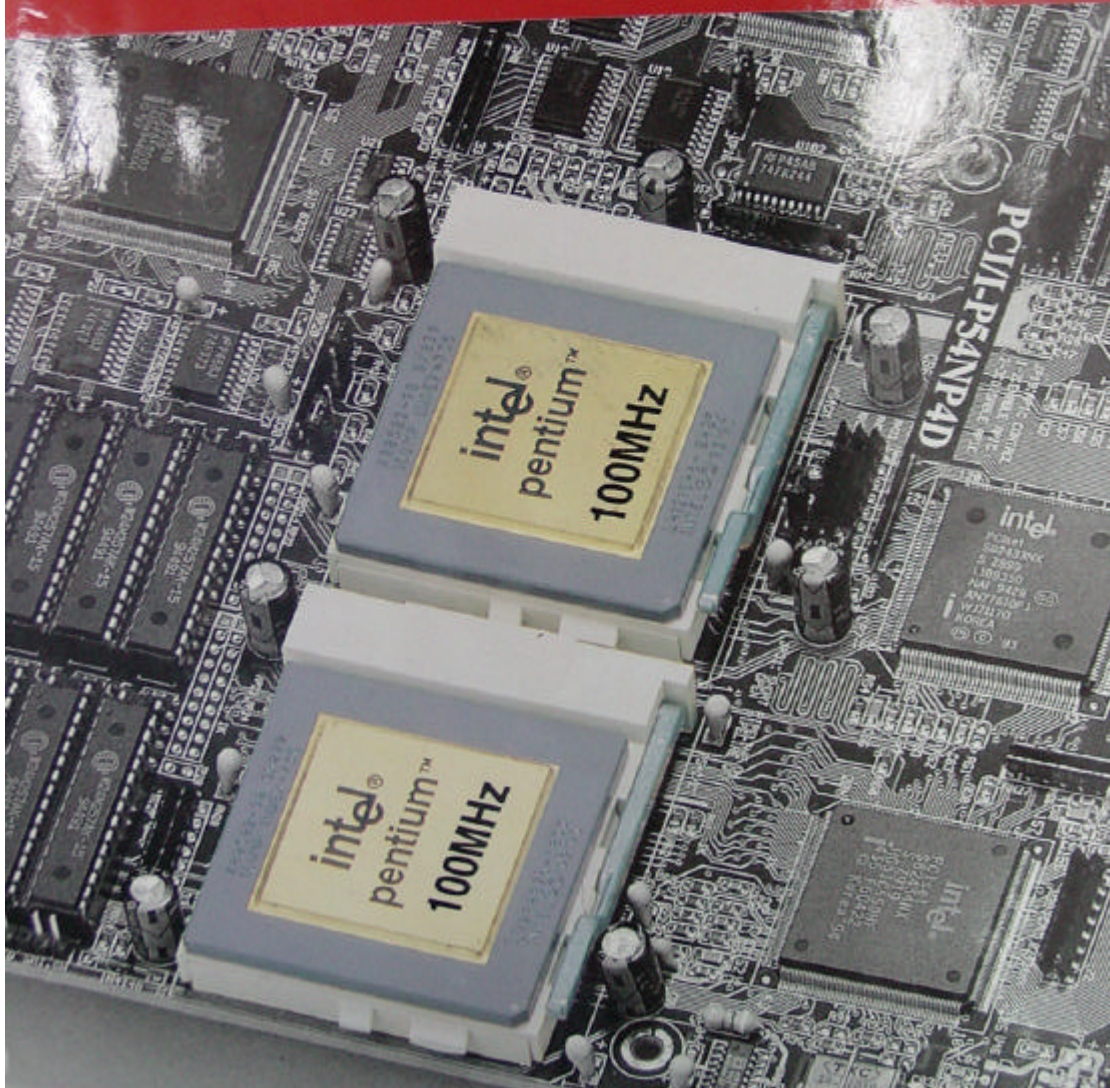


PCI/I-P54NP4D

*PCI / ISA Bus, 75/90/100MHz Dual Pentium Mainboard
With Super Multi-I/O*



Technical Summary

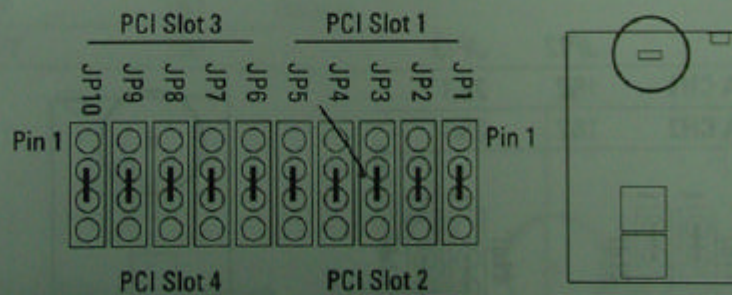
The first part of this section summarizes the mainboard's specifications and explains L2 external cache. The second part explains how to set up the optional PCI-SC200 SCSI Interface card.

