

Chapter

Software Specifications

Get to know more about the A7Sv series Notebook with a detailed look at the software specifications.

he information contained in the chapter can be quite useful when you are troubleshooting the system's hardware. Each item has its individual usage for you to Understand the software side of the notebook's architecture.



1. BIOS Version Naming Rule

BIOS Version Format : RNN

Tahlo 1	RIOS	Revision	Code	Format
I able I	DIUS	Revision	Code	ruinal

CHARACTER	DEFINITION	DESCRIPTION
R	Major	0 = SR (sample run) phase,
	version	1 = ER (engineer run) phase,
		2 = PR (pilot-run) and MP (mass-production) phases
		T = Test Version, which is for unofficial verification.
		The test BIOS will not be released officially and uploaded to BIOS
		folder of NB sever.
		9 = Test Version, used in case of test BIOS over xxxxxxx.T99,
		The next version of test BIOS will be xxxxxxx.900
		Note: minor version of test BIOS is counting sequentially.
		9 – Test Version, used in case of test BIOS over xxxxxxx.T99,
		The next version of test BIOS will be <code>xxxxxxxx.900</code> $_{\circ}$
NN	Minor	00~99
	version	



2. BIOS Schedule

Stage	BIOS Revision	Release date
Bring UP	000	2007/04/26
SR	001	2007/05/04
	002	2007/05/17
PR	200	2007/05/25
	201	2007/06/28
	202	2007/07/09

Table 2 BIOS Development Schedule



3. Documentation

- 1. BIOS Engineering Specification, and update should be provided in the beginning of each stage.
- 2. BIOS Validation Items should be provided in the end of S/R stage.
- 3. BIOS Implementation Checklist should be provided before S/R stage and should be updated on each S/R bios release.



4. POST

4.1 ASUS Logo

4.1.2 With ASUS BIOS

The ASUS animation logo should be displayed during POST like below.



4.1.2 With General BIOS

If there is no OEM logo like ASUS/Hitachi/Epson/Haier displayed during POST. The intel OSB should be displayed on the center of screen.

4.2 ASUS Instant On Logo

Boot from Instant ON button or CIR, and the ASUS instant on logo should be displayed during POST like below.



4.3 intel OSB

intel OSB (On-Screen Branding) should follow the intel spec.

If there is an OEM logo like ASUS/Hitachi/Epson/Haier displayed during POST. The intel OSB should be displayed on the right-bottom of screen.





4.2 Prompt Message

During 'Quiet Boot', the prompt string like "<F2> : Enter Setup, <ESC> : Popup Menu" should be displayed on the left-bottom of screen.

4.3 Hotkey Functions during BIOS POST

Button	Description
Esc	Press Esc Key during post stage, the system will pop up a boot menu.
Tab	Press Tab key during post stage, the normal post will become Text Mode POST
F2	Press F2 key during post stage, the system will enter into BIOS Setup Menu.
E4	Press F4 key during post stage, the system will open the easy flash utility.
Γ4	The generic version of bios doesn't support this function.
F9	Press F9 during post stage, the system will start the Recovery Capability up.
E 10	Press F12 key during post stage, the system will boot from network if the Onboard
FIZ	LAN Boot ROM function under BIOS setup menu is enabled.
Fn + F5	Press Fn+F5 to decrease the brightness of LCD backlight.
Fn + F6	Press Fn+F6 to increase the brightness of LCD backlight.

4.4 Beep Sound

There is no warning beep sound allowed during POST.

4.5 POST Wave

POST Wave sound should be played during POST, and the sound volume could be adjusted in the setup menu.

4.6 Text Mode POST (Diagnostic Mode)

The following items should be displayed during text mode POST.

- BIOS Date, Version
 - EX : BIOS Date: 07/09/2007 Ver: 202
- CPU Information, speed, type

EX : CPU : Intel® Core™ 2 DUO CPU T5250 @ 1.50GHz

Current Speed : 1.50GHz

Memory size & Information (Not include VGA shared memory)
 The MCH is operating with DDR2 667/CL5 in Single-Channel Mode

EX: 1024MB



USB Devices (Detected by BIOS during POST.)
 EX : USB Device(S) : 1 Keyboard, 1 Hub
 Hard drive information

The IDE Device will be detected automatically.

EX : Auto-Detecting Pri Master .. IDE Hard Disk

Auto-Detecting 3rd Master ... ATAPI CDROM

Pri Master : HTS541616J9SA00 SB40C7OP

Ultra DMA Mode-5, S.M.A.R.T. Capable and Status OK

3rd Master : MATSHITADVD-RAM UJ-850S 120

Ultra DMA Mode-2

USB mass storage devices detection

EX : Auto-detecting USB Mass Storage Devices ..

00 USB mass storage devices found and configured.

• Other information.

Hotkey prompt :

EX: Press F2 to run Setup

Press F12 if you want to boot from the network

(The "Onboard LAN Boot ROM" function under BIOS setup menu should be enabled.) Press Esc for BBS POPUP



5. SETUP Menu

Refer to the A7Sv_BIOS_Setup_Menu_Specification_Draft.DOC



6. Boot Devices Support

The system supports the following bootable devices,

- HDD
- ODD (CD-ROM/ DVD-ROM ...)
- LAN (PXE server)
- USB Mass Storage (USB CDROM/ Floppy/ Flash Disk...)

6.1 Boot Device Selection by Recovery CD Command

Refer to the Boot Device Selection 0.3.doc.



7. Audio

7.1 PCBEEP

A7Sv supports PCBEEP sound and the volume of audio sound is 40 db under DOS mode. There is no sound allowed while plug in/out USB devices. There is no sound during POST.

7.2 POSTWAVE

During the POST the A7Sv supports the POSTWAVE, and the user can enable, disable or modify the volume under BIOS setup menu.



8. EXTF/*BBSS* Interface & Utilities

The bios should support EXTF and *BBSS* interfaces for the following functions.

