

C931 / C942

**Option Fiery XF Server
Maintenance Manual
(Disassembly)**

062513A

Copyright Information

Copyright © 2013 by Oki Data. All Rights Reserved

Disclaimer

Every effort has been made to ensure that the information in this document is complete, accurate, and up-to-date. The manufacturer assumes no responsibility for the results of errors beyond its control. The manufacturer also cannot guarantee that changes in software and equipment made by other manufacturers and referred to in this guide will not affect the applicability of the information in it. Mention of software products manufactured by other companies does not necessarily constitute endorsement by the manufacturer.




While all reasonable efforts have been made to make this document as accurate and helpful as possible, we make no warranty of any kind, expressed or implied, as to the accuracy or completeness of the information contained herein.

The most up-to-date drivers and manuals are available from the web site:
<http://www.okiprintingsolutions.com>

Introduction

Warnings

This Manual uses the following warnings to prevent injury to maintenance personnel and damage to customer property.

 DANGER	“Danger” indicates the imminent danger of death or serious injury if not used (or conducted) properly.
 WARNING	“Warning” indicates the possibility of death or serious injury if not used (or conducted) properly.
 CAUTION	“Caution” indicates the possibility of light or medium injury or of property damage to the product itself or other property of the user or other party if not used (or conducted) properly.

Warning labels

- Never peel off a label, and be sure to keep them clean. If a label has peeled off or is too dirty to read, replace it.

Countering static electricity during maintenance work

Replace maintenance parts after first taking measures to counter static electricity.

- Wrist straps
Use antistatic wrists straps during maintenance work.
- Antistatic work mats
Disassemble the equipment atop an antistatic mat. Place removed electronic parts on top of antistatic mats.

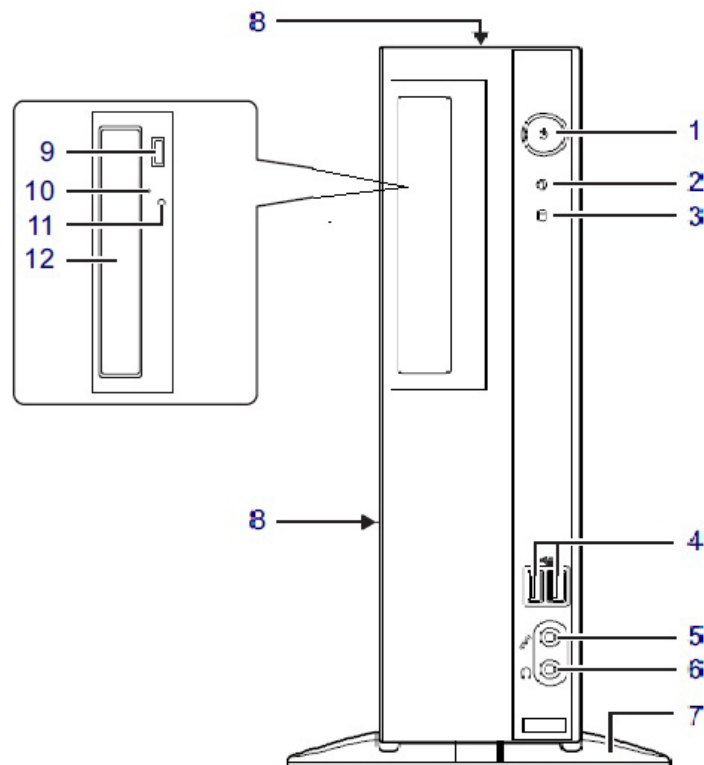
Disassembly/reassembly procedures

- [Names of parts](#) (0000)
- [List of maintenance parts](#) (0001)
- [Replacing the upper cover and dust filter](#) (0002)
- [Replacing memory](#) (0003)
- [Replacing the slot board](#) (0004)
- [Replacing the ODD \(e.g., DVD drive\) and ODD cable](#) (0005)
- [Replacing the HDD and HDD cable](#) (0006)
- [Replacing the SW/LED cables](#) (0007)
- [Replacing the power-supply unit](#) (0008)
- [Replacing the CPU fan](#) (0009)
- [Replacing the main board assembly](#) (0010)
- [Replacing the lithium battery](#) (0011)
- [Clearing the CMOS](#) (0012)

Names of parts

0000

1. Front of personal computer



(Actual unit may differ from the above illustration depending on model and conditions)

1. Power button

Used to turn on the power to the PC and put it in power saving mode.

2. Power lamp

Lights green when the PC's power is on. Lights orange when the PC is in sleep mode.

3. Disc access lamp

Lights during access to the internal hard disk, CD, DVD or other drive.

4. USB connector

Compliant with USB 2.0.

5. Microphone jack

6. Headphone jack

7. Foot

A stand attached when setting up the PC.

8. Air intake

Holes for taking in air to cool off the PC.

9. Disc eject button

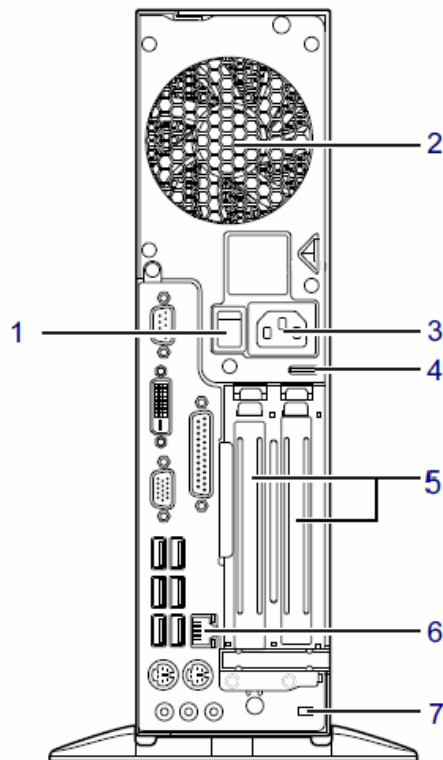
10. Force eject button

Used to forced the tray open when the optical drive tray will not open conventionally.

11. Optical disk access lamp

Lights when accessing a CD/DVD disc, or when opening/closing the optical drive tray.

2. Rear side of the PC



(Actual unit may differ from the above illustration depending on model and conditions)

1. Main switch

Switches the PC's power on or off.
Switch status

Switch to on ("I")	To use the PC (ordinary state)
Switch to off ("O")	<ul style="list-style-type: none"> To turn the power off completely When not using the PC for a long time

2. Exhaust vent

Releases heat from inside the PC.

3. Inlet

Used to attach the power cable that came with the PC.

