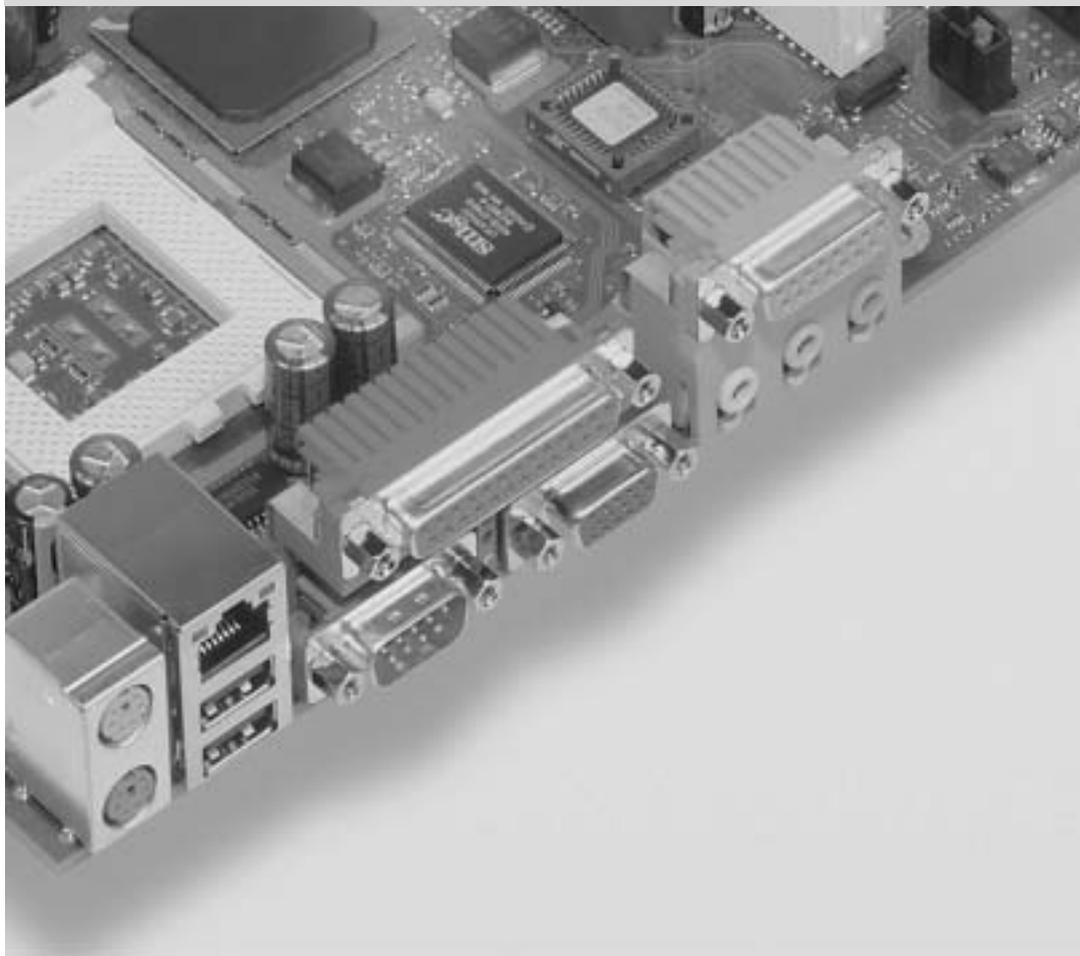


COMPONENT

.com

Additional Technical Manual

System board D1335 / D1337



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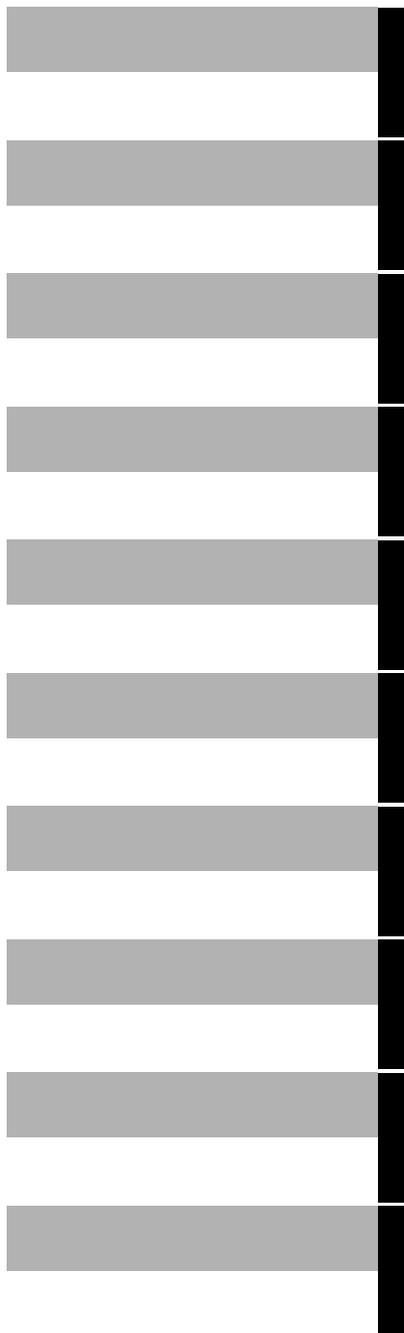


A26361-D1337-Z180-1-7619

System Board D1335 / D1337

Additional Technical Manual

January 2002 edition



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Introduction



Depending on the configuration chosen, some of the hardware components described may not be available on your system board.

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

Further information regarding drivers is provided on the supplied drivers diskettes or on the "Drivers & Utilities" or "ServerStart" CD. For detailed information please read the "Installing drivers" chapter. The latest BIOS version and drivers can be found on the internet under

<http://www.fujitsu-siemens.com/en/service>.



Computer system boards and components contain very delicate IC chips. To protect them against damage caused by static electricity, you must follow these precautions:

- Use a grounded wrist strap.
- Unplug your computer before you remove any part of the casing.
- Place the system board and the components on a grounded antistatic pad whenever you remove them from the computer.

