

CHAPTER 2. FEATURES

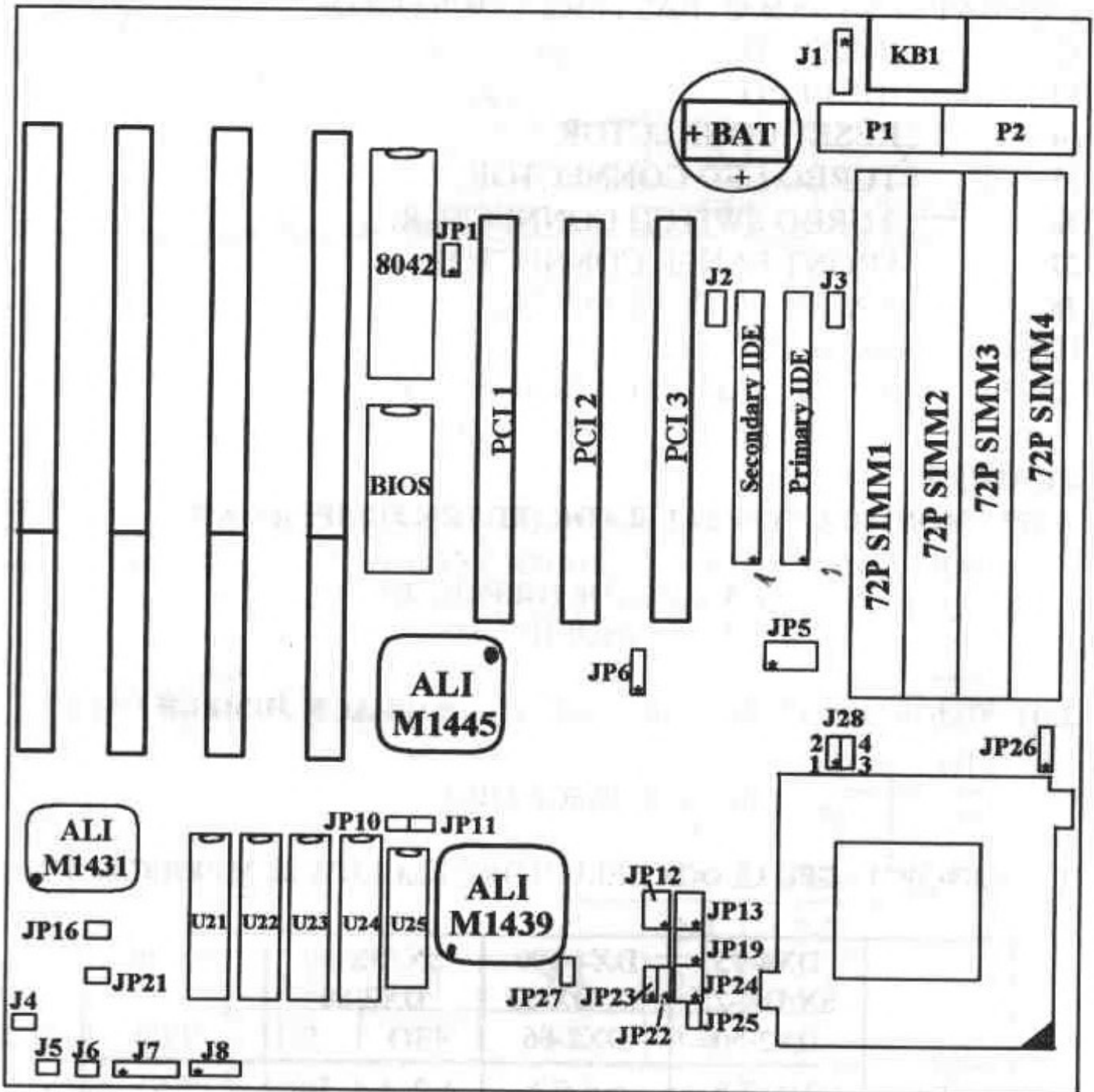
CHAPTER 2 FEATURES

2.1 SPECIFICATIONS .

CPU	: 25-100 MHz Intel/AMD/Cyrix/UMC 486SX/DX/DX2/ DX4 , 3.3V/3.45V/4V/5V CPU .
MEMORY	: 4 x 72-pin SIMM sockets.
EXP. SLOT	: 4 x ISA , 3 x PCI slots and Built-in two IDE controller.
CHIPSET	: ALI M1445, M1439, M1431
CACHE SIZE	: 128K/256K/512K .
BIOS	: AMI BIOS.
BOARD SIZE	: 22 CM x 23 CM.

