SIEMENS NIXDORF

Additional Technical Manual D1042

Introduction

This technical manual applies for the mainboard D1042. 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. Further information f. e. the complete **technical manual for the D1042** and the **reference manual for the BIOS-Setup** are provided on the **"Drivers & Utility" CD**. For detailed information please look at chapter 3.

1   Features

Version	D1042-E
Processor	P55C / K6 / MII
AMD-Jumper	√
Cache	512 KB
Flash	2 MB - PLCC
ATX-SV	√
Systemmonitoring	-
Graphic	Matrox Cyclone
Graphic-Memory	2 MB - SGRAM
Audio	-
Wave-Socket	-
USB	2 x USB
IrDA	√
Card-Reader	√
Super-I/O	NSC317
KBD-On	√
Remote-On	√
SCSI-LED	√
Frontpanel II	-
I²C-Connector	-
WakeOnLAN	-

2   Mechanics

CAUTION:

> Computer mainboards and components contain very delicate IC chips. To protect them against damage caused from electric static, you have to follow some precautions:
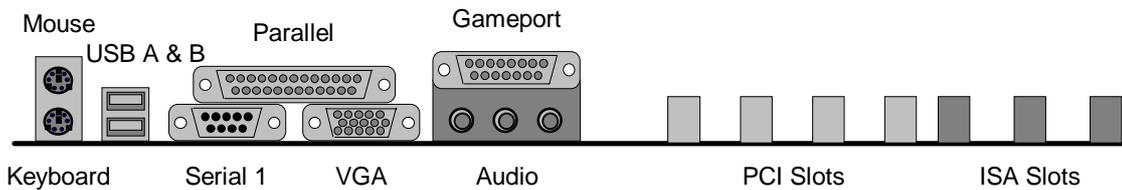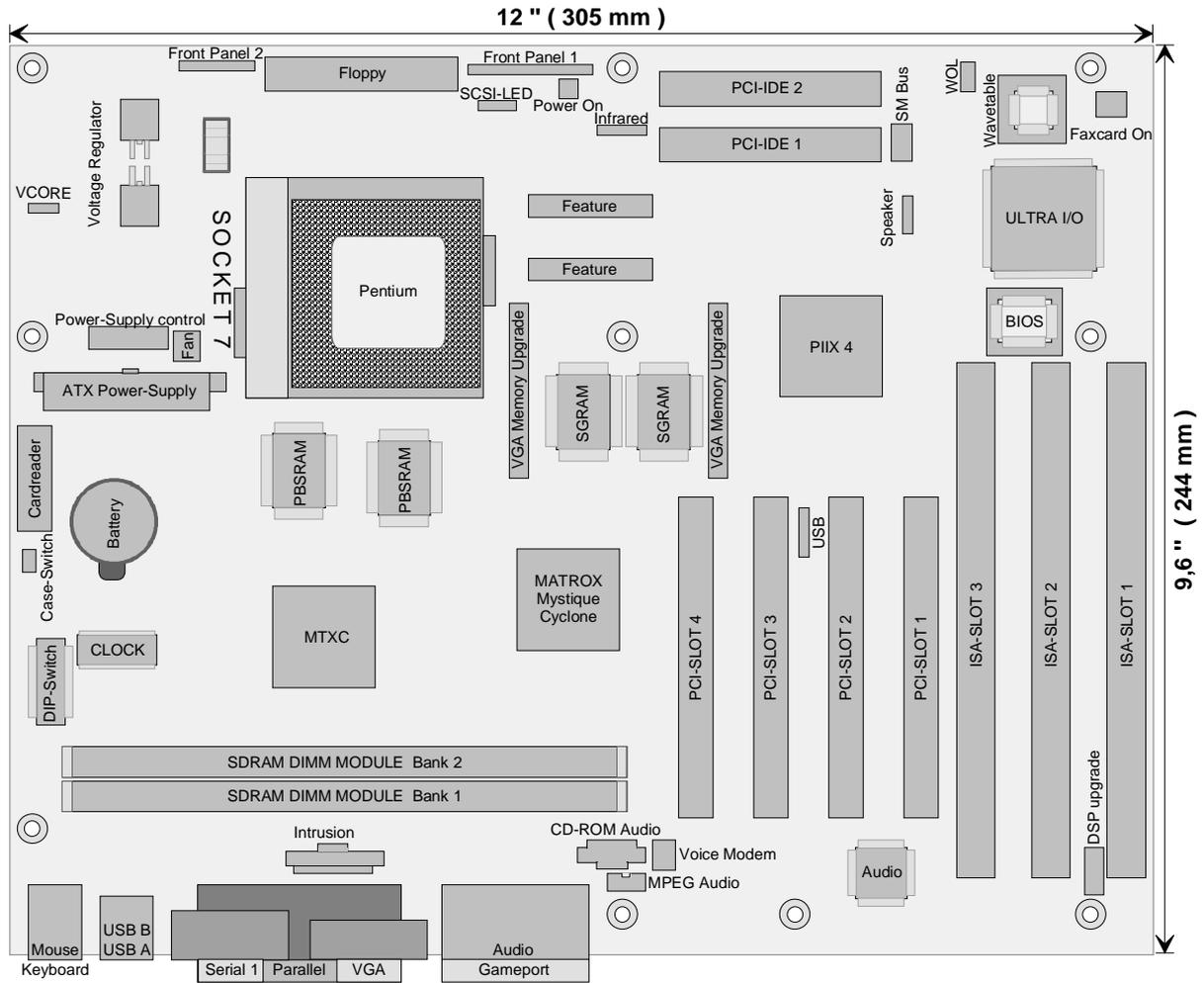> - Unplug your computer when you work inside
> - Hold components by the edge, don't touch their leads
> - Use a grounded wrist strap
>
> Place the mainboard and the components on a grounded antistatic pad whenever you work outside the computer

