System Specifications

Product Features

Key features of the Safari Plus Databook include:

■ **Mainboard Bus Architecture**
32-bit PCI and 16-bit ISA

■ **Processors**
The onboard ZIF socket supports:

Intel Pentium (P54C) CPU speed 75/90/100/120/133/150/166/200MHz processors, P54CS, P54CTB as well as the Intel Pentium processor with MMX technology (P55C) CPU speed 166~233MHz.

■ **Onboard LAN Controller**
RTL 8029AS, built-in PCI interface, Ethernet NE2000 compatible, 10Mbps 10BaseT LAN controller

■ **Onboard VGA Controller**
Two options:

1. S3 86C375 (ViRGE DX/GX) VGA with onboard 2MB video RAM

2. S3 86C775 (Trio64V2/DX) with onboard 1MB video RAM (upgradable to 2MB)

■ **BIOS (Basic Input Output System)**
AWARD

■ **Floppy Disk Drives**
1.44MB (Megabytes) capacity

■ **Hard Disk Drive (Optional)**
1.2 GB or above

■ **System Memory**
from 8MB expandable to 128MB Fast Page Mode or EDO DRAM via two 72-pin SIMM sockets, including ECC memory

■ **Cache Memory**
256KB Pipeline Burst Level II cache, upgradable to 512KB

■ **Riser Card**
One PCI slot and one shared PCI/ISA slot

The maximum card cage load should not exceed +5V, 1A; +12V, 1A in combination.

■ **Input/Output Interface**
Two serial ports; one parallel port; one optional SIR interface via a 9-pin D-SUB connector which is linked by a cable to the onboard IrDA pinhead (IR_CON), two USB ports

■ **Sound Card (Optional)**
Equipped with advanced audio environment Crystal 4237 3D Full Duplex audio chip

■ **CD-ROM Drive**
12.7mm Slim 20X/24X CD-ROM drive with a 50-pin connection cable and adaptor

Technical Specifications

■ **Dimensions**
250 x 310 x 75 mm

■ **Power Supply**
100 to 240 VAC (Universal input), 50 to 60Hz, 80 Watt

■ **Environment Air Temperature**
Operating: 5 ^{o}C to 35 ^{o}C / Storage: –29 ^{o}C to 65 ^{o}C

Under the normal operating room temperature of 25^{0}C, the system allows the installation and usage of two pieces of add-on cards. In case the system's operating room temperature rises to 35^{0}C, it is imperative that only the upper or first ISA/PCI slot be used to maintain the system's optimal performance.

■ **System Operating Environment**

The recommended system operating room temperature is between 5^0C and 35^0C. Due to the size, the system is not intended to function as a workstation or server (never to be powered off or to remain powered on for extended periods of time). In the event that the system is to function as a workstation or server, it is imperative that periodic inspection of the CPU fan and the power supply fan be undertaken. Please consult the local dealer for more information.

■ **Humidity**

Operating: 0 % to 80 % / Storage: 0 % to 95 %

Note: *In order to maintain the system's optimal performance by aiding in it's heat dissipation, and to save valuable working space on your desktop, it is advised that the system be placed in a vertical position (with the CD-ROM drive positioned underneath the floppy disk drive) as opposed to the conventional horizontal position. (See the following figure.)*
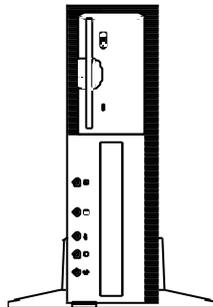
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System Jumpers and Connectors

Jumpers

Jumpers are used to select the operation modes for the system. Some jumpers on the mainboard have three metal pins with each pin representing a different function. To **set** a jumper, a black cap containing metal contacts is placed over the jumper pins according to the required configuration. A jumper is said to be **shorted** when the black cap has been placed on one or two of its pins. The types of jumpers used in this Manual are shown below:

