

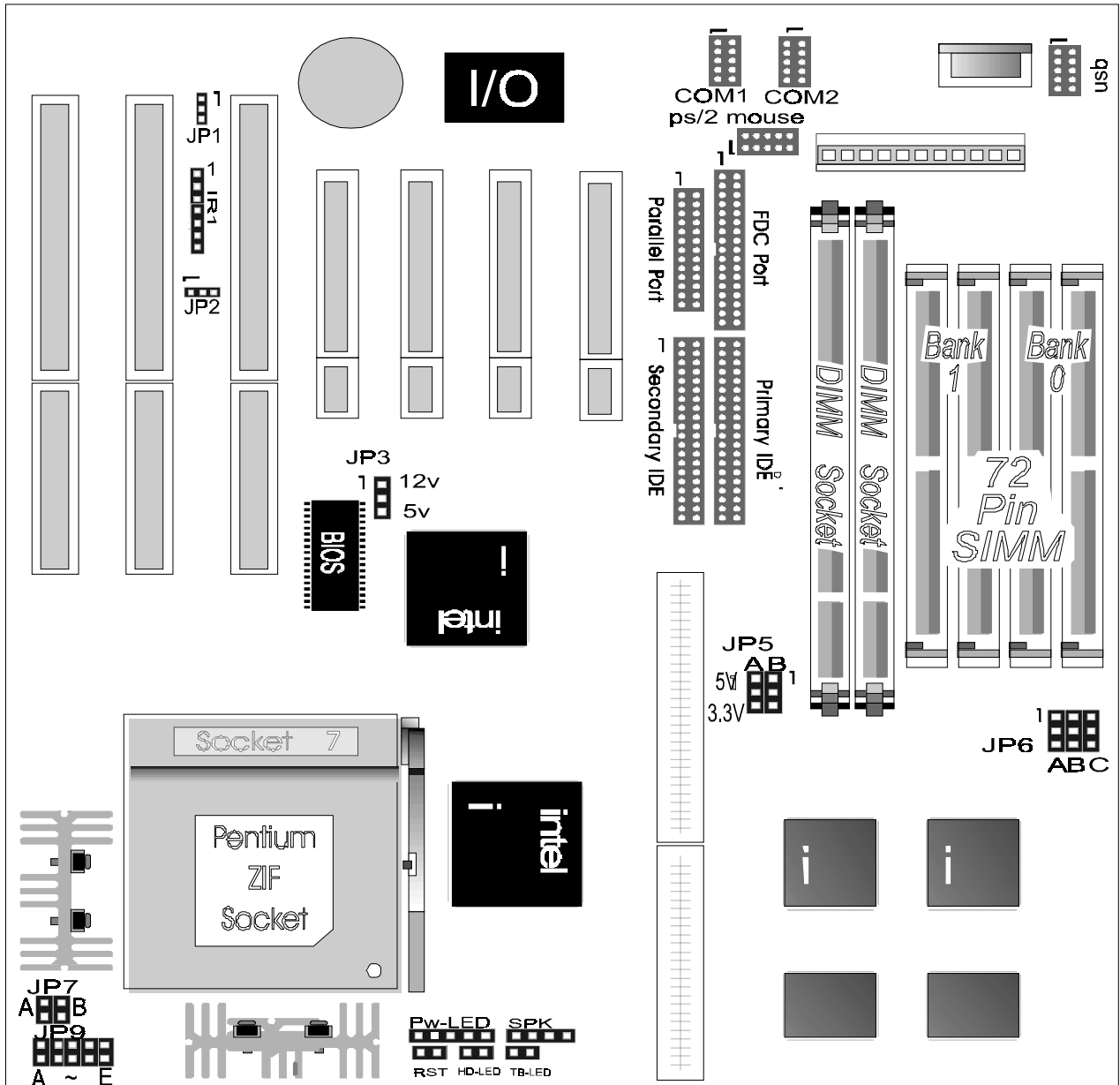
Installation Procedures

This chapter explains how to configure the EM-5900V mainboard's hardware. Before you install the mainboard, make sure you are working with an unplugged mainboard. Many components powered by low voltage current, but there still may be a dangerous electric current coming from the leads and power supply.