8.1 AFLASH2

• Automatic : The BIOS ROM will be flashed automatically without any prompt.

Usage :

Aflash2.exe /auto:filename

Manual

Usage :

Aflash2.exe

8.2 EasyFlash

Refer to the A7Sv_BIOS_Setup_Menu_Specification_Draft.DOC - Chapter 2-2 Start Easy

Flash

8.3 ROMWRT

A7Sv supports Rom Write function, there are some spaces reserved for factory using. But product engineer (PE) needs to use different utility to write data into those areas by different customer's requirement.

8.4 WDMI

A7Sv supports WDMI utility, the DMI information can be accessed under windows.

8.5 WINFlash

A7Sv support winflash function. The user can update bios under ACPI-OS. The system needs to reboot after the bios is updated.



9. BIOS Crisis Recovery

9.1 Auto Crisis Recovery (Generic Version does not support this feature)

If bios checksum is not correct, the bios crisis recovery will be invoked automatically. However, there should be one bios image existed in the hard disk and named as 'A7Sv.BIN'.

9.2 Manual Crisis Recovery

Before invoking the bios crisis recovery, there should be one bios image existed in the hard disk and named as "A7Sv.BIN". The combination hotkey "CTRL+HOME" is used to invoke the bios crisis recovery during bootblock and POST. If the hotkey is pressed in bootblock, the bios crisis recovery will be invoked during POST. If the hotkey is pressed during POST, the system will reboot automatically and the bios crisis recovery will be invoked on the next time of POST.



10. ATK Interface & Functions

BIOS should support ATK interface which defined by driver team for the following functions.

10.1 ASUS OSD (On-Screen Display)

While pressing the following combination hotkey, the system will pop up an illustration on the left-top corner of the screen to indicate the function is invoked.

Button	Description	
Fn+F2	The OSD for wireless console display and wireless device will be displayed.	
Fn+F5	The OSD for brightness up will be displayed.	
Fn+F6	The OSD for brightness down will be displayed.	
Fn+F7	The OSD for LCD back light ON/OFF will be displayed.	
En I Eq	The OSD for display switch will be displayed. The last OSD displayed will	
FII + FO	decide the final state which display should be switched to.	
Fn+F9	The OSD for Touch Pad ON/OFF will be displayed.	
Fn+F10	The OSD for volume mute will be displayed.	
Fn+F11	The OSD for volume down will be displayed.	
Fn+F12	The OSD for volume up will be displayed.	
Fn+Space	The OSD for Power4Gear mode will be displayed.	
TouchPad	The OSD for Tough Dod ON/OFF will be displayed	
On/Off	The USD for Touch Pad UN/UFF will be displayed.	
Splendid	The OSD for Color Enhancement will be displayed	
Power4Phone	The OSD for Power4Phone will be displayed.	
Power4Gear	The OSD for Power4Gear mode will be displayed.	

Table 10 ASUS OSD List

10.2 ASUS Power4Gear

BIOS should support ASUS Power4Gear by pressing the Power4Gear button.

10.3 ASUS Power4Phone

BIOS should support ASUS Power4Phone by pressing Power4Phone button or Fn+Space..

10.4 ASUS Color Enhancement

BIOS should support Color Enhancement by pressing Splendid button.



10.5 ASUS TouchPad

BIOS should support TouchPad On/Off by pressing TouchPad On/Off button or Fn+F9.

10.6 ASUS Key Define

A7Sv doesn't support this feature.

10.7 ASUS Mail LED

A7Sv doesn't support this feature.

10.8 ASUS TouchPad LED

A7Sv doesn't support this feature.





11. ACPI Tables

R	SDP	OEMID	ACPIAM
RSDT		OEMID	_ASUS_
		OEM Table ID	Notebook
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	0000097
	FACP	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMFACP" (0x20504341464d454f)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	0000097
	APIC	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMAPIC" (0x20434950414d454f)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	0000097
	MCFG	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMMCFG" (0x204746434d4d454f)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	0000097
	BOOT	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMBOOT" (0x2049204d2041)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	0000097
	OEMB	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"AMI_OEM" (0x204d454f5f494d41)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	0000097
DSDT		OEMID	"A7Sv00" (0x003030533741)
		OEM Table ID	"A7Sv00000" (0x3030303030533741)



OEM Revision	0x0000000
Creator ID	"INTL" (0x4c544e49)
Creator Revision	20051117



12. Power Management

12.1 Sleep States

BIOS supports S3, S4 and S5 states.

12.2 Wake Up Events

BIOS supports the following wake-up events.

- Wake up by pressing Power Button.(S3, S4, S5)
- Wake up by pressing any key.(S3)
- Wake up form USB keyboard/mouse.(S3)
- Wake up from LAN.(S3, (S4 AC mode))
- Wake up from modem ring.(S3)
- RTC.(S3, (S4, S5 AC mode))
- Wake up by Instant Button.(S3, S4, S5)
- Wake up by CIR Power Button.(S3, S4, S5)

12.3 Auto Brightness Control

A7Sv supports Auto Brightness Control. No matter which brightness level is set under AC mode, when AC adapter is removed, the brightness value should be automatically reduced 20% of AC mode brightness.

For example,

If AC mode brightness value is 100, then DC mode brightness should be reduced to 80.

12.4 C-States

The system supports C2, C3 and C4 states.

Note : The C3 and C4 states are supported only under DC mode.

12.5 intel (Geyserville)

BIOS supports intel Geyserville III.

The CPU performance is dynamically adjusted based on the system loading (demand).

12.6 AMD (PowerNow)

A7Sv doesn't support AMD CPU.



13. Thermal Management

13.1 Thermal Policy



13.2 Thermal Protect Function

For prevent the platform overheated, the bios will make the system into S4 automatically. While the below status are true, the system will into S4.