CHAPTER 3. INSTALLATION

3.1 LAYOUT REFERENCE



- J4 : Reset J5 : Turbo LED J6 : Turbo Switch J7 : Keylock**
J8 : Speaker

3.2 ALI M1445 JUMPER SETTINGS

- P1+P2 : POWER CONNECTOR.
 KB1 : KEYBOARD CONNECTOR.
 EXT BAT : EXTERNAL BATTERY CONNECTOR.
 J2 : IDE2 LED
 J3 : IDE1 LED
 J4 : RESET CONNECTOR.
 J5 : TURBO LED CONNECTOR.
 J6 : TURBO SWITCH CONNECTOR.
 J7 : FRONT PANEL CONNECTOR.
 J8 : SPEAKER CONNECTOR.
 IDE1 : PRIMARY IDE CONNECTOR
 IDE2 : SECONDARY IDE CONNECTOR

JUMPER

1. JP1 : MONITOR TYPE SELECTOR (BLACK JUMPER CAP)

- 2-3 : COLOR (DEFAULT)
 1-2 : MONOCHROME

2. J1 : CMOS DISCHARGEABLE SELECTOR (BLACK JUMPER CAP)

- 1-2 : RTC DISCHARGE

3. JP5,JP6,JP21 : CPU CLOCK SELECTOR (YELLOW JUMPER CAP)

	DX4-75 SX/DX-25 DX2-50	DX4-100 SX/DX-33 DX2-66	SX/DX-40 DX2-80	DX-50
JP5	3-4, 7-8	5-6, 7-8	1-2, 3-4, 5-6	5-6
JP6	2-3	2-3	1-2	1-2
JP21	OFF	OFF	ON	ON

4. JP10, JP11 : CACHE SIZE SELECTOR (BLACK JUMPER CAP)

PLEASE SEE CHAPTER 3 SECTION 5 FOR DETAILS (PAGE 7)

5. JP26, JP28 : 3.3V/4V/5V SELECTOR (RED JUMPER CAP)

CPU VOLTAGE	Intel DX4 AMD DX4 AMD DX2 66/80 Cyrix DX2 66 (3.3V)	Cyrix DX2-80 (4V)	ALL CPU (5V)
JP26	1-2	2-3	X
JP28	OFF	OFF	1-2, 3-4

6. JP27 : AMD CPU TYPE SELECTOR ONLY FOR AMD CPU
(RED JUMPER CAP)

JP27 : ON DX2 - 66 (3.3V) / 80 (3.3/5V)
: OFF DX4-100 (3.3V) / OTHER CPU (5V)

7. CPU TYPE SELECTOR (RED JUMPER CAP)

	486SX	UMC 486SX	486DX /DX2	486DX/ DX2-SLE	Intel DX4	Cyrix DX/DX2	AMD DX/DX2 DX4
JP12	OFF	1-2	OFF	3-4	3-4	5-6	OFF
JP13	OFF	OFF	OFF	OFF	OFF	1-2	OFF
JP16	OFF	OFF	OFF	OFF	OFF	ON	OFF
JP19	1-2	1-2	1-2	3-4	3-4	5-6	1-2
JP22	OFF	OFF	2-3	2-3	2-3	2-3	2-3
JP23	1-2	1-2	2-3	2-3	2-3	2-3	2-3
JP24	OFF	1-2	OFF	3-4	3-4	5-6	OFF
JP25	OFF	OFF	OFF	ON	ON	ON	OFF

NOTE: Ⓢ IF YOU FIND "&" ON INTEL CPU PLEASE SET JUMPER AS " 486DX/DX2-SLE ".

