocols and is backward compatible with drives using slower IDE transfer protocols.

For the cable to function correctly:

1. Attach the cable end with the single connector (A), which is blue and labeled P1, to the desktop board.
2. Attach the cable end with the two closely spaced connectors (B), which are gray (for secondary drive) and black (for primary drive) and are labeled P2 and P3, to the drives.



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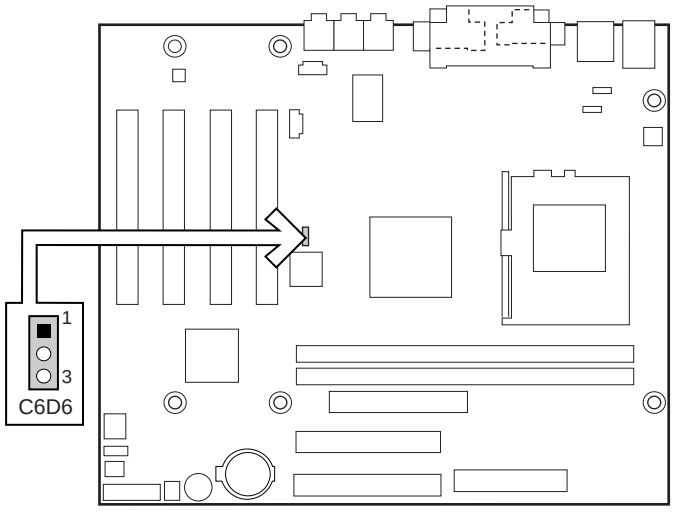
Setting the BIOS Setup Configuration Jumper Block

The BIOS Setup configuration jumper block determines the operating mode of the BIOS Setup Program and enables BIOS recovery in the event of a failed BIOS upgrade. The following figure shows the location of the configuration jumper (C6D6).



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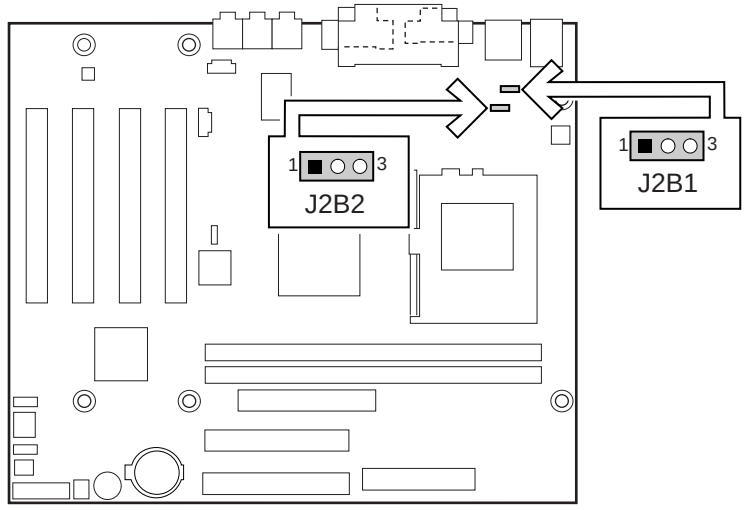
The following table describes the BIOS mode for each jumper position.

Jumper Position		Mode	Description
1-2	1 3	Normal (default)	The BIOS uses the current configuration and passwords for booting.
2-3	1 3	Configure	After the Power-On Self-Test (POST) runs, Setup runs automatically. The Maintenance menu is displayed.
None	1 3	Recovery	The BIOS recovers data from a recovery CD-ROM or diskette in the event of a failed BIOS upgrade. To upgrade or recover the BIOS, see the instructions in the *Intel Desktop Board D815EGEW Product Guide* on the Intel® Express Installer CD-ROM.

Setting the PS/2 and USB Wake Configuration Jumper Blocks

The 3-pin PS/2 jumper block, labeled J2B1, enables ACPI wake configurations of the two PS/2 ports. The 3-pin USB port jumper block, labeled J2B2, enables ACPI wake configurations of the two USB ports.



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The following table describes the jumper settings for configuring the PS/2 mouse and keyboard ports.