- (1) The Lid is close.
- (2) The temperature is over 100'C.
- (3) Both (1) and (2) keep 10 minutes.



14. Hotkeys & Instant Keys

BIOS should support the following Hotkeys and Instant keys functions.

Table 14-1 Hotkeys/Instant Keys Table

Hotkeys/Instant Keys	Function	Non ACPI	ACPI
Fn+F1	Functions as sleep button	No	Yes
Fn+F2	Bluetooth / Wireless switch on / off	No	Yes
Fn+F3	Trigger off email	No	Yes
Fn+F4	Trigger off internet	No	Yes
Fn+F5	Brightness Up	Yes	Yes
Fn+F6	Brightness Down	Yes	Yes
Fn+F7	LCD backlight ON/OFF	Yes	Yes
Fn+F8	Display Switch	Yes	Yes
Fn+F10	Volume on/off toggling	No	Yes
Fn+F11	Adjust Volume	No	Yes
Fn+F12	Adjust Volume	No	Yes
Power4Gear	Switch the modes of DewordCoor	No	Voo
Fn+Space	Switch the modes of Power4Gear	INU	res
Power4Phone	Trigger off the Power/Phone	No	Voc
Fn+T		NO	165
Splendid	Trigger off the Color Enhancement	No	Vos
Fn+C		NO	163
Touch Pad	Touch Pad ON/OFF	No	Vos
Fn+F9			163
Fn+ ↑	Stop	No	Yes
Fn+↓	Play/Pause	No	Yes
Fn⊥←	Previous section	No	Vos
	Previous Track	NO	162
Fn:>	Next section	No	Vee
rn+→	Next Track		100





15. Wireless LAN Control

Wireless On/Off is controlled by Wireless control button.
A7Sv supports Wireless console to control Wireless LAN and Bluetooth.
There are four checked boxes in the Wireless console.
If you select Wireless LAN, it means that only Wireless LAN is controlled by Wireless control button.
If you select Bluetooth, it means that only Bluetooth is controlled by Wireless control button.
If you select both, it means that Wireless LAN and Bluetooth are all controlled by Wireless control button.
When switch the button to left, the Wireless (Wireless LAN or Bluetooth or both) is On.
When switch the button to right, the Wireless (Wireless LAN or Bluetooth or both) is Off.

Under DOS mode, there is no effect on Wireless control when switching the button. In the bios setup menu, if selecting the following items, the switch button is invalidated. Security – I/O Interface Security – Wireless Network Interface – [LOCKED] Security – I/O Interface Security – USB Interface – [LOCKED] If one of them is [UNLOCKED], the switch button is valid.



16. BIOS NV Data Auto Save / Restore

Refer to the ASUS BIOS NV Data Auto SaveRestore Requirement verification_v1r00.doc.



17. Instant On (Direct Media)

Refer to the *DirectMediaEngineerSpecv0r01.pdf*.



18.Main menu

Main menu describes system overall information with some user changeable setting, it contains below items:

ain Advanced	BIOS SETUP UTILITY Display Security Security	Boot Exit
System Overview AMIBIOS Version :203.001 UGA BIOS Version EC BIOS Version	: 60.86.41.00.55.N11414.002 : 1000B50001	Use [ENTER], [TAB] or [SHIFT-TAB] to select a field. Use [+] or [-] to configure system Ti
Processor Type :Intel(R Speed :2200MHz System Memory) Core(TM)2 Duo CPU 17500 @ 2.20G	
Size :2048MB System Line System Date	[15:22:45] [Wed 07/11/2007]	 ↔ Select Screen ↑↓ Select Item ← Change Field Tab Select Field F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit

18.1 System Firmware

[Help string] : none

[System BIOS Version] : Display BIOS Version.

[VGA BIOS Version] :

Display VGA BIOS Version. Please check VGABIOSNamingRuleISO_v0r06.doc for more detail.

18.2 Processor

[Help string]	: none
[Type]	: Display CPU Type.
	BIOS could get the CPU type from command "CPUID 80000002, CPUID
	80000003, CPUID 80000004 ".
	BIOS should skip all leading "Space" characters (20h) of the CPU type string
	which got from CPUID 8000002h, 80000003h and 80000004h.
[Speed]	: Display CPU Current Speed.

18.3 System Memory



[Help string] : none

:

[Size]

Display the size of system memory which the VGA share memory should be decreased.

18.4 System Time

[Help string] :

Use [ENTER], [TAB] Or [SHIFT-TAB] to Select a field. [Blank Line] Use [+] or [-] to Configure system Time. [System Time] : [HH:MM:SS]

18.5 System Date

[Help string] :

Use [ENTER], [TAB] Or [SHIFT-TAB] to Select a field.

Use [+] or [-] to

Configure system Date.

[System Date] :

[WD MM/DD/YYYY], WD means Week Day - Mon, Tue, Wed, Thu, Fri, Sat, Sun.



19. Advanced menu

19.1 IDE Configuration

[Help String] : Configure the IDE device(s).



19.1.1 IDE Configuration – Sub Menu

- [Help String]: While entering setup, BIOS auto detects the presence of IDE devices. This displays the status of auto detection of IDE devices.
- **[Items] :** If the device is a hard disk, the item should be 'Hard Disk'.

If the device is a CD/DVD - ROM, the item should be 'ATAPI CDROM'.



	(T) an par a mart	•
	BIOS SETUP UTILITY	
IDE Configuration Primary IDE Master Third IDE Master	: [Hitachi HT354] : [TSSTcorpCD/DV]	While entering setup. BIOS auto detects the presence of IDE devices. This displays the status of auto detection of IDE devices.
		 ↔ Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
v02.59 (C) Copyrig	ht 1985-2005, American Meg	gatrends, Inc.

19.1.1.1 Primary IDE Master – Sub Menu

Display the information of IDE devices.