Hold components by the edge, do not touch any pins or connectors on them.

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

Features

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

Features	D1335-B	D1337-A
Chipset	Intel i845D	Intel i845D
Board Size	ATX	ATX
VGA onboard	-	-
Audio onboard (AC '97)	✓	✓
LAN onboard / with Alert-on-LAN	- / -	✓ / -
Thermal Management onboard	-	✓
System Monitoring onboard	-	✓
Fujitsu Siemens Keyboard Power Button Support	-	✓
Buzzer onboard / int. Speaker Support	✓ / -	- / ✓

Internal Connectors

DIMM Sockets (DDR)	2	2
AGP Slot	1	-
AGP Pro Slot	-	1
PCI Slots (32Bit, 33 MHz, 5 V and 3.3 V)	5	5
ISA Slot	-	-
CNR Slot	1	-
IDE Interfaces (Ultra DMA/100)	2	2
Floppy Interface (up to 2.88 MB)	1	1
CD / AUX Audio Input	1 / 1	1 / 1
Front Panel Audio Output	1	1
Wake-on-LAN	1	1
Int. Serial Port / with SmartCard Support	- / -	- / -
Int. USB Connectors / shared with CNR / with SmartCard Support	2 / 1 / -	2 / - / ✓

External Connectors

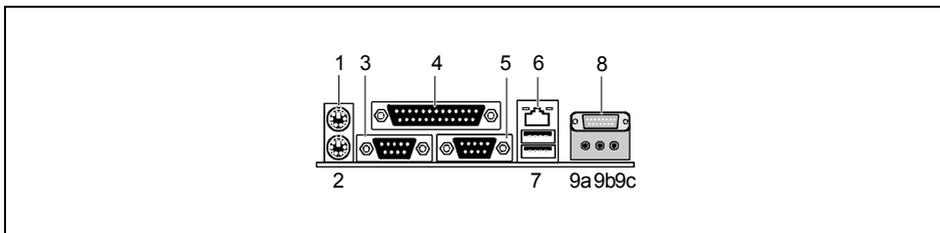
VGA	-	-
Audio Mic. / in / out (2 x 1 Vrms / 32 Ω)	1 / 1 / 1	1 / 1 / 1
Game/MIDI	1	1
LAN (RJ-45)	1	1
PS/2 Mouse/Keyboard	1 / 1	1 / 1
Ext. Serial Port (FIFO, 16550 compatible)	2	2
Parallel Port (EPP/ECP)	1	1
USB Connectors external	2	2

