2 Configuring the LPM30

Although the LPM30 system board is packaged in protective materials, it is important to use care while unpacking and setting up.

Static Electricity

The LPM30 is shipped from the factory in an antistatic bag. To reduce the possibility of damage, it is important to neutralize any accumulated static charges on your body before handling the board. The best way to do this is to ground yourself using a special wrist or ankle strap. If you do not have a strap, you should touch both of your hands to a safely grounded object. After you have grounded yourself, ground the LPM30 via the solder pads surrounding one of its mounting holes.

Once the LPM30 is removed from its packaging, place it on top of the antistatic bag. Carefully inspect the board for damage which may have occurred during shipment.

Office Environment

Make sure the finished computer system is in an area with good ventilation. The system should not be in direct sunlight, near heaters, or exposed to moisture, dust, or dirt.
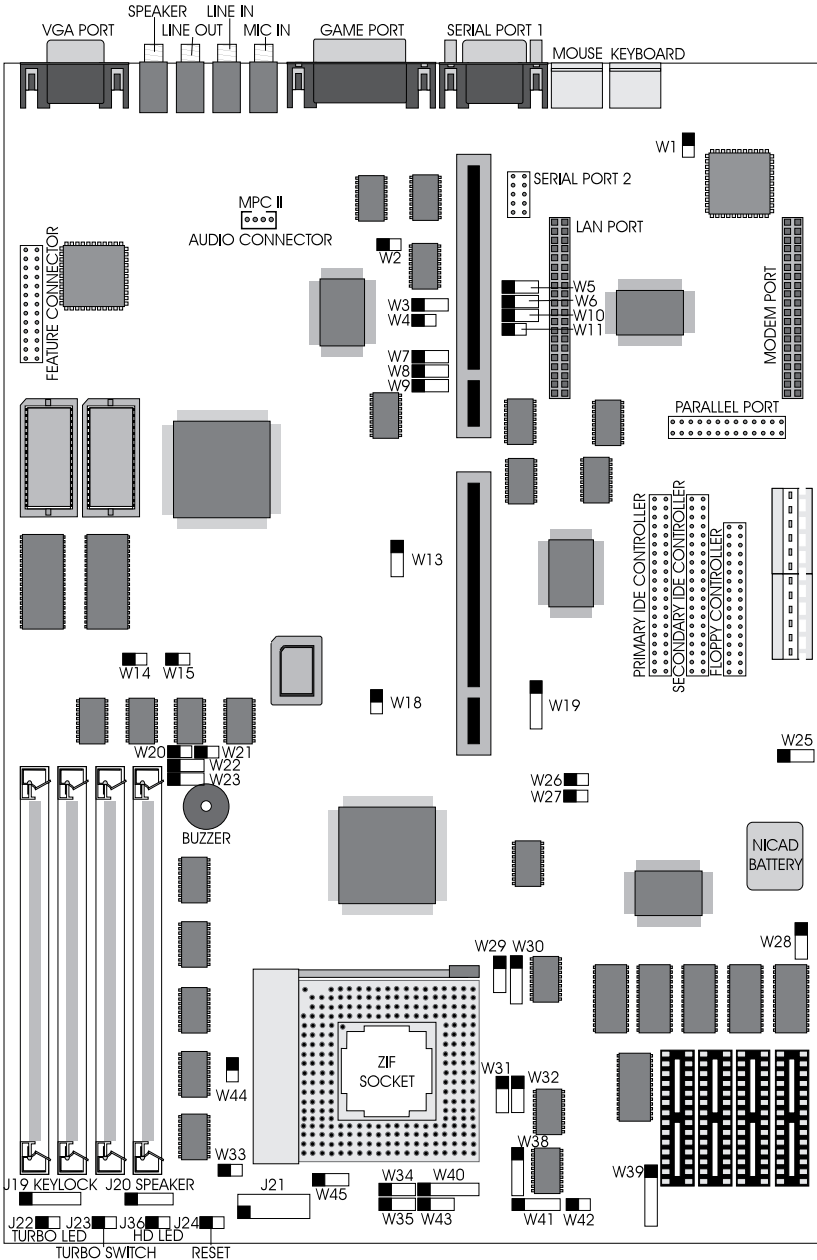
LPM30 Components

Figure 2-1 LPM30 System Board

CPU Voltage

Warning:
This system board has been factory set to support 5.0V processors. If using a 3.3V or 4.0V processor, you must install a Power Module (Appendix E). Failure to install a Power Module could result in damage to the CPU.

