SYSTEM BOARD D1171

ADDITIONAL TECHNICAL MANUAL

FUJITSU COMPUTERS SIEMENS

Is there ...

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

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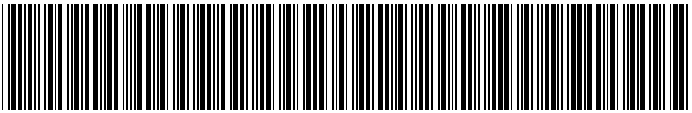

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System Board D1171

Additional Technical Manual

January 2000 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 & Utilities" or "ServerStart" CD. For detailed information please look at chapter "Installing drivers".

Features

The table shows two assembly versions of this system board as example.

Function	Version D1171-A	Version D1171-B
Processor socket	PGA 370	PGA 370
Processor	Intel Celeron or Pentium III	Intel Celeron or Pentium III
Formfactor	µATX	µATX
Front Side Bus in MHz	66/100/133	66/100/133
Chipset	i810e	i810e
Memory sockets	2 DIMM	2 DIMM
ISA slots	- -	- -
PCI slots	4	4
ISA/PCI shared	- -	- -
AGP-Port	- -	- -
System monitoring	x	x
Thermal Management	x	x
Wake On LAN	x	x
Keyboard On	x	x
IrDA	- -	- -
Chipcard reader	x	x
Save to Disk (ACPI S4)	x	x
Save to RAM(ACPI S3)	x	x
LAN onboard	x	- -
Audio onboard	AD 1881	AD 1881
VGA onboard	i 810e	i 810e
4MB Display Cache	x	x

Computer system boards 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 system board and the components on a grounded antistatic pad whenever you work outside the computer.

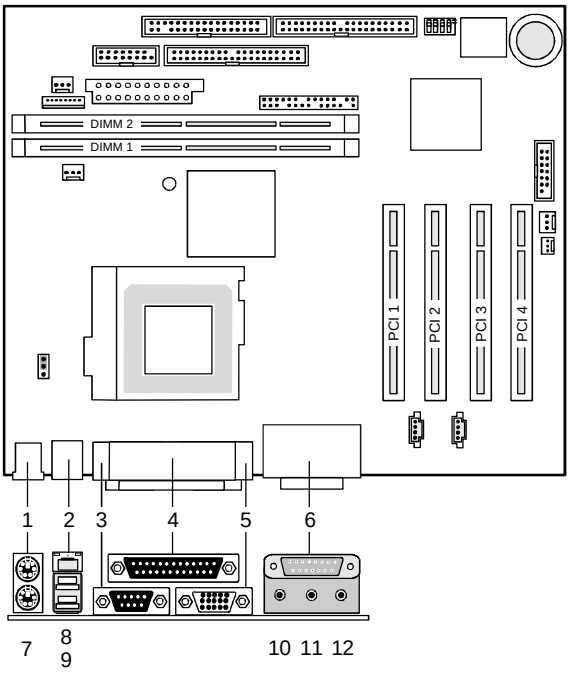
Once you have installed the system board, you should remove the battery protection (i.e. the thin plastic plate between battery and contact spring).

Mechanics

Layout

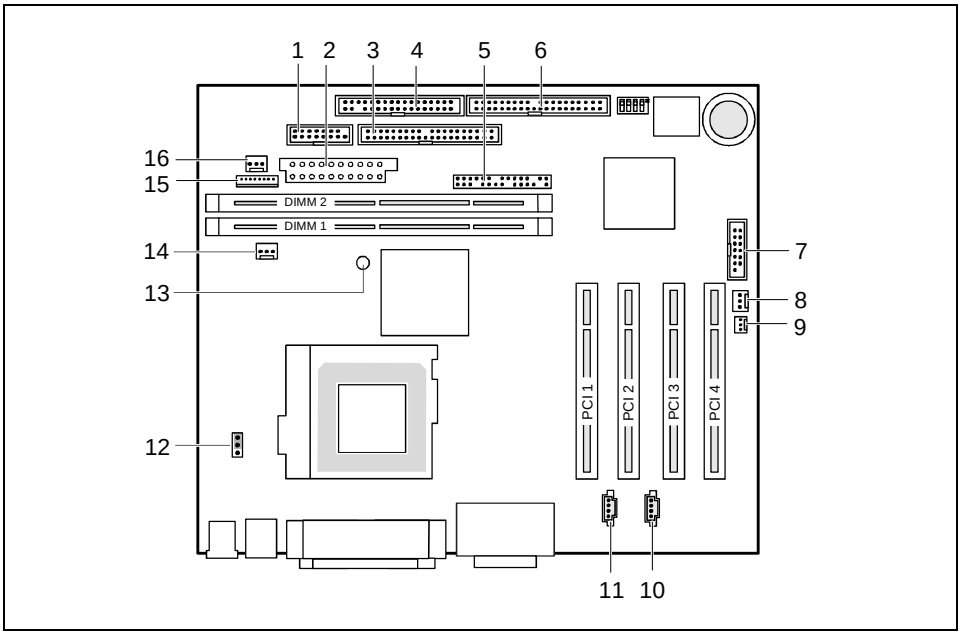
µ-ATX 9,6" x 8" (243,84 mm x 203,2 mm)

