25/33/40/50MHz 80486
Turbon Main Board

MB
-1425UHT
-1433UHT
-1440UHT
-1450UHT

User's Manual

Chapter1 System Board

Chapter2 Serial and Parallel Ports

Chapter3 Troubleshooting

Features

• Hardware

Green function

- Power Down Timer from (0.25 - 512 mins.)
- Wake up by any key and user defind.

CPU

- 80486SX/DX/DX2, 80486SL, OverDriver™, P24T, DX4, Cyrix M6, Cyrix M7, AMD 486/DXLT and (Support UMC-U5: If the board is: MB-1433/50UHT-A PCB VER: 4 " or a later version.
- Provide PGA CPU, CPU socket as following:

  (1) 237-pin ZIF white socket (optional).
  (2) 237-pin PGA socket (optional).
  (3) 237-pin LIF socket (optional).

Speed

- 25/33/40/50MHz system and VESA Local Bus speed.
- Hardware and Software speed switchable function supported.
- Bus I/O clock 8MHz for maximum compatibility with add on cards.

Shadow RAM

- A memory controller that provides shadow RAM and supports 8-bit ROM BIOS.

DRAM memory

- Support (1) 1 banks 30-pin 1/4/16 MB SIMM Module sockets.

  (2) 2 banks 72-pin 1/2/4/8/16/32MB SIMM Module socket.
- Support DRAM memory up to 128MB on board.

- DRAM Type: page mode, 80ns required.

Cache memory

- Flexible Cache RAM size 128KB/256KB/512KB/1M.

Bus slots

- Provide four 16-bit ISA Bus slots, two VESA Local Bus slots and three PCI Local Bus slots.

Dimension

- 22 cm X 26 cm (W x L)

• Software

BIOS

- AWARD Legal BIOS

O.S.

- Offers the highest performance for MS/DOS, OS/2,Windows, Windows NT, Novell, etc.

System Performance

CPU Type/ Test Under Software	Landmark Ver 0.99	Landmark Ver 1.14	Landmark Ver 2.0	Power Meter MIPS Ver 1.7
486SX/DX-25MHz	130.5	114.1	83.65	11.2
486SX/DX-33MHz	167.8	151.9	111.53	14.9
486DX-40MHz	195.7	182.3	133.86	17.6
486DX-50MHz	234.9	>200	167.32	21.4
486DX2-50MHz	234.9	>200	167.32	21.8
486DX2-66MHz	293.6	>200	223.06	26.9
486DX4-75MHz	234.9	>200	272.40	30.0
486DX4-100MHz	293.6	>200	359.64	33.3

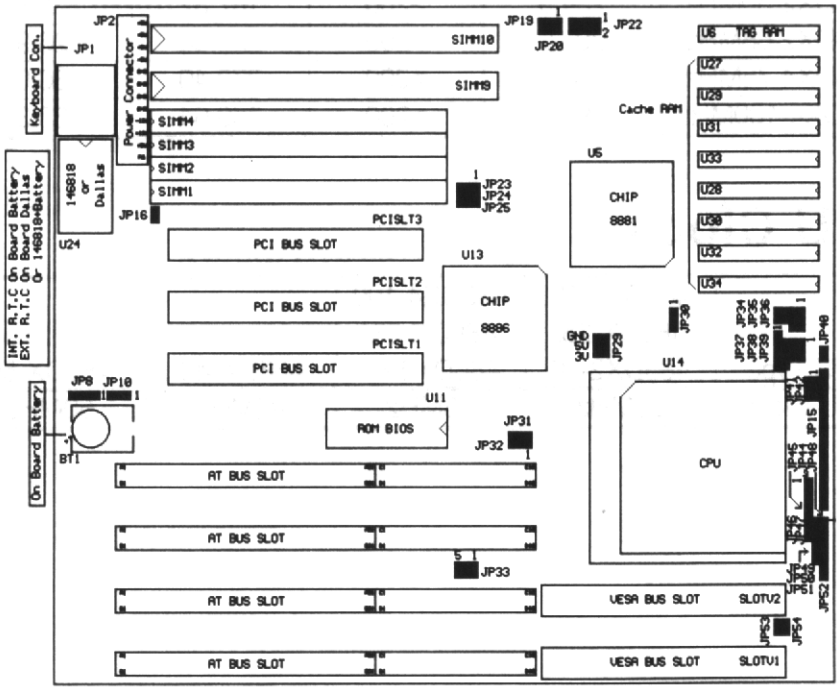
CPU Clock

CPU Type	486DX4-75 486DX-25/ 486DX2-50	486DX4-100 486DX-33/ 486DX2-66	486DX-40	486DX-50
CPU Clock	25MHz	33MHz	40MHz	50MHz