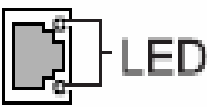
4. Security lock attachment

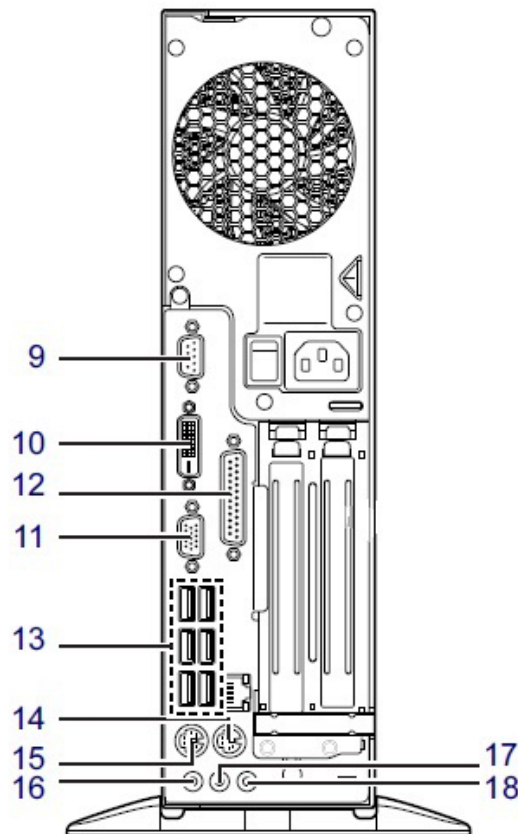
5. Expansion card slot

6. LAN connector

See the table below concerning the status LEDs

7. Antitheft lock attachment

		Upper LED (Speed)	Lower LED (Link/Act)
	Link established at 1000 Mbps	Lit orange	Lit green (see Note)
	Link established at 100 Mbps	Lit green	Lit green (see Note)
	Link established at 10 Mbps	Off	Lit green (see Note)
<p>Note: Blinks green during data transfer For 1000 BASE-T data transfer, use a 1000 BASE-T-compatible network device and an Enhanced Category 5 (Category 5E) or higher LAN cable.</p>			



(Actual unit may differ from the above illustration depending on model and conditions)

9.  Serial connector

Connect or disconnect a serial device after first turning off the power to the PC.

10.  Digital display connector

(DVI-D)

This connector cannot be used on a model equipped with a graphics card.
Connect a digital display after first turning off the power to the PC.

11.  Analog display connector


This connector cannot be used on a model equipped with a graphics card.
Connect an analog display after first turning off the power to the PC.

12.  Parallel connector

Connect or disconnect a parallel device after first turning off the power to the PC.

13.  USB connectors

The upper four connectors are USB 3.0-compliant, while the lower two are USB 2.0-compliant.

14.  Mouse connector

Connect a mouse after first turning off the power to the PC.

15.  Keyboard connector

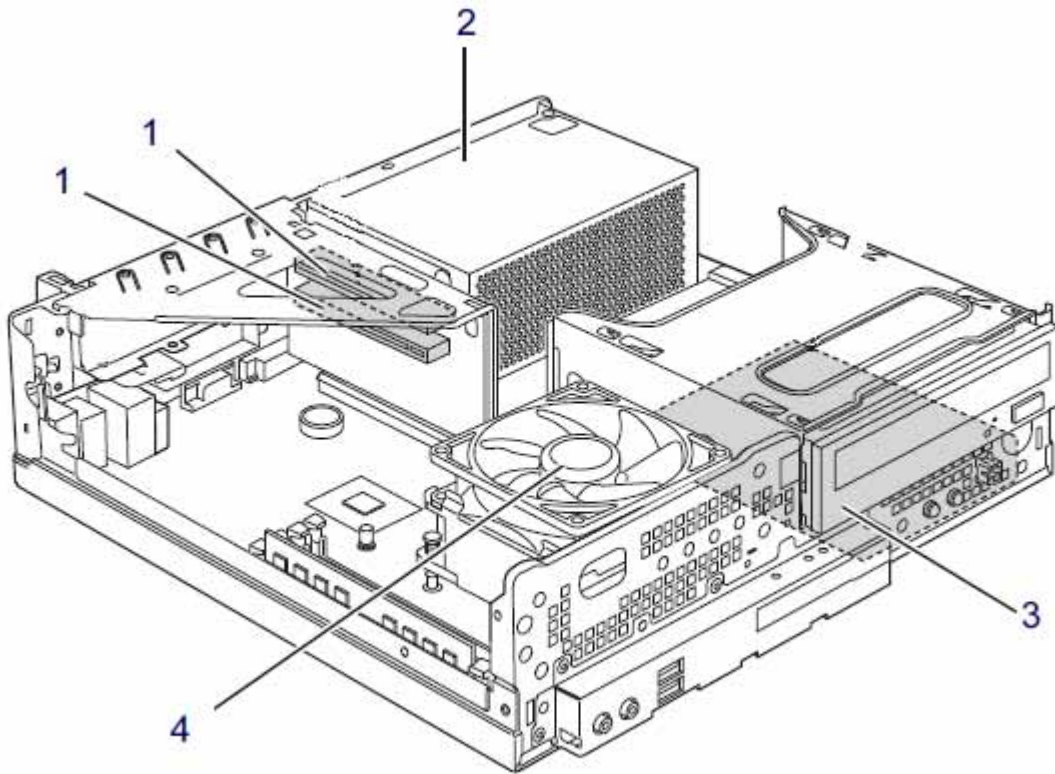
Connect a keyboard after first turning off the power to the PC.

16.  Microphone jack

17.  Line-out jack

18.  Line-in jack

3. Inside the PC



(Actual unit may differ from the above illustration depending on model and conditions)

1. PCI card slot

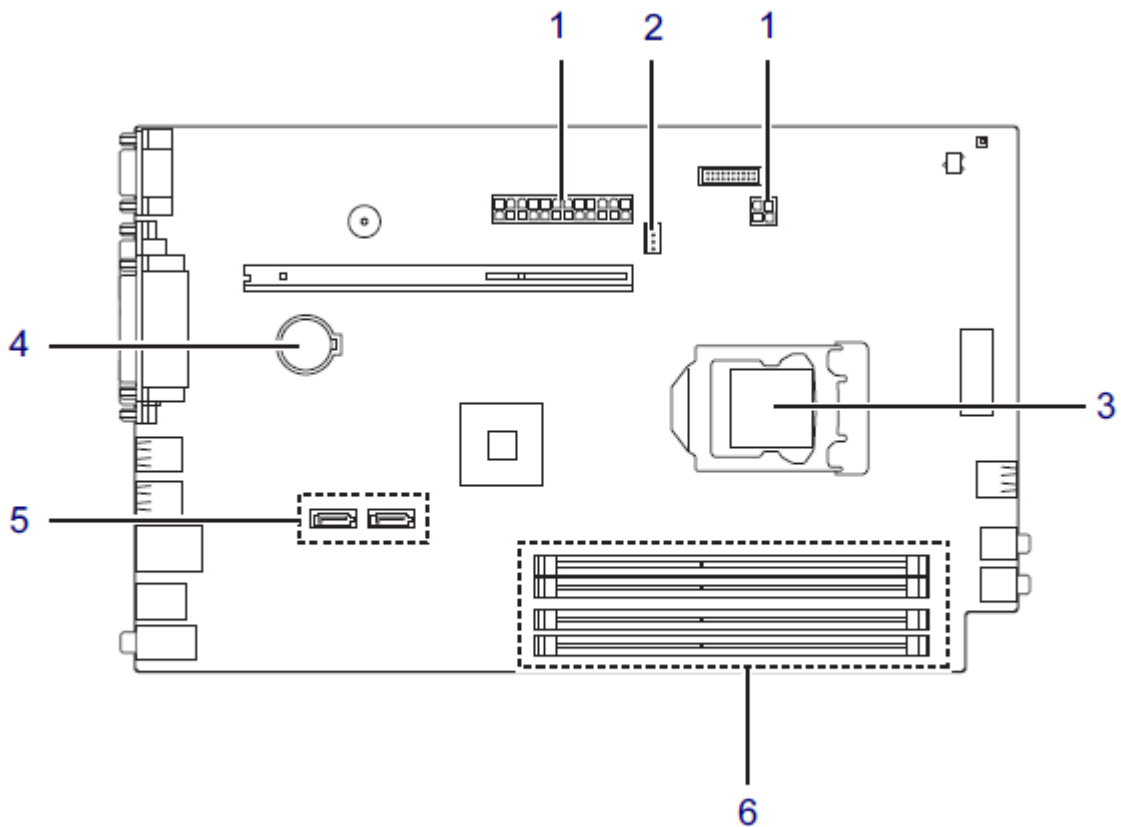
Use this slot to attach various expansion cards to expand the PC's functions.