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



1 = PS/2 mouse port	7 = PS/2 keyboard port
2 = LAN port	8 = USB port B
3 = Serial port 1	9 = USB port A
4 = Parallel port	10 = Audio line-out
5 = VGA connector	11 = Audio line-in
6 = Game/Midi port	12 = Audio micro-in

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



1 = Serial chipcard reader or serial port 2
2 = Power supply
3 = IDE drives 3 and 4 (secondary)
4 = Floppy disk drive
5 = Front panel and loudspeaker
6 = IDE drives 1 and 2 (primary)
7 = USB chipcard reader
8 = Fan 2 (e. g. for the processor)
9 = Wake On LAN
10 = CD audio input
11 = AUX audio input
12 = USB power jumper
13 = Voltage indicator LED
14 = Fan 1 (e. g. for the processor)
15 = Power supply monitoring
16 = Intrusion detection

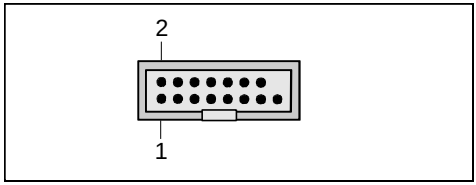
The components and connectors marked do not have to be present on the system board.

Connectors

Some of the following connectors are optional!

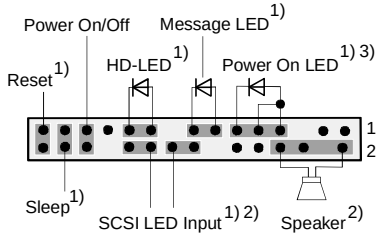
Serial chipcard reader or internal serial port 2 (COM 2)

external via optional cable



Pin	Signal	Pin	Signal
1	DCD 2	2	DSR 2
3	SIN 2	4	RTS 2
5	SOUT 2	6	CTS 2
7	DTR 2	8	PC_On_Strobe
9	GND	10	VCC Auxiliary
11	Not connected	12	VCC
13	RESET (high asserted)	14	GND
15	GND	16	Key

Front panel connector



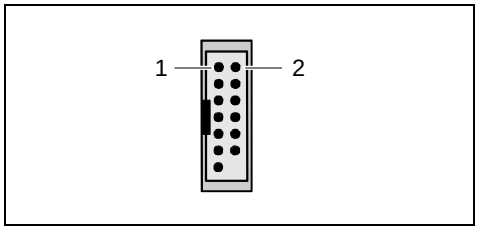
1) Cable is not included in the delivery scope.
2) The same interface
3) 2pin or 3pin connector possible

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

1) Pin 8 is connected to VCC if audio is not onboard.
Pin 8 is connected to GND if audio is onboard.

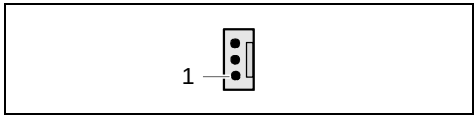
2) The sleep button (optional) functions only for operating systems with APM (not with ACPI).

USB chipcard reader



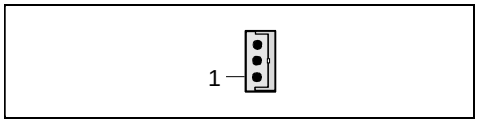
Pin	Signal	Pin	Signal
1	P3V3P_DUAL	2	VCC
3	Data negative up	4	Data positive up
5	Data negative down	6	Data positive down
7	GND	8	GND
9	Not connected	10	VCC auxiliary
11	P3V3P	12	Power OK (high asserted)
13	Chipcard reader On (low pulse)	14	Key

Fan 2 connector



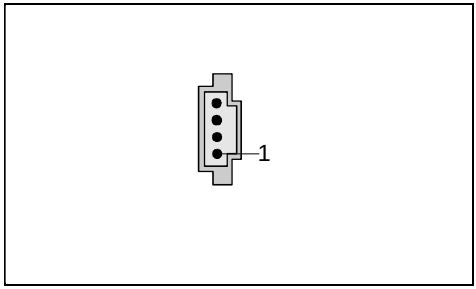
Pin	Signal
1	GND
2	+12 V
3	Fan sense

Wake On LAN (WOL) connector



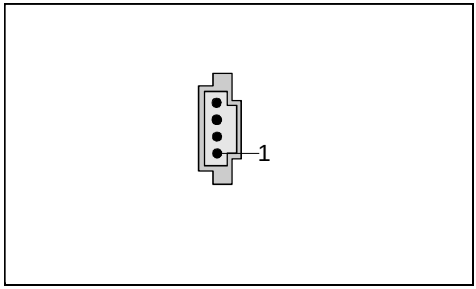
Pin	Signal
1	VCC Auxiliary
2	GND
3	Wake pulse (high asserted)

CD-ROM audio connector (internal)