Mainboard Installation

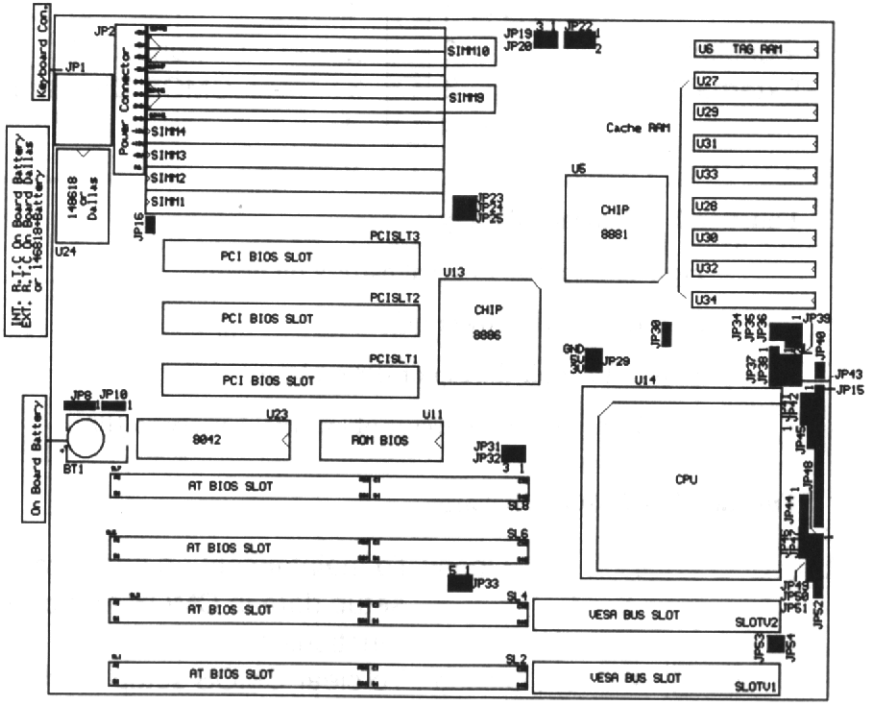
Layout of Mainboard

Model No. MB-1425/33/40/50UHT-A VER:2



Model No. MB-1425/33/40/50UHT-A VER:3

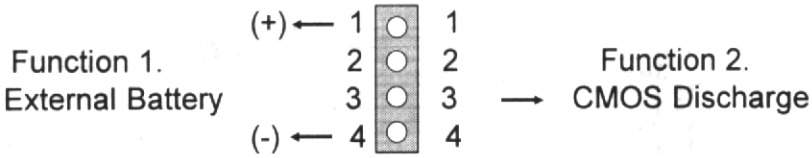
Model No. MB-1425/33/40/50UHT-A VER:4



Jumper Settings

A jumper is several pins which may or may not be covered by a plastic connector plug. A jumper is used to select different system options.

(A) JP8 This jumper has two functions, the details as the following:



Function 1. – External Battery

How to install an external battery on board:

Step 1: Turn the power off.

Step 2: Take off the cap of JP8 on board.

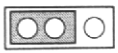
Step 3: Insert the connector of external battery to JP8.

Function 2. – CMOS Discharge

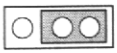
Open : To maintain set up and extended setup data in CMOS for normal functioning.

3-4 Closed : To clear CMOS setup memory, if there has been any inappropriate operation incurring the system is failure.

(B) JP10 Power Good Select (Default)



1-2 Closed : For power Supply's power good signal



2-3 Closed : For main board's power good signal

(C) JP16 Clear Password Select (Default)

Open : Normal

Closed : Clear Password

(D) JP19, JP20 CPU Select

CPU	Intel	Cyrix	AMD
JP19	1 3 1-2 closed	1 3 1-2 closed	1 3 2-3 closed
JP20	1 3 1-2 closed	1 3 2-3 closed	1 3 1-2 closed