2. Power supply unit

3. Internal hard disk

4. CPU fan

4. Main board



(Actual unit may differ from the above illustration depending on model and conditions)

1. Power connector

2. CPU fan connector

3. CPU socket

The PC's CPU is mounted in this socket.

Maintenance parts installed in the CPU socket are the CPU and the heat sink.

4. Internal lithium battery

This battery is used to power the PC's clock and save its BIOS setup configuration.

Under normal conditions, it can be used for approximately five years.

5. Serial ATA connector

6. Memory slot

List of maintenance parts

0001

Parts specifications are subject to change, addition, or removal without notice.
Check specifications before ordering parts.

Part name	Common name	Part specification	Comments
MB-main board-ASY	Main board ASY	CP583532-XX-OKI	M/B+CPU(Corei7-3770)+H/S(heat sink)
FAN-CPU	CPU fan	CP539904-XX-OKI	FAN + LABEL +DUCT
PCB-slot board	Slot board	CP506137-XX-OKI	PCI 2 SLOT
MEM-DIMM-4GB×2	Memory	CP583533-XX-OKI	4GB X2 cards set
HDD-250GB	HDD	CP170109-XX-OKI	
CBL-SATA-HDD	HDD cable	CP117998-XX-OKI	SATA CABLE HDD
DVD-ROM	ODD	CP343981-XX-OKI	
CBL-SATA-ODD	ODD cable	CP432780-XX-OKI	SATA CABLE ODD
Power supply unit		CP371611-XX-OKI	
CBL-SW/LED cable	SW/LED cable	CP241175-XX-OKI	
Dust filter		CP539901-XX-OKI	Attached inside CPU air inlet on upper cover
Upper cover		CP525197-XX-OKI	
Lower cover		CP525198-XX-OKI	
Clamp		CA31950-0072-OKI	For use with the power supply unit
Stand-SET		CP364596-XX-OKI	Set consists of two stands and two screws
Coin screw		CP241176-XX-OKI	
Rubber feet		CP168996-XX-OKI	4-piece set
Small screw M3L6		F6-SW2N3-06121-OKI	
Screw		F6-SBD3-04121-OKI	HDD
Inch screw		CP126822-XX-OKI	
Thumbscrew		CP198901-XX-OKI	
Lithium battery-CR2032		TBA	
HDD 25 BRACKET		CP241299-XX-OKI	For use with HDD
AC CORD JAPAN		CA63100-0002-OKI	
AC CORD EU		CP583561-XX-OKI	
AC CORD AMERICA		CP583560-XX-OKI	
AC CORD AUS/NZL		CP583562-XX-OKI	
AC CORD MALAYSIA		CP583566-XX-OKI	
AC CORD SINGAPORE		CP583567-XX-OKI	
AC CORD CHINA		CP583564-XX-OKI	
AC CORD TAIWAN		CP583563-XX-OKI	
AC CORD KOREA		CP583565-XX-OKI	

Replacing the upper cover and dust filter

0002

* Minimum work time: approx. 5 min.

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Removal steps

- (1) If the stand set is installed, remove it from the PC unit and set the PC in a horizontal position.
- (2) Remove the two screws (thumb screws) from the rear of the unit. (Fig. 1)
- (3) Slide the upper cover toward the front of the unit (as far as the expansion card hardware line) and lift it up to remove it. (Fig. 2)
- (4) To replace the dust filter, peel it off from the inside of the upper cover.

Fig. 1

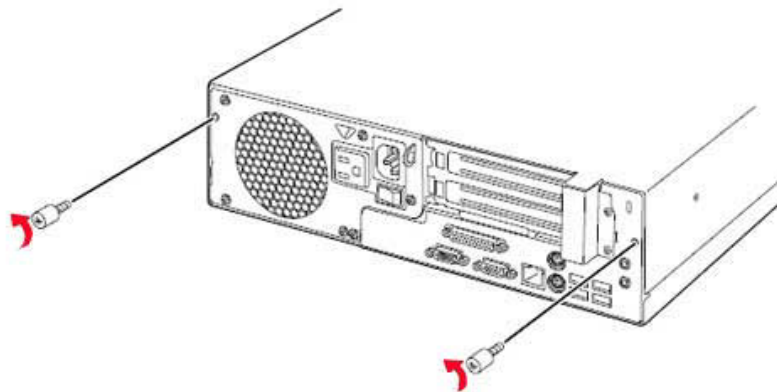
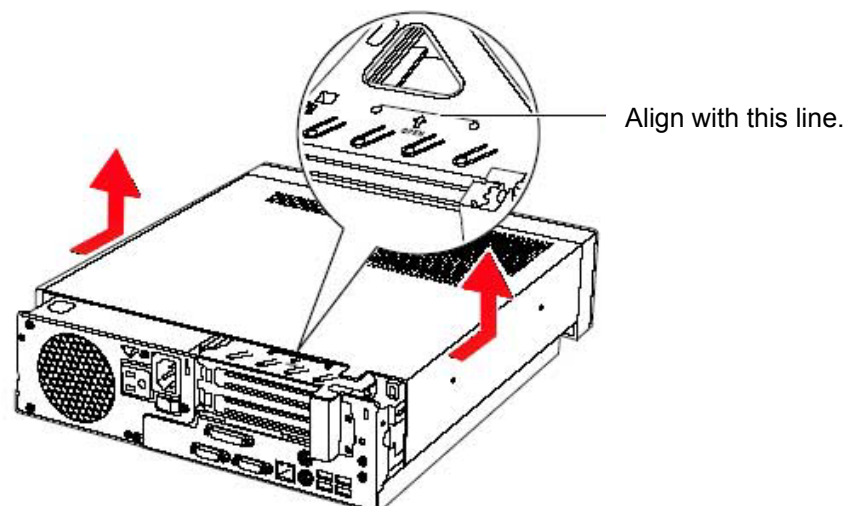


Fig. 2



Installation steps

(1) Affix the dust filter to the air intake vents on the inside of the upper cover. (Fig. 3) (Fig. 4)

