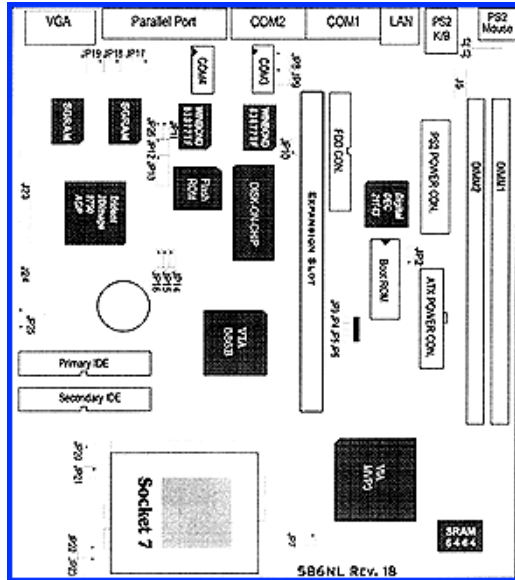


586NL SYSTEM MAINBOARD OUTLINE



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2-1 ENDAT-586NL Jumpers and Connectors

Jumpers/Connectors Overview:

Function	Jumpers
CPU: CPU Clock Frequency	JP4, JP5, JP6
CPU Ratio	JP22
CPU V-I/O Voltage	JP21
CPU Vcore Voltage	JP20
CPU Clock Strapping	JP23
Power for CPU Cooling Fan	JP20
Power Supply: Type (AT/ATX)	JP2
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VGA Adapter Dis/Enabled	JP15
LAN Adapter Dis/Enabled	JP10
COM Ports Power Selector	JP8, JP9, JP18, JP19
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DiskOnChip Memory Address	JP13
SDRAM Sync. Mode Selector	JP3
Clear CMOS	JP16
FLASH ROM Select	JP12
PS/2 Keyboard Header	J2
PS/2 Mouse Header	J3
IR	J17
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Modem Ring Detect	J24 Pin21, Pin23
HDD LED	J24 Pin12, Pin14
Hardware Reset	J24 Pin18, Pin20
External Speaker	J24 Pin2, Pin4, Pin6, Pin8
Key Lock/Power LED	J24 Pin1, 3, 5, 7, 9

Doze-LED	J24 Pin17, Pin19
Buzzer on/off	J24 Pin25, Pin26
Turbo LED for Case Panel	J24 Pin22, Pin24

Note: The cooling fan and heat sink are required for Pentium processors. Please pay attention on the direction of CPU cooling fan when install. Let the cooling ventilator direct face to the regulator heat sink which locate on (beside the CPU socket) will reduce the overheat of regulator and help the reliability of system.

JP3: SDRAM Sync. Mode Selector

Pin 1-2	PC-100
Pin 2-3	66MHz

JP4, JP5, JP6: CPU Clock Frequency Selector

JP4	JP5	JP6	CPU Clock	AGP Clock	PCI Clock
2-3	2-3	2-3	60.0MHz	60.0MHz	30.0MHz
2-3	2-3	1-2	66.8MHz	66.8MHz	33.4MHz
2-3	1-2	2-3	68.5MHz	68.5MHz	34.2MHz
1-2	2-3	2-3	75.0MHz	60.0MHz	30.0MHz
1-2	2-3	1-2	83.3MHz	66.6MHz	33.3MHz
1-2	1-2	2-3	95.2MHz	63.5MHz	31.8MHz
1-2	1-2	1-2	100.0MHz	66.6MHz	33.3MHz

JP20: CPU Vcore Voltage Selector

1-2	3-4	5-6	7-8	Vcore
Close	Close	Close	Close	3.5V
Close	Close	Close	Open	3.4V
Close	Close	Open	Close	3.3V
Close	Close	Open	Open	3.2V
Close	Open	Close	Close	3.1V
Close	Open	Close	Open	3.0V
Close	Open	Open	Close	2.9V
Close	Open	Open	Open	2.8V
Open	Close	Close	Close	2.7V
Open	Close	Close	Open	2.6V
Open	Close	Open	Close	2.5V
Open	Close	Open	Open	2.4V
Open	Open	Close	Close	2.3V
Open	Open	Close	Open	2.2V
Open	Open	Open	Close	2.1V
Open	Open	Open	Open	2.0V