Jumper Cap   3-pin Jumper   2-pin Jumper   Jumper Block
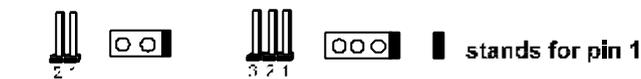
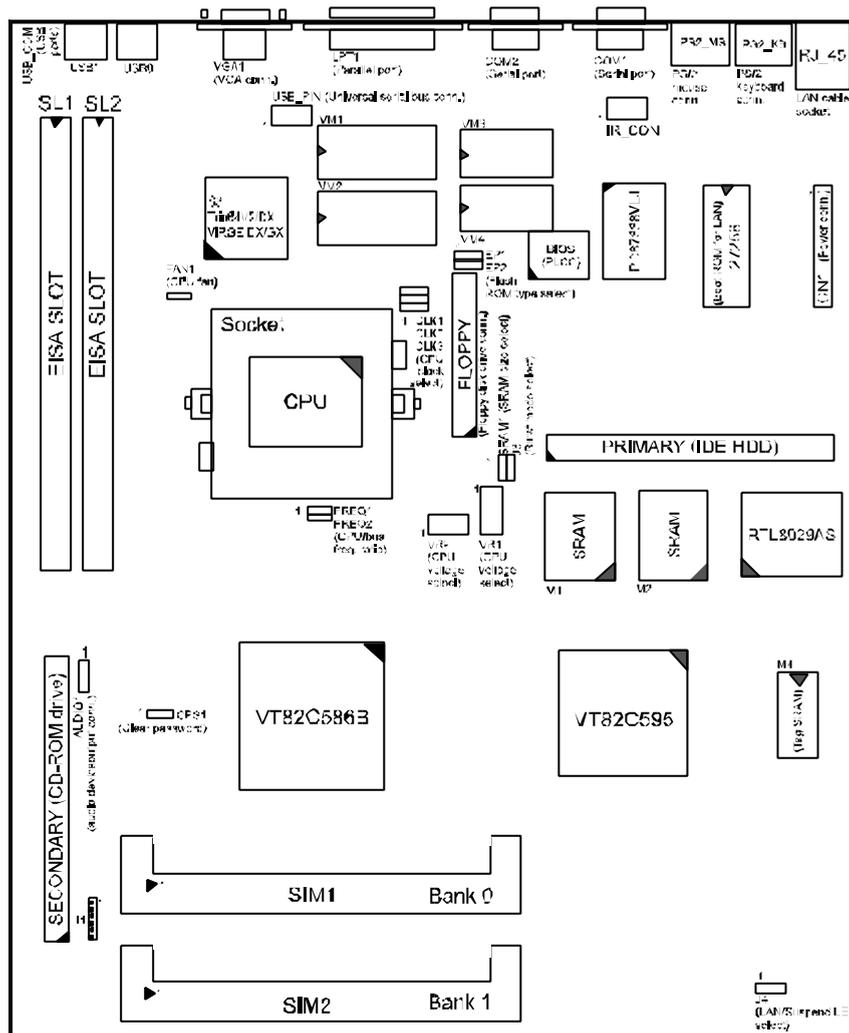Jumpers are shown as above

Jumper cap is shown as above

Jumpers in a Block

> *Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.*
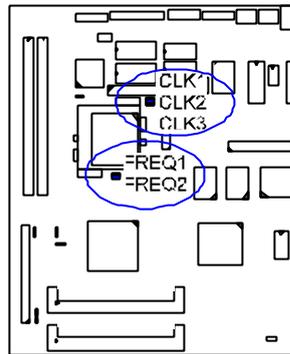
Mainboard Layout

CPU External Clock (Bus) Frequency: CLK1, CLK2, CLK3

The table below shows the jumper settings for the different CPU speed configurations.

| CPU Speed	CLK1	CLK2	CLK3
75 MHz			
66 MHz			
60 MHz			
55 MHz			
50 MHz			

CPU to Bus Frequency Ratio: FREQ1, FREQ2

These two jumpers are used in combination to decide the ratio of the internal frequency of the CPU to the Bus clock.