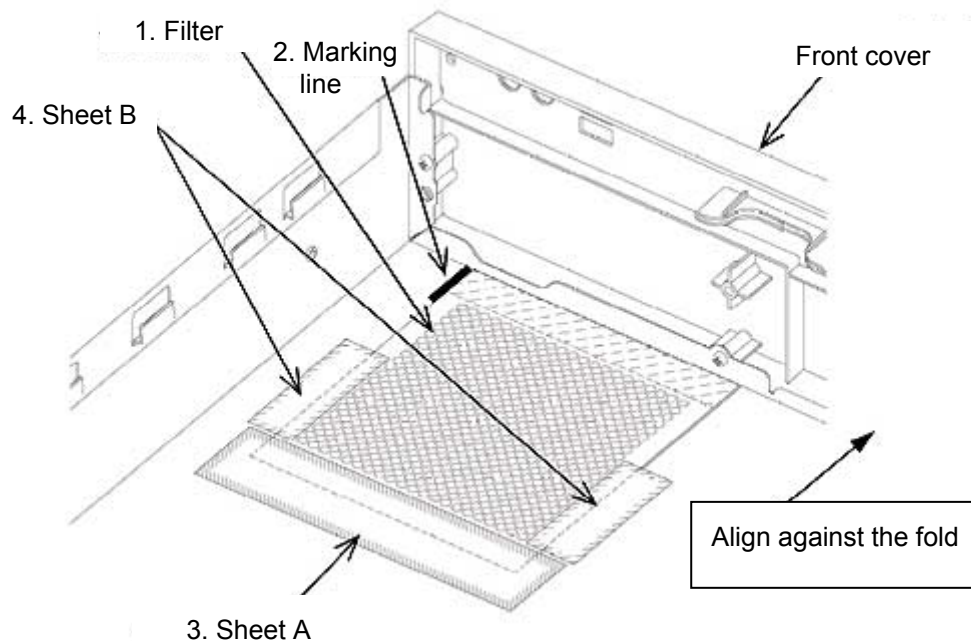
Note: Cautions on affixing the dust filter

- 1) Check the direction of installation.
 - The double-sided tape is on the front-cover side.
- 2) Remove both pieces of backing paper on the double-sided tape attached to the filter.
 - When doing so, remove only the backing paper, so as not to bend the filter.
- 3) Position the filter so that it is aligned with the lines marked on the upper cover on both the left and right sides.
 - Position the filter so that it extends evenly beyond the air intake vents on both left and right sides, as shown in Fig. 3.
- 4) Holding the filter just above the upper cover so that the double-sided tape does not stick to the upper cover, align the top so that it lightly touches the fold in the upper cover.
 - See the alignment example in Fig. 3.
- 5) Press down from above on the double-sided tape on the front cover side to affix the filter to the upper cover.
 - Lightly bend the filter so that the other piece of double-sided tape does not stick.

Note: After affixing the filter, press down on the double-sided tape from above with the fleshy part of your finger. Do not rub it.
- 6) Next, affix the other piece of double-sided tape.

Note: Press down on the tape from above, without rubbing, as you did with the other piece.
- 7) Affix Sheet A so that it does not block the air intake vents. (Affix by pressing down from above. Do not rub.)
- 8) Affix Sheet B on the left and right so that it does not block the air intake vents. (As with Sheet A, do not rub.)

Fig. 3



- (2) Place the upper cover atop the main unit (aligning it with the expansion card hardware line) and slide it toward the rear of the unit until it aligns against it.
- (3) Attach the two thumb screws on the rear of the unit.
- (4) If you removed the stand set from the PC main unit, reattach them now.

Replacing memory

0003

* Minimum work time: approx. 10 min. (not including testing time)

WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Removal steps

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Open the hooks on both sides of the slot outward, and remove the memory. (Fig. 1)

Fig. 1



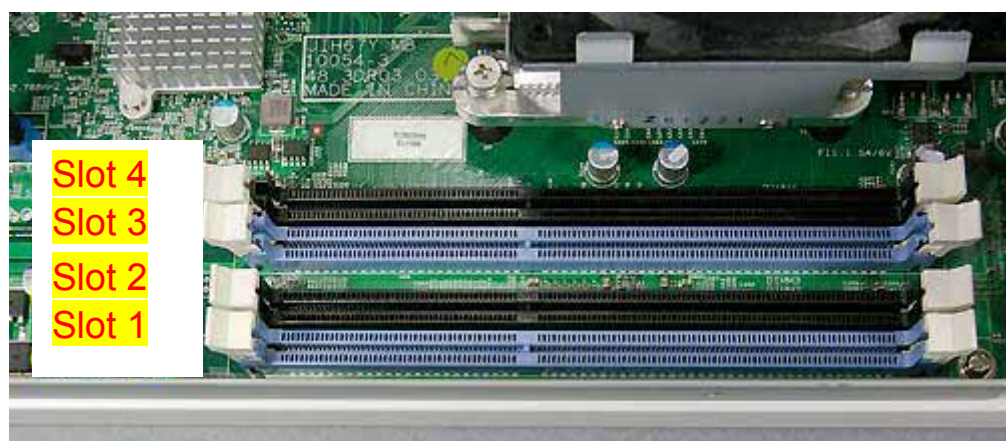
Installation steps

- (1) Noting the notch in the memory, insert it vertically into the slot. Check to make sure the hooks firmly lock the memory in place.

Note: When installing memory, align the notch on the memory with the notch on the slot.

Note: Improper installation of memory, such as leaving it partially out of the slot, could cause smoke. Be sure to check that the memory is firmly in place when installing it.

Fig. 2: Memory slot positions



(2) Install the upper cover. [\(0002\)](#)

Note: Check the memory capacity, including the number of installed slots, in the BIOS.
Also, make sure there is no looseness or play in the memory when installing it.

Memory slot combinations

DIMM1	DIMM2	DIMM3	DIMM4
4GB	—	4GB	—

* This equipment is compatible with Dual-Channel mode. Memory from the same vendor, with the same capacity and standard, must be installed in DIMM1 and DIMM3 or DIMM2 and DIMM4. During maintenance, both memory cards must be replaced simultaneously in accordance with the above conditions.

Replacing the slot board

0004

* Minimum work time: approx. 15 min. (not including testing time)

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Removal steps

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Remove the entire slot board and tray. (Fig. 1)
- (3) Remove both screws and take out the slot board. (Fig. 2)

Fig. 1



Fig. 2: Standard



Installation steps

- (1) Attach the two screws to install the slot board. (Fig. 2)
- (2) Attach the entire slot board and tray to the unit.

Note: Take care to ensure the slot board hardware and lower cover assembly fit together. (Fig. 3)

Fig. 3



- (3) Attach the upper cover. [\(0002\)](#)

Note: Make sure there is no looseness or play when installing it.