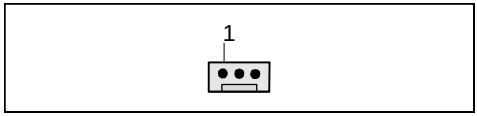
Pin	Signal
1	Left CD audio input
2	CD GND
3	CD GND
4	Right CD audio input

Auxiliary (MPEG, TV) audio connector (internal)



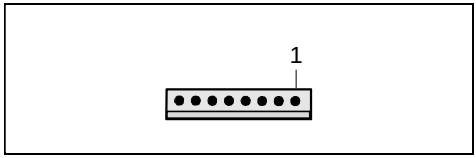
Pin	Signal
1	Left AUX audio input
2	Analog GND
3	Analog GND
4	Right AUX audio input

Fan 1 connector



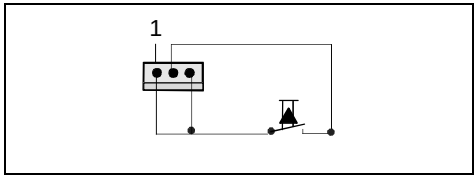
Pin	Signal
1	GND
2	Controlled fan voltage (0 V / 6...12 V)
3	Fan sense

Power supply monitoring



Pin	Signal
1	Monitor on
2	PS FAN off request (low asserted)
3	PS FAN full on (low asserted)
4	PS FAN pulse
5	SMB CLK
6	SMB DATA
7	VCC EEPROM
8	GND

Intrusion connector for case open detect for optional push-button (opener)



Pin	Signal
1	GND
2	Case open (low asserted)
3	Intrusion switch present (low asserted)

Configuration

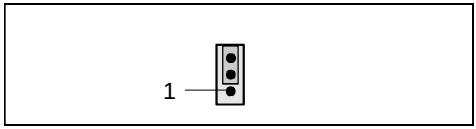
Functions controlled by the switch block

Function	SKP	RCV	FWP	RES*
Password skip	on	X	X	off
Off	off	X	X	off
Recovery BIOS	X	on	X	off
Off	X	off	X	off
Floppy write protect	X	X	on	off
Off	X	X	off	off

*) Must be in "off" state.

USB power

USB power jumper



Pin	Signal
1	VCC
2	USB power connection
3	VCC_AUX

Jumper 2-3	Default setting: If the power supply supports auxiliary voltage the USB interface is permanently powered except when the main supply is plugged off. Wakeup from ACPI S1-S4 state possible.
Jumper 1-2	The USB interface is only powered in operating state. Wakeup from ACPI S1 state possible.

Power

Power requirement

Source	Voltage	Maximum variation	Maximum current	Comment
Main power supply	+5.0 V	±5 %	15 A	
Main power supply	+12 V	±10 %	350 mA	
Main power supply	-12 V	±10 %	150 mA	
Main power supply	+3.3 V	±5 %	4 A	
Auxiliary power supply	+5.0 V	±5 %	2 A	

Power loadability

Fuse number	Maximum fuse current	Function	Maximum function current
1	750 A	Keyboard port	Not specified
		Mouse port	Not specified
		Game port	Not specified
		VGA connector	Minimum 50 mA
2	750 mA	Universal serial bus (USB) Port A	500 mA
3	750 mA	Universal serial bus (USB) Port B	500 mA

Documentation

- ► Insert the "Drivers & Utilities" CD.
- ► If the CD does not start automatically, run the *START.EXE* file in the main directory of the CD.
- ► Select your system board or your device.
- ► Select *Documentation*.
- ► Select - *Technical Manuals*
- ► Select - *Technical Manuals (BIOS)*

i

You may have to install the Acrobat Reader - Software on the CD-ROM (path: utls/acrobat) before reading!

For more details please read the according readme.txt files.

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.

Upgrading main memory

Support:	The system needs at least one module and can manage at most two SDRAM modules.
Size:	From 16 Mbytes up to 512 Mbytes SDRAM
Technology:	100 MHz unbuffered DIMM modules. 168 pin, 3.3 V, 64 bit, 100 MHz SDRAM 2 M, 4 M, 8 M, 16 M and 32 M x 64 bit
Granularity:	For one socket 16, 32, 64. 128 or 256 Mbyte SDRAM modules with ECC can be plugged in but ECC is not functioning. Mix of ECC modules with non ECC modules is possible.

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.

ACPI S3 (Save-to-RAM) and/or ACPI S4 (Save-to-Disk) doesn't work

This system board is fully compliant for ACPI S3 and S4. Therefore it is PC98 certified by Microsoft.

If you have any problems with ACPI please ensure that all of your components are supporting ACPI S3 and S4.

- Operating system
- Hardware and drivers of controllers (e. g. VGA, audio, LAN, SCSI controllers).

The system board D1171 supports Save-to-RAM. Therefore the D1171 is certified by Intel and Microsoft. This support must be also guaranteed by the operating system, the extension boards and the power supply. For the time neither Windows 98 1st edition nor Windows NT4.0 support this function reliably. Windows 98 SE and Windows 2000 will support ACPI S3. Unfortunately only a few extension boards work with functional Save-to-RAM compliant drivers (refer to *http://developer.intel.com/technology/iapc/involve.htm*).