Primary IDE Master		Sele	Select the type	
Device :Hard Disk Vendor :Hitachi HTS541616J9 Size :160.0GB LBA Mode :Supported Block Mode:16Sectors PIO Mode :4 Async DMA :MultiWord DMA-2 Ultra DMA :Ultra DMA-5 S.M.A.R.I.:Supported	SAOO	to t	evice connected he system.	
Type LBA/Large Mode Block (Multi-Sector Transfer) PIO Mode DMA Mode S.M.A.R.T. 32Bit Data Transfer	[Auto] [Auto] [Auto] [Auto] [Auto] [Auto] [Enabled]	++ †1 +- F1 F9 F10 ESC	Select Screen Select Item Change Option General Help Load Defaults Save and Exit Exit	

<u>19.1.1.1.1 Type</u>

[Help String] : Select the type of device connected to the system.

[Items] :

"Not Installed"

"Auto" : Default



"CD/DVD"

"ARMD"

19.1.1.1.2 LBA/Large Mode

[Help String] :

Disabled : Disables LBA Mode.

Auto : Enables LBA Mode if the device supports it and the device is not already formatted with LBA Mode disable.

[Items] :

"Disabled"

"Auto" : Default

19.1.1.1.3 Block (Multi-Sector Transfer)

[Help String] :

Disabled : The Data transfer from and to the device occurs one sector at a time. Auto : The data transfer from and to the device occurs multiple sectors at a time if the device supports it.

[Items] :

"Disabled"

"Auto" : Default

19.1.1.1.3 PIO Mode

[Help String] :

Select PIO Mode.

[Items] :

"Auto" : Default "0" "1" "2" "3" "4"

19.1.1.1.4 DMA Mode

[Help String] :

Select DMA Mode. Auto : Auto Detected SWDMAn : SingleWordDMAn MWDMAn : MultiWordDMAn UDMAn : UltraDMAn



[Items] :

"Auto" : Default

"SWDMA0"

"SWDMA1"

"SWDMA2"

"MWDMA0"

"MWDMA1" "MWDMA2"

"UDMA0"

"UDMA1"

"UDMA2"

- "UDMA3"
- "UDMA4"
- "UDMA5"

<u>19.1.1.1.5 S.M.A.R.T.</u>

[Help String] :

S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Technology.

[Items] :

"Auto" : Default "Disabled" "Enabled"

19.1.1.1.6 32Bit Data Transfer

[Help String] :

Enable/Disable 32-bit Data Transfer.

[Items] :

"Enabled" : Default

"Disabled"

19.1.1.2 Primary IDE Slave – Sub Menu

Display the information of IDE devices.



7	lvanced	BIOS SETUP UTIL	ITY
Third IDE Device Vendor LBA Mode PIO Mode Async DMA Ultra DMA	Master :ATAPI CDROM :TSSTcorpCD/DVDW :Supported :4 :MultiWord DMA-2 :Ultra DMA-2	TS-L632D	Select PID Mode.
PIO Mode DMA Mode		[Auto] [Auto]	 ↔ Select Screen ↑↓ Select Item ← Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
	v02.59 (C) Copyrig	ht 1985-2005, Amer	rican Megatrends, Inc.

19.1.1.2.1 PIO Mode

[Help String] :

Select PIO Mode.

[Items] :

"Auto" : Default
"O"
"1"
"2"
"3"
"4"

19.1.1.2.2 DMA Mode

[Help String] :

Select DMA Mode.

Auto : Auto Detected

SWDMAn : SingleWordDMAn

MWDMAn : MultiWordDMAn

UDMAn : UltraDMAn

[Items] :

"Auto" : Default

- "SWDMA0"
- "SWDMA1"
- "SWDMA2"



"MWDMA0"

"MWDMA1"

"MWDMA2"

"UDMA0"

"UDMA1"

"UDMA2"

"UDMA3"

"UDMA4" "UDMA5"



19.2 Start Easy Flash

[Help String] :

Press ENTER to run the utility to select and update BIOS. Press F4 at POST to invoke the utility.

navanced Settings		Press ENTER to run
UARNING: Setting wrong values in be may cause system to malfun > IDE Configuration Start Easy Flash Internal Pointing Device [Ena Play POST Sound [Yes Speaker Volume [4]	low sections action. bled)	the utility to select and update BIOS. Press HotKey F4 at POST to invoke the utility. This utility doesn't support: 1.CDROM 2.USB HDD 3.Secondary HDD
		 ↔ Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
u82.59 (C)Comminstat 1985-	2005 American Mer	

19.2.1 Start Easy Flash Utility

	BIOS SETUP UTILITY play Security Power	
Advanced Settings WARNING: Setting wrong of may cause syste	values in below sections em to malfunction.	Press ENTER to run the utility to select and update BIOS. Press HotKey F4 at POST to invoke the utility. This
► IDE Configuration Start Easy Flash Internal Pointing Devi Play POST Sound Speaker Volume	Start Easy Flash Utility?	utility doesn't support: I.CDROM 2.USB HDD I.Secondary HDD I.S
002.59 (C) Copy	yright 1985-2005, American Me	egatrends, Inc.



19.2.2 AsusTek BIOS ROM Easy Flash Utility V1.12

The utility is invoked.

Current ROM - PLATFORM: A7S VER: 203 DATE: 05/03/07		Update ROM PLATFORM: Unknown VER: Unknown DATE: Unknown	
PATH : Drive A: B: C: D:	File —		·
Note	e , <enter> to d</enter>	etermine , <bspace> to drive selec</bspace>	t

19.2.3 AsusTek BIOS ROM Easy Flash Utility V1.12

Select the bios image file.