Replacing the ODD (e.g., DVD) and ODD cable

0005

* Minimum work time: approx. 15 min. (not including testing time)

**WARNING**

Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

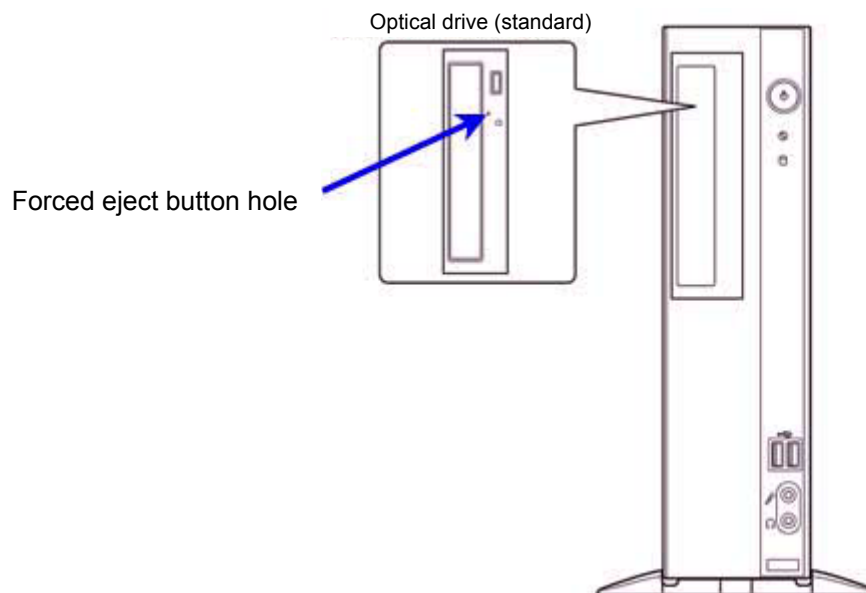
**CAUTION**

Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Note: Forced ejecting of media

* If the tray does not eject when you press the media eject button, use the following method to eject the media:

- (1) Insert the eject pin (or a thin bar such as the tip of a paper clip) into the forced eject button hole, pull out the tray and remove the media.

**Removal steps (thick drive)**

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Remove the drive unit's mounting screw. (Fig. 1)
- (3) Raise up the drive unit, pull out the stopper hardware, and set it in place. (Fig. 2)
- (4) Remove the ODD's ODD cable and power cable.
- (5) Remove the two ODD mounting screws and pull it forward. (Fig. 3)

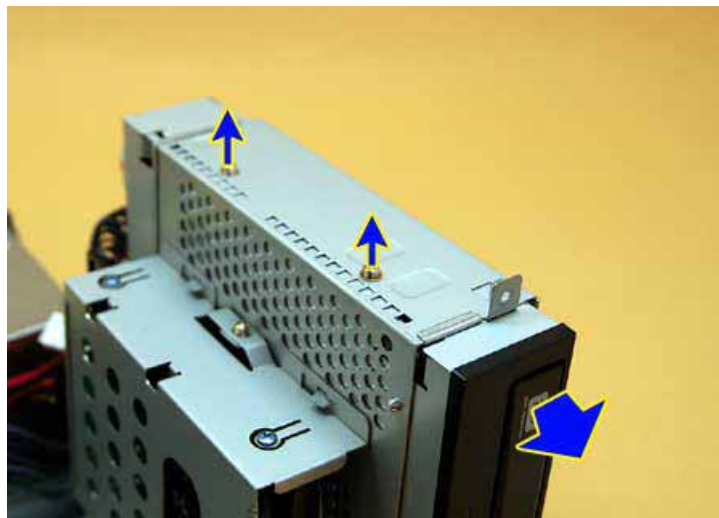
Fig. 1



Fig. 2



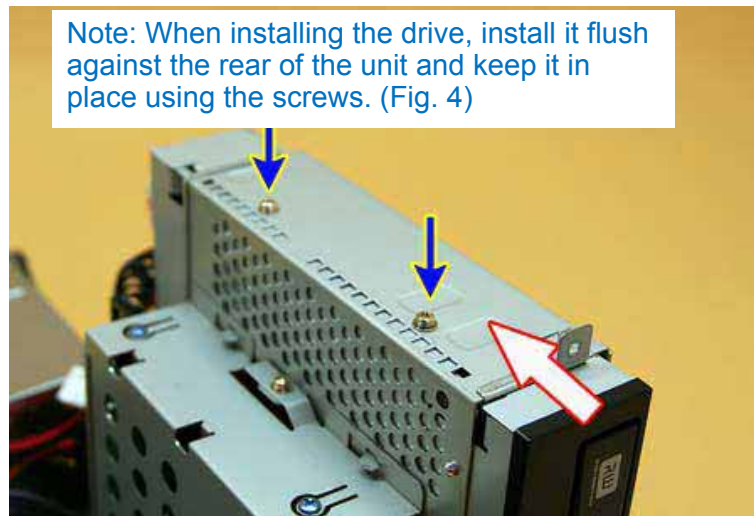
Fig. 3



Installation steps

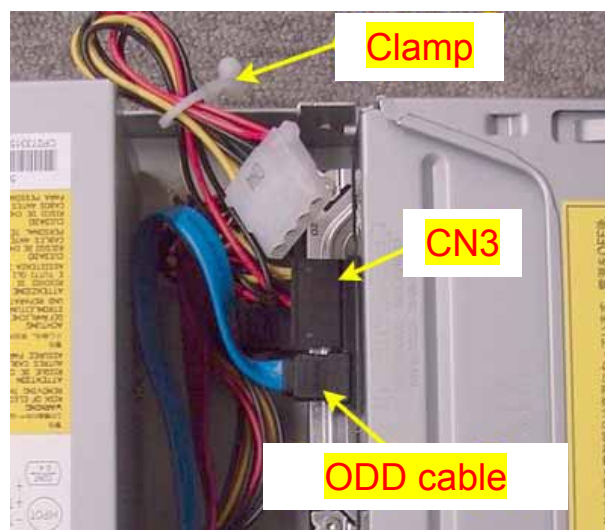
Note: When installing the drive, install it flush against the rear of the unit and keep it in place using the screws. (Fig. 4)

Fig. 4



Note: When connecting the ODD cable, connect the right-angle connector to the main board's SATA4 (blue) connector. (Fig. 5)

Fig. 5: Connect the right-angle connector to the main board's SATA4 (blue) connector



Note: Store the extra length of the ODD cable in front of the power supply unit. (Fig. 6)

- (1) Insert the ODD (thick drive) into the drive unit and mount it in place using two screws.
- (2) Connect the ODD's ODD cable and power cable.
- (3) Put the driver unit's stopper in place and store the drive unit inside the main unit (following the instructions on the warning label).
- (4) Mount the drive unit in place using one screw.
- (5) Attach the upper cover. [\(0002\)](#)

Fig. 6

Store the extra length in front
of the power supply unit



Replacing the HDD and HDD cable

0006

* Minimum work time: approx. 15 min. (not including testing time)

**WARNING**

Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

**CAUTION**

Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Note: Follow the rules below during maintenance of the HDD

Strictly observe the rules below when replacing the HDD, to protect the confidentiality of user data on the HDD and prevent exposure to computer viruses.

