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Additional Technical Manual

System board D1289

FUJITSU COMPUTERS SIEMENS

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

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System Board D1289

Additional Technical Manual

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Introduction

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

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 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 one assembly version of this system board as an example.

Features	**D1289**
Chipset	VIA Apollo KT266A
Board Size	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-SDRAM)	3
AGP Slot (4x, 32Bit, 66 MHz, 1.5 V)	1
PCI Slots (32Bit, 33 MHz, 5 V and 3.3 V)	5
ISA Slot	-
ACR Slot	-
CNR Slot	-
AMR Slot	-
IDE Interfaces (Ultra DMA/100)	2
Floppy Interface (up to 2.88 MB)	1
CD / AUX Audio Input	1 / 1
Wake-on-LAN	1
Int. Serial Port / with SmartCard Support	1 / 1
USB Connectors int. / int. on ACR/CNR	3 / -
External Connectors	
VGA	-
Audio Mic. / in / out (2 x 0.5 W / 8 Ω)	1 / 1 / 1
Game/MIDI	1
LAN (RJ-45)	-
PS/2 Mouse/Keyboard	1 / 1
Ext. Serial Port (FIFO, 16550 compatible)	1
Parallel Port (EPP/ECP)	1
USB Connectors external	2

Mechanics

Layout System board D1289

ATX 12" x 9.6'' (304,8 mm x 243.8 mm)

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

Ports of the D1289

1 = PS/2 mouse port
2 = PS/2 keyboard port
3 = USB port 1
4 = USB port 2
5 = Serial port 1
6 = Parallel port
7 = Game/Midi port
8a = Audio Line-Out
8b = Audio Line-In
8c = Audio Micro-In

1 = Connector for control panel and loudspeaker
2 = Power supply monitoring
3 = Serial chipcard reader interface (optional) or serial port 2
4 = Cover monitoring
5 = Fan 2 (e. g. for the processor)
6 = Floppy Disk Drive
7 = IDE drives 3 and 4 (secondary)
8 = IDE drives 1 and 2 (primary)
9 = Frequency for the Front Side Bus
10 = USB ports C, D
11 = Wake On LAN
12 = CD audio input
13 = AUX audio input
14 = Power supply
15 = Additional power supply
16 = Fan 1 (e. g. for the processor)
17 = USB port E

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

Connectors

Some of the following connectors are optional!

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	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)]	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).

Power supply monitoring

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

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 (TTL - Signal, low asserted)
9	GND	10	VCC Auxiliary
11	EXT SMI (low asserted)	12	VCC
13	RESET (TTL - Signal, low asserted)	14	GND
15	GND	16	Key

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)

Fan 2 connector

(system fan - supervised)

Pin	Signal
1	GND
2	+12 V
3	Fan sense

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

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	+12 V
3	Fan sense

USB port E

Pin	Signal	Pin	Signal
1	VCC Dual (max. 250mA)	2	Shield GND
3	Data negative	4	GND
5	Data positive	6	Data positive
7	GND	8	Data negative
9	Shield GND	10	VCC Dual (max. 250mA)

FSB jumper - Front Side Bus

The jumper sets the frequency of the Front Side Bus.

inserted 266 MHz

not inserted 200 MHz

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	±5 %	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)*

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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 64 Mbytes up to 3 Gbyte DDR-SDRAM
Technology:	PC1600 or PC2100 unbuffered DIMM modules. 8M, 16M and 32M x 64/72 bit.
Granularity:	For one socket 64, 128, 256, 512 Mbyte or 1 Gbyte
	DDR-SDRAM modules with ECC can be plugged in but ECC is not functioning. Mix of ECC modules with non ECC modules is possible.
	Mix of PC1600 and PC2100 DIMMs is possible, but all modules will only work at PC1600 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*.