Jumper Setting		Configuration
1-2		Allows wake from ACPI state S1
2-3		Allows wake from keyboard/mouse in all ACPI states (must also set ACPI BIOS option to S3)
None		PS/2 ports will not function

The following table describes the jumper settings for configuring USB port 0 and USB port 1.

Jumper Setting		Configuration
1-2		Allows wake from ACPI state S1
2-3		Allows wake from USB ports in all ACPI states (must also set ACPI BIOS option to S3)
None		USB ports will not function

BIOS Setup Program Defaults

For a complete list of the BIOS Setup settings, refer to the Intel customer support World Wide Web site at:

http://support.intel.com/support/motherboards/desktop

and select *Intel Desktop Board D815EGEW Technical Product Specification* under the Product Documentation heading.

NOTES

To disable the audio interface, select the Peripheral Configuration Submenu under the Advanced Menu, then set Audio Device to "Disabled."

To disable the LAN interface, select the Peripheral Configuration Submenu under the Advanced Menu, then set LAN Device to "Disabled.

Intel® 桌面母板 D815EGEW

370 引脚处理器通用平台

快速参考指南

本指南供已具备安装和配置桌面母板经验的合格技术人员使用。

CD-ROM 上提供的项目

- 产品保修书
- Intel® Express Installer（Intel 快速安装程序）
- 《Intel® 桌面母板 D815EGEW 产品指南》
- 软件实用程序和驱动程序
- 软件许可证协议
- 自述文件

获取帮助

您可从以下 Intel 万维网站点查看或下载产品的支持信息：

http://support.intel.com/support/motherboards/desktop/

请通过链接进入并访问 Intel® 桌面母板网页，以获取以下信息：

- 已知问题及解决方法
- 软件和驱动程序（最新 BIOS 和驱动程序更新）
- 兼容性（关于所支持的 Intel® 处理器和内存的信息）
- 产品文档
  - — 产品技术规格
  - — 产品规格更新

如果您在万维网上未能找到所需信息，请与您的经销商联络。Intel 万维网站点上还列出了 Intel 客户支持的电话号码及收费标准（若需收费）。

开始之前

警告与注意事项

警告

在连接或断开电缆、安装或拆下任何桌面母板元件之前，请先将桌面母板的交流电源切断。否则，可能会导致人身伤害或损坏设备。即使在关闭前面板电源按钮以后，桌面母板上的某些电路仍可能继续带电。

注意

静电释放 (ESD) 可能会损坏桌面母板的元件。请在配备 ESD 控制装置的工作台上安装桌面母板。如果没有 ESD 工作台可用，请佩戴防静电腕带。

安全和规范要求

有关此产品符合的所有标准及规范的声明、产品认证标识、安全与电磁兼容性 (EMC) 标准以及所符合的各种规范及规章等详情，请参阅《Intel® 桌面母板 D815EGEW 产品指南》。

提供的更换电池警告标签：请将此标签贴在机箱内靠近电池且容易看见的位置，注意不要贴在母板上。

设计应用领域：此产品经过评估测试，认定为信息技术设备 (I.T.E.)，可安装于家用和商用个人计算机机箱中。此产品在其它应用领域或应用环境的适用性，有待进一步鉴定。

支持的元件

处理器

Intel 桌面母板 D815EGEW 支持以下处理器：

处理器类型	频率标志 (GHz)	频率标志 (MHz)	系统总线频率 (MHz)
Intel® Pentium® III 处理器（FC-PGA2 插座）	1.2 和 1.13	不适用	133
Intel Pentium III 处理器（FC-PGA 插座）	1.0	933、866、800EB、733、667、600EB 和 533EB	133
	不适用	850、800、750、700、650、600E、550E 和 500E	100
Intel® Celeron™ 处理器（FC-PGA2 插座）	1.2	不适用	100
Intel Celeron 处理器（FC-PGA 插座）	1.1 和 1.0	950、900、850 和 800	100
Intel Celeron 处理器（FC-PGA 插座）	不适用	766、733、700、667、633、600、566 和 533A	66

