

SYSTEM BOARD D1218 /
D1219

*ADDITIONAL TECHNICAL
MANUAL*

Are there ...

... any technical problems or other questions you need clarified?

Please contact:

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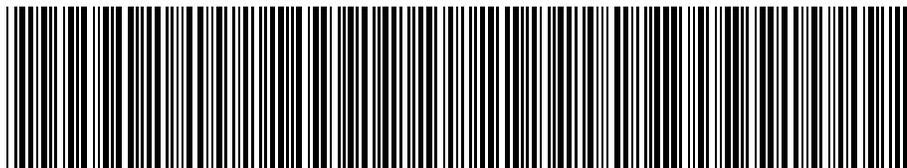
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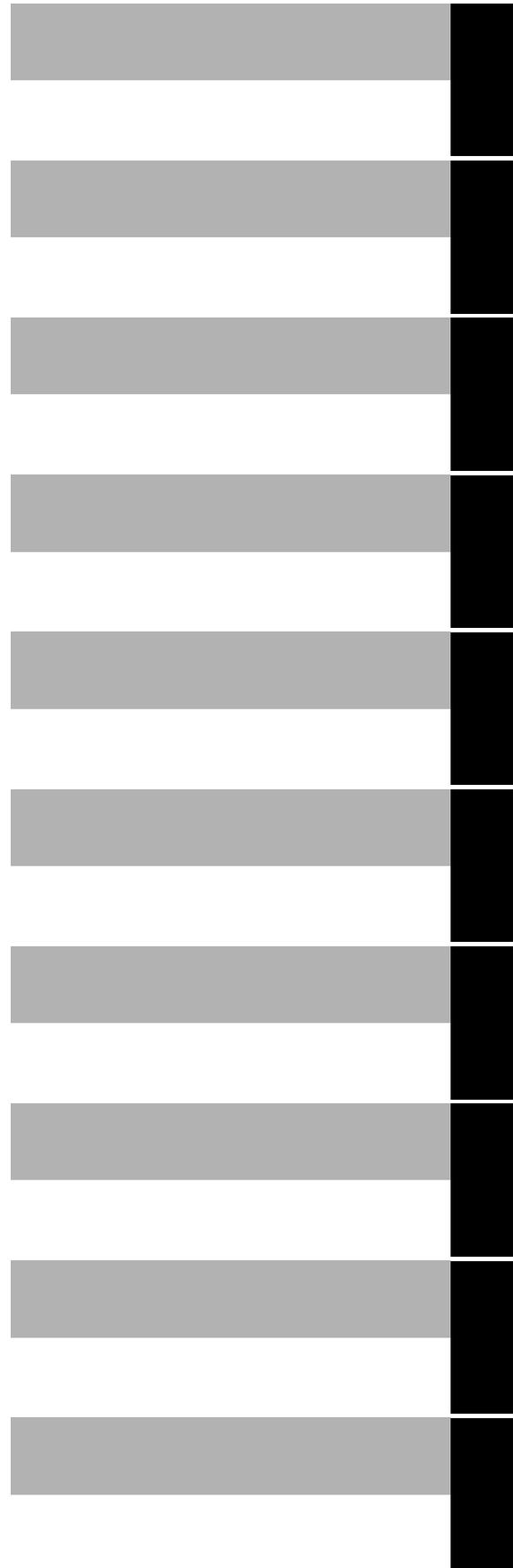


A26361-D1218-Z180-1-7619

System Board D1218 / D1219

Additional Technical Manual

November 2000 edition



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Introduction



This system boards are 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](#)". The latest BIOS version or 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 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).