Table 2-1 lists the voltage requirements for CPUs supported by this system board.

CPU	Manufacturer(s)	Voltage
486SX	Intel, AMD	5.0V
486DX	Intel, AMD	5.0V
486DX2	Intel	5.0V
486DX2	AMD	3.3V or 5.0V
486SL-series	Intel	5.0V
Write-Back Enhanced 486DX2	Intel	5.0V
486DX4	Intel, AMD	3.3V
Pentium OverDrive	Intel	5.0V
Cyrix 486DX/DX2	Cyrix	5.0V
Cyrix 486DX2V-80	Cyrix	4.0V

Table 2-1 CPU Voltage Requirements

Jumper Settings

Table 2-2 and 2-3 list the settings to select the CPU installed in your system.

CPU	W22	W23	W30	W31	W32	W33	W34
486SX	2-3	1-2	2-3	2-3	2-3	open	open
486DX/DX2	2-3	1-2	1-2 & 3-4	2-3	2-3	open	open
486SL-series	2-3	1-2	1-2 & 3-4	2-3	2-3	open	open
Intel Write-Back Enhanced 486DX2	1-2	1-2	1-2 & 3-4	2-3	1-2	close	1-2
486DX4	2-3	1-2	1-2 & 3-4	2-3	2-3	open	open
Pentium OverDrive	1-2	1-2	1-2 & 3-4	2-3	1-2	open	open
AMD 486DX/DX2	2-3	1-2	1-2 & 3-4	2-3	2-3	open	open
AMD DXL4	2-3	1-2	1-2 & 3-4	open	2-3	open	2-3
Cyrix 486DX/DX2	1-2	2-3	1-2 & 3-4	1-2	2-3	open	1-2

Table 2-2 CPU Jumper Settings

CPU	W35	W38	W40	W41	W43	W44	W45
486SX	open	3-4	4-5	3-4	1-2	open	open
486DX/DX2	open	3-4	4-5	3-4	1-2	open	open
486SL-series	1-2	3-4	4-5	3-4	1-2	open	open
Intel Write-Back Enhanced 486DX2	2-3	3-4	4-5	1-2 & 3-4	1-2	open	open
486DX4	open	3-4	4-5	3-4	1-2	open	open
Pentium OverDrive	open	2-3	1-2	3-4	1-2	open	open
AMD 486DX/DX2	open	1-2 & 3-4	4-5	open	1-2	close	1-2
AMD DXL4	open	1-2 & 3-4	4-5	open	1-2	close	open
Cyrix 486DX/DX2	open	3-4	2-3	2-3	2-3	open	open

Table 2-3 CPU Jumper Settings (Cont'd.)

Note:
If you are using a 3.3V or 4.0V processor, you will need to install a special
Power Module. See Appendix E for more information.

Table 2-4 lists the jumper settings to select the speed of the CPU installed in your system.

Speed Jumper	25MHz	33MHz (default)	40MHz
W26	open	open	close
W27	open	close	open

Table 2-4 CPU Speed Selection

Table 2-5 lists the jumper settings to select the size of the external cache.

Jumper	Function	Setting
W39	128K	1-2 & 3-4
	256K	2-3 & 4-5
W42	128K	open
	256K	close

Table 2-5 External Cache Size Selection

Table 2-6 lists the jumper settings to enable or disable the IDE controller.

Jumper	Function	Setting
W28	Enable IDE controller (default)	1-2
	Disable IDE controller	2-3

Table 2-6 Enabling the IDE Controller

Table 2-7 lists the jumper settings to enable or disable the on-board I/O controller.

Jumper	Function	Setting
W11	On-board I/O enabled (default)	open
	On-board I/O disabled	close

Table 2-7 Enabling the I/O Controller

Table 2-8 lists the jumper settings to enable or disable the game port.

Jumper	Function	Setting
W2	Game port enabled (default)	close
	Game port disabled	open

Table 2-8 Enabling the Game Port

Table 2-9 lists the jumper settings to set the parallel port for IRQ7 or IRQ5.

Jumper	Function	Setting
W5	IRQ7	1-2
	IRQ5	2-3

Table 2-9 Parallel Port IRQ Selection

Table 2-10 lists the jumper settings to select the DMA channel for the parallel port ECP/EPP mode.