To set up your computer, you should follow these installation steps:

- Step 1 -
Set system jumpers
- Step 2 -
Install System RAM modules
- Step 3 -
Install the CPU
- Step 4 -
Install expansion cards
- Step 5 -
Connect cables and power supply
- Step 6 -
Set up BIOS feature (Please read Chapter Three.)

Mainboard Layout



1). Jumper setting

Jumpers

Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins with each pin representing a different function. To “set” a jumper, a black or white cap containing metal contacts is placed over the jumper pin/s 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.

NOTE : Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

Symbols



Pins 1 and 2 shorted with a jumper cap.



Pin 2 and 3 are shorted with jumper cap.



The jumper is open



Pin 1 and 2 are shorted with jumper cap

J4 Power Supply Connector

Pin	Description	Pin	Description
1	Power Good	7	Ground
2	+5V/DC	8	Ground
3	+12V/DC	9	-5V/DC
4	-12V/DC	10	+5V/DC
5	Ground	11	+5V/DC
6	Ground	12	+5V/DC

COM 1	Serial Port #1
COM 2	Serial Port #2
PRN	Parallel Port
IDE 1	Primary IDE Port
IDE 2	Secondary IDE Port

J2 Keyboard Connector

Pin	Description
1	KB Clock
2	KB Data
3	N.C.
4	Ground
5	+5VDC

USB1 Universal Serial BUS Connector

Pin	Description	Pin	Description
1	+5VDC	1	+5VDC
2	Data -	2	Data -
3	Data +	3	Data +
4	Ground	4	Ground
5	N.C	5	N.C

J8 HDD LED Connector

<i>Pin</i>	<i>Description</i>
1	+5V
2	Active Low

System Reset

<i>Pin</i>	<i>Description</i>
1	Ground
2	Reset

Power LED & Keylock

<i>Pin</i>	<i>Description</i>
1	LED Output
2	N.C.
3	Ground
4	Keylock
5	Ground

Speaker

<i>Pin</i>	<i>Description</i>
1	Data Output
2	N.C.
3	Ground
4	+5V

JP1-Clear CMOS

<i>JP1</i>	<i>Description</i>
Open	Normal (Default)
Close	Clear CMOS

JP3-Flash ROM

<i>JP3</i>	<i>Description</i>
P1,P2	12V Flash ROM (Default)
P2,P3	5V Flash ROM

JP2-AT BUS Clock

<i>JP2</i>	<i>Description</i>
P1,P2	PCI Clk/4(Default)
P2,P3	PCI Clk/3

JP5-Dimm Module Voltage

<i>JP5</i>	<i>5V</i>	<i>3.3V</i>
A	P1,P2	P2,P3
B	P1,P2	P2,P3

JP6A,B,C-CPU Speed Selectors

Jumper JP6	50Mhz	55Mhz	60Mhz	66Mhz	75Mhz
A	P2,P3	P1,P2	P2,P3	P1,P2	P1,P2
B	P2,P3	P1,P2	P1,P2	P2,P3	P1,P2
C	P1,P2	P2,P3	P1,P2	P1,P2	P1,P2

JP7A,B-CPU Internal Clock Speed Selectors

Jumper JP7	X 1.5	X 2.0	X 2.5	X 3.0
A	Open	Close	Close	Open
B	Open	Open	Close	Close

JP9-CPU Voltage Selectors

Jumper JP9	3.5V	2.9V	2.7V	3.3V
Position	A	B	C	D

* All Open for 2.5V

J3-PS/2 Mouse Connector

Pin	Description
1	Mouse Clock
2	GND
3	N.C.
4	Mouse Data
5	N.C.
6	N.C.
7	N.C.
8	+5VDC