有关本桌面母板所支持处理器的最新信息，请访问以下 Intel 客户支持万维网站点：

http://support.intel.com/support/motherboards/desktop/

内存模块

注释

D815EGEW 桌面母板在启动时使用 1 MB 的系统内存用于视频显示，专门用于旧式 VGA 显示。一旦操作系统启动后，操作系统看不见此 1 MB 内存。

本桌面母板上有两个 DIMM 内存插槽，支持以下内存功能：

- 带有镀金触点的 3.3V、168 针 SDRAM 双列直插式内存模块 (DIMM)
- 无缓冲单面或双面 DIMM
- 100 MHz PC100 SDRAM（适用于所有系统总线频率）
- 133 MHz PC133 SDRAM（仅限于 133 MHz 的系统总线频率）

- 最小系统内存：64 MB
- 最大系统内存：512 MB
- 非串行设备检测 (Non-SPD) 内存，默认频率为 100 MHz
- 不同速度的 DIMM 混合安装时，默认的速度将采用其中速度最慢的 DIMM 速度。

处理器和内存模块组合

桌面母板 D815EGEW 支持下表所列的处理器和内存模块组合。

处理器类型 （系统总线频率）	PC100 内存模块…	PC133 内存模块…
Intel Celeron 处理器 (66 MHz)	…运行速度为 100 MHz	…运行速度为 100 MHz
Intel Celeron 处理器 (100 MHz)	…运行速度为 100 MHz	…运行速度为 100 MHz
Intel Pentium III 处理器 (100 MHz)	…运行速度为 100 MHz	…运行速度为 100 MHz
Intel Pentium III 处理器 (133 MHz)	…运行速度为 100 MHz	…运行速度为 133 MHz

注释

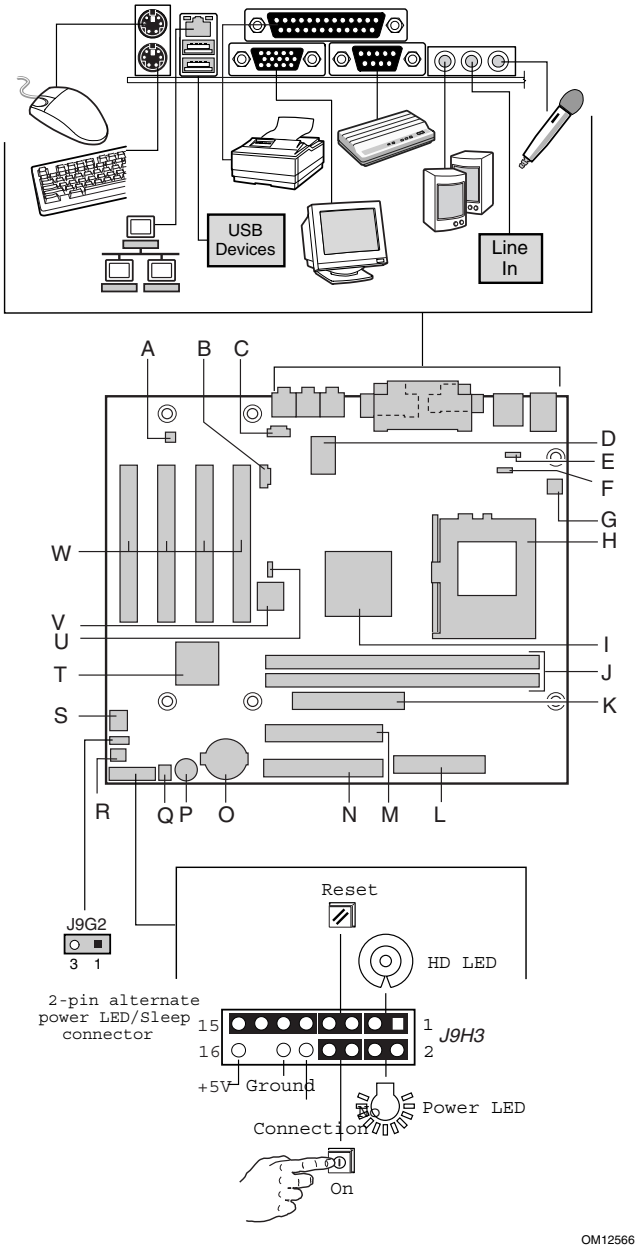
本桌面母板使用的所有内存元件和 DIMM 内存模块必须符合 PC SDRAM 规格。包括 PC SDRAM 规格（内存元件规格）、PC 无缓冲 DIMM 规格以及 PC 寄存式 DIMM 规格。欲查看或下载这些规格，请访问以下 Intel 万维网站点：

http://www.intel.com/technology/memory/pcsdram/

有关支持这些内存要求的产品供应商详情，请访问以下 Intel 客户支持万维网站点中的 D815EGEW 链接：

http://support.intel.com/support/motherboards/desktop/

D815EGEW 桌面母板元件



D815EGEW 桌面母板元件

A	ADI AD1885 音频编码解码器
B	辅助线路输入连接器
C	CD-ROM 连接器
D	National PC87360 超级 I/O 控制器
E	PS/2† 端口唤醒配置跳线块
F	USB 端口唤醒配置跳线块
G	处理器风扇连接器（风扇 1）
H	处理器插座
I	Intel® 82815EG 图形内存控制器枢纽 (GMCH)
J	DIMM 插座
K	软盘驱动器连接器
L	电源连接器
M	次 IDE 连接器
N	主 IDE 连接器
O	电池
P	扬声器
Q	SCSI 硬盘驱动器活动 LED 指示灯连接器
R	机箱开启连接器
S	机箱风扇连接器（风扇 2）
T	Intel® 82801BA I/O 控制器枢纽 (ICH2)
U	BIOS 配置跳线块
V	固件枢纽 (FWH)
W	PCI 总线附加卡连接器

注意

许多桌面母板上的内部连接器为计算机机箱内的设备（如风扇和内部外围设备）提供工作电压（如 +5 VDC 和 +12 VDC）。这些连接器不具备过载保护。请不要使用这些连接器为计算机机箱外的设备提供电源。由外部设备产生的电源加载故障可能会损坏计算机、互连电缆和外部设备本身。

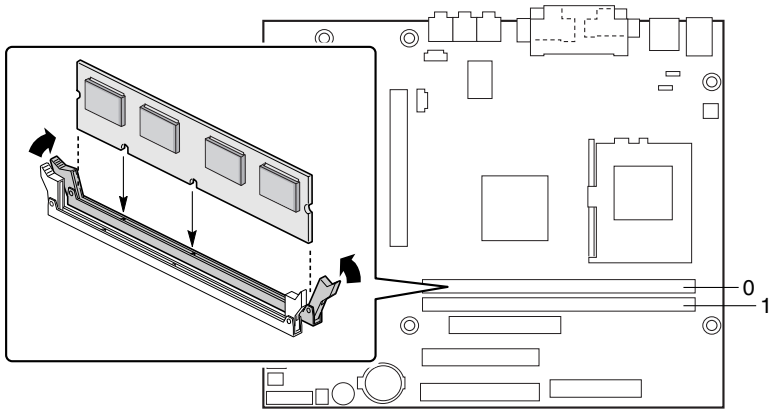
安装步骤

1 安装内存模块

注意

PCI 插槽 1 中安装的设备可能会影响对内存固定架的操作。在添加或拆卸内存模块之前，请先拆下 PCI 插槽 1 中的设备。

桌面母板 D815EGEW 要求按下图所示安装 DIMM。两个 DIMM 插座依次排列为 Bank 0 和 Bank 1，如下图所示。如果只安装一条 DIMM 内存模块，请将其安装在 Bank 0 中。



