Introduction

This technical manual applies for the mainboard D1064. 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 e. g. the complete **technical manual for the D1064** 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

Function	**Version**	
	D1064-A	**D1064-E**
Processor	Pentium II	Pentium II
Flash	2 Mbit	2 Mbit
Video onboard	X	-
AGP connector	X	X
Wake on LAN (WOL) connector	X	-
USB	X	X
IrDA connector	X	X
Chipcard reader	X	X
Keyboard on	X	X
I^2C connector	-	-
BIOS Fax	-	-
Quiet Boot	X	X
DMI	X	X
Systemmonitoring	X	-
DIMM	3	3

2 Mechanics

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

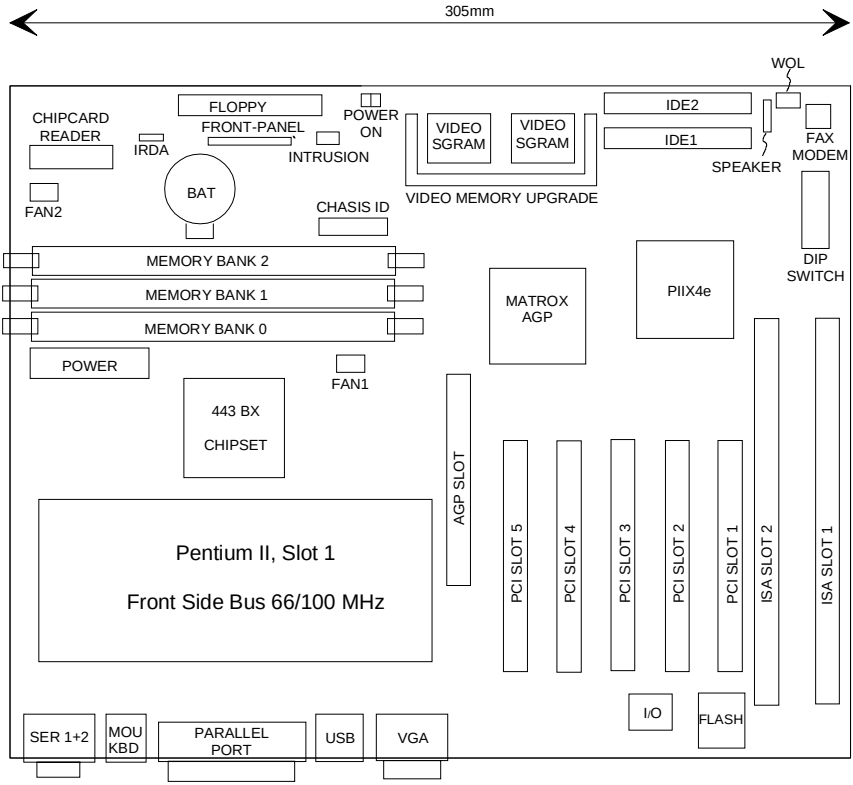
Place the mainboard and the components on a grounded antistatic pad whenever you work outside the computer.

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

2.1 Layout

ATX 12" x 8,8" (305mm x 224mm)

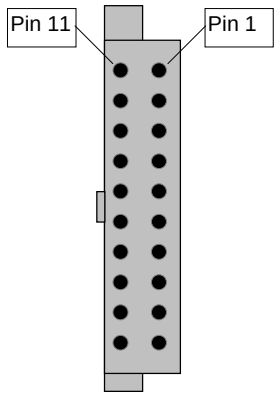
Some of the following connectors are optional and may therefore not be included on your mainboard.



2.2 Connectors, DIP-Switch, Jumpers

Some of the following connectors are optional!