Ⓢ THERE ARE TWO TYPES OF UMC 486 U5-40 PGA CPU, ONE IS " U5S-SUPER40 ", PLEASE SET AS "UMC 486SX MODE", THE OTHER IS "U5SD-SUPER40 YOU MUST SET AS " 486DX/DX2" MODE.

3.3 MEMORY CONFIGURATION

This section provides information on how to install the DRAM and Cache RAM. Improper installation of DRAM or Cache RAM will cause the system to shutdown.

3.4 INSTALLATION OF DRAM

There are no jumpers for the DRAM configuration. The BIOS will test the DRAM type and size automatically. All you need to do is just plug in the SIMM DRAM. There are three banks of Memory (Bank0 - Bank3) on the system board, each bank consists of 4pcs of SIMM DRAM. The SIMM DRAM can be 256K x 36, 1M x 36, 2M x 36 or 4M x 36 modules. Following are the possible combinations of the SIMM DRAM.

SIMM1	SIMM2	SIMM3	SIMM4	TOTAL
1MB	1MB	---	---	2MBytes
1MB	1MB	1MB	---	3MBytes
1MB	1MB	1MB	1MB	4MBytes
1MB	4MB	---	---	5MBytes
1MB	1MB	4MB	---	6MBytes
4MB	4MB	---	---	8MBytes
4MB	4MB	4MB	---	12MBytes
4MB	4MB	4MB	4MB	16MBytes
8MB	8MB	---	---	16MBytes
4MB	16MB	---	---	20MBytes
16MB	16MB	---	---	32MBytes
16MB	16MB	16MB	---	48MBytes
4MB	16MB	16MB	16MB	52MBytes
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5. JP26, JP28 : 3.3V/4V/5V SELECTOR (RED JUMPER CAP)

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JP27 : ON DX2 - 66 (3.3V) / 80 (3.3/5V)
: OFF DX4-100 (3.3V) / OTHER CPU (5V)

7. CPU TYPE SELECTOR (RED JUMPER CAP)

	486SX	UMC 486SX	486DX /DX2	486DX/ DX2-SLE	Intel DX4	Cyrix DX/DX2	AMD DX/DX2 DX4
JP12	OFF	1-2	OFF	3-4	3-4	5-6	OFF
JP13	OFF	OFF	OFF	OFF	OFF	1-2	OFF
JP16	OFF	OFF	OFF	OFF	OFF	ON	OFF
JP19	1-2	1-2	1-2	3-4	3-4	5-6	1-2
JP22	OFF	OFF	2-3	2-3	2-3	2-3	2-3
JP23	1-2	1-2	2-3	2-3	2-3	2-3	2-3
JP24	OFF	1-2	OFF	3-4	3-4	5-6	OFF
JP25	OFF	OFF	OFF	ON	ON	ON	OFF

NOTE: Ⓞ IF YOU FIND "&" ON INTEL CPU PLEASE SET JUMPER AS " 486DX/DX2-SLE ".

Ⓞ THERE ARE TWO TYPES OF UMC 486 U5-40 PGA CPU, ONE IS " U5S-SUPER40 ", PLEASE SET AS "UMC 486SX MODE", THE OTHER IS "U5SD-SUPER40 YOU MUST SET AS " 486DX/DX2" MODE.

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1MB	1MB	---	---	2MBytes
1MB	1MB	1MB	---	3MBytes
1MB	1MB	1MB	1MB	4MBytes
1MB	4MB	---	---	5MBytes
1MB	1MB	4MB	---	6MBytes
4MB	4MB	---	---	8MBytes
4MB	4MB	4MB	---	12MBytes
4MB	4MB	4MB	4MB	16MBytes
8MB	8MB	---	---	16MBytes
4MB	16MB	---	---	20MBytes
16MB	16MB	---	---	32MBytes
16MB	16MB	16MB	---	48MBytes
4MB	16MB	16MB	16MB	52MBytes
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3.5 CACHE RAM CONFIGURATIONS

The ALI M1445 system is very flexible in its configuration of Cache SRAM. Please refer to the Following tables.