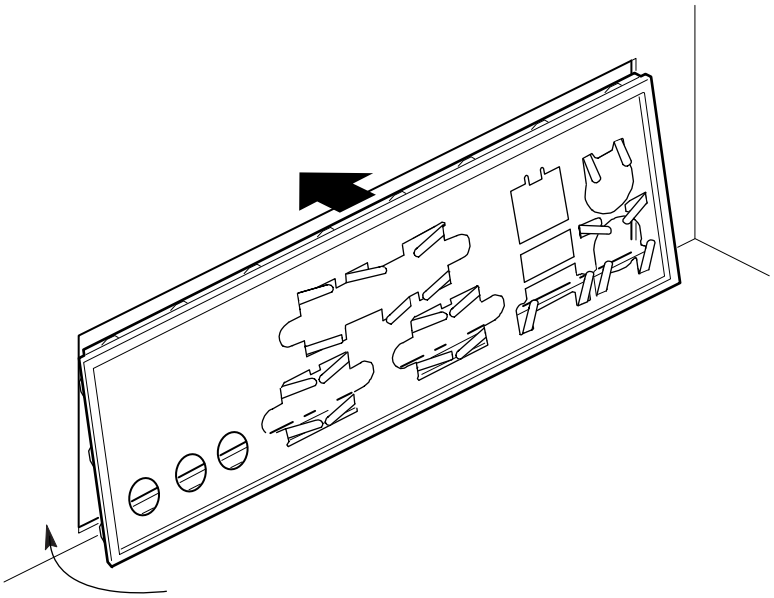
要安装 DIMM（双列直插式内存模块），请按以下步骤操作：

1. 请遵守“开始之前”中的注意事项（参见第 3 页）。
2. 关闭所有与计算机连接的外围设备。关闭计算机电源，并拔下计算机电源电缆。
3. 打开计算机箱盖，找到 DIMM 插座。
4. 用手握住 DIMM 的边缘，将其从防静电袋中取出。
5. 确保插座两端的卡固销子已推到张开状态（如上图所示）。
6. 将 DIMM 放置在插座上。将 DIMM 底部边缘的两个小凹口与插座上的卡固销子对齐。
7. 将 DIMM 的底边插入插座。
8. 插入 DIMM 期间，按住 DIMM 的顶边向下推压，直到卡固销子将其卡固到位。确保销子已牢牢夹紧。
9. 重新盖好计算机箱盖。

2　安装 I/O 防护板

本桌面母板带有 I/O 防护板。机箱内安装此防护板后，可阻挡无线电射频的传播，保护内部元件不受灰尘和异物侵害，并可促进机箱内的空气正确流通。

在向机箱中安装桌面母板之前，应先安装 I/O 防护板。如下图所示，将防护板放入机箱中。沿箭头所指方向推压防护板，使其紧固到位。如果防护板不适合机箱的尺寸，请从机箱供应商处获取合适尺寸的防护板。

