Manuals

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Jumpers, Switches, and Connectors: Dell™ PowerEdge™ 2450 Systems Service Manual

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Overview

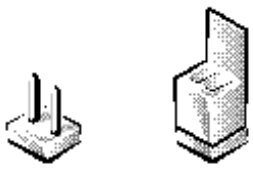
This section provides specific information about the jumpers on the system board. It also provides some basic information on jumpers and switches and describes the connectors and sockets on the various boards in the computer.

Jumpers and Switches—A General Explanation

Jumpers and switches provide a convenient and reversible way of reconfiguring the circuitry on a printed circuit board. When installing replacement parts or reconfiguring the system, you may need to change jumper settings on the system board. You may also need to change jumper and/or switch settings on expansion cards or drives.

Jumpers

Jumpers are small blocks on a circuit board with two or more pins emerging from them. Plastic plugs containing a wire fit down over the pins. The wire connects the pins and creates a circuit. To change a jumper setting, pull the plug off its pin(s) and carefully fit it down onto the pin(s) indicated.

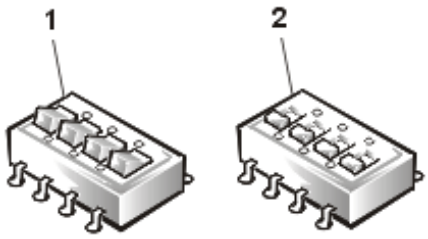


NOTICE: Make sure the system is turned off before you change a jumper setting. Otherwise, damage to the system or unpredictable results may occur.

A jumper is referred to as open or unjumpered when the plug is pushed down over only one pin or if there is no plug at all. When the plug is pushed down over two pins, the jumper is referred to as jumpered. The jumper setting is often shown in text as two numbers, such as 1-2. The number 1 is printed on the circuit board so that you can identify each pin number based on the location of pin 1.

Switches

Switches control various circuits or functions in the computer system. The switches that you are most likely to encounter are dual in-line package (DIP) switches, which are normally packaged in groups of two or more switches in a plastic case. Two common types of DIP switches are slide switches and rocker switches (see the following illustration).



1 Rocker switch

2 Slide switch

Each of these switches has two positions, or settings (usually on and off). To change the setting of a slide switch, use a small, pointed object such as a small screwdriver or a straightened paper clip to slide the switch to the proper position. To change the setting of a rocker switch, use the screwdriver or paper clip to press down on the appropriate side of the switch. In either case, do not use a pen, pencil, or other object that might leave a residue on the switch.

System Board Jumpers

Figure 1 shows the location of the configuration jumpers on the system board. Table 1 lists the function of these jumpers.

Figure 1. System Board Jumpers

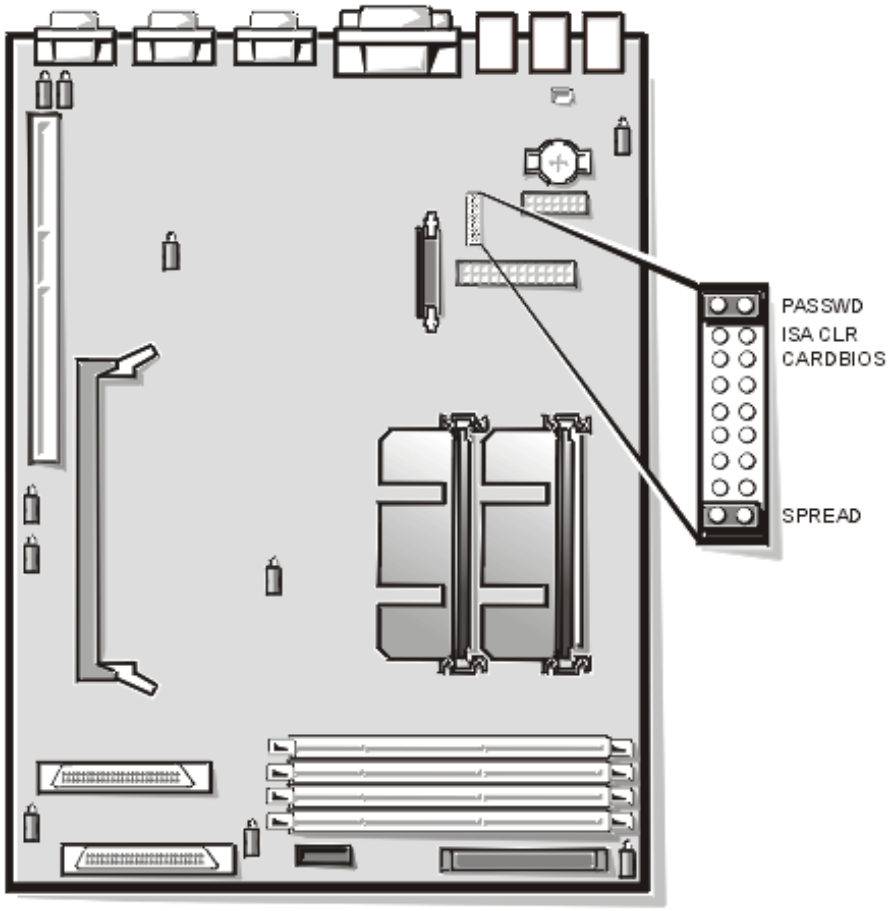


Table 1. System-Board Jumper Settings

Jumper	Setting		Description
CARDBIOS			Reserved (do not change).
ISA_CLR		(default)	The ISA configuration settings are retained at system boot. The ISA configuration settings are cleared at next system boot. If the ISA configuration settings become corrupted to the point where the system will not boot, install the jumper plug and boot the system. Remove the jumper before restoring the ISA configuration information.
PASSWD		(default)	The password feature is enabled. The password feature is disabled.
SPREAD			Reserved (do not change).

jumpered unjumpered

System Board Labels

Table 2 lists the connectors and sockets located on the system board.