Ratio	FREQ1	FREQ2
3.5 x		
3 x		
2.5 x		
2 x		
1.5 x		

Intel Pentium CPUs

Frequency

CPU Speed	External (CPU/CLK)	CLK1	CLK2	CLK3	CPU Clock Rate		
					Internal	FREQ1	FREQ2
233 MHz	66 MHz		1	1	3.5 x Ext.	1	
200 MHz	66 MHz	1	1	1	3 x Ext.	1	1
166 MHz	66 MHz	1	1	1	2.5 x Ext.	1	1
150 MHz	60 MHz	1	1	1	2.5 x Ext.		1
133 MHz	66 MHz	1	1		2 x Ext.	1	1
120 MHz	60 MHz	1	1	1	2 x Ext.	1	1
100 MHz	66 MHz	1	1	1	1.5 x Ext.	1	1
90 MHz	60 MHz	1	1	1	1.5 x Ext.	1	1
75 MHz	50 MHz	1	1	1	1.5 x Ext.	1	1

Voltage

VR1   VR2

1 2
3 4
5 6
7 8
9 10

2 4 6 8
1 3 5 7
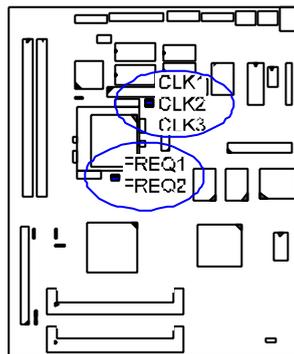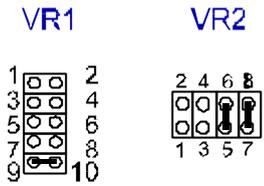
Core : 3.4V-3.6V
IO   : Same
P54C VRE

1 2
3 4
5 6
7 8
9 10

2 4 6 8
3 5 7
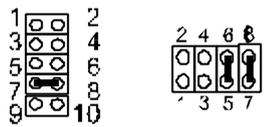
Core : 3.3V
IO   : Same
P54C STD

1 2
3 4
5 6
7 8
9 10

2 4 6 8
1 3 5 7
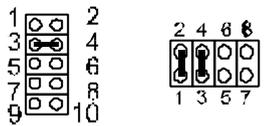
Core : 2.8V
IO   : 3.3V
P55C

Intel Pentium CPU
Bottom Side Marking

XXXXXXXXXX
XXXXXXXXXX
BP80502-SSS
SXXXX/RSS
XXX
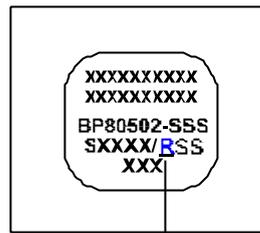
R (Identifier for Voltage Range) :
    V for VRE Voltage Range
    or
    S for Standard Voltage Range
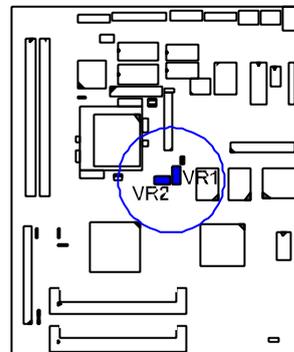
System Jumpers

CPS1 Clear password	▣ Enable	▣ Disable (Default)
J3 Burst mode selection	▣ Intel burst mode (Default) For *Intel Pentium CPUs*	▣ Linear burst mode
J4 LAN/Suspend LED selection	▣ LAN LED	▣ Suspend mode LED (Default)
J5 Onboard VGA Feature	▣ Enable (Default)	▣ Disable
J6 Display Data Channel (DDC) Standard Monitor	▣ Enable (Default)	▣ Disable
SRAM1 SRAM size selection	▣ 256K (Default)	▣ 512K