2.1   Layout

ATX 12'' x 9,6'' (305mm x 244mm)
Some of the following connectors are optional and may therefore not be included on your mainboard.

12 " (305 mm)

9,6 " (244 mm)

Front Panel 2

Floppy

Front Panel 1

SCSI-LED

Power On

Infrared

PCI-IDE 2

PCI-IDE 1

SM Bus

WOL

Wavetable

Faxcard On

Voltage Regulator

VCORE

SOCKET 7

Pentium

Feature

Feature

Speaker

ULTRA I/O

Power-Supply control

Fan

ATX Power-Supply

VGA Memory Upgrade

SGRAM

SGRAM

VGA Memory Upgrade

PIIX 4

BIOS

Cardreader

Battery

PBSRAM

PBSRAM

Case-Switch

CLOCK

MTXC

MATROX
Mystique
Cyclone

USB

PCI-SLOT 4

PCI-SLOT 3

PCI-SLOT 2

PCI-SLOT 1

ISA-SLOT 3

ISA-SLOT 2

ISA-SLOT 1

DIP-Switch

SDRAM DIMM MODULE Bank 2

SDRAM DIMM MODULE Bank 1

Intrusion

CD-ROM Audio

Voice Modem

MPEG Audio

Audio

DSP upgrade

Mouse

Keyboard

USB B
USB A

Serial 1

Parallel

VGA

Audio

Gameport

Mouse

USB A & B

Parallel

Gameport

Keyboard

Serial 1

VGA

Audio

PCI Slots

ISA Slots

2.2 Connectors, DIP-Switch, Jumpers (some of the following connectors are optional)

2.2.1 Power-On-Switch Connector

Pin	Signal
1	GND
2	Power-On Pulse (low asserted)

Pin 1
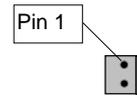
2.2.2 Faxcard-On-Connector

Pin	Signal
1	GND
2	Remote On

Pin 1
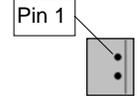
2.2.3 Wake-On-LAN Connector

Pin	Signal
1	VCC-Help
2	GND
3	LAN-Wakeup

Pin 1
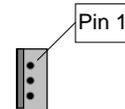
2.2.4 Front Panel Connector 1

Pin	Signal
1	Boot Lock
2	+ Standby LED
3	Key
4	+ Power LED
5	Key
6	- Standby / Power LED
7	n.c.
8	GND
9	Key
10	+ HD LED
11	HD LED
12	HD LED
13	+ HD LED