(E) JP22, JP34, JP35, JP36 Cache RAM Size Select

Jumper No./ SRAM size	128K	256K	512K	1M
JP22	1 7 1-2 closed	1 7 1-2 , 3-4 closed	1 7 1-2 , 3-4 , 5-6 closed	1 7 1-2 , 3-4 , 5-6 , 7-8 , closed
JP34	1 3 open	1 3 open	1 3 3-4 closed	1 3 1-2 , 3-4 closed
JP35	1 3 1-2 closed	1 3 2-3 closed	1 3 2-3 closed	1 3 2-3 closed
JP36	1 3 2-3 closed	1 3 1-2 closed	1 3 1-2 closed	1 3 1-2 closed

(F) JP23,JP24,JP25,JP30,JP31,JP32 Engineer Test Pin

(G) JP29, JP49, JP50, JP51, JP52 CPU Voltage Select

Function	JP29	JP49/JP50	JP51/JP52
For 3.3 Voltage CPU (DX4 CPU)	3V 5V GND open	open	closed
For 5 Voltage CPU	3V 5V GND 3V-5V closed	closed	open

(H) JP33 System Clock Select

CPU Clock	25MHz	33MHz	40MHz	50MHz
JP33	1 5 1-2 closed	1 5 1-2 , 3-4 , 5-6 closed	1 5 1-2 , 3-4 closed	1 5 5-6 closed

(I) JP40 Hardware Power Managment Switch

Open : Defaul

Closed : Trigger For Enter SMM Mode

(J) JP48 Intel P24C Clock Multipleir:

1 3 Open : 3X Clock

1 3 1-2 Closed : 2.5X Clock

1 3 2-3 Closed : 2X Clock (For 50MHz Only)

(K) JP37, JP42, JP44, JP45, JP46, JP47 SMI Jumper Select (For "MB-1433/50UHT-A" PCB VER: 3, 4)

CPU Type	JP37	JP42	JP44
SX/DX/DX2	1 5 open	1 4 open	1 4 open
P24T	1 5 2-3, 4-5 closed	1 4 1-2 closed	1 4 1-2 closed
S-SERIAL	1 5 2-3, 4-5 closed	1 4 1-2 closed	1 4 open
CX486DX/SX	1 5 1-2, 3-4 closed	1 4 2-3 closed	1 4 2-3 closed
UMC486/AMD	1 5 open	1 4 open	1 4 open
P24D	1 5 2-3, 4-5 closed	1 4 1-2, 3-4 closed	1 4 3-4 closed

	JP45	JP46	JP47
SX/DX/DX2	1 3 open	1 4 open	1 3 open
P24T	1 3 1-2 closed	1 4 2-3 closed	1 3 2-3 closed
S-SERIAL	1 3 1-2 closed	1 4 open	1 3 open
CX486DX/SX	1 3 1-2 closed	1 4 1-2 closed	1 3 1-2 closed

CPU Type	JP45	JP46	JP47
UMC486/AMD	1 3 2-3 closed	1 4 3-4 closed	1 3 open
P24D	1 3 1-2 closed	1 4 open	1 3 open

(L) JP38, JP39, JP41 CPU Type Select (For PCB VER:3, 4)

CPU Type	JP38	JP39	JP41
DX	1 4 1-2, 3-4 closed	1 5 1-2 closed	1 4 2-3 closed
SX	1 4 2-3 closed	1 5 1-2 closed	1 4 open
SL/P24D/CX-DX	1 4 1-2, 3-4 closed	1 5 3-4 closed	1 4 2-3 closed
CX-SX	1 4 2-3 closed	1 5 3-4 closed	1 4 open
P24T	1 4 1-2, 3-4 closed	1 5 3-4, 5-6 closed	1 4 2-3 closed
UMC-U5	1 4 2-3 closed	1 5 1-2 closed	1 4 1-2 closed

* UMC-U5 : If the board is "MB-1433/50UHT-A PCB VER:4" or a later Version.