Features

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

Function	Version D1218-A1X	Version D1218-B1X
Processor socket	PGA 370	PGA 370
Processor	Intel Celeron or Pentium III	Intel Celeron or Pentium III
Formfactor	ATX	ATX
Front Side Bus in MHz	66/100/133	66/100/133
Chipset	815e	815e
Memory sockets	3 DIMM	3 DIMM
PCI slots	5	5
AGP Port	1	1
CNR slot Type A	--	1
System monitoring	--	--
Thermal Management	--	--
Wake On LAN	x	x
Basic Alert On LAN II	--	--
Chipcard reader	x	x
Save to Disk (ACPI S4)	x	x
Save to RAM(ACPI S3)	x	x
Game/midi port	x	x
LAN onboard	Ethernet Contr. 82562ET	Ethernet Contr. 82562ET
Audio onboard	AD1885	AD1885
VGA onboard	i 815	i 815
USB ports extern	2	2
USB ports intern	2	1 - internal connector 1 - via CNR connector

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

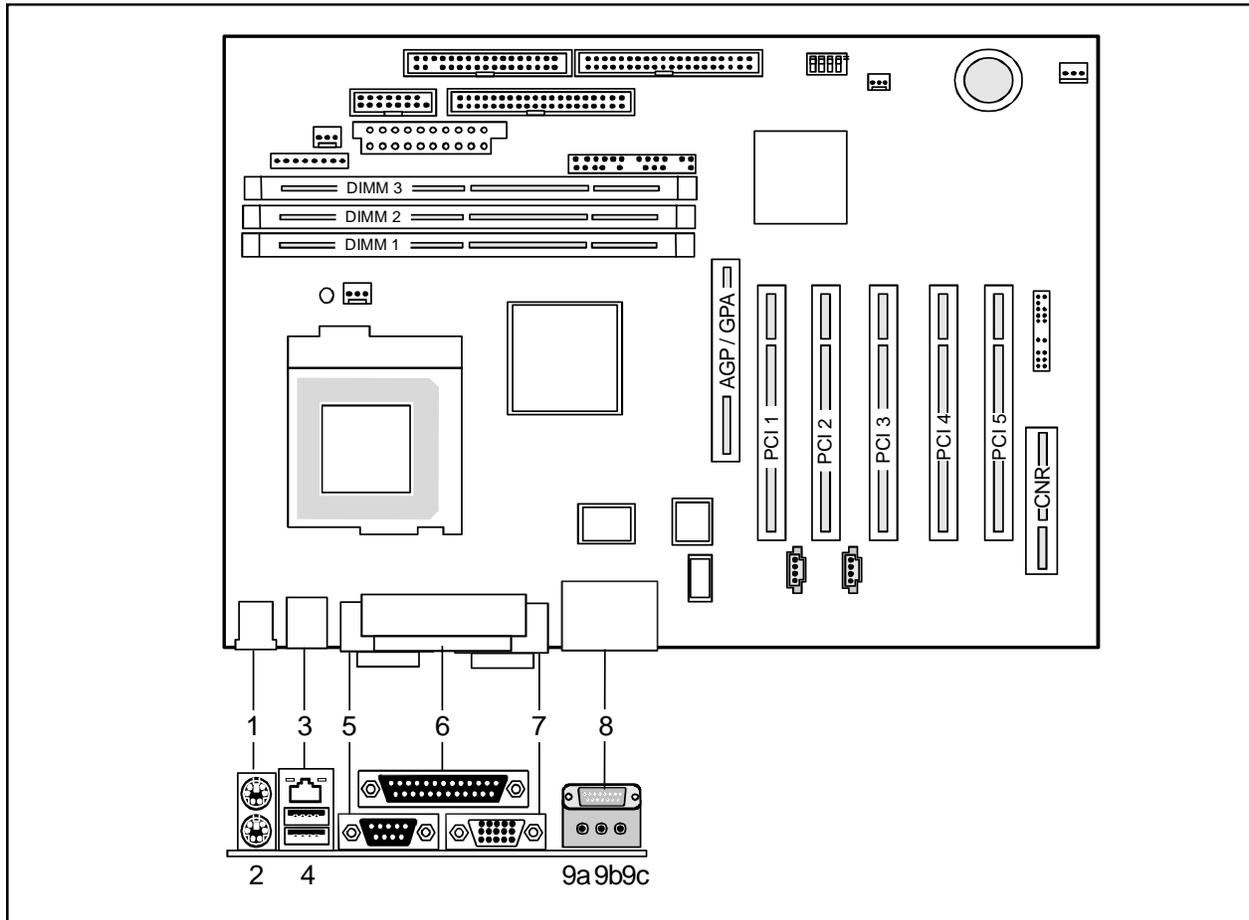
Function	Version D1219-A1X	Version D1219-C1X
Processor socket	PGA 370	PGA 370
Processor	Intel Celeron or Pentium III	Intel Celeron or Pentium III
Formfactor	ATX	ATX
Front Side Bus in MHz	66/100/133	66/100/133
Chipset	815e	815e
Memory sockets	3 DIMM	3 DIMM
PCI slots	5	5
AGP Port	1	1
ISA slot	--	1
System monitoring	x	x
Thermal Management	x	x
Wake On LAN	x	x
Basic Alert On LAN II	x	x
Chipcard reader	x	x
Save to Disk (ACPI S4)	x	x
Save to RAM(ACPI S3)	x	x
Game/midi port	x	x
LAN onboard	Ethernet Contr. 82562EM	Ethernet Contr. 82562EM
Audio onboard	AD1885	AD1885
VGA onboard	i 815E	i 815E
USB ports extern	2	2
USB ports intern	2	2