- Be sure to use a maintenance part as the replacement HDD.
- Handle the HDD in a safe environment to prevent damage from static electricity. Be sure to take measures against static electricity particularly after removing the HDD from the antistatic bag. Also, after maintenance work, be sure to place it in a shield bag before storing it.
- Unplug the unit from the AC outlet prior to beginning disassembly/reassembly. (This does not apply to devices compatible with hot maintenance.)
- When moving the HDD or storing it, take care to protect it from static electricity, vibration, shock, etc.
- When connecting or disconnecting the HDD connector, take care not to expose it to any major shocks.
- Since the HDD will continue to rotate from inertia even after turning off the power, do not connect or disconnect the cable or move the HDD for about 15 seconds while the disk is still rotating.
- When disassembling or reassembling the HDD, take care to protect it from static electricity, shock, vibration, etc.
- When disassembling or reassembling the HDD, take care not to damage the HDD's printed circuit board or other parts with the screwdriver.

Note: When an HDD password has been set up

Since the HDD after replacement with maintenance parts will not have a password, if the customer has set up an HDD request him or her to set it up again.

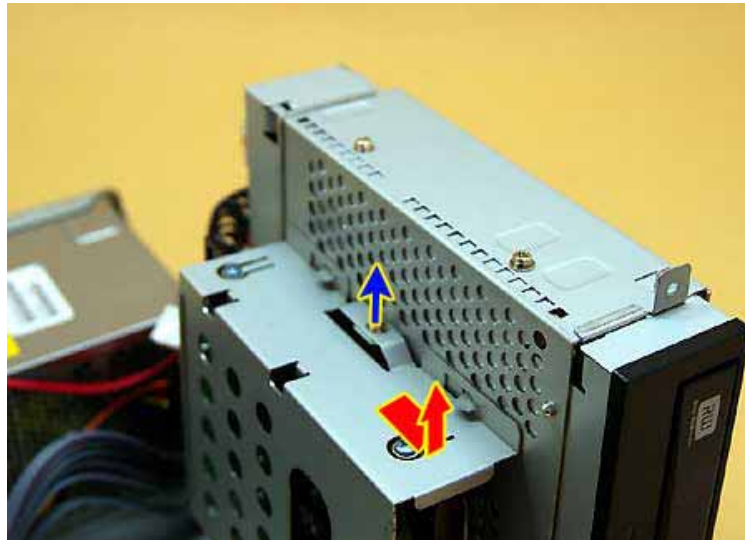
Removal steps

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Remove the drive unit. [\(0005\)](#)
- (3) Remove the HDD cable and the power cable from the HDD.
- (4) Remove the HDD tray by removing the screw from the drive unit. (Fig. 1)

Note: Be careful because this is connected to the drive unit's hook.

* Lift it up to remove it after sliding it toward the front of the equipment. (Fig. 1)

Fig. 1



- (5) Remove the HDD and its hardware by removing the four screws to the left and right of the HDD tray. (Fig. 2)
- (6) Remove the HDD by removing the four screws at the base of the hardware. (Fig. 3)

Fig. 2

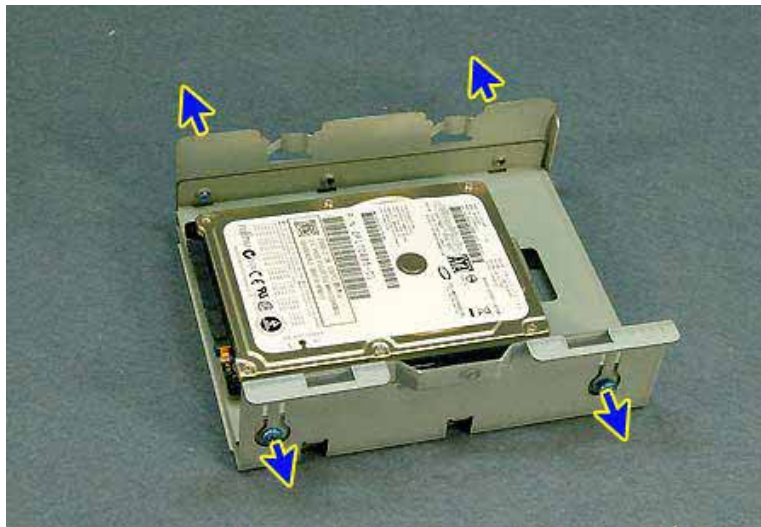
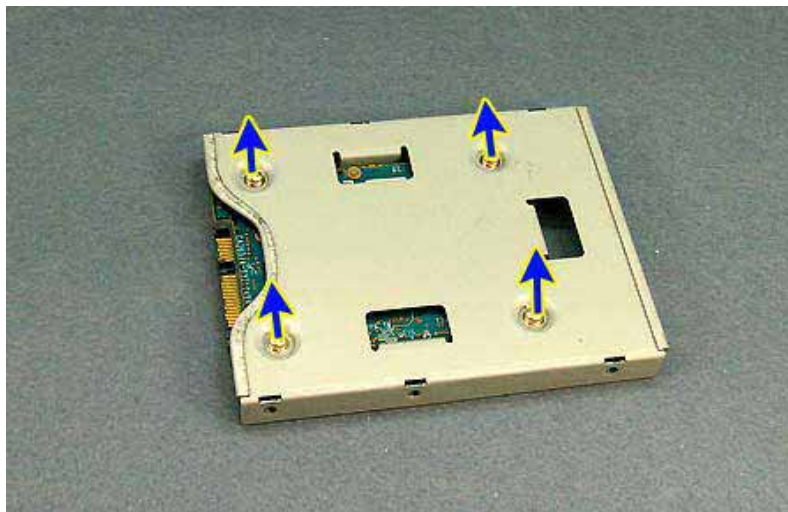


Fig. 3



Installation steps

Note: Connect the HDD cable to the SATA0 (black) connector on the main board.

Note: Store the extra length of the HDD cable in front of the power supply unit. (Fig. 4)

- (1) Attach the HDD to the hardware with four screws. (Fig. 3)
- (2) Attach the HDD and its hardware to the HDD tray with four screws. (Fig. 2)
- (3) Attach the HDD tray to the drive unit and fix it in place with one screw.
- (4) Attach the HDD cable and power cable to the HDD.
- (5) Put the drive unit back in its original position and fix it in place with one screw. [\(0005\)](#)
- (6) Attach the upper cover assembly. [\(0002\)](#)

Fig. 4

Store the extra length in front of
the power supply unit



Replacing the SW/LED cables

0007

* Minimum work time: approx. 15 min. (not including testing time)

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Removal steps

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Raise up the drive unit the stopper and set it in place with the stopper. [\(0005\)](#)
- (3) Remove the SW/LED cables from the main board. (Fig. 1)
- (4) Remove the LED from the equipment by opening the holder tabs outward. (Fig. 2)
- (5) Remove the switch with its holder by pulling it outward while pressing the holder tabs inward. (Fig. 2)
- (6) Remove the SW/LED cables from the equipment.