- Current ROM PLATFORM: A7 VER: 203 DATE: 05/03/	S 07	Update ROM PLATFORM: Un VER: Unknown DATE: Unknow	known n	
ATH : A:N	File			
A	A7SAS203.T37	2007/5/7	14:58	
B:	A7STES~1.XLS	2007/5/7	15:11	
C:	UPDATE	<dir></dir>		
D:	AFLASH2.EXE	2007/4/18	6:8	
	A7SUS001.T04	2007/5/7	15:1	
	A7SUTE~1.XLS	2007/5/7	15:14	
	A7S203~1	<dir></dir>		
	TATU2_~1.ZIP	2007/5/3	17:34	
	GZSASZ04.TZ4	2007/5/7	14:55	





19.2.4 AsusTek BIOS ROM Easy Flash Utility V1.12

Confirm to update BIOS...



19.2.5 AsusTek BIOS ROM Easy Flash Utility V1.12

BIOS updated is in progress. The platform is A7S, the BIOS version is 203.t37 and the bios build date is 05/07/07.





19.2.6 AsusTek BIOS ROM Easy Flash Utility V1.04

The system will shut down automatically after BIOS is flashed successfully.



19.3 Internal Pointing Device

[Help String] : Enable/Disable internal touch pad.



[Items] : "Enabled" : Default

"Disabled"

Main <mark>Advanced</mark> Display	BIOS SETUP UTILITY Security Power	
Advanced Settings		Enable/Disable
WARNING: Setting wrong values may cause system to	in below sections malfunction.	internal touch pad.
► IDE Configuration Start Easy Flash Internal Pointing Device Play POST Sound Speaker Volume	[Enabled] [Yes] [4]	
		 ↔ Select Screen ↑↓ Select Item ← Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
v02.59 (C) Copyright	1985-2005, American Me	gatrends, Inc.

19.4 Play POST Sound

[Help String] : Select 'Yes' if you need to play POST sound on boot.

[Items]: "Yes": Default

"No"



BIOS SETUP UTILITY Main Advanced Display Security Power	
Advanced Settings WARNING: Setting wrong values in below sections may cause system to malfunction.	Select 'Yes' if you need to play POST sound on boot.
 IDE Configuration Start Easy Flash Internal Pointing Device [Enabled] Play POST Sound [Yes] Speaker Volume [4] 	 ↔ Select Screen ↑↓ Select Item +- Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
v02.59 (C)Copyright 1985-2005, American	n Megatrends, Inc.



19.5 Speaker Volume

[Help String] :

Set speaker volume

[Items] :

- "0" "1" "2"
- "3"
- "4" : Default
- "5"
- "6"
- "7"
- "8"





20. Display menu

20.1 TV Display Type

[Items] :

"NTSC" : Default

The Standard is for Japan, Taiwan, US ...etc.

"PAL" : The Standard is for China, Europe ...etc.

Note : Make sure the TV setting is correct, or the TV output will be abnormally.

Main Bdvanced	BIOS SETUP UTI Display Security	LITY Power Boot	Exit
Display Settings			Options
TV Display Type	[NTSC]	MTSC	
		++ †↓ +- F1 F9 F10 ESC	Select Screen Select Item Change Option General Help Load Defaults Save and Exit Exit
v02.59 (C)Copyright 1985-2005, Am	<mark>erican M</mark> egatrend	s, Inc.



21. Security menu

21.1 Security Settings

[Description] : Display the status of Supervisor/User Passwords.

Supervisor Password	:[Installed/Not Installed]
User Password	:[Installed/Not Installed]

21.1.1 Change Supervisor Password

[Description] :

- The supervisor password is limited to N characters and case sensitivity. Also, it does not support special characters like "!", "%", "^", "~"...
- 2. If the supervisor password is set or installed, the status should be changed to "Installed".
- 3. After the supervisor password is installed, the item "User Access Level" will be prompted for further setting. Please check the section 4.2 for more detail.
- 4. If the supervisor password is cleared or uninstalled, the status should be changed to "Not Installed". Also, the user password should be cleared automatically. And the item "User Access Level" should be hidden again.
- 5. After the supervisor password is installed, the password validation process will be invoked during system booting or entering into BIOS setup menu. If the user inputs wrong password over three times, the system bios must prompt a warning message that including the system date. And, if the warning message is pop-up when entering into setup menu, there should be an option to continue POST like below. ("F2") [Example]

System Date: 07-20-2005

Password check failed

Press F2 to resume

If the warning message is prompted during system booting, there is no option could be chose to continue POST.

[Help String] : Install or Change the password.





21.1.2 User Access Level

[Description] :

This item only could be activated when the supervisor password is installed. If the supervisor is uninstalled, the item should be hidden again.

[Help String] :

LIMITED: allows only limited files to be changed such as Date and Time.

NO ACCESS: prevents User access to the Setup Utility.

VIEW ONLY: allows access to the Setup Utility but the fields can not be changed.

FULL ACCESS: allows User access to the Setup Utility and change the setting except Easy flash, change supervisor password, change HDD password.

[Items] :

- "No Access"
- "View Only"

"Limited"

"Full Access" : Default



Main Advanced Display	Security Power	Boot Exit
Security Settings		LIMITED: allows only
Sumeruisor Password :Install	ed	 limited fields to be changed such as Date
User Password :Not Ins	talled	and Time. NO ACCESS: prevents
Change Supervisor Password User Access Level	[Full Access]	User access to the Setup Utility.
Change User Password Password Check	[Setup]	VIEW ONLY: allows access to the Setup
Boot Sector Virus Protection	[Disabled]	Utility but the fields can not be changed.
▶ Hard Disk Security Setting		↔ Select Screen
► I/O Interface Security		†‡ Select Item +- Change Option
		F1 General Help F9 Load Defaults
		F10 Save and Exit
		LOC LATE
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21.1.3 Change User Password

[Description] :

- The user password is limited to N characters and case sensitivity. Also, it does not support special characters like "!", "%", "^", "~"...
- 2. If the user password is set or installed, the status should be changed to "Installed".
- If the user password is cleared or uninstalled, the status should be changed to "Not Installed".
- 4. After the user password is installed, the password validation process will be invoked during system booting or entering into BIOS setup menu. If the user inputs wrong password over three times, the system bios must prompt a warning message that including the system date. And, if the warning message is pop-up when entering into setup menu, there should be an option to continue POST like below. ("F2") [Example]

System Date: 07-20-2005

Password check failed

Press F2 to resume

If the warning message is prompted during system booting, there is no option could be chose to continue POST.