Mechanics

Layout System board D1218

ATX 12" x 8" (304,8 mm x 203.2 mm)

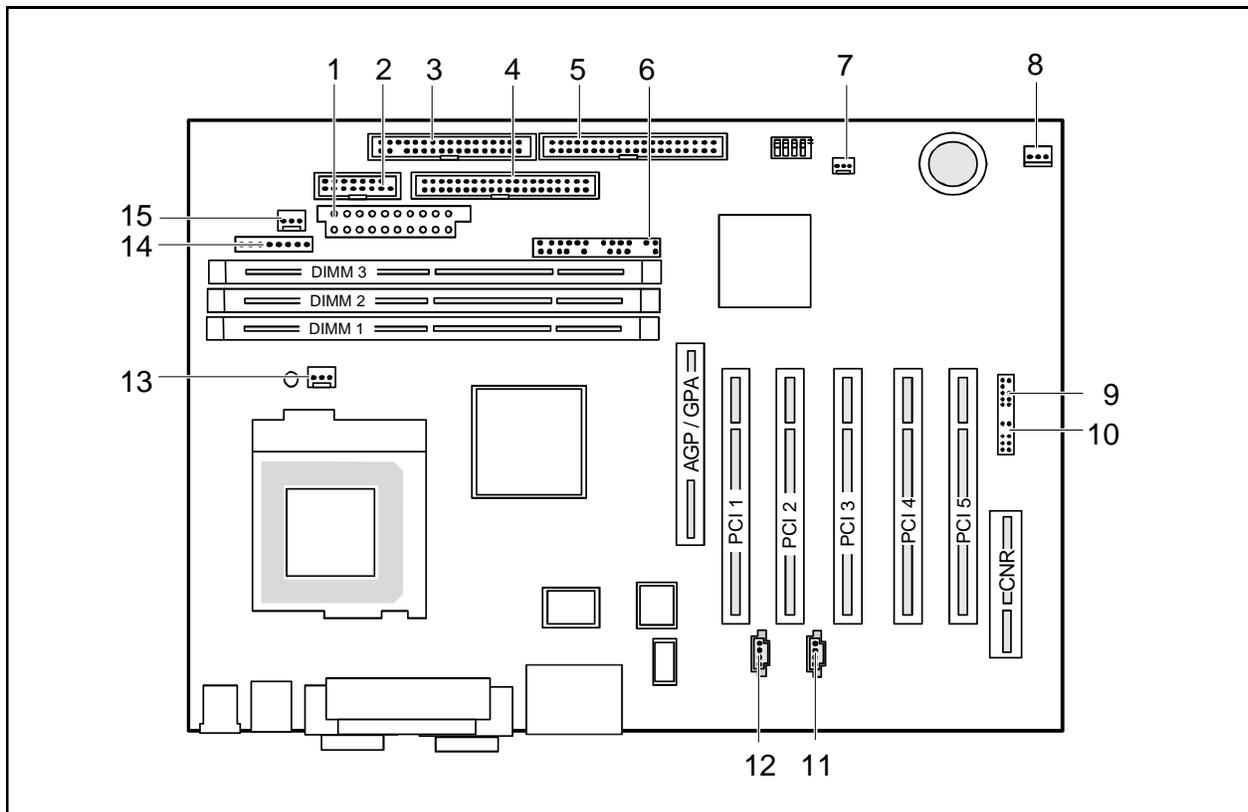
Some of the following connectors are optional and may therefore not be included on your system board.



- 1 = PS/2 Mouse Controller
- 2 = PS/2 keyboard port
- 3 = LAN port
- 4 = USB ports 1 and 2
- 5 = Serial Port 1
- 6 = Parallel Port

- 1 = VGA port
- 2 = Game/Midi
- 9a = Audio Line-Out
- 9b = Audio Line-In
- 9c = Audio Micro-In

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



1 = Power Supply

2 = Serial chipcard reader interface or serial port 2

3 = Floppy Disk Drive

4 = IDE drives 3 and 4 (secondary)

5 = IDE drives 1 and 2 (primary)

6 = Connector for control panel and loudspeaker

7 = Wake On LAN

1 = Fan 2 (e. g. for the processor)

2 = USB port 4

3 = USB port 3

4 = CD audio input

5 = AUX audio input

6 = Fan 1 (e. g. for the processor)

7 = Power supply monitoring

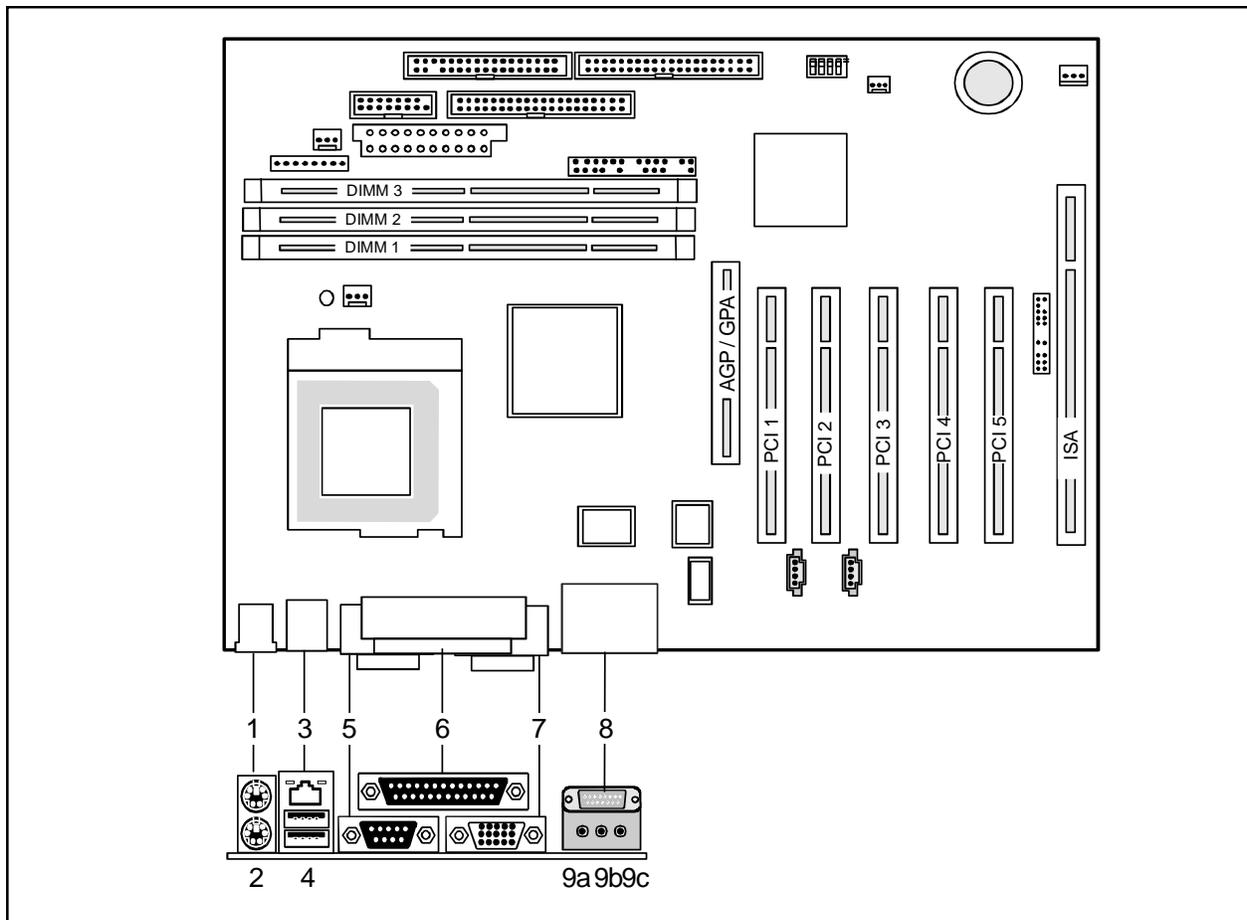
8 = Cover monitoring

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

Layout System board D1219

ATX 12" x 8" (304,8 mm x 203.2 mm)

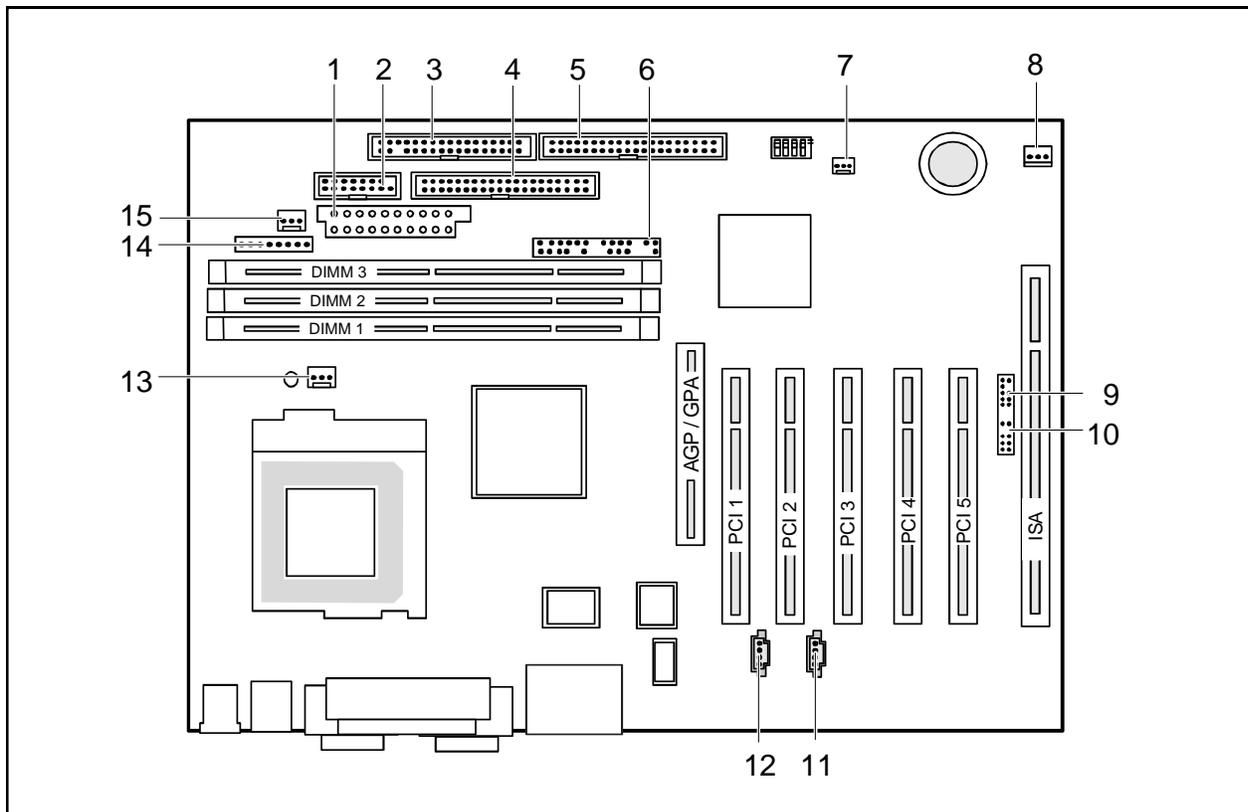
Some of the following connectors are optional and may therefore not be included on your system board.