Fig. 1

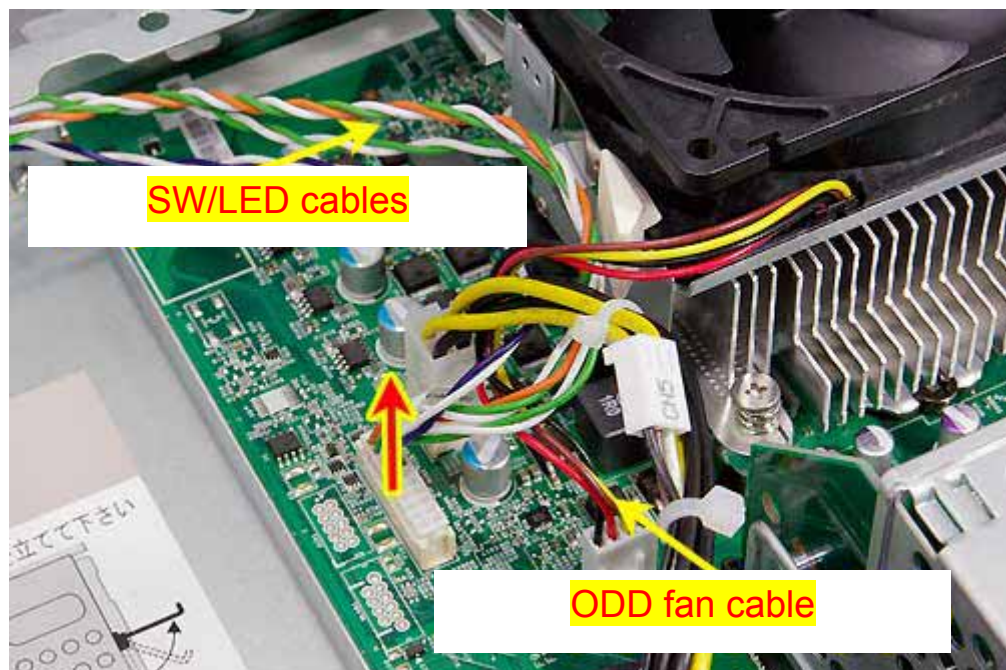
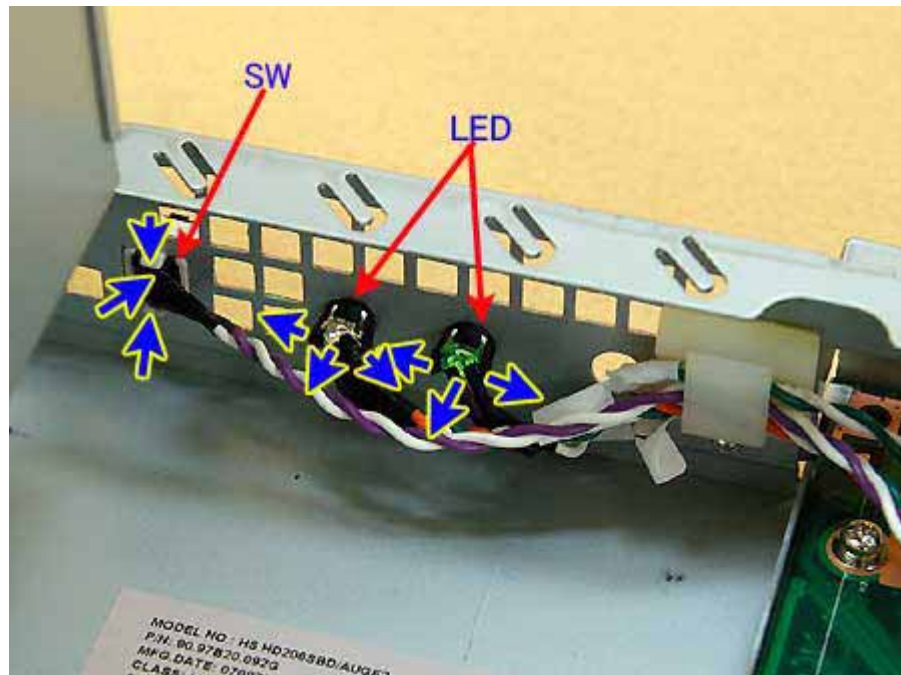


Fig. 2



Installation steps

- (1) Place the LEDs in their holders, from the side of the equipment.
- (2) Pull the switch out from the mounting hole and place it in the holder.
- (3) Connect the SW/LED cable connectors to the main board and place the cables in the holder.

Note: Place the cable in the clamp (Fig. 2)

Note: Attach the cables to the connector wound together with the CPU fan cable (Fig. 1)

- (4) Return the drive unit to its original position and fix it in place using screws. [\(0005\)](#)
- (5) Attach the upper cover. [\(0002\)](#)

Replacing the power supply unit

0008

* Minimum work time: approx. 15 min. (not including testing time)

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Removal steps

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Pull out the drive unit. [\(0005\)](#)
- (3) Remove all cables connected to the power supply unit.
- (4) Remove the five power supply unit mounting screws from the rear of the equipment. (Fig. 1)
- (5) Remove the power supply unit by sliding it toward the front of the equipment. (Fig. 2)

Fig. 1

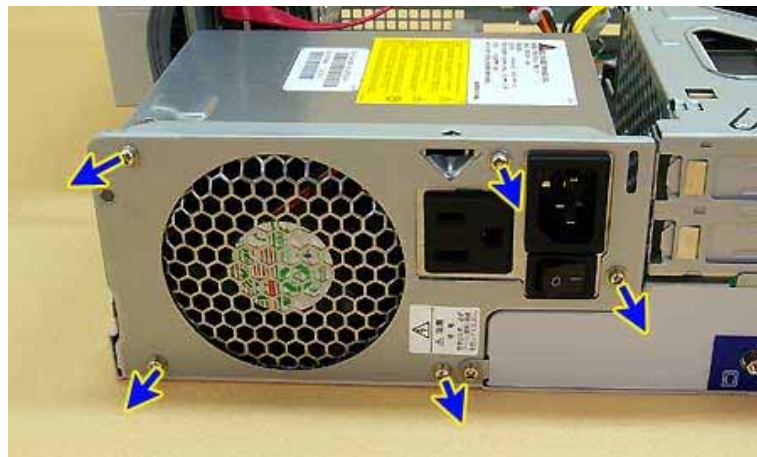


Fig. 2



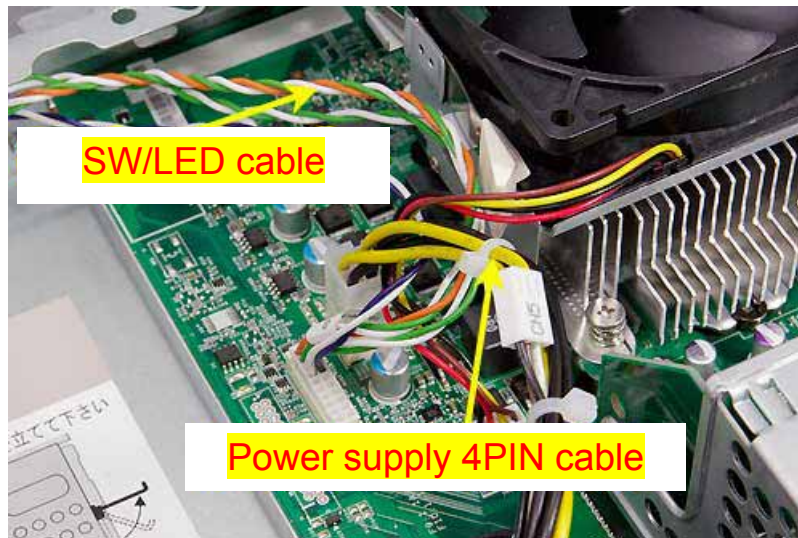
Installation steps

Note: First connect the power supply's 4PIN cable, and then connect the 24PIN cable last.