Mechanics

Layout System board D1335 / D1337

ATX 12" x 9.6" (304.8 mm x 243.84 mm)

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



1 = PS/2 mouse port

2 = PS/2 keyboard port

3 = Serial port 1

4 = Parallel port

5 = Serial port 2

6 = LAN connector

7 = USB ports A and B

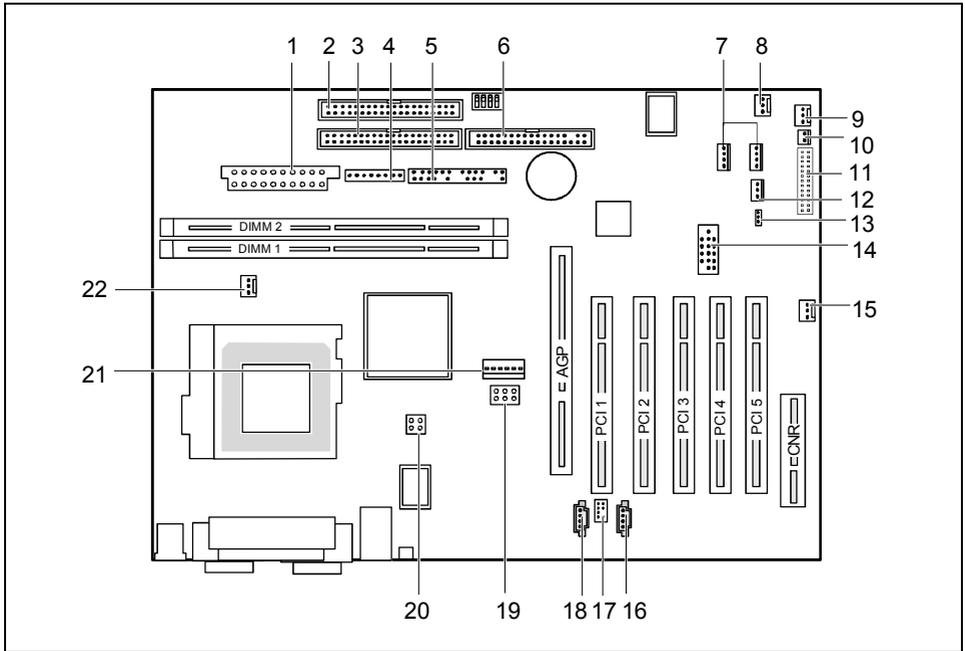
8 = Game/Midi port

9a = Audio Line-Out / Headphones

9b = Audio Line-In

9c = Audio Micro-In

The components and connectors marked are not necessarily present on the system board.



- | | |
|---|-------------------------------------|
| 1 = Power supply | 12 = Cover monitoring |
| 2 = Floppy Disk Drive | 13 = NMI |
| 3 = IDE drives 3 and 4 (secondary) | 14 = USB ports C / D |
| 4 = Power supply monitoring | 15 = Wake On LAN |
| 5 = Connector for control panel and loudspeaker | 16 = CD audio input |
| 6 = IDE drives 1 and 2 (primary) | 17 = Audio front panel |
| 7 = SMB 1 / SMB 2 | 18 = AUX audio input |
| 8 = Fan 2 | 19 = Power supply +3.3 V |
| 9 = Fan 3 | 20 = Power supply +12 V |
| 10 = Power supply RSB | 21 = Power supply +3.3 V |
| 11 = Connector for RSB (Remote Service Board) | 22 = Fan 1 (e.g. for the processor) |

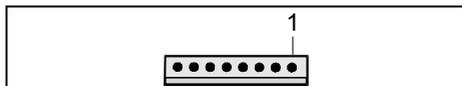
The components and connectors marked are not necessarily present on the system board.

Connectors



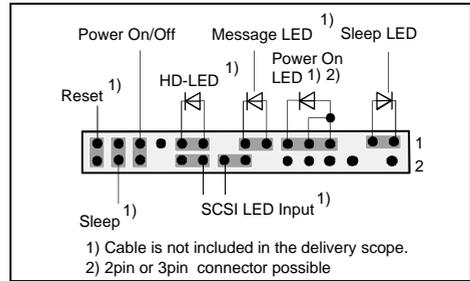
Some of the following connectors are optional!