- 1 = PS/2 mouse port
- 2 = PS/2 keyboard port
- 3 = LAN port
- 4 = USB ports 1 and 2
- 5 = Serial port 1
- 6 = Parallel port

- 1 = VGA port
- 2 = Game/Midi port
- 9a = Audio Line-Out
- 9b = Audio Line-In
- 9c = Audio Micro-In

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



- 1 = Power supply
- 2 = Serial chipcard reader interface or serial port 2
- 3 = Floppy disk drive
- 4 = IDE drives 3 and 4 (secondary)
- 5 = IDE drives 1 and 2 (primary)
- 6 = Connector for control panel and loudspeaker
- 7 = Wake On LAN

- 1 = Fan 2 (e. g. for the processor)
- 2 = USB port 4
- 3 = USB port 3
- 4 = CD audio input
- 5 = AUX audio input
- 6 = Fan 1 (e. g. for the processor *)
- 7 = Power supply monitoring
- 8 = Cover monitoring

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

*) only for speed controllable fans (3 pin connector), for 2 pin processor fans use Fan2 connector only.

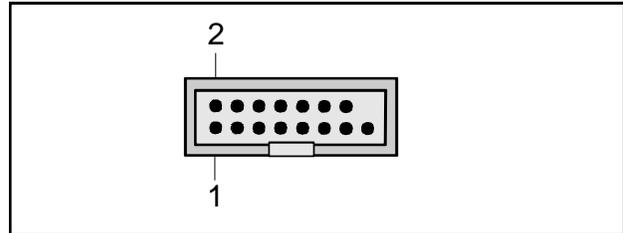
Connectors



Some of the following connectors are optional!

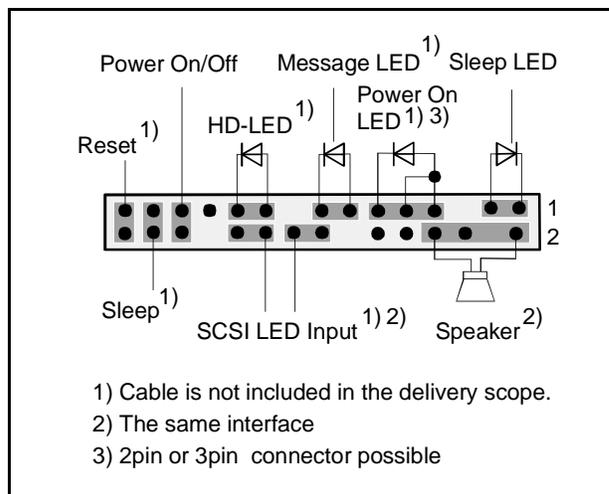
Serial chipcard reader or internal serial port 2 (COM 2)

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	EXT SMI (low asserted)	12	VCC
13	RESET (high asserted)	14	GND
15	GND	16	Key