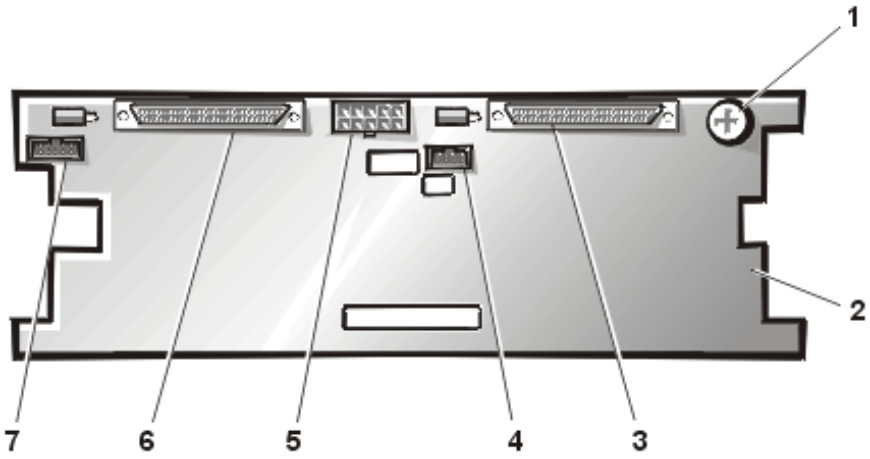
Table 2. System Board Connectors and Sockets

Connector or Socket	Description
BACKPLANE	Hot-pluggable SCSI backplane board interface cable connector
BATTERY	Battery connector
COM*n*	Serial port connectors; sometimes referred to as COM1 and COM2
DIMM_*x*	DIMM sockets
DIMM_RAID	DIMM socket for integrated RAID controller
ENET	Ethernet connector
INTRUS1	Intrusion-alarm switch connector
KYBD	Keyboard connector
MOUSE	Mouse connector
PARALLEL	Parallel port connector; sometimes referred to as LPT1
POWER*n*	Power connector
PROC_*n*	Microprocessor guide bracket assembly and connectors
RAID_KEY	Socket for integrated RAID controller hardware key
SCSI1, SCSI2	Ultra3 SCSI host adapter connector
USB*n*	USB connector
VGA	Video connector

SCSI Backplane Boards

Figure 2 shows the location of the connectors on the back of the SCSI backplane board.

Figure 2. SCSI Backplane Board Connectors

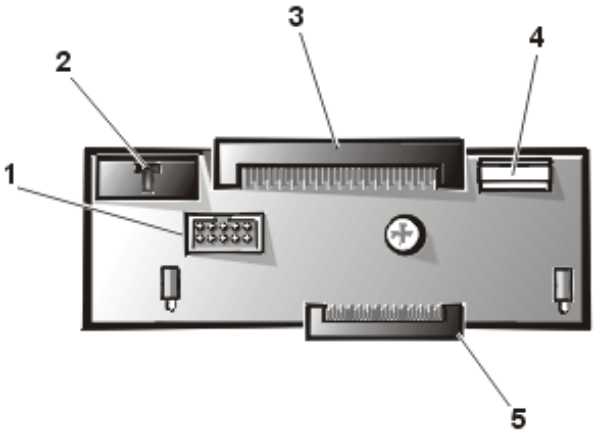


1. Thumbscrew
2. SCSI backplane board
3. Ultra3 SCSI connector (SCSIB)
4. System board interface connector (PLANAR)
5. Power connector (POWER2)
6. Ultra3 SCSI connector (SCSIA)
7. Data cable to optional 5th hard-disk drive SCSI backplane board (Drive5)

Interposer Board Connectors

Figure 3 shows the connectors and sockets located on the interposer board.

Figure 3. Connectors on the Interposer Board



1. Control panel cable connector
2. Cooling fans wiring harness connector (P2)
3. System board interface cable connector (P1)
4. Interposer board power cable connector (P3)
5. Diskette drive/CD-ROM drive interface connector (J1)

Disabling a Forgotten Password

The computer's software security features include a supervisor password and a user password, which are discussed in detail in "Using the System Setup Program" of the *User's Guide*. A password jumper on the system board enables these password features or disables them and clears any password(s) currently in use.

To disable a forgotten supervisor password or user password, perform the following steps.

NOTICE: See "Protecting Against Electrostatic Discharge."

1. Turn off the system, including any attached peripherals, and disconnect the AC power cable from its power source.
2. Remove the optional front bezel, if it has one.
3. Remove the computer doors.

4. Refer to "System Board Jumpers" for the location of the password jumper (labeled PASSWD) on the system board.
5. Remove the jumper plug from the PASSWD jumper.
6. Replace the computer doors and then reconnect the computer to an electrical outlet and turn it on.

   The existing passwords are not disabled (erased) until the system boots with the PASSWD jumper plug removed. However, before you assign a new system and/or user password, you must install the jumper plug.

NOTE: If you assign a new system and/or user password with the jumper plug still removed, the system disables the new password(s) the next time it boots.

7. Repeat step 1.
8. Install the jumper plug on the PASSWD jumper.
9. Replace the computer doors and then reconnect the computer and peripherals to their electrical outlets and turn them on.
10. Assign a new system and/or user password.

    To assign a new system password using the System Setup program, see "Assigning a System Password" in the *User's Guide*. To assign a new user password using the System Setup program, see "Assigning a Setup Password" in the *User's Guide*.

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