Power supply monitoring



Pin	Signal
1	AC Outlet (high asserted)
2	PS FAN Control (PWM high = full))
3	PS FAN 2 pulse
4	PS FAN 1 pulse
5	SMB CLK
6	SMB DATA
7	VCC EEPROM (+3,3V)
8	GND

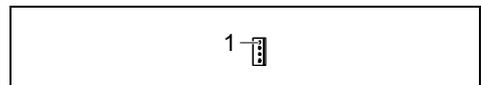
Front panel connector



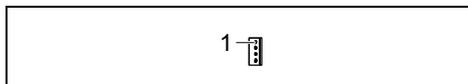
1) The sleep button (optional) functions only for operating systems with APM (not with ACPI).

Pin	Signal	Pin	Signal
1	Sleep LED (Cathode)	2	In case of 'Sound via internal system speaker' support: Speaker negative Otherwise: not connected
3	Sleep LED (Anode)	4	Key
5	Key	6	GND
7	PowerON_LED (Anode)	8	In case of 'Sound via internal system speaker' support: Speaker positive Otherwise: not connected
9	PowerON_LED (Anode)	10	Key pin
11	Sleep LED and PowerON_LED (Cathode)	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 ¹⁾	Sleep button (low asserted)	28	GND
29	Reset button (low asserted)	30	GND

SMB connector (internal)



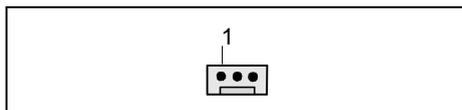
Pin	Signal
1	P3V3P_DUAL
2	SMB_CLK_DUAL_H
3	SMB_DATA_DUAL_H
4	GND

BMC SMB connector (internal)

Pin	Signal
1	P3V3P_DUAL
2	SMB_PIC_CLK_H
3	SMB_PIC_DATA_H
4	GND

Fan 2 connector

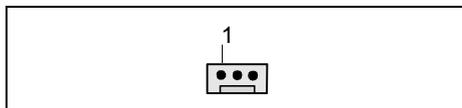
(system fan - supervised)



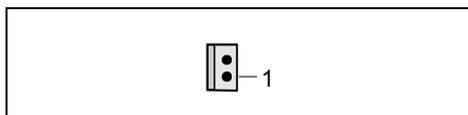
Pin	Signal
1	GND
2	Fix Fan voltage (+12 V, max. 1 A)
3	Fan sense

Fan 3 connector

(system fan - supervised)



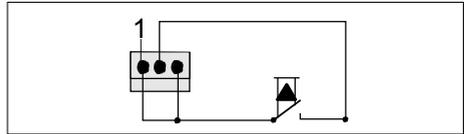
Pin	Signal
1	GND
2	Fix Fan voltage (+12 V, max. 1 A)
3	-

Power supply for RSB

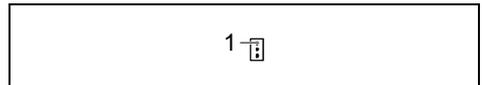
Pin	Signal
1	VCC_Aux
2	GND

Connector for RSB

Pin	Signal	Pin	Signal
1	SCL_N	2	I2C2_CLOCK
3	OVER_TEMP_N	4	GND
5	RSB_PRSENT_N	6	I2C2_DATA
7	STBY_PWR_GOOD	8	NMI_OUT
9	PWR_GOOD	10	I2C2_INT_N
11	HOST_RST_N	12	GND
13	PWR_SWITCH_N	14	RI_N
15	PWR_ON_N	16	SLP_S5_N
17	ON_OFF_0	18	ON_OFF_1
19	ON_OFF_2	20	ON_OFF_3
21	ON_OFF_4	22	ON_OFF_5
23	ON_OFF_6	24	ON_OFF_7
25	FP_RES_SW_N	26	GPIO_9

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


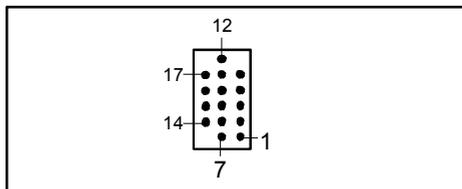
Pin	Signal
1	GND
2	Case open (low asserted)
3	Intrusion switch present (low asserted)

NMI connector (internal)

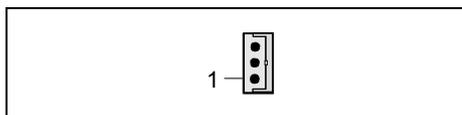
Pin	Signal
1	GND
2	NMI_L
3	GND

USB port C / D 1 - Dual channel

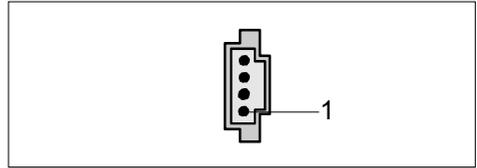
(internal or external via special wire)



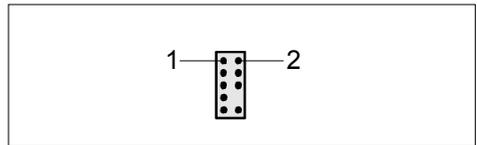
Pin	Signal	Pin	Signal	Pin	Signal
1	VCC Dual / VCC (fused max. 500mA and power supervision with over current detection)	7	Shield GND	13	Key
2	Data negative (port C)	8	GND	14	GND
3	Data positive (port C)	9	Data positive (port D)	15	Data positive (port C)
4	GND	10	Data negative (port D)	16	Data negative (port C)
5	Shield GND	11	VCC Dual / VCC (fused max. 500mA and power supervision with over current detection)	17	VCC Dual (fused max. 500mA and power supervision with over current detection)
6	Key	12	Power supply on (CCR on) (max. 1 second low pulse)	18	Key

Wake On LAN (WOL) connector

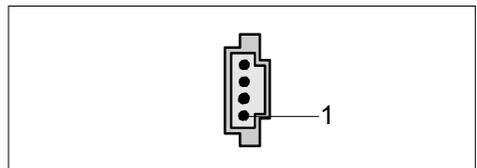
Pin	Signal
1	VCC Auxiliary
2	GND
3	Wake pulse (high asserted)

CD-ROM audio connector (internal)

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

Audio front panel (internal)

Pin	Signal	Pin	Signal
1	Micro input	2	Analog GND
3	Micro bias	4	Analog VCC
5	Right line output	6	Right line return
7	Not connected	8	Key
9	Left line output	10	Left line return

Auxiliary (MPEG, TV) audio connector (internal)

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

Power supply +3.3 V

Pin	Signal	Pin	Signal
1	GND	2	GND
3	+3.3 V	4	GND
5	+3.3 V	6	3.3 V

Power supply ATX 12 V

Pin	Signal	Pin	Signal
1	GND	2	GND
3	+12 V	4	+12 V

Power supply +3.3 V

Pin	Signal	Pin	Signal
1	GND	2	GND
3	GND	4	+3.3 V
5	+3.3 V	6	Not connected

Fan 1 connector

(processor fan - controlled and supervised, only for 3 pin fans)



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

Configuration

Functions controlled by the configuration switch

Switch	Function	SKP	RCV	N.U.	LAUX
1	Password skip	on			
1	Off	off			
2	Recovery BIOS		on		
2	Off		off		
3	Not used				
3	Not used				
4	Low auxiliary power supply (<2 A)				on
4	High auxiliary power supply				off

Power

Power requirement for onboard components (worst case)

Source	Voltage	Maximum variation	Maximum current	Comment
Main power supply	+12 V	±5 %	200 mA	
Main power supply	-12 V	±10 %	350 mA	
Main power supply	+5.0 V	±5 %	15 A	
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 mA	Keyboard port Mouse port Game port VGA connector	Not specified Not specified Not specified Minimum 50 mA
2	500 mA	Universal serial bus (USB) Port A	500 mA
3	500 mA	Universal serial bus (USB) Port B	500 mA
4	1250 mA	Universal serial bus (USB) Port C Universal serial bus (USB) Port D	500 mA 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)*



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 two DDR modules.
Size:	From 64 Mbytes up to 2 Gbytes DDR-SDRAM
Technology:	PC2100 unbuffered DIMM modules. 184 pin, 2.5 V, 64 bit, 72 bit 4 internal banks required PC 133 Modules can be plugged in, but run at 100 MHz
Granularity:	For one socket 64, 128, 256, 512 or 1024 MB
ECC support:	Yes
PC 266 support:	Up to 2 double sided DDR-266 DDR-DIMMs.

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 PC99 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).

For further information please refer to <http://developer.intel.com/technology/iapc/involve.htm>.