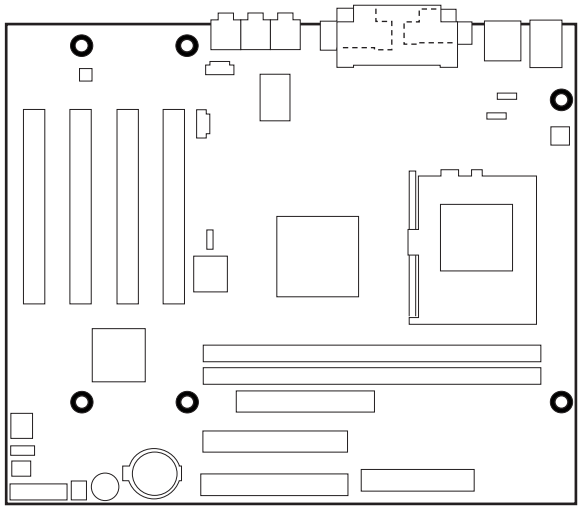


OM12554

3 安装桌面母板

有关安装和拆卸桌面母板的说明，请参阅机箱手册。

使用六个螺丝将桌面母板固定到机箱支撑立柱上。如下图所示，将螺丝插入安装孔。



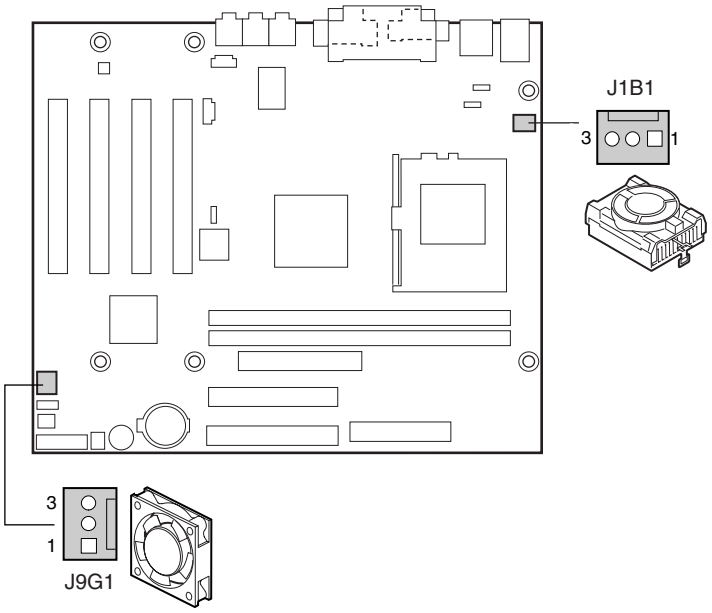
OM12555

4 安装处理器

按照盒装处理器附带的说明进行操作。

5 连接风扇

下图显示了风扇连接器的位置。如果您正在安装一个配有有源风扇散热器的处理器，应将处理器的风扇电缆连接到标为 J1B1（风扇 1）的桌面母板连接器上。将机箱风扇电缆连接到标为 J9G1（风扇 2）的桌面母板连接器上。



6 连接 IDE 驱动器

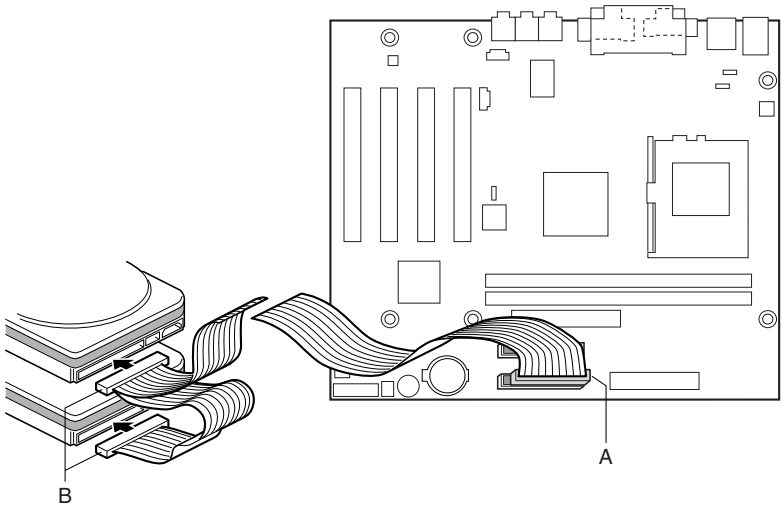
注释

如果 IDE 驱动器上的电缆选择选项设为启用，则必须把主驱动器连接到 IDE 电缆的黑色连接器上。

Intel® 桌面母板的包装中包括一条 IDE 电缆。该电缆可将两个驱动器连接到桌面母板上。40 触点电缆支持 Ultra DMA-33 传输协议；40 触点 80 芯电缆支持 ATA-66 和 ATA-100 传输协议，并向后兼容使用更慢速 IDE 传输协议的驱动器。

为确保电缆正常工作：

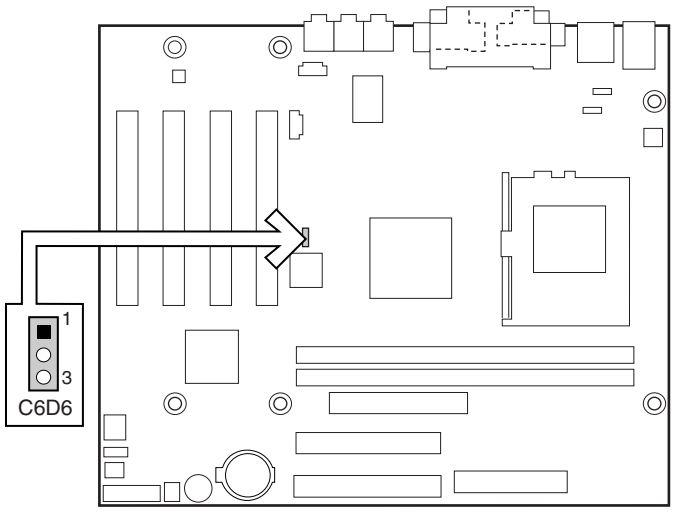
1. 将电缆带有单连接器 (A)（蓝色，标为 P1）的一端连接到桌面母板上。
2. 将电缆带有相邻双连接器 (B) 的一端连接到驱动器上；灰色连接器用于连接次驱动器，黑色连接器用于连接主驱动器，它们分别标为 P2 和 P3。