[Help String] : Install or Change the password.



And MonneedPropendPerspectiveRootExitSecurity Settings	BIOS SETUP UTILITY					
Security Settings Installed Supervisor Password :Not Installed Install or Change the password. Change Supervisor Password User Password Deck IFull AccessI Isetup] Boot Sector Virus Protection IDisabled] Hard Disk Security Setting I/O Interface Security Security Setting I/O Save and Exit ESC Exit 		Security Pover	Boot Exit			
Supervisor Password :Installed Installed Change Supervisor Password IFull Access] User Access Level IFull Access] Change User Password ISetup] Boot Sector Uirus Protection IDisabled] Hard Disk Security Setting I/O Interface Security	Security Settings		Install or Change the			
Change Supervisor Password User Access Level Change User Password Password CheckIFull AccessI (Setup)Boot Sector Virus ProtectionIDisabled]• Hard Disk Security Setting • I/O Interface Security**** Select Screen t1 Select Item Enter Change F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit	Supervisor Password :Installe User Password :Not Inst	d alled	passmord.			
Password Check [Setup] Boot Sector Virus Protection [Disabled] Hard Disk Security Setting I/O Interface Security Select Screen Select Item Enter Change General Help F9 Load Defaults F10 Save and Exit ESC Exit Exit<	Change Supervisor Password User Access Level Change User Password	[Full Access]				
Boot Sector Virus Protection [Disabled] ▶ Hard Disk Security Setting ▶ I/O Interface Security ★ Select Screen ★ Select Item Enter Change F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit	Password Check	[Setup]				
 ▶ Hard Disk Security Setting ► I/O Interface Security ► Select Screen ► Select Item ► Enter Change F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit 	Boot Sector Virus Protection	[Disabled]				
	 Hard Disk Security Setting I/O Interface Security 		 ↔ Select Screen †↓ Select Item Enter Change F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit 			

21.1.4 Password Check

[Help String]: Setup: Check Password while invoking setup.

Always: Check password while invoking setup as well as on each boot.

[Items] : "Setup" : Default

"Always"



21.1.5 Boot Sector Virus Protection

[Help String] : Enable/Disable Boot Sector Virus Protection.

[Items]: "Disabled": Default

"Enabled"





21.1.6 Hard Disk Security Setting

[Help String] :

Configure HD Security.

[Description] :

- 1. The Hard Disk Password is limited to N characters and case sensitivity. Also, it does not support special characters like "!", "%", "^", "~"...
- 2. If the Hard Disk Password is set or installed, the status should be changed to "Installed".
- 3. If the Hard Disk Password is cleared or uninstalled, the status should be changed to "Not Installed".
- When the Hard Disk Password is set or installed, if the user inputs the wrong password over three times, the system must prompt an error message like below. The system date should be included in.

[Example]

System Date: 07-20-2005

Failed to unlock Hard Drive!

Fatal Error... System Halted.

			Security Power		
Security Se	ettings			Conf	igure HDD Security
Supervisor User Passud	Password ord	:Installe :Not Insta	l alled		
Change Supe User Access Change User	ervisor P s Level	assword d	[Full Access]		
Password Cl	heck	•	[Setup]		
Boot Sector	r Virus P	rotection	[Disabled]		
▶ Hard Disi ▶ I/O Inter	k Securit rface Sec	y Setting writy		<pre> ti Enter F1 F9 F10 ESC </pre>	Select Screen Select Item Go to Sub Screen General Help Load Defaults Save and Exit Exit
	u02.59 ((.) Copyr ight	1985-2005, American M	egatrend	s, Inc.



21.1.6.1 Change HDD Master Password

[Help String] :

The password for this Hard Disk can be set or cleared here. Power must be cycled for the Disk to lock.

21.1.6.2 Change HDD User Password

[Help String] :

The password for this Hard Disk can be set or cleared here. Power must be cycled for the Disk to lock.

Had Nick Security				
Change HDI Change HDI) Master Password) User Password	Hard Disk can be set or cleared here. Power must be cycled for the Disk to lock.		
Enter New Password				
		↔ Select Screen 11 Select Item Enter Change		
		F1 General help F9 Load Defaults F10 Save and Exit ESC Exit		



21.1.7 I/O Interface Security

[Description] : Lock/Unlock the interface of some I/O devices.

[Help String] : Disable input/output interfaces to prevent from stealing system data.

B Main Advanced Display	IOS SETUP UTILITY Security Power	Boot Exit
Security Settings		Disable input/output
Supervisor Password :Installed User Password :Not Insta	lled	interfaces to prevent from stealing system data.
Change Supervisor Password User Access Level Change User Password Password Check	[Full Access] [Setup]	
Boot Sector Virus Protection	[Disabled]	
 Hard Disk Security Setting I/0 Interface Security 		 ↔ Select Screen ↑↓ Select Iten Enter Go to Sub Screen F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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21.1.7.1 AUDIO/MODEM Interface

[Help String] : If LOCKED, the High Definition Audio controller will be disabled.

[Items] : "UNLOCKED" : Default.