Jumper Setting Summary

ISA/PCI IRQ Assignments: JP1 – 10

These assign IRQs to either the ISA slots (default) or to PCI slots with edge-triggered cards installed. Don't use these for level-triggered cards. Use the PCI Slot Configuration section in the BIOS Setup program for level-triggered cards.

	PCI Slot 1	PCI Slot 2	PCI Slot 3	PCI Slot 4
IRQ5	JP2, 1&2	JP2, 3&4	JP9, 1&2	JP9, 3&4
IRQ9	JP1, 1&2	JP1, 3&4	JP10, 1&2	JP10, 3&4
IRQ11	JP3, 1&2	JP3, 3&4	JP8, 1&2	JP8, 3&4
IRQ14	JP4, 1&2	JP4, 3&4	JP7, 1&2	JP7, 3&4
IRQ15	JP5, 1&2	JP5, 3&4	JP6, 1&2	JP6, 3&4

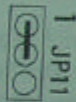
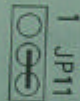
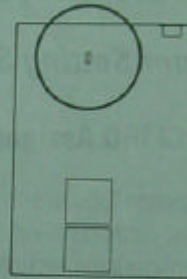


The default settings, all jumpers in the block Pins 2&3 shorted, leave the IRQs listed available for level-triggered or EISA bus expansion cards.

PS/2 Mouse Port Selector: JP11

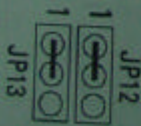
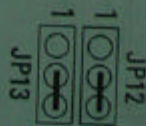
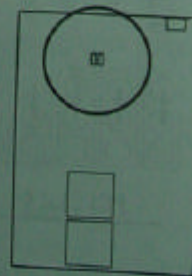
This jumper controls the on-board PS/2 Mouse lead connector. When set to Enable, the port is active and uses IRQ12.

	JP11	
Enable	1&2	Default
Disable	2&3	

**Enable****Disable****DMA Channel Selection for ECP: JP12 – JP13**

These set the DMA channel for use with the Parallel port's ECP capability. Refer to the manual for the ECP-capable device you want to connect for instructions on which DMA channel to use.

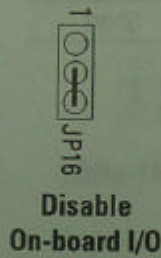
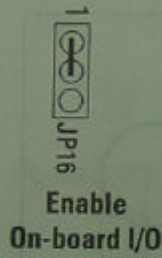
	JP12	JP13
DMA CH1	1&2	2&3
DMA CH3	1&2	2&3

**DMA CH1****DMA CH3**

On-board I/O Selector: JP16

This jumper controls the on-board Super Multi I/O chip. When set to Enable, the I/O ports on the board are active.

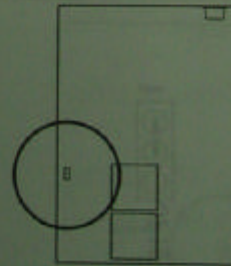
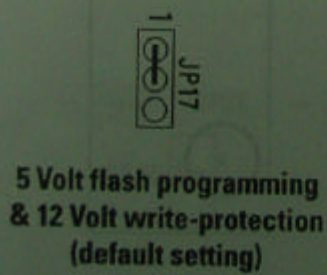
JP16		
Enable	1&2	Default
Disable	2&3	



BIOS Flash Memory Voltage Selector: JP17

This is factory-set to the 5V setting. See the FMW section in Chapter 3 for more information on this.

JP17		
5V	1&2	Default
12V	2&3	



Host Bus Frequency Selector: JP18

This jumper sets what fraction of the CPU's internal clock the external clock speed will be. The default setting for the 90MHz Pentium CPUs is for a 60MHz external clock. Later Pentium CPUs will support the 1/2 feature, which will allow a 100MHz Pentium to run with an external clock speed of either 50 or 66MHz.

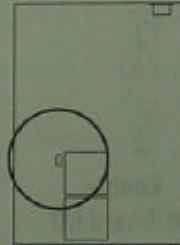
	JP18
2/3 of Internal Clock (Default)	Open
1/2 of Internal Clock	Short



2/3 Internal Clock



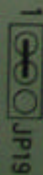
1/2 Internal Clock



Single/Dual Pentium Selector: JP19

Set this according to the number of Pentium chips installed on the mainboard.

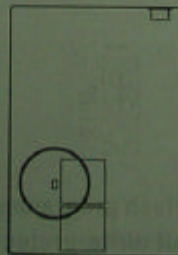
	JP19
Dual	1&2
Single	2&3



Dual



Single



Level 1 Cache Type Selector: JP20

This sets the cache type for the CPU's internal cache.