IR1-Infra Red Connector

Pin	Description
1	RD(LO)
2	GND
3	TD
4	VCC
5	RD(HI)
6	VCC
7	GND

Memory Installation

TOTAL MEMORY	SIMM 1 & 2 (72-PIN X 2)	SIMM 3 & 4 (72-PIN X 2)	DIM1 (168-PIN X 1)	DIM2 (168-PIN X 1)
8MB	4Mx2	None	None	None
16MB	8Mx2	None	None	None
32MB	16Mx2	None	None	None
64MB	32Mx2	None	None	None
8MB	None	4Mx2	None	None
16MB	None	8Mx2	None	None
32MB	None	16Mx2	None	None
64MB	None	32Mx2	None	None
8MB	None	None	8MB	None
16MB	None	None	16MB	None
32MB	None	None	32MB	None
64MB	None	None	64MB	None
8MB	None	None	None	8MB
16MB	None	None	None	16MB
32MB	None	None	None	32MB
64MB	None	None	None	64MB
16MB	4Mx2	4Mx2	None	None
32MB	8Mx2	8Mx2	None	None
64MB	16Mx2	16Mx2	None	None
128MB	32Mx2	32Mx2	None	None
16MB	None	None	8MB	8MB
32MB	None	None	16MB	16MB
64MB	None	None	32MB	32MB
128MB	None	None	64MB	64MB

(Continue)

TOTAL MEMORY	SIMM 1 & 2 (72-PIN X 2)	SIMM 3 & 4 (72-PIN X 2)	DIM1 (168-PIN X 1)	DIM2 (168-PIN X 1)
16MB	4Mx2	None	None	8MB
32MB	8Mx2	None	None	16MB
64MB	16Mx2	None	None	32MB
128MB	32Mx2	None	None	64MB
16MB	None	4Mx2	8MB	None
32MB	None	8Mx2	16MB	None
64MB	None	16Mx2	32MB	None
128MB	None	32Mx2	64MB	None
24MB	None	8Mx2	8MB	None
32MB	None	8Mx2	16MB	None
48MB	None	8Mx2	32MB	None
80MB	None	8Mx2	64MB	None
24MB	8Mx2	None	None	8MB
32MB	8Mx2	None	None	16MB
48MB	8Mx2	None	None	32MB
80MB	8Mx2	None	None	64MB
40MB	16Mx2	4Mx2	None	None
48MB	16Mx2	8Mx2	None	None
64MB	16Mx2	16Mx2	None	None
96MB	16Mx2	32Mx2	None	None
40MB	None	16Mx2	8MB	None
48MB	None	16Mx2	16MB	None
64MB	None	16Mx2	32MB	None
96MB	None	16Mx2	64MB	None

(Continue)

TOTAL MEMORY	SIMM 1 & 2 (72-PIN X 2)	SIMM 3 & 4 (72-PIN X 2)	DIM1 (168-PIN X 1)	DIM2 (168-PIN X 1)
40MB	16Mx2	None	None	8MB
48MB	16Mx2	None	None	16MB
64MB	16Mx2	None	None	32MB
96MB	16Mx2	None	None	64MB
72MB	32MBx2	4Mx2	None	None
80MB	32MBx2	8Mx2	None	None
96MB	32MBx2	16Mx2	None	None
128MB	32MBx2	32Mx2	None	None
72MB	32MBx2	None	None	8MB
80MB	32MBx2	None	None	16MB
96MB	32MBx2	None	None	32MB
128MB	32MBx2	None	None	64MB
72MB	None	32MBx2	8MB	None
80MB	None	32MBx2	16MB	None
96MB	None	32MBx2	32MB	None
128MB	None	32MBx2	64MB	None

Notes:

1. Bank0(SIMM1,2) and DIM1 the two types DRAM module can not be used at the same time.
2. Bank1(SIMM3,4) and DIM2 the two types DRAM module can not be used at the same time.
3. All SIMMs and DIMM module speed must faster than 70ns
4. Synchronous DRAM (JP7) Must set to 3.3V position