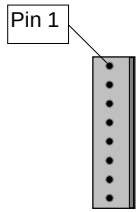
2.2.1 Power supply ATX connector



Pin	Signal
11	+ 3.3V
12	- 12V
13	GND
14	PS on (low asserted)
15	GND
16	GND
17	GND
18	- 5V
19	+ 5V
20	+ 5V

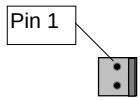
Pin	Signal
1	+ 3.3V
2	+ 3.3V
3	GND
4	+ 5V
5	GND
6	+ 5V
7	GND
8	Powergood (high asserted)
9	+ 5V SB
10	+ 12V

2.2.2 Power control connector



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

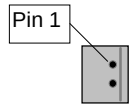
2.2.3 Power on switch connector



Pin	Signal
1	GND
2	Power on pulse (low asserted)

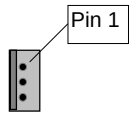
2.2.4 Remote (Fax card) on connector

Pin	Signal
1	GND
2	Remote on (low asserted)



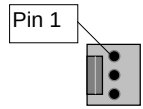
2.2.5 Wake on LAN (WOL) connector (stuffing option)

Pin	Signal
1	+ 5 V SB
2	GND
3	Wake pulse (high asserted)



2.2.6 CPU-FAN connector

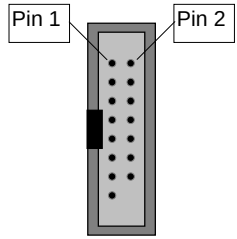
Pin	Signal
1	GND
2	FAN power supply
3	FAN sense



2.2.7 Internal serial port for chip card reader

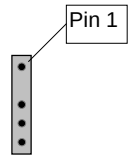
Pin	Signal
1	DCD 2 (low asserted)
3	SIN 2 (high asserted)
5	SOUT 2 (high asserted)
7	DTR 2 (low asserted)
9	GND
11	
13	RESETDRV (high asserted)
15	GND

Pin	Signal
2	DSR 2 (low asserted)
4	RTS 2 (low asserted)
6	CTS 2 (low asserted)
8	PC_ON_Strobe
10	VCC SB
12	VCC
14	GND
16	Key



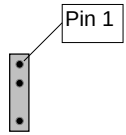
2.2.8 Internal infrared (IrDA) connector

Pin	Signal
1	VCCHELP
2	Key
3	IRDA_RX
4	GND
5	IRDA_TX



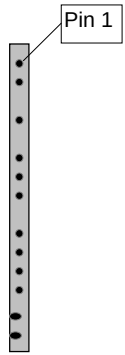
2.2.9 Internal speaker connector

Pin	Signal
1	VCC
2	GND
3	Key
4	Speaker output



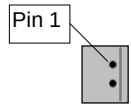
2.2.10 Front panel connector 1

Pin	Signal
1	Boot Lock
2	+ Standby LED
3	Key
4	+ Power LED
5	N.C.
6	- Standby / Power LED
7	N.C. (Keylock)
8	GND
9	Key
10	+ HD LED
11	HD LED
12	GND
13	Power On Pulse (low asserted)
14	N.C.
15	RESET (low asserted)



2.2.11 Front panel connector 2

Pin	Signal
1	Reset (low asserted)
2	GND



2.2.12 Configuration SWITCH-Block (DIP-Switch)

For Frequency selection, Reserved, Password clear, Recovery and Floppy write.

Function	SW1 SKP	SW2 RCV	SW3 FWP	SW4 RES	SW5 CF1	SW6 CF2	SW7 CF3	SW8 CF4
Password Skip	On	x	x	x	x	x	x	x
Off	Off	x	x	x	x	x	x	x
Recovery BIOS	x	On	x	x	x	x	x	x
Off	x	Off	x	x	x	x	x	x
Floppy Write Protect	x	x	On	x	x	x	x	x
Off	x	x	Off	x	x	x	x	x
Reserved	x	x	x	On	x	x	x	x
Reserved	x	x	x	Off	x	x	x	x

Recovering System BIOS - switch 2

Switch 2 enables recovery of the old system BIOS after an attempt to update has failed. To restore the old system BIOS you need a Flash BIOS Diskette (call customer service).

on The System BIOS executes from floppy drive A: and restores the System BIOS on the system board.

off The System BIOS is started from the system board (default setting).