JP21: CPU V-I/O Voltage Selector

JP21	V-I/O
Open All	3.3V

Close 1-3/2-4 | 3.45V

JP22: CPU Frequency Ratio Setting

Pin 1-2 (BF0)	Pin 3-4 (BF1)	Pin 5-6 (BF2)	RATIO
Close	Close	Open	2.5x
Open	Close	Open	3.0x
Close	Open	Open	2.0x
Open	Open	Open	1.5/3.5x
Close	Close	Close	4.5x
Open	Close	Close	5.0x
Close	Open	Close	4.0x
Open	Open	Close	5.5x

JP23: CPU Clock Strapping Selector

Pin1-2-3	Pin4-5-6	Pin7-8-9	CPU Ratio	
Close	1-2	5-6	7-8	60MHz, 66MHz, 75MHz
Close	2-3	4-5	8-9	100MHz

AMD

PROCESSOR	F/R	VC	Frequency			JP22 CPU Ratio			JP23			JP20 Vcore Voltage			
			JP4	JP5	JP6	1-2	3-4	5-6	1-2-3	4-5-6	7-8-9	1-2	3-4	5-6	7-8
K5-133	66*2.0	2.8	2-3	2-3	1-2	C	O	O	1-2	5-6	7-8	C	O	O	O
K5-166	66*2.5	2.8	2-3	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	O
K6-166	66*2.5	2.9	2-3	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	C
K6-200	66*3.0	2.9	2-3	2-3	1-2	O	C	O	1-2	5-6	7-8	C	O	O	C
K6-233	66*3.5	3.2	2-3	2-3	1-2	O	O	O	1-2	5-6	7-8	C	C	O	O
K6-266	66*4.0	2.2	2-3	2-3	1-2	C	O	C	1-2	5-6	7-8	O	O	C	O
K6-300	66*4.5	2.2	2-3	2-3	1-2	C	C	C	1-2	5-6	7-8	O	O	C	O
K6-300	66*4.5	2.1	2-3	2-3	1-2	C	C	C	1-2	5-6	7-8	O	O	O	C
K6-2-300	66*4.5	2.2	2-3	2-3	1-2	C	C	C	1-2	5-6	7-8	O	O	C	O
K6-2-300	100*3.0	2.2	1-2	1-2	1-2	O	C	O	2-3	4-5	8-9	O	O	C	O
K6-2-350	100*3.5	2.2	1-2	1-2	1-2	O	O	O	2-3	4-5	8-9	O	O	C	O
K6-2-380	95*4.0	2.2	1-2	1-2	2-3	C	O	C	1-2	5-6	7-8	O	O	C	O
K6-2-400	100*4.0	2.2	1-2	1-2	1-2	C	O	C	2-3	4-5	8-9	O	O	C	O

Intel

PROCESSOR	F/R	VC	Frequency			JP22 CPU Ratio			JP23			JP20 Vcore Voltage			
			JP4	JP5	JP6	1-2	3-4	5-6	1-2-3	4-5-6	7-8-9	1-2	3-4	5-6	7-8
Pentium-133	66*2.0	2.8	2-3	2-3	1-2	C	O	O	1-2	5-6	7-8	C	O	O	O
Pentium-150	66*2.5	2.8	2-3	2-3	2-3	C	C	O	1-2	5-6	7-8	C	O	O	O
Pentium-166	66*2.5	2.7	2-3	2-3	1-2	C	C	O	1-2	5-6	7-8	O	C	C	C
Pentium-180	66*3.0	2.8	2-3	2-3	2-3	O	C	O	1-2	5-6	7-8	C	O	O	O
Pentium-200	66*3.0	2.7	2-3	2-3	1-2	O	C	O	1-2	5-6	7-8	O	C	C	C
Pentium-	66*2.5	2.8	2-3	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	O

166MMX															
Pentim-200MMX	66*3.0	2.8	2-3	2-3	1-2	O	C	O	1-2	5-6	7-8	C	O	O	O
Pentim-233MMX	66*3.5	2.8	2-3	2-3	1-2	O	O	O	1-2	5-6	7-8	C	O	O	O

[\[Continues..... \]](#)



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IBM/Cyrix

PROCESSOR	F/R	VC	Frequency			JP22 CPU Ratio			JP23			JP20 Vcore Voltage			
			JP4	JP5	JP6	1-2	3-4	5-6	1-2-3	4-5-6	7-8-9	1-2	3-4	5-6	7-8
IBM CPU:															
6x86L-P166	66*2.0	2.82	2-3	2-3	1-2	C	O	O	1-2	5-6	7-8	C	O	O	O
6x86M-PR200	66*2.5	2.9	2-3	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	C
6x86M-PR233	75*2.5	2.9	1-2	2-3	2-3	C	C	O	1-2	5-6	7-8	C	O	O	C
6x86M-PR266	83*2.5	2.9	1-2	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	C
6x86M-PR300	75*3.0	2.9	1-2	2-3	2-3	O	C	O	1-2	5-6	7-8	C	O	O	C
ST 6x86-P166	66*2.0	3.52	2-3	2-3	1-2	C	O	O	1-2	5-6	7-8	C	C	C	C
CYRIX CPU:															
6x86-P166	66*2.0	3.52	2-3	2-3	1-2	C	O	O	1-2	5-6	7-8	C	C	C	C
6x86L-PR166	66*2.0	3.52	2-3	2-3	1-2	C	O	O	1-2	5-6	7-8	C	C	C	C
6x86-PR200	66*2.5	2.9	2-3	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	C
6x86MX-PR233	75*2.5	2.9	1-2	2-3	2-3	C	C	O	1-2	5-6	7-8	C	O	O	C
6x86MX-PR266	83*2.5	2.9	1-2	2-3	1-2	C	C	O	1-2	5-6	7-8	C	O	O	C
M2-233	75*2.5	2.9	1-2	2-3	2-3	C	C	O	1-2	5-6	7-8	C	O	O	C
M2-300	75*3.0	2.9	1-2	2-3	2-3	O	C	O	1-2	5-6	7-8	C	O	O	C
M2-333	83*4.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9

Win Chip

PROCESSOR	F/R	VC	Frequency			JP22 CPU Ratio			JP23			JP20 Vcore Voltage			
			JP4	JP5	JP6	1-2	3-4	5-6	1-2-3	4-5-6	7-8-9	1-2	3-4	5-6	7-8
IDT-200	66*3.0	3.52	2-3	2-3	1-2	O	C	O	1-2	5-6	7-8	C	C	C	C
IDT-225	75*3.0	3.52	1-2	2-3	2-3	O	C	O	1-2	5-6	7-8	C	C	C	C
IDT-240	60*4.0	3.52	2-3	2-3	2-3	C	O	C	1-2	5-6	7-8	C	C	C	C

Note: Without a CPU cooling fan, the CPU could be overheat and cause damage to both the CPU and the motherboard

JP2: Power Supply Type Selector

Pin 1-2	AT Power
Pin 2-3	ATX Power

JP9, JP8, JP19, JP18: DC Power Selector for COM Port

COM1: JP9 COM2: JP8	Standard RI	+12V	+5V
COM3: JP19 COM4: JP18	Close 3-4	Close 1-2	Close 5-6

Note: If user change COM3/COM4 to COM1/COM2, please disable COM1/COM2 at BIOS setting or the hardware will conflict
 Note: Please make sure your device voltage before using or it may burn out your external device when wrong voltage is choose.

JP11, JP26: COM3/COM4 IRQ Selector

JP11	COM3	JP12	COM4
1-2	IRQ5	1-2	IRQ4
2-3	IRQ3	2-3	IRQ10

Note: If change COM3/COM4 IRQ hardware setting, the BIOS setting must be followed the setting as well or the I/O will be conflict.

JP10: LAN Dis/Enable

Pin 1-2	Enabled
Pin 2-3	Disabled

JP12: Flash ROM Selector

Pin 3-5	1MB Flash ROM
Pin 1-3	2MB Flash ROM (Default)
Pin 2-4	5V Flash ROM
Pin 4-6	12V Flash ROM

JP13: DiskOnChip Memory Address Selector

JP13	Memory Address
1-2 / 7-8	0C800H V 0C9FFH
1-2 / 9-10	0CC00H V 0CDFFH
3-4 / 7-8	0DCCCH - 0D1FFH
3-4 / 9-10	0D400H V 0D5FFH
5-6 / 7-8	0D800H V 0D9FFH
5-6 / 9-10	0DC00H V 0DDFFH (Default)