(M) JP43 **Cyrix CPU Clock Mode Select**

Open : CX=X2

Closed : CX=X1

(N) JP53 **VESA Bus Wait State Select**

Open : o Wait State

Closed : 1 Wait State

(O) JP54 **VESA Bus Timming Select**

Open : Clock <= 33 MHz

Closed: Clock > 33 MHz

Connectors

JP15	Pin No.	Assignment	Function
	1	Speaker	Speaker Connector
	2	No Connection	
	3	Ground	
	4	+5Vdc	
	5	Power LED(+)	Power LED & Keylock
	6	No Connection	
	7	Ground	
	8	Keylock	
	9	Ground	
	10	Turbo LED(-)	Turbo LED
	11	Turbo LED(+)	
	12	Reset Control	Reset
	13	Ground	
	14	Turbo Control	Turbo Switch
	15	Ground	
	16	No Connection	
	17	+5Vdc	+5V,Gnd
	18	Ground	

DRAM Installation

DRAM Access Time: 80ns, page mode

DRAM Type: 512KB/1MB/4MB/16MB SIMM Module (30Pin)

2MB/4MB/8MB/16MB/32MB SIMM Module (72Pin)

Memory Size	SIMM 1-4	SIMM 9	SIMM 10
2M	512K Module x 4pcs	—	—
2M	—	2M Module x 1pcs	—
2M	—	—	2M Module x 1pcs
4M	1M Module x 4pcs	—	—
4M	—	2M Module x 1pcs	2M Module x 1pcs
4M	—	4M Module x 1pcs	—
4M	—	—	4M Module x 1pcs
6M	1M Module x 4pcs	2M Module x 1pcs	—
6M	1M Module x 4pcs	—	2M Module x 1pcs
8M	1M Module x 4pcs	2M Module x 1pcs	2M Module x 1pcs
8M	1M Module x 4pcs	4M Module x 1pcs	—
8M	1M Module x 4pcs	—	4M Module x 1pcs
8M	—	4M Module x 1pcs	4M Module x 1pcs
8M	—	8M Module x 1pcs	—
8M	—	—	8M Module x 1pcs
16M	4M Module x 4pcs	—	—
16M	—	8M Module x 1pcs	8M Module x 1pcs
16M	—	8M Module x 1pcs	8M Module x 1pcs
16M	—	16M Module x 1pcs	—
16M	—	—	16M Module x 1pcs
24M	4M Module x 4pcs	4M Module x 1pcs	4M Module x 1pcs
24M	4M Module x 4pcs	8M Module x 1pcs	—
24M	4M Module x 4pcs	—	8M Module x 1pcs

Memory Size	SIMM 1-4	SIMM 9	SIMM 10
32M	4M Module x 4pcs	8M Module x 1pcs	8M Module x 1pcs
32M	4M Module x 4pcs	16M Module x 1pcs	—
32M	4M Module x 4pcs	—	16M Module x 1pcs
32M	8M Module x 4pcs	—	—
32M	—	16M Module x 1pcs	16M Module x 1pcs
32M	—	32M Module x 1pcs	—
32M	—	—	32M Module x 1pcs
64M	16M Module x 4pcs	—	—
64M	—	32M Module x 1pcs	32M Module x 1pcs
128M	16M Module x 4pcs	32M Module x 1pcs	32M Module x 1pcs

!! Warning !! *Each Bank can be installed and worked individually but do not supports 1MB memory size. The SIMM 1-4 must equal or above (SIMM 9 + SIMM 10) if SIMM 1-4 is used. SIMM 9 equal SIMM 10 if SIMM 9 & SIMM 10 used at the same time.The mainboard provide optimal performance and free choices depending upon your needs. The list above for DRAM configuration is just for reference.*

Cache RAM Combination

SRAM Size /Locate	**Cache RAM** U27,U29 U31,U33	**Cache RAM** U28,U30 U32,U34	**Tag RAM** U6	Cacheable Main Memory (MB)
128K	32K x 8 x 4pcs	—	8K x 8 x 1pcs	32
256K	32K x 8 x 4pcs	32K x 8 x 4pcs	32K x 8 x 1pcs	64
512K	64K x 8 x 4pcs	64K x 8 x 4pcs	32K x 8 x 1pcs	128
1M	128Kx8x4pcs	128Kx8x4pcs	64Kx8x1pcs	128

BIOS Setup

Entering Setup

Power on the computer and press **<Del>** immediately will allow you to enter Setup. The other way to enter Setup is to power on the computer, when the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press **<Del>** key or simultaneously press **<Ctrl>**, **<Alt>**, and **<Esc>** keys.

TO ENTER SETUP BEFORE BOOT PRESS CTRL-ALT-ESC OR DEL KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing **<Ctrl>**, **<Alt>**, and **<Delete>** keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP

Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press **<F1>** to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window Press **<Esc>**.

Control Keys

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in left hand
Right arrow	Move to the item in right hand
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift) F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select color backward
F3 key	Calendar, only for Status Page Setup Menu
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu