SYSTEM BOARD D1115

ADDITIONAL TECHNICAL MANUAL

FUJITSU COMPUTERS SIEMENS

Is there ...

... any technical problem or other question you need clarified?

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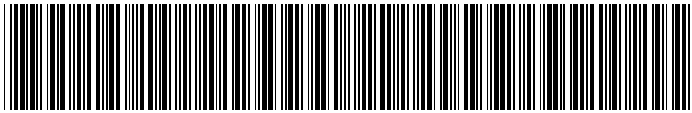

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English

System Board D1115

Additional Technical Manual

December 1999 edition

Contents

Introduction

This system board is available in different configuration levels. Depending on the hardware configuration of your device, it may be that you cannot find several options in your version of the system board, even though they are described.

You may find further information e. g. in the complete Technical Manual for the system board and in the description "BIOS Setup".

Further information to drivers is provided on the supplied drivers diskettes or on the "Drivers & Utility" or "ServerStart" CD. For detailed information please look at chapter "Installing drivers and utilities".

Features

This table shows an assembly version of this system board as example.

Function	**Version**	
	F1x	**G1x**
Processor	Pentium II or Celeron	Pentium II or Celeron
Max. CPU Frequency	450 MHz	500 MHz
Chipset	440 BX	440 ZX
DIMM sockets	2	2
Main memory up to	512 Mbyte	256 Mbyte
ISA slots	0	0
PCI slots	2	2
ISA/PCI shared	1	1
AGP Port	1	1
System monitoring	- -	- -
Thermal Management	- -	- -
Wake On LAN (WOL)	- -	- -
Keyboard On	- -	- -
IrDA	- -	- -
Chipcard Reader	- -	- -
Save to Disk	X	X
Save to RAM	- -	- -
IAPC	- -	- -

Computer mainboards and components contain very delicate IC chips. To protect them against damage caused from electric static, you have to follow some precautions:

- Unplug your computer when you work inside.
- Hold components by the edge, don't touch their leads.
- Use a grounded wrist strap.

Place the mainboard and the components on a grounded antistatic pad whenever you work outside the computer.

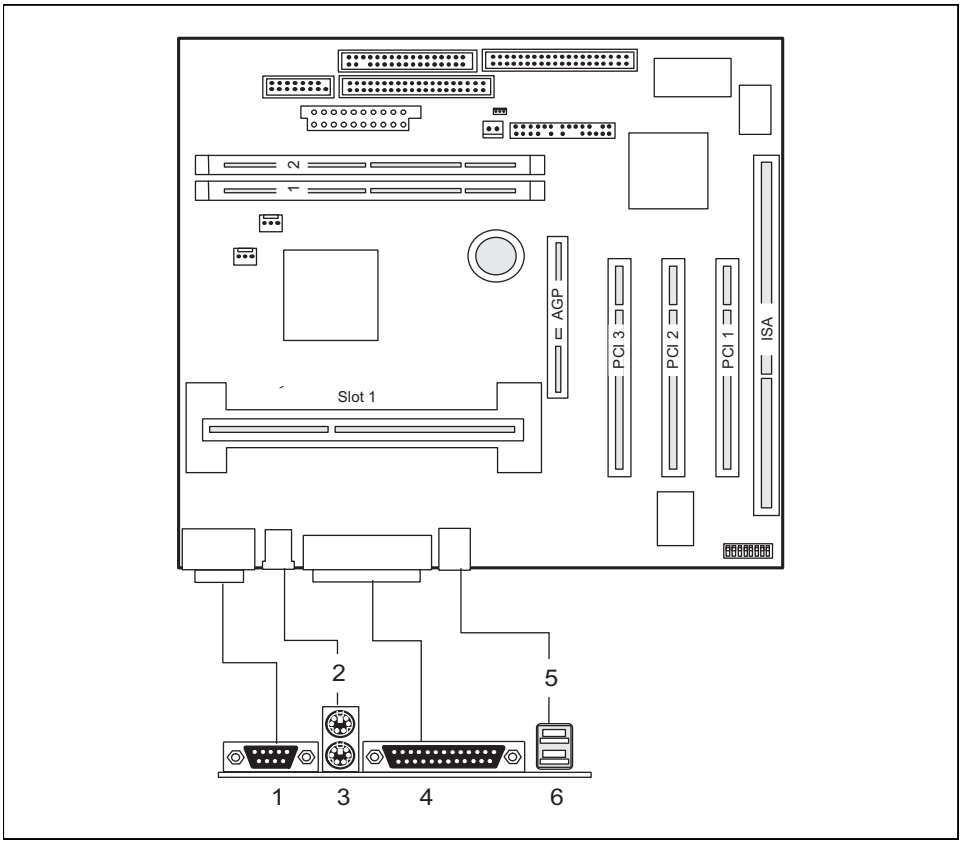
Once you have installed the system board, you should remove the battery protection (i.e. the thin plastic plate between battery and contact spring).

Mechanics

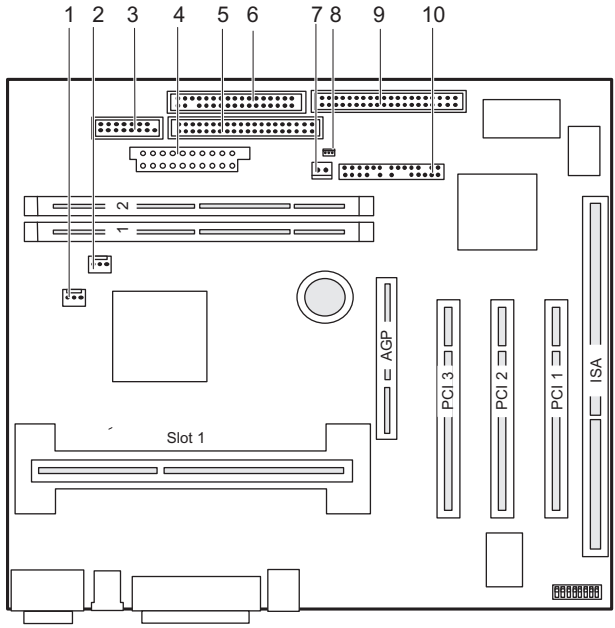
Layout

µ-ATX 9,6" x 8" (243,84 mm x 203,2 mm)

Some of the following connectors are optional and may therefore not be included on your mainboard.



1 = Serial port 1
2 = PS/2 mouse port
3 = PS/2 keyboard port
4 = Parallel interface
5 = USB connection 2
6 = USB connection 1



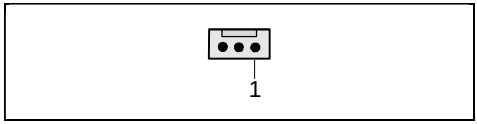
1 = Fan (e. g. for the processor)
2 = Fan (e. g. for the processor)
3 = Serial port 2
4 = Power supply
5 = IDE drives 3 and 4 (secondary)
6 = Floppy disk drive
7 = ON/OFF switch
8 = Wake On LAN (WOL)
9 = IDE drives 1 and 2 (primary)
10 = Front panel connector

The components and connectors marked do not have to be present on the system board.

Connectors and Jumpers

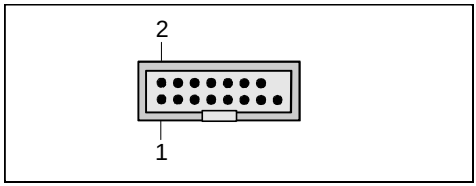
Some of the following connectors are optional!

CPU Fan connector



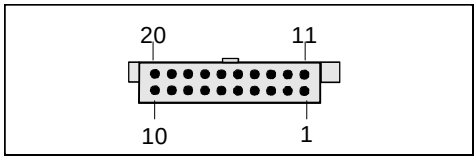
Pin	Signal	Notes
1	GND	
2	Fan power supply	
3	Not connected	

Internal serial (COM2) port (external via wire)



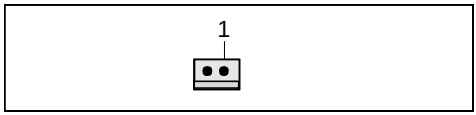
Pin	Signal	Notes
1	DCD 2 (low asserted)	
2	DSR 2 (low asserted)	
3	SIN 2 (high asserted)	
4	RTS 2 (low asserted)	
5	SOUT 2 (high asserted)	
6	CTS 2 (low asserted)	
7	DTR 2 (low asserted)	
8	PC_ON_Strobe	
9	GND	
10	VCC Auxiliary	
11	EXT SMI (low asserted)	
12	VCC	
13	RESETDRV (high asserted)	
14	GND	
15	GND	
16	Key	

Power supply ATX connector



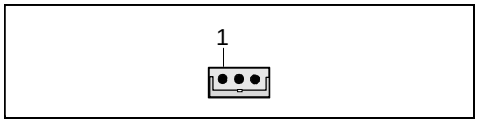
Pin	Signal	Notes
1	+3.3 V	
2	+3.3 V	
3	GND	
4	+5 V	
5	GND	
6	+5 V	
7	GND	
8	Powergood (high asserted)	
9	+5 V Auxiliary	
10	+12 V	
11	+3.3 V	
12	-12 V	
13	GND	
14	PS on (low asserted)	
15	GND	
16	GND	
17	GND	
18	-5 V	
19	+5 V	
20	+5 V	

Power on switch connector (ON/OFF switch)



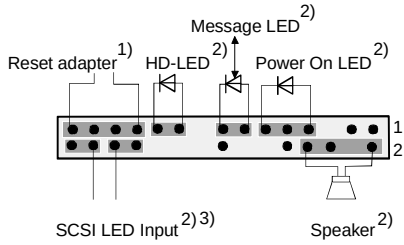
Pin	Signal	Notes
1	GND	
2	Power on pulse (low asserted)	

Wake on LAN (WOL) connector



Pin	Signal	Notes
1	+5 V Auxiliary	
2	GND	
3	Wake pulse (high asserted)	

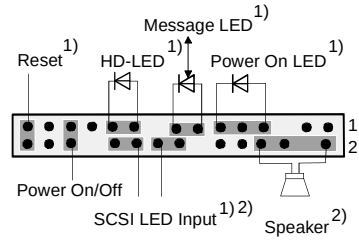
Front panel connector (version 1)



1) Reset adapter from 4pin female to 2pin male.
2) Cable is not included in the delivery scope.
3) The same interface.

Pin	Signal	Pin	Signal
1	Reserved	2	Speaker
3	Anode Standby LED	4	Key
5	Key	6	GND
7	Anode PON_LED	8	VCC
9	Not connected	10	Key pin
11	Cathode PON_LED (GND)	12	Key
13	Anode Message LED	14	Key
15	Cathode Message LED	16	Key pin
17	Key	18	Key
19	Anode HD_LED	20	Key
21	Cathode HD_LED	22	Key
23	GND (for Reset and Power button)	24	Not connected
25	Power Button	26	SCSI LED Input
27	Not connected	28	SCSI LED Input
29	Reset Button	30	Not connected

Front panel connector (version 2)



1) Cable is not included in the delivery scope.
2) The same interface.

Pin	Signal	Pin	Signal
1	Reserved	2	Speaker
3	Anode Standby LED	4	Key
5	Key	6	GND
7	Anode PON_LED	8	VCC
9	Not connected	10	Key pin
11	Cathode PON_LED (GND)	12	Key pin
13	Anode Message LED	14	Key
15	Cathode Message LED	16	Not connected
17	Key	18	SCSI LED Input
19	Anode HD_LED	20	SCSI LED Input
21	Cathode HD_LED	22	Not connected
23	GND (for Reset and Power button)	24	Key
25	Power Button	26	GND
27	Not connected	28	GND
29	Reset Button	30	GND

Configuration

Clock frequency

The switches may only be set as specified in the tables below for the particular Pentium II or Celeron used.

There are also Pentium II and Celeron processors, which automatically always operate at the proper frequency, regardless of the switch position.
As these new processors do not differ externally from the previous processors, we recommend always setting the switches in accordance with the processor.

This system board you may use with Pentium II processors with 66 MHz and 100 MHz Front Side Bus or with Celeron processors with 66 MHz Front Side Bus.

Information on which processors can be used is available from your sales office or the customer service center.

Pentium II with 66 MHz Front Side Bus:

Processor	switch 5	switch 6	switch 7	switch 8
300 MHz	off	on	off	on
333 MHz	on	off	off	on

Celeron with 66 MHz Front Side Bus:

Processor	switch 5	switch 6	switch 7	switch 8
233 MHz	off	off	on	on
266 MHz	on	on	off	on
300 MHz	off	on	off	on
333 MHz	on	off	off	on
366 MHz	off	off	off	on
400 MHz	on	on	on	off
433 MHz	off	on	on	off

Pentium II with 100 MHz Front Side Bus:

Processor	switch 5	switch 6	switch 7	switch 8
350 MHz	off	off	on	on
400 MHz	on	on	off	on
450 MHz	off	on	off	on

Pentium III with 100 MHz Front Side Bus:

Processor	switch 5	switch 6	switch 7	switch 8
450 MHz	off	on	off	on
500 MHz	on	off	off	on
550 MHz	off	off	off	on
600 MHz	on	on	on	off
600 MHz	on	on	on	off
700 MHz	on	off	on	off

Functions controlled by the switch block

Function	SW1	SW2	SW3	SW4
Password Skip	on	X	X	X
Off	off	X	X	X
Recovery BIOS	X	on	X	X
Off	X	off	X	X
Floppy write protect	X	X	on	X
Off	X	X	off	X

Switch 4 (SW4) is reserved!

Power

Power requirement

Source	Voltage	Maximum variation	Maximum current	Comment
Main power supply	+5.1 V	±5 %	15 A	
Main power supply	+12 V	±10 %	300 mA	
Main power supply	-12 V	±10 %	100 mA	
Main power supply	+3.3 V	±5 %	4 A	
Auxiliary power supply	+5.0 V	±5 %	50 mA	
Onboard power supply	1.8 - 3.5 V	±5 %	14 A	

Power loadability

Fuse number	Maximum Fuse current	Function	Maximum function current
1	750 mA	Universal serial bus (USB) Port A	500 mA
		Keyboard	Not specified
		Mouse	Not specified
2	750 mA	Universal serial bus (USB) Port B	500 mA

Installing drivers

- Insert the "Drivers & Utilities" CD.
- If the CD doesn't start automatically call the *START.EXE* file in the main directory of the CD.
- If the system board list is displayed select the system board or select under *Driver* the operating system used and the audio and video drivers.

Upgrades

Main memory

Support:	The system needs at least one module and can manage at most two SDRAM modules. PC100 modules must have an SPD-EEPROM*. It is not possible to mix SDRAM and EDO modules.
Size:	From 16 Mbytes up to 512 Mbytes SDRAM (Chipset 440 BX) From 16 Mbytes up to 256 Mbytes SDRAM (Chipset 440 ZX)
Technology:	100 MHz unbuffered DIMM modules. 168 pin, 3.3V, 100 MHz SDRAM 2M, 4M, 8M, 16M and 32M x 64 bit 2M, 4M, 8M, 16M and 32M x 72 bit (with ECC)
Granularity:	For one socket 16, 32, 64, 128 or 256 Mbyte (256 Mbyte only at chipset 440 BX)

*: The EEPROM of PC100 modules contains a number of critical timing parameters and data regarding the chip and the module vendor. Due to this the mainboard will properly recognize the module by reading all important timing parameters specified in the EEPROM via the **S**erial **P**resence **D**etect interface.

Troubleshooting

Message BIOS update

The System BIOS provides optimum support for the processor you have chosen. If the message

`BIOS update for installed CPU failed`

appears the microcode required for the processor inserted must still be loaded. Further information on this is available in the "BIOS Setup" manual on the "Drivers & Utilities" CD provided.

The screen stays blank

If your screen stays blank this may have the following cause:

The wrong RAM memory module has been inserted

- ▶ See the chapter "Main Memory" for information which memory modules can be used.