JP14: CPU Cooling Fan Power Connector

Pin 1, 3	Ground
Pin 2	+12V

JP15: VGA Dis/Enable

Pin 1-2	Enabled
Pin 2-3	Disabled

JP16: CMOS Data Clear

Pin 1-2	Normal
Pin 2-3	Clear CMOS Data

JP25: Power Good source Selector

Pin 1-2	Internal Power Good
Pin 2-3	External Power Good

J5: USB Header (for USB1, USB2)

PIN	Description
1, 2	USB_VCC
3, 4	USB_DATA- (0,1)
5, 6	USB_DATA+ (0,1)
7, 8	USB_GND
9, 10	USB_GND

JP24: Header for Panel

PIN	Description
1,3,5,7,9	Power LED / Key V Lock
13,15	ATX-Power on/off Switch
17,19	Doze-LED
21,23	Modem Ring-Detect
2,4,6,8	External Speaker
12,14	Harddisk Active LED
18,20	Hardware Reset Switch
22,24	Turbo-LED(for case panel only, no function)
25,26	On-board Buzzer on/off Switch (Default: on)

Installing Riser Card**586NL Installing Riser Card (Max. 3 PCI Slot on Riser Card)**

PCI Slot No.	ADSEL	INT#	Remark
PCI 1	AD23	A, B, C, D	Free
PCI 2	AD22	B, C, D, A	Free
PCI 3	AD21	C, D, A, B	Free

PCI 4	AD24	D, A, B, C	Occupied by On-board LAN Adapter
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586CL Installing Riser Card (Max. 2 PCI Slot on Riser Card)

PCI Slot No.	ADSEL	INT#	Remark
PCI 1	AD23	A, B, C, D	Free
PCI 2	AD22	B, C, D, A	Free
PCI 3	AD21	C, D, A, B	Occupied by On-board LAN Adapter
PCI 4	AD24	D, A, B, C	Occupied by On-board LAN Adapter

There are two different riser cards can be fitted to Unicorn s Pentium All-In-One motherboard. The first one is 98pins ISA BUS riser card (traditional ISA BUS riser card) only, the second one is 188pin PCI/ISA riser card. **Please be noted that the jumpers setting of PCI/ISA riser card has to be match with the motherboard AD select**, the correct AD select for Unicorn s Pentium All-In-One motherboard is listed as above table.

Caution: Can not insert PCI BUS Add-On card into on-board expansion slot directly

APPENDIX C. CPU SPECIFICATION:

CPU Brand/Type	Frequency	Ratio	V-Core/V-I/O
AMD K6-166ALR	66MHz	2.5	2.9V / 3.3V
AMD K6-200ALYD	66MHz	3.0	2.9V / 3.3V
AMD K6-233ANR	66MHz	3.5	3.2V / 3.3V
AMD K6-266AFR	66MHz	4.0	2.2V / 3.3V
AMD K6-300AFR-66	66MHz	4.5	2.1V / 3.45V
AMD K6-2-300	100MHz	3.0	2.2V / 3.3V
AMD K6-2-350	100MHz	3.5	2.2V / 3.3V
AMD K6-2-366	66MHz	5.5	2.2V / 3.3V
AMD K6-2-380	95MHz	4.0	2.2V / 3.3V
AMD K6-2-400	100MHz	4.0	2.2V / 3.3V
INTEL-166	66MHz	2.5	2.7V / 3.3V
INTEL-200	66MHz	3.0	2.8V / 3.3V
INTEL-233	66MHz	3.5	2.8V / 3.3V
IDT-PSME200GA	66MHz	3.0	3.5V / 3.3V
IDT-PSME225GA	75MHz	3.0	3.5V / 3.3V
IDT-PSME240GA	60MHz	4.0	3.5V / 3.3V
IBM6x86 P166	66MHz	2.0	2.8V / 3.3V
IBM6x86 P200	75MHz	2.0	2.8V / 3.3V
ST 6x86 P166	66MHz	2.0	3.5V/ 3.3V
CYRIX 6x86	66MHz	2.0	3.3V or 3.5V/ 3.3V
CYRIX M2-300	75MHz	3.0	2.9V/ 3.3V
M2-PR233	75MHz	2.5	2.9V/ 3.3V
M2-PR333	75MHz	2.5	2.9V/ 3.3V

The manufacturer reserves the right to make the improvement for thistable at any time without notice in advance.