OM12559

设置 BIOS SETUP（设置程序）配置跳线块

BIOS Setup（设置程序）配置跳线块决定 BIOS Setup（设置）程序的运行模式，并可在更新 BIOS 失败时恢复原来的 BIOS 设置。下图显示了配置跳线 (C6D6) 的位置。



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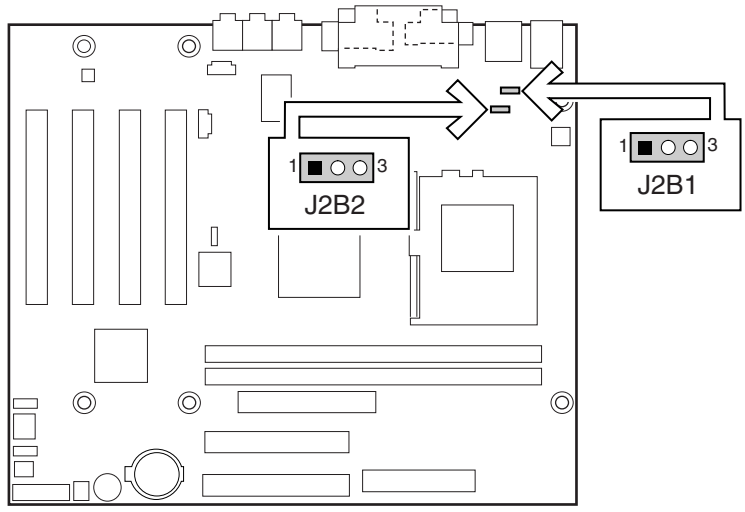
下表描述了每种跳线位置所对应的 BIOS 模式。

跳线位置	模式	说明
1-2 	正常（默认）	BIOS 使用当前配置和口令来启动系统。
2-3 	配置	开机自检 (POST) 运行后，自动运行 Setup（设置）程序。显示 Maintenance（维护）菜单。
无插接 	恢复	如果 BIOS 升级失败，BIOS 将从一张恢复 CD-ROM 或软盘中恢复数据。要升级或恢复 BIOS，请参阅 Intel® Express Installer（Intel 快速安装程序）光盘上的《Intel 桌面母板 D815EGEW 产品指南》。

设置 PS/2 和 USB 唤醒配置跳线块

3 针的 PS/2 跳线块标记为 J2B1，用于启用两个 PS/2 端口的 ACPI 唤醒配置。3 针的 USB 端口跳线块标记为 J2B2，用于启用两个 USB 端口的 ACPI 唤醒配置。



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下表列示了 PS/2 鼠标和键盘端口不同配置的跳线设置。

跳线设置		配置
1-2		允许从 ACPI 状态 S1 唤醒系统
2-3		允许通过键盘或鼠标从所有 ACPI 状态唤醒系统（必须同时将 ACPI 的 BIOS 选项设置为 S3）
无插接		PS/2 端口将不起作用

下表列示了 USB 端口 0 和 USB 端口 1 不同配置的跳线设置。

跳线设置		配置
1-2		允许从 ACPI 状态 S1 唤醒系统
2-3		允许通过 USB 端口从所有 ACPI 状态唤醒系统 （必须同时将 ACPI BIOS 选项设置为 S3）
无插接		USB 端口将不起作用

BIOS Setup（设置）程序默认设置

要获得 BIOS 设置程序所有设置的完整列表，请访问以下 Intel 客户支持万维网站点：

http://support.intel.com/support/motherboards/desktop

并在 Product Documentation（产品文档）标题下选择 Intel Desktop Board D815EGEW Technical Product Specification（Intel 桌面母板 D815EGEW 产品技术规格）。

注释

要禁用音频接口，选择 Advanced Menu（高级菜单）下的 Peripheral Configuration Submenu（外围设备配置子菜单），然后将 Audio Device（音频设备）设置为 “Disabled”（禁用）。

要禁用 LAN 接口，选择 Advanced Menu（高级菜单）下的 Peripheral Configuration Submenu（外围设备配置子菜单），然后将 LAN Device（LAN 设备）设置为 “Disabled”（禁用）。