Front panel connector



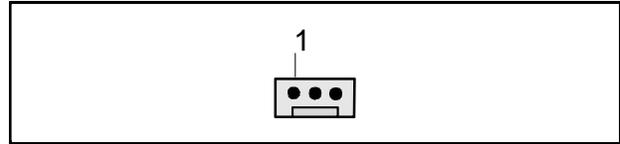
Pin	Signal	Pin	Signal
1	Sleep LED (Cathode)	2	Speaker
3	Sleep LED (Anode)	4	Key
5	Key	6	GND
7	PowerON_LED (Anode)	8 ¹⁾	VCC or GND
9	PowerON_LED (Anode)	10	Key pin
11	PowerON_LED (Cathode)	12	Key pin
13	Message LED (Anode)	14	Key
15	Message LED (Cathode)	16	Not connected
17	Key	18	SCSI LED input (low 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 ²⁾	reserved	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).

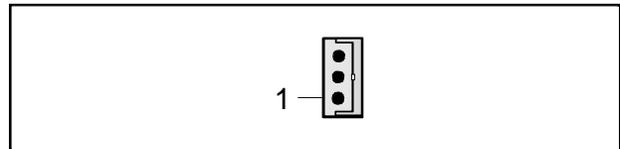
Fan 2 connector

(system fan - supervised)



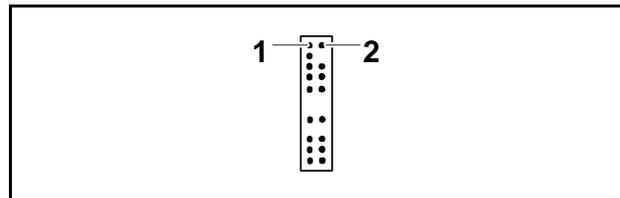
Pin	Signal
1	GND
2	+12 V
3	Fan sense

Wake On LAN (WOL) connector

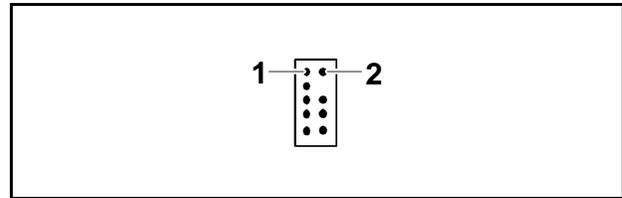


Pin	Signal
1	VCC Auxiliary
2	GND
3	Wake pulse (high asserted)

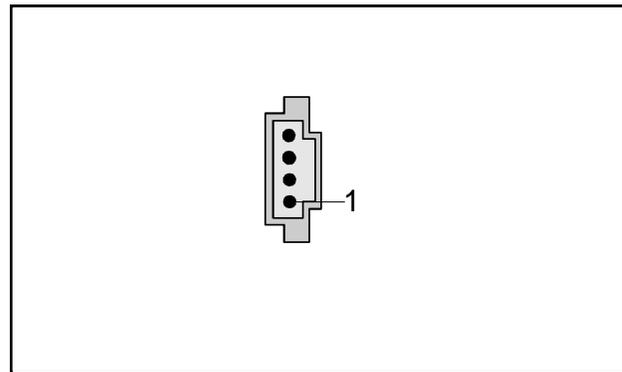
USB port - Dual channel



Pin	Signal		
Pin	Signal	Pin	Signal
1	VCC Dual (max. 250mA)	2	VCC Dual (max. 250mA)
3	Reserved	4	Key
5	Power supply on (max 1 second low pulse)	6	GND
7	Data positive	8	Data negative
9	GND	10	Over current (low asserted)
11	Key	12	Key
13	Key	14	Key
15	VCC Dual (max. 250mA)	16	VCC Dual (max. 250mA)
17	Key	18	Key
19	Power supply on (max 1 second low pulse)		GND
21	Data positive		Data negative
22	GND		Over current (low asserted)