Write protection for floppy disks - switch 3

Switch 3 is used to define whether floppy disks can be written or deleted in the floppy disk drive. To write and delete floppy disks, the write -protection in *BIOS setup* must be disabled (in menu *Security*, the field *Diskette Write* must be set to *Enabled*).

on The floppy disk drive is write-protected.

off Read, write and delete floppy disks is possible (default setting).

Clock speed - switch 5, 6, 7 and 8

The switches may only be set as specified in the table below for the particular Pentium II used.

This system board you may use with processors with a host bus frequency of 100 MHz and 66 MHz.

Pentium II with 100 MHz Host Bus frequency:

processor	switch 5	switch 6	switch 7	switch 8
350 MHz	off	off	on	on
400 MHz	on	on	off	on
450 MHz	off	on	off	on

Pentium II with 66 MHz Host Bus frequency:

processor	switch 5	switch 6	switch 7	switch 8
233 MHz	off	off	on	on
266 MHz	on	on	off	on
300 MHz	off	on	off	on
333 MHz	on	off	off	on

The processor selects the host bus frequency automatically between 66/100 MHz

2.2.15 PCI-SLOT Configuration And Placement

PCI-Slot	IDSEL	Device number
PCI-Slot 1	ADR 23	12 h
PCI-Slot 2	ADR 24	13 h
PCI-Slot 3	ADR 25	14 h
PCI-Slot 4	ADR 26	15 h
PCI-Slot 5	ADR 27	16 h

2.3 Power Requirements (Power Supply)

Source	Voltage	Max. Variation	Max. Current
SV	+ 5.1 V	+/- 5 %	15A
SV	- 5 V	+/- 5 %	100mA
SV	+ 12 V	+/- 10 %	300mA
SV	- 12 V	+/- 10 %	100mA
On Board	1.8 - 3.5 V	+/- 5 %	14 A
SV	+ 3,3 V	+/- 5 %	4 A
SV	+ 5.0 V (aux)	+/- 5 %	500mA

- Power: minimum 145 Watts
- ATX-capable
- Remote on/off capable

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 e. g. 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 USB-Support, DirectX 3.0
- You will find the description for the Mainboard D1064 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 this mainboard we recommend the usage of the following DIMM-Modules.

For upgrades of the following list, please ask your local dealer.

16MB DIMM SDRAM 2Mx64 / 100 MHz

Producer	Part.-No
SIEMENS	HYS64V2200GU-8
SAMSUNG	KMM366S203CT-GH
SAMSUNG	KMM366S203CT-GL

32MB DIMM SDRAM 4Mx64 / 100 MHz

Producer	Part.-No
NEC	MC-454AD646F-A10
SIEMENS	HYS64V4220GU-8
SAMSUNG	KMM366S424BT-GH

32MB DIMM SDRAM 4Mx72 / 100 MHz

Producer	Part.-No
NEC	MC-454AC726F-A10
SIEMENS	HYS72V4220GU-8
SAMSUNG	KMM374S403CT-GH

64MB DIMM SDRAM 8Mx72 / 100 MHz

Producer	Part.-No
NEC	MC-458CB646F-A10
SIEMENS	HYS64V8200GU-8
SAMSUNG	KMM366S823BT-GH

64MB DIMM SDRAM 8Mx64 / 100 MHz

Producer	Part.-No
NEC	MC-458CA726F-A10
SIEMENS	HYS72V8200GU-8
SAMSUNG	KMM374S823BT-GH

128MB DIMM SDRAM 16Mx64 / 100 MHz

Producer	Part.-No
NEC	MC-4516CD646F-A10
SIEMENS	HYS64V162200GU-8
SAMSUNG	KMM366S1623BT-GH

128MB DIMM SDRAM 16Mx72 / 100 MHz

Producer	Part.-No
NEC	MC-4516CC726F-A10
SIEMENS	HYS72V162200GU-8
SAMSUNG	KMM374S1623BT-GH

4.2 VGA Memory Upgrade

Further information are shown in the main technical manual.

Use only the standard VGA memory extension (up to 6 MB VGA memory) for the Matrox MGA-G100 graphic controller.

Contents

A26361-D1064-Z180-3-7619
System board D1064
Additional Technical Manual
October 1998 edition