(BLACK JUMPER CAP)

JMP	128K	256K	512K
JP10	OFF	ON	ON
JP11	OFF	OFF	ON

NOTE: PLEASE DO NOT CHANGE OR REMOVE THE DEFAULT JUMPER SETTINGS BY YOURSELF, CONTACT YOUR DEALER FOR DETAILS FIRST.

(1) 128KB Cache RAM

Bank 0 (U21,U22,U23,U24) : 32Kx8 SRAM 4pcs.

Tag RAM (U25) : 8Kx8 SRAM 1pc

(2) 256KB Cache RAM

Bank 0 (U21,U22,U23,U24) : 64Kx8 SRAM 4pcs.

Tag RAM (U25) : 32Kx8 SRAM 1pc

(3) 512KB Cache RAM

Bank 0 (U21,U22,U23,U24) : 128Kx8 SRAM 4pcs.

Tag RAM (U25) : 32Kx8 SRAM 1pc

Addendum (ALI M1445 P.I MAIN BOARD REV 1.1)

1. CPU TYPE SELECTOR (RED JUMPER CAP)

	INTEL P24D	INTEL (P24T) PENTIUM ODP	INTEL 486 ODP	AMD PLUS
JP12	3-4	3-4	3-4	3-4
JP13	5-6	OFF	OFF	3-4
JP15	ON	OFF	OFF	ON
JP16	OFF	OFF	OFF	OFF
JP18	2-3	2-3	1-2	2-3
JP19	3-4	3-4	3-4	3-4
JP22	2-3	1-2	2-3	2-3
JP23	2-3	2-3	2-3	2-3
JP24	3-4	3-4	3-4	3-4
JP25	ON	ON	ON	ON

MORE JUMPER SETTINGS FOR OTHER CPUs ,PLEASE REFER TO PAGE 5.

2. JP26, JP28 : 3V/4V/5V SELECTOR (RED JUMPER CAP)

CPU VOLTAGE	Intel /AMD/Cyrix (3V)	Cyrix DX2-80 (4V)	ALL 5V CPU PENTIUM ODP (P24T)
JP26	1-2	2-3	X
JP28	OFF	OFF	1-2, 3-4

THE CURRENT CPU TYPES COULD BE 3V , 4V OR 5V , PLEASE CHECK EXACT CPUs VOLTAGE BEFORE INSTALLATION.

3. JP5,JP6,JP21 : CPU CLOCK SELECTOR (YELLOW JUMPER CAP)

	SX/DX-25, DX2-50 DX4-75, 486 ODP-50 P24T-63	SX/DX-33, DX2-66 DX4-100, 486 ODP-66 P24T-83	SX/DX-40 DX2-80 DX4-120	DX-50
JP5	3-4, 7-8	5-6, 7-8	1-2, 3-4, 5-6	5-6
JP6	2-3	2-3	1-2	1-2
JP21	OFF	OFF	ON	ON

NOTE 1 : INTEL PENTIUM ODP (P24T) HAS ON PACKAGE REGULATION FOR CONVERSION OF THE 5V SYSTEM SUPPLY TO 3.3V SUPPLY FOR THE PROCESSOR MAINBOARD IS SET AS "5V".

NOTE 2 : AMD PLUS IS AMD'S LATEST " WRITE-BACK" TECHNOLOGY CPU_s.

NOTE 3 : WHEN INSTALL INTERNAL WRITE BACK CPU_s LIKE INTEL P24T, P24D, AMD PLUS, PLEASE ENABLE "WR-BACK " FIELD UNDER ADVANCED SETUP FROM BIOS.

4. CORRECTION FOR LAYOUT REFERENCE ON PAGE 3 :

PLEASE SWAP JUMPERS BETWEEN JP22 & JP23 ON PAGE 3 AS THE FOLLOWING LAYOUT.