"LOCKED"



I/O Interface Security		If LOCKED, audio and
AUDIO/MODEM Interface LAN Network Interface Wireless Network Interface ODD Interface CardBus/1394 Interfaces USB Interface eSATA Interface	LUNLOCKED] LUNLOCKED] LUNLOCKED] LUNLOCKED] LUNLOCKED] UNLOCKED LOCKED	disabled. ↔ Select Screen ti Select Item ← Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit



21.1.7.2 LAN Network Interface

[Help String] :

If LOCKED, the LAN controller will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.3 Wireless Network Interface

[Help String] :

If LOCKED, the wireless LAN will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.4 Secondary IDE Interface

[Help String] :

If LOCKED, the 2nd IDE Channel will be disable to avoid the system data being copied to a hard disk and/or burned into a CDROM diskette.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.5 Cardbus/1394 Interfaces

[Help String] :

If LOCKED, all Cardbus and 1394 controllers will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.6 USB Interface

[Help String] :

If LOCKED, all USB controllers will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.7 eSATA Interface

[Help String] :

If LOCKED, the eSATA controller will be disable

[Items] :

"UNLOCKED" : Default.

"LOCKED"



22. Power menu

22.1 LCD Power Saving

[Help String] : Enabled to dim LCD brightness when powered by a battery.

[Items]: "Enabled": Default.

When system is powered by DC, the LCD brightness will be reduced 80% of its original setting in AC mode.

"Disabled" : The brightness of AC and DC mode is same.



22.2 Start Battery Calibration

[Help String] :

Press Enter to start calibrating a battery. The calibration should charge the battery to full and then discharge it to empty.





After long time incomplete charge/discharge cycles, the battery meter becomes less and less accurate (the total power capacity is not significantly affected, however). Battery gauge needs to *"learn*", this item helps users to recalibrate the battery gauge. In the learning process, users need to follow system BIOS instruction to Insert/remove the AC adapter so that a complete reset and learning cycle may start.



22.3.1 Start Battery Calibration

22.3.2 Start Battery Calibration

Start charging the battery.





22.3.3 Start Battery Calibration

Remove AC adapter.



22.3.4 Start Battery Calibration

Battery Discharging...







23. Boot menu

23.1 Boot Setting Configuration

[Help String] : Configure Settings during system Boot.

Boot Sett						
DOD'L DELL	ings				Confi	gure Settings
 ▶ Boot Se ▶ Boot De ▶ Hard Di ▶ CD/DUD 	ttings Com vice Prior sk Drives Drives	nfiguration Tity			durin	1 System Boot.
Onboard L	AN Boot RO	m	[Disabled]			
					 ↔ †4 Enter F1 F9 F10 ESC 	Select Screen Select Item Go to Sub Scree General Help Load Defaults Save and Exit Exit
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23.1.1 Quiet Boot – Sub Menu

[Help String] : Disabled: Displays normal POST message.

Enabled: Displays OEM Logo instead of POST message.

[Items] : "Disabled" : Displays POST message.

"Enabled": Default

Displays OEM logo instead of POST message.



	BIOS SETUP UTILITY	1
		Boot
Boot Settings Configu	ration	Disabled: Displays
Quiet Boot	[Enabled]	Enabled: Displays OEM Logo instead of POST messages.
		 ↔ Select Screen ↑↓ Select Iten ↔ Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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23.2 Boot Device Priority

[Help String] : Specifies the Boot Device Priority sequence.



23.2.1 Boot Device Priority

[Description] :

There are four selections for boot devices.



- "1st Boot Device"
- "2nd Boot Device"
- "3rd Boot Device"
- "4th Boot Device"

[Help String] :

Specifies the boot sequence from the available devices.

[blank line]

A device enclosed in parenthesis has been disabled in the corresponding type menu.

[Items] :

There are five selections for each boot device. The selection is exclusive to each other.

Simply said, the selection could not appear in two boot devices at the same time.

"Removable Device" : Like USB mass-storage devices.

"Hard Drive"

"CD/DVD"

"Removable Device"

"Network" : On board LAN.

"Disabled" : Disable the boot device.

	BIOS SETUP UTILITY	
		Boot
Boot Device Priority 1st Boot Device 2nd Boot Device 3rd Boot Device 4th Boot Device	[Hard Drive] [CD/DVD] [Removable Device] [Network]	Specifies the boot sequence from the available devices. A device enclosed in parenthesis has been disabled in the corresponding type menu.
		 ↔ Select Screen ↑↓ Select Item ↔ Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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	BIUS SETUP UTILITY	Boot
Root Device Priority 1st Boot Device 2nd Boot Device 3rd Boot Device 4th Boot Device	Hard Drivel ICD/DUDI IRemovable Devicel INetworkI Options Hard Drive CD/DVD Removable Device Network Disabled	Specifies the boot sequence from the available devices. A device enclosed in parenthesis has been disabled in the corresponding type menu. ↔ Select Screen ti Select Item +- Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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23.3 Hard Disk Drives

[Help String] : Specifies the Boot Device Priority sequence from available Hard Drives.

BIOS SETUP UTILITY Main Advanced Display Security Power	Boot Exit
Boot Settings	Specifies the
 Boot Settings Configuration Boot Device Priority Hard Disk Drives CD/DUD Drives 	Boot Device Priority sequence from available Hard Drives.
Onboard LAN Boot ROM [Disabled]	
	 ↔ Select Screen ↑↓ Select Iten Enter Go to Sub Screen F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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6.3.1 Hard Disk Drives

[Description] :

If there are more than one Hard Drives in the system. It will display the list as following.

"1st Drive"

"2nd Drive"

"3rd Drive"

•••

Each drive will display the model name behind of it.

[Help String] : Specifies the boot sequence from the available device.

[Items] :

It will list all of Hard Drives' model name for selection.



BIOS SETUP UTILITY	Boot
Hard Disk Drives	Specifies the boot
1st Drive [SATA:PM-Hitachi HTS541616J9SA00]	 available devices. ↔ Select Screen ↑1 Select Item ← Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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23.4 CD/DVD Drives

[Description] :

If there are 1 or more CD/DVD Drives, the user could select one drive that will be used as boot device. It is the "CD/DVD" described in the section 6.2.1

[Help String] : Specifies the Boot Device Priority sequence from available CD/DVD Drives.