2M Flash ROM	EP1	EP2
SST 29EE020	▣	▣
ATMEL AT29C020	▣	▣
MXIC MX28F2000P	▣	▣

1M Flash ROM	EP1	EP2
SST 29EE010	▣	▣
ATMEL AT29C010A	▣	▣
MXIC MX28F1000PQC	▣	▣

Connectors

AUDIO1	Audio resource
CN1	Power resource
FAN1	CPU fan
FLOPPY	Floppy diskette drive
PRIMARY	IDE device
SECONDARY	CD-ROM drive
J1	1 *ground* 2 *reset* 3 *power LED* 4 *IDE device LED* 5 *LAN/suspend LED (refer to J4)* 6 *suspend mode switch*
SL1 **SL2**	Audio card slot Riser card slot
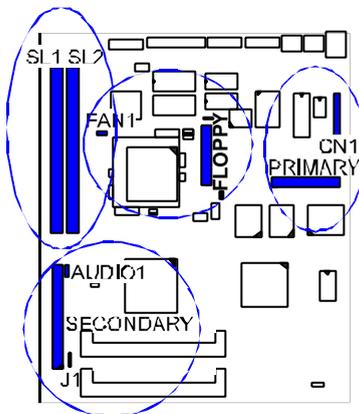
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Driver Utilities

The Driver Utility Diskettes

For Sound Card

1. Sound Driver (Win 95)

2. Sound Driver Win NT 4.0 / Win NT 3.5

3. Sound Driver OS/2

4. Crystal Soft Synthesizer Wavetable (optional)

For VGA (S3 Trio64V2/DX) – option 1

S3 Trio64V2/DX Driver

For VGA (S3 ViRGE DX/GX) – option 2

S3 ViRGE DX/GX Driver

For CD-ROM Drive

1. Mitsumi SR201S 20X CD-ROM drive device driver

2. Matsushita UJDA110 20X CD-ROM drive device driver

3. Toshiba XM-1702B 24X CD-ROM drive device driver

4. Matsushita UJDA150L 24X CD-ROM drive device driver

For LAN

RTL 8029AS LAN driver

Note: *Make backup copies of the original disks and use the backup ones.*

LAN Controller Driver

The LAN controller utility disks provide the necessary information and the utilities allowing you to connect with the network environment. These disks include all the driver installation programs supported by the adapter.

The controller driver software utilities are located in the different subdirectories. It contains a driver program and the corresponding README.TXT file. Please read them for the driver installation procedures.

Setup Procedures for Diskless LAN Station

Enter the BIOS SETUP, under the Chipset Features Setup section, select and enable the item Remote Boot From NE2000.

The following suggestions provide a way of modification that allows the system to share the resources of the server.

Setup 1: Enter the commands below on the file server – (In this example, the server's LAN card is NE2000.)

1. SERVER (Enter)
2. LOAD NE2000 FRAME=ETHERNET 802.2
3. BIND IPX TO NE2000
4. LOAD RPL
5. BIND RPL TO NE2000

Setup 2: Place the following commands into the AUTOEXEC.BAT file

set comspec=f:\login\command.com

lsl

pciodi

ipxodi

netx622

The bootable disk must contain the following files –

command.com   autoexec.bat

lsl.com   pciodi.com (provided by REALTEK)

ipxodi

netx622.exe   (based on MS DOS Ver. 6.22 in this case)

Setup 3: Execute the following commands on the system –

1.   f: \SYSTEM\DOSGEN A: (Enter)
     (The fileserver creates NET$DOS.SYS)

2.   copy a:\NET$DOS.SYS   f: \PUBLIC (Enter)

3.   copy f:\PUBLIC\NET$DOS.SYS   f:\login (Enter)

4.   copy a:\command.com   f: \login (Enter)

5.   Reboot the system (not with drive C: or A:)

6.   f:\login\login (supervisor's ID)

Sound/VGA Software Drivers and Utilities

Before running any utility or installing any driver, you should have an understanding about functions such as disk formatting, copying, file deletion, and so on.

The system supplies drivers for DOS and Windows-based programs. The drivers will help you utilize and enhance the system's audio and video subsystem.

The drive disks contain README (or README.TXT) files that are accessible through any word processor.

Please read the READ.ME (or README.TXT) files of the driver disks for installation instructions and news about recent updates. Software drivers for other operating systems may be available in the future or upon request.