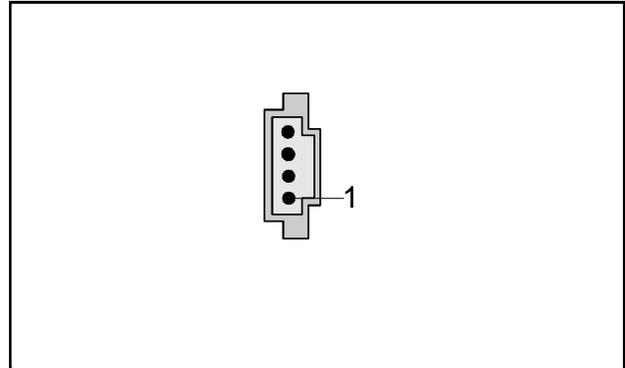
USB port - Single channel

Pin	Signal		
Pin	Signal	Pin	Signal
1	VCC Dual (max. 250mA)	2	VCC Dual (max. 250mA)
3	Reserved	4	Key
5	Power supply on (max 1 second low pulse)	6	GND
7	Data positive	8	Data negative
9	GND	10	Over current (low asserted)

CD-ROM audio connector (internal)

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

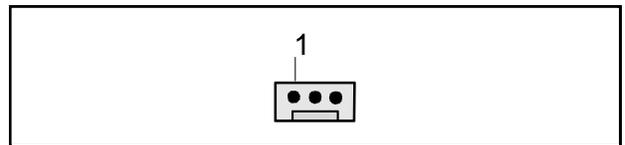
Auxiliary (MPEG, TV) audio connector (internal)



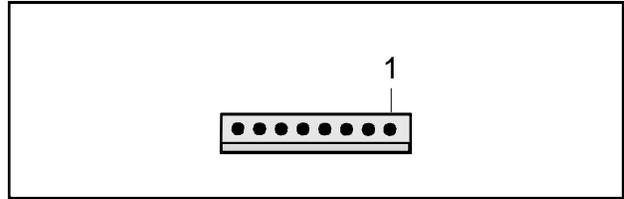
Pin	Signal
1	Left AUX audio input
2	Analog GND
3	Analog GND
4	Right AUX audio input

Fan 1 connector

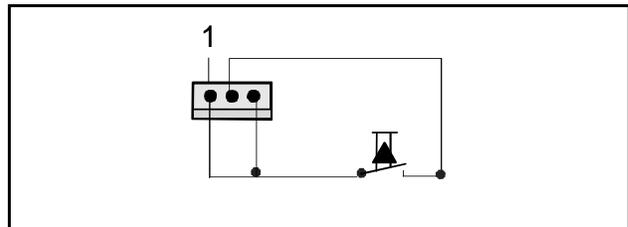
(processor fan - controlled and supervised, only for 3 pin fans)



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 configuration switch

Function	SKP	RCV	FWP	PSS
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
Low auxiliary power supply (<2 A)	X	X	X	on
High auxiliary power supply	X	X	X	off

PSS must be switched on for systems with not enough 5 V auxiliary power for all its self powered wake devices (WakeOnLAN, USB, PCI) in S3-S4.

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 %	200 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 mA	Keyboard port	Not specified
		Mouse port	Not specified
		Game port	Not specified
		VGA connector	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

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.
- Size: From 32 Mbytes up to 512 Mbytes SDRAM
- Technology: PC100 or PC133 unbuffered DIMM modules.
168 pin, 3.3 V, 64 bit, 72 bit (with ECC), SDRAM
2 M, 4 M, 8 M, 16 M and 32 M x 64 bit
2 M, 4 M, 8 M, 16 M and 32 M x 72 bit
- Granularity: For one socket 16, 32, 64, 128, 256 or 512 Mbyte
SDRAM modules with ECC can be plugged in but ECC is not functioning. Mix of ECC modules with non ECC modules is possible.
Support for up to 2 single sided or 2 double sided DIMM modules.
Mix of PC100 and PC133 DIMMs is possible, but all modules will only work at PC100 speed.

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> .