Pin 1
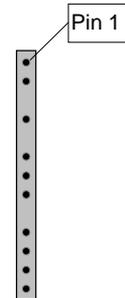
2.2.5 Front-Panel Connector 2

Pin	Signal
1	Reset (low asserted)
2	GND
3	Key
4	n.c.
5	n.c.
6	Key
7	n.c.
8	GND

Pin 1
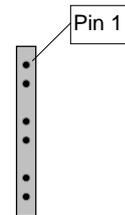
2.2.6 SCSI-LED Connector

Pin	Signal
1	n.c.
2	HD-LED
3	HD-LED
4	n.c.

Pin 1
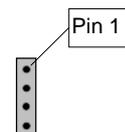
2.2.7 Speaker Connector

Pin	Signal
1	VCC
2	GND
3	Key
4	Speaker OUT

Pin 1
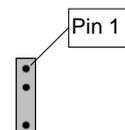
2.2.8   FAN Connector

Pin	Signal
1	GND
2	VCC-CPU-Fan
3	CPUA-FanSense

Pin 1
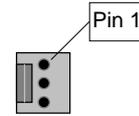
2.2.9   ATX-Power-Supply-Connector

Pin	Signal	Pin	Signal
11	+ 3.3 V	1	+ 3.3 V
12	- 12 V	2	+ 3.3 V
13	GND	3	GND
14	PS-ON	4	+ 5 V
15	GND	5	GND
16	GND	6	+ 5 V
17	GND	7	GND
18	- 5 V	8	Power OK
19	+ 5 V	9	5 V SB
20	+ 5 V	10	+ 12 V

Pin 11   Pin 1
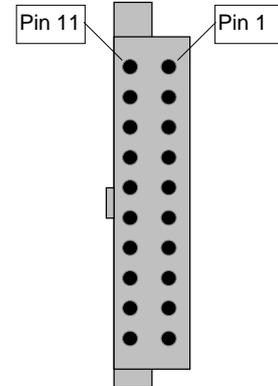
2.2.10   Internal Serial Port 2 for Cardreader

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-Help
11	EXTSMI	12	VCC
13	RESETDRV	14	GND
15	GND	16	Key

Pin 1   Pin 2
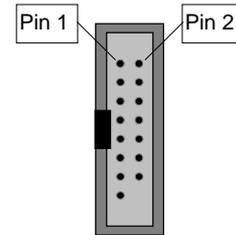
2.2.11   Infrared Connector

Pin	Signal
1	VCC
2	Key
3	IRDA-RX
4	GND
5	IRDA-TX

Pin 1
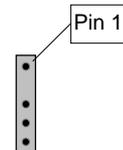
2.2.12   Feature Connector

Pin	Signal	Pin	Signal
1	GND	2	Video Data 0
3	GND	4	Video Data 1
5	GND	6	Video Data 2
7	Video Enable	8	Video Data 3
9	SYNC Enable	10	Video Data 4
11	DCLK Enable	12	Video Data 5
13	n.c.	14	Video Data 6
15	GND	16	Video Data 7
17	GND	18	DCLK
19	GND	20	BLANK
21	GND	22	HSYNC
23	VIDRST	24	VSYNC
25	Key	26	GND

Pin 1   Pin 2
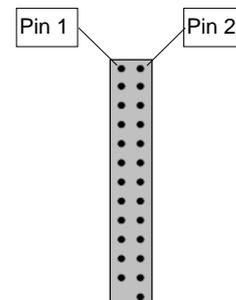
2.2.13 Processor Supply-Voltage Setting

Jumper	Processor-type	1-2-3
-	Intel	
1 - 2	AMD K6 - 200 MHz Cyrix M II	
2 - 3	AMD K6 - 233 MHz	