JP20

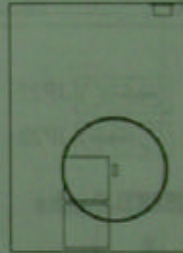
Write-Back	Open	Default
Write-Through	Short	



Write-Back



Write-Through

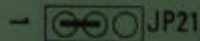


CPU to PCI Bus Clock Ratio Control Selector: JP21

This sets the ratio between the CPU's external clock speed and the speed of the PCI Bus.

JP21

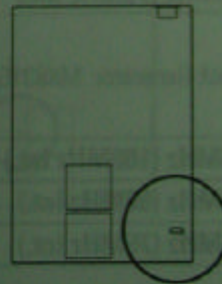
2:1 (CPU=60 or 66MHZ, PCI=30 or 33MHZ)	1&2	Default
3:2 (CPU=50MHZ, PCI=33MHZ)	2&3	



2:1 Ratio



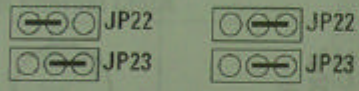
3:2 Ratio



Level 2 Cache Size: JP22 – JP23

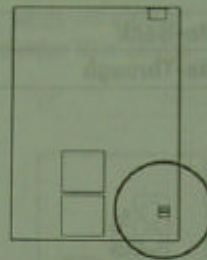
These are set based on the size of the installed cache.

	JP22	JP23
256K	1&2	2&3
512K	2&3	2&3



256KB Cache

512KB Cache



External Clock Frequency Selector: JP24 – JP26

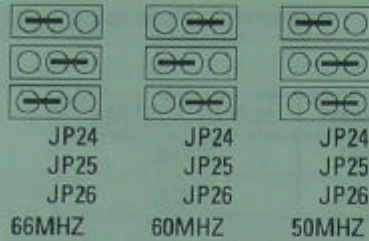
The three jumpers set the Bus Clock speed. There are two groups of settings, one each for the two clock generator chip options. If you need to change these from the current setting, check the existing setting to see which chip your board has.

Clock Generator: AV9154A-27

	JP24	JP25	JP26	
66MHz (100MHz int.)	1&2	2&3	1&2	
60MHz (90MHz int.)	2&3	1&2	2&3	Default
50MHz (75MHz int.)	1&2	2&3	2&3	

Clock Generator: MX8315

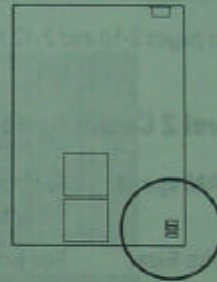
	JP24	JP25	JP26	
66MHz (100MHz int.)	2&3	1&2	2&3	
60MHz (90MHz int.)	1&2	2&3	1&2	Default
50MHz (75MHz int.)	2&3	1&2	1&2	



AV9154A-27



MX8315



Address Pipeline: JP31

This controls the address pipeline feature. The default is to turn the feature off. Use the default for dual-CPU operation. For single CPU operation, turn this on to enhance performance.

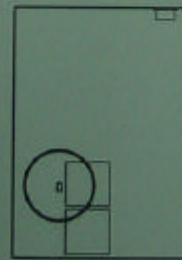
	JP31
Off (Default)	Open
On	Short

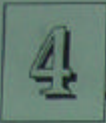


Pipeline Off



Pipeline On





PCI/I-P54NP4D User's Manual

Memory Subsystem

Memory Specifications:

See pages 2-9.

Memory Configurations

See pages 2-10 and 2-12 for chart.

Level 2 Cache Options

SRAM speed: 66MHz external clock – 12ns
50 or 60MHz external clock – 15ns

Cache Size: See jumper section for settings and next page for other specifications.

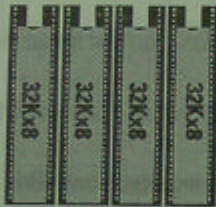
CPU Options

Types: Install in ZIF Socket 5 – Pentium P54C, CT or CM

Internal/External Clock Speeds: 90MHz/60MHz or 100MHz/66MHz

Level 2 Cache Configurations

SRAM Cache Size	Number & Size	Pin Configuration
256KB	Eight 32Kx8	28 pins/chip
512KB	Eight 64Kx8	32 pins/chip



256KB cache



512KB cache



Connectors

There are several connectors on the board for switches and indicator lights from the system case. The connectors are made of the same components as the jumper switches. There are also connectors for the on-board I/O ports and the leads from a 5-volt system power supply.

KeyLock	Connector for both a case-mounted keyboard lock. Pin 1 is live, pins 3 & 5 are grounds.
Speaker	Connector for the lead from a speaker mounted inside the system case.
Reset Switch	Connector for the lead from a Reset switch mounted on the system case.
Power LED	Connector for the lead from a case-mounted Power-On LED indicator light.
SMI Switch	Connector for the lead from a Case-mounted Suspend switch.
PS/2 Mouse	Connector for a lead from a case-mounted PS/2 mouse port.