DMA Channel Jumper	None (default)	DMA1	DMA3
W6	open	1-2	2-3
W10	open	1-2	2-3

Table 2-10 ECP/EPP Mode DMA Selection

Table 2-11 lists the jumper settings to select the type of video installed.

Jumper	Function	Setting
W1	Color monitor (default)	close
	Monochrome monitor	open

Table 2-11 Video Selection

Table 2-12 lists the jumper settings to enable or disable the on-board VGA controller

Jumper	Function	Setting
W14	On-board VGA enabled (default)	open
	On-board VGA disabled	close

Table 2-12 VGA Controller Selection

Table 2-13 lists the jumper settings to enable or disable VGA controller's feature connector.

Jumper	Function	Setting
W15	RAMDAC enabled (default)	open
	RAMDAC disabled/Feature enabled	close

Table 2-13 Enabling the VGA Feature Connector

Table 2-14 lists the jumper settings to enable or disable the on-board sound controller.

Jumper	Function	Setting
W4	On-board sound enabled (default)	open
	On-board sound disabled	close

Table 2-14 Enabling the On-Board Sound Controller

Table 2-15 lists the jumper settings to set the sound controller's address.

Jumper	Function	Setting
W3	On-board sound address 240 (default)	1-2
	On-board sound address 220	2-3

Table 2-15 Sound Controller Address Selection

Table 2-16 lists the jumper settings to set the sound controller's IRQ.

Jumper	Function	Setting
W7	On-board sound IRQ5 (default)	1-2
	On-board sound IRQ9	2-3

Table 2-16 Sound Controller IRQ Selection

Table 2-17 lists the jumper settings to set the sound controller's DRQ.

DRQ Setting / Jumper	DRQ0	DRQ1 (default)	DRQ3	None
W8	1-2	2-3	1-2	2-3
W9	2-3	1-2	1-2	2-3

Table 2-17 Sound Controller DRQ Selection

Table 2-18 lists the jumper settings to enable or disable the buzzer.

Jumper	Function	Setting
W20	Buzzer enabled (default)	close
	Buzzer disabled	open

Table 2-18 Buzzer Selection

Table 2-19 lists the jumper settings for BIOS operation.

Jumper	Function	Setting
W18	Flash BIOS write protected (default)	open
	Flash BIOS programmable	close

Table 2-19 BIOS Operation Selection

Table 2-20 lists the jumper setting to reset the CMOS. With the computer's power off, move the jumper to pins 2 and 3 for about five seconds and place the jumper back on pins 1 and 2.

Jumper	Function	Setting
W25	Normal Operation (default)	1-2
	Reset CMOS	2-3

Table 2-20 CMOS Reset Jumper

Table 2-21 lists reserved jumper settings. **Do not reconfigure these jumpers.**

Jumper	Function	Setting
W13	Reserved	1-2
W17	Reserved	open
W19	Reserved	1-2 & 3-4
W21	Standard 5V DRAM	open
	Micron 12V DRAM	close
W29	Reserved	2-3

Table 2-21 Reserved Jumpers

Table 2-22 lists the jumper settings for case and peripheral connections.

Jumper	Function	Notes
J15	VL IDE Connector	Primary
J16	ISA IDE Connector	Secondary
J17	Floppy Connector	
J2	VGA Connector	
J12	Parallel Port Connector	Can be disabled in CMOS.
J5	Serial Port (Com 1)	Can be disabled in CMOS.
J7	Serial Port (Com 2)	Can be disabled in CMOS.
J1	Game Port	
J4	PS/2 Keyboard	
J3	PS/2 Mouse	
J10	LAN Connector	Contact Micronics to order
J11	Modem Connector	Contact Micronics to order
J14 & J18	Power Supply Connectors	
SPKR	Speaker	Sound Controller
LINE OUT	Line Level Output	Sound Controller
LINE IN	Line Level Input	Sound Controller
MIC IN	Microphone Input	Sound Controller
J8	Audio Connector	Connect to CD-ROM
J20	Speaker Connector	1-Speaker; 2-N/C; 3-Ground; 4-5V DC
J22	Turbo LED	1-5V DC; 2- Ground
J23	Turbo Switch	
J24	Reset	
W36	HD LED	1-5V DC; 2- Ground
J19	Keylock/ Power LED	1-Power; 2-N/C; 3-Ground; 4-5V DC
J21	Power Module Connector	See Appendix E

Table 2-22 Case and Peripheral Connections