Pin 1

1 VCORE
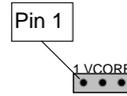
2.2.14 Configuration SWITCH-Block (DIP-Switch)

for Frequency selection, Recovery and Password clear

Function:	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
Recover BIOS								
On	x	x	x	x	On	x	x	x
Off	x	x	x	x	Off	x	x	x
Password Skip								
On	x	x	x	x	x	On	x	x
Off	x	x	x	x	x	Off	x	x
Floppy Write Protect								
On	x	x	x	x	x	x	x	On
Off	x	x	x	x	x	x	x	Off

On = 0 = Close   *Off = 1 = Open*   *x = don't care*

Frequency-setting for Intel P55 (MMX) Processor:

ON=0 1 2 3 4 5 6 7 8 **166**   BUS = 66 MHz   Core = x 2,5

ON=0 1 2 3 4 5 6 7 8 **200**   BUS = 66 MHz   Core = x 3,0

ON=0 1 2 3 4 5 6 7 8 **233**   BUS = 66 MHz   Core = x 3,5

Frequency-setting for AMD (K6) Processor:

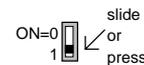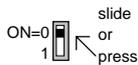ON=0 1 2 3 4 5 6 7 8 **166**   BUS = 66 MHz   Core = x 2,5

ON=0 1 2 3 4 5 6 7 8 **200**   BUS = 66 MHz   Core = x 3,0

ON=0 1 2 3 4 5 6 7 8 **233**   BUS = 66 MHz   Core = x 3,5

Switch position: **ON (0)**   **OFF (1)**

ON=0 1   slide or press   ON=0 1   slide or press

2.2.15 PCI-SLOT Configuration And Placement

PCI-SLOT	IDSEL	Device number
PCI-SLOT 1	ADR 28	11 h
PCI-SLOT 2	ADR 29	12 h
PCI-SLOT 3	ADR 30	13 h
PCI-SLOT 4	ADR 31	14 h

2.3 Power Requirements (Power Supply)

Voltage	Max. variation	Max. current
+ 5.1 V	± 5 %	Tbd
- 5 V	± 5 %	Tbd
+ 12 V	± 10 %	Tbd
- 12 V	± 10 %	Tbd
+ 3.4 V	± 5 %	Tbd
+ 5.0 V (aux.)		Tbd

- Power: minimum 145 W
- ATX-capable
- Remote on/off capable
- Continous voltage of minimum 5V / 20 mA

3 Installing drivers and utilities; documentation

♦ Insert the "Drivers & Utilities" CD.

♦ When the DeskStart window appears, select Explore the CD via HTML.

♦ Select the language in which you want to operate the user interface.

♦ Select Scenic Pro and then select f.e. Windows 95.

Here you will find the required drivers, utilities and the additional documentation

♦ For the following components, install the software offered to you in the HTML interface:

– Display adapters > Matrox MGA > Install

– Harddisk-Controller > PIIX4-Support > Install

– Updates > USB, Siemens Nixdorf USB-Support, DirectX 3.0

♦ You will find the description for the Mainboard D1042 under „Documentation" > Technical Manual

(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

4 Upgrades

4.1 Main Memory

Further information is given in the main technical manual. For correct functionality of the mainboard D1042 we recommend the usage of the following DIMM-Modules. For upgrades of the following list, please ask your local dealer.

16MB DIMM SDRAM, 2Mx64

Producer	Part.-No
Samsung	KMM366S203BTN-G2

32MB DIMM SDRAM, 4Mx64

Producer	Part.-No
NEC	MC-454AD644F-A67
SAMSUNG	KMM366S403BTN-G2
SIEMENS	HYS64V4020GU-10
HYUNDAI	HYM7V64400TFG-10

64MB DIMM SD-RAM, 8Mx64

Producer	Part.-No
NEC	MC-458CB644F-A10
SAMSUNG	KMM366S823AT-G2

128MB DIMM SD-RAM, 16Mx64

Producer	Part.-No
NEC	MC-4516CD644F-A10
SAMSUNG	KMM366S1623AT-G2

4.2 VGA Memory Upgrade

Further information are shown in the main technical manual.
Use only the standard VGA memory extension (up to 8 MB VGA memory) for the Matrox Mystique 220 grapic cards.

A26361-D1042-Z180-1-7619