BIOS SETUP U Main Advanced Display Security	TILITY Power Boot Exit
Boot Settings • Boot Settings Configuration • Boot Device Priority	Specifies the Boot Device Priority sequence from available CD/DUD Drives.
Hard Disk Drives CD/DUD Drives Onboard LAN Boot ROM [Disabled]	
	 ↔ Select Screen ti Select Item Enter Go to Sub Screen F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
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23.4.1 CD/DVD Drives

[Description] : If there are more than one CD/DVD Drives in the system. It will display the list as following.

"1st Drive"

"2nd Drive"

Each drive will display the model name behind of it.

[Help String] : Specifies the boot sequence from the available device.

	E	IOS SETUP UT	ILITY			
CD/DVD Drives				Specifies the boot		
	[CD/DVD:3M-TSSTcorp	CD/DUDW TS-LE	53201	↔ ti +- F1 F1 F10 ESC	Select Screen Select Item Change Option General Help Load Defaults Save and Exit Exit	
	v02.59 (C)Copyright	1985-2005, Am	nerican Mega	atrends	s, Inc.	



23.5 Onboard LAN Boot ROM

[Help String] :

Enable to load PXE Boot ROM of LAN.

[Items] :

"Disabled" :	Default.			
	Disable to load PXE Boot ROM of LAN.			
"Enabled" :	Enable to load PXE Boot ROM of LAN.			

			BIOS SETUP UT Security	ILITY Power	Boot Exit	
Boot S	ettings				Enabled to load PXE	
► Boot	Settings Co	nfiguration			Boot RUM of LAN	
 ▶ Boot ▶ Hard ▶ CD/D 	Device Prio Disk Drives VD Drives	rity				
Onboar	d LAN Boot R	DM	[Disabled]			
					 ↔ Select Screen ↑↓ Select Item 	•
					+- Change Option F1 General Help	
					F9 Load Defaults F10 Save and Exit	
					ESC Exit	
	v02.59 (C) Copyr ight	1985-2005, A	merican Meg	gatrends, Inc.	



24. Exit menu

24.1 Save Changes and Exit

[Help String]: Exit system setup after saving the change.

[blank line]

F10 key can be used for this operation.

		ŀ	BIOS SETUP UT	ILITY	
Main	Advanced	Display	Security	Power	Boot Exit
Exit (lptions				Exit system setup
Save (Discar	Changes and E d Changes an	xit d Exit			changes.
Discar	d Changes				F10 key can be used for this operation.
Load L Load M	lser Defaults Ianufacture D	efaults			
					the Salast Sereen
					14 Select Item
					Enter Go to Sub Screen
					F1 General Help
					F10 Saue and Exit
					ESC Exit
	v02.5 <mark>9</mark> (C) Copyr ight	1985-2005, A	merican Me	gatrends, Inc.

24.2 Discard Changes and Exit

[Help String]: Exit system setup without saving any change.

[blank line]

ESC key can be used for this operation.



			BIOS SETUP UT	ILITY	
Main	Advanced	Display	Security	Power	Boot Exit
Exit (Iptions				Exit system setup
Save (Disca	Changes and E [•] d Changes an	<mark>xit</mark> d Exit			changes.
Discar	d Changes				ESC key can be used for this operation.
Load L Load I	lser Defaults Manufacture D	efaults			
					 ↔ Select Screen ↑↓ Select Item
					Enter Go to Sub Screen F1 General Help
					F9 Load Defaults F10 Save and Exit
					ESU Exit
	v02.59 (C) Copyright	1985-2005, A	merican Me	gatrends, Inc.



24.3 Discard Changes

[Help String] : Discards changes done so far to any of the setup questions.

[blank line]

F7 key can be used for this operation.

			BIOS SETUP UT	ILITY		
Main	Advanced	Display	Security	Power	Boot	Exit
Exit C Save C Discar Discar Load L Load M	Dptions Changes and E rd Changes an rd Changes Iser Defaults Lanufacture D	xit d Exit efaults			Disca done the s F7 ke for t for t t↓ Enter F1 F9 F10 ESC	urds changes so far to any of setup questions. ey can be used this operation. Select Screen Select Item Go to Sub Screen General Help Load Defaults Save and Exit Exit
	v02.59 (C) Copyright	1982-2002, A	merican Me	egatrend	ls, Inc.

24.4 Load user Defaults

[Help String]: Load user Default values for all the setup questions.

[blank line]

F9 key can be used for this operation.



		I	BIOS SETUP UT	ILITY	
Main	Advanced	Display	Security	Power	Boot Exit
Exit O	ptions				Load User Default
Save C Discar	hanges and E d Changes an	xit d Exit			setup questions.
Discar	d Changes				F9 key can be used for this operation.
Load U Load M	ser Defaults <mark>anufacture D</mark>	efaults			
					t ↔ Select Screen
					Enter Go to Sub Screen
					F1 General Help F9 Load Defaults
					F10 Save and Exit
					ESC Exit
	02 E0 /	C) Ctb-t	1005 2005 0		
		COpyright	1982-2062 ¹ H	merican Me	egatrends, Inc.

24.5 Load Manufacture Defaults

[Help String] :

Load Manufacture Default values for all the setup questions.

[blank line]

F8 key can be used for this operation.

		H	BIOS SETUP UT	ILITY	
Main	Advanced	Display	Security	Power	Boot Exit
Exit O	ptions				Load Manufacture
Save C Discar	hanges and E d Changes an	xit d Exit			all the setup questions.
Discar	d Changes				F8 key can be used
Load U Load M	<mark>ser Defaults</mark> anufacture D	efaults			for this operation.
					← Select Screen ↑↓ Select Item
					Enter Go to Sub Screen F1 General Helm
					F9 Load Defaults F10 Save and Exit
					ESC Exit
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