Note: Pass the power supply's 4PIN cable above the SW/LED cable. (Fig. 3)

- (1) Set the power supply unit in the housing.
- (2) Remove the five screws from the power supply unit.
- (3) Remove the power supply unit's cable.
- (4) Put the drive unit back in place and fix it in place using the screws. [\(0005\)](#)
- (5) Attach the upper cover. [\(0002\)](#)

Fig. 3



Replacing the CPU fan

0009 [Edition] 001

* Minimum work time: approx. 10 min. (not including testing time)

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Note: When removing the CPU fan, do not press on the blades. Doing so could damage the fan.

Removal steps

- (1) Remove the upper cover. ([0002](#))
- (2) Remove the CPU fan connector. Unlock it by moving the left and right levers forward. (Fig. 1)(Fig. 2)
- (3) The CPU fan has a duct attached. (Fig. 3)

Fig. 1

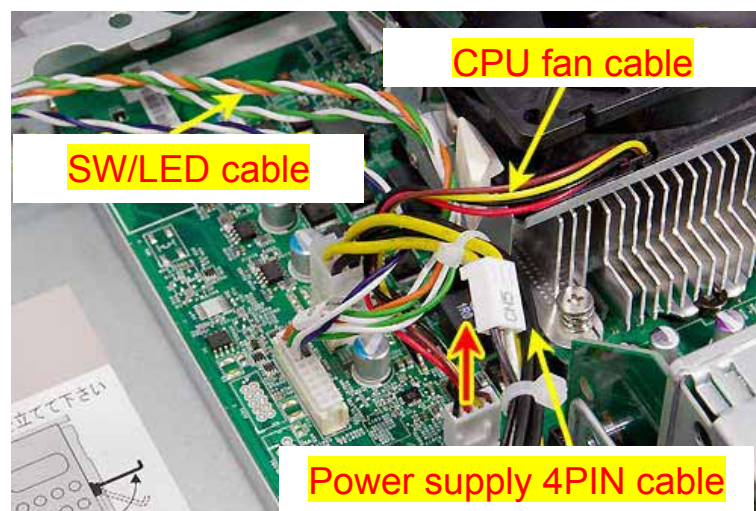


Fig. 2



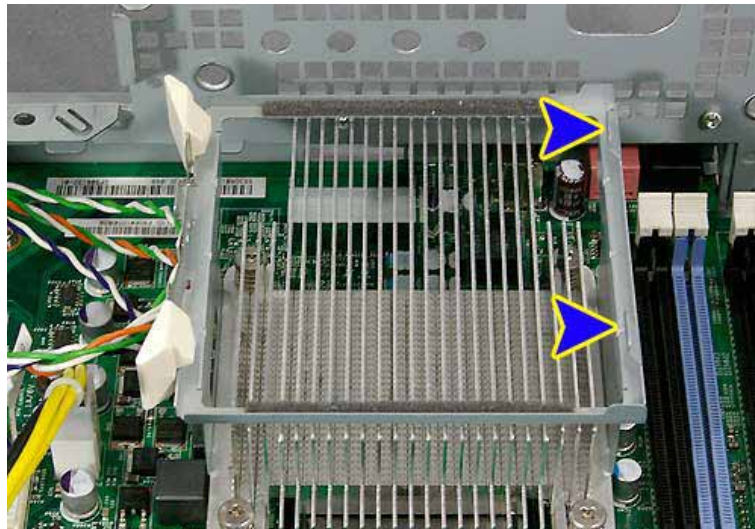
Fig. 3: CPU fan (with duct attached)



Installation steps

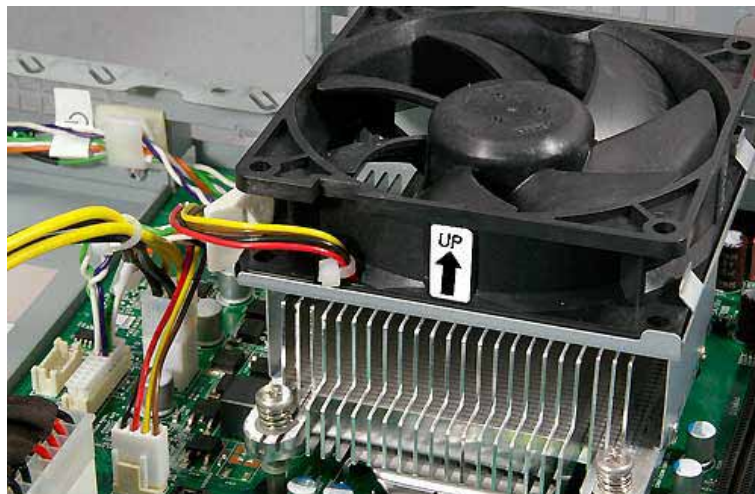
- (1) CPU fan (with duct attached) (Fig. 3)
- (2) Set the CPU fan (with duct attached) in place aligned with the tabs on the heat sink hardware. (Fig. 4)

Fig. 4



Note: Position the fan so that the arrow on the label points up and set the cable so that it comes out toward the rear of the equipment. (Fig. 5)

Fig. 5



(3) Connect the CPU fan's connector and fix it in place using the levers.

Note: Attach the CPU cable wrapped together with the SW/LED cable. (Fig. 1)

(4) Attach the upper cover. [\(0002\)](#)

Replacing the main board assembly

0010 [Edition] 001

* Minimum work time: approx. 25 min. (not including testing time)

**WARNING**

Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

**CAUTION**

Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Caution!

When replacing the main board or drives, or when taking receipt of the entire unit from the customer, check to make sure that no media remains in the unit.

- **Check visually.**
- **Check by pushing the media eject button (using the eject pin).**

Caution!

When replacing the main board with a maintenance part, do not forget to transfer to the new main board the following parts etc. installed by the user.

- **MEM-DIMM (memory) etc.**

Note: Clearing the boot password (important)

If the user has forgotten the password, it cannot be reset even by clearing the CMOS in the BIOS (for security reasons). For this reason, ordinarily a lost password is resolved by replacing the main board (at a fee, even during the free warranty period). The same applies to the HDD password. Cases of a lost HDD password usually are resolved by replacing the HDD (at a fee, even during the free warranty period).

Note: Global MAC address

After replacing the main board, the global MAC address will change, so that there may be a need to change the device's address in the network OS and in relevant software applications.

Removal steps

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Remove the memory. [\(0003\)](#)
- (3) Remove the slot card part. [\(0004\)](#)
- (4) Remove the drive unit. [\(0005\)](#)
- (5) Remove the CPU fan. [\(0009\)](#)
- (6) Remove all the cables connected to the main board assembly. See Fig. 1 for the layout and names of connectors.

Note: Remove the HDD and ODD cables from their clamps.

- (7) Remove the single screw (on the rear side of the equipment) from the main board's metal tray and pull out the main board assembly by sliding it toward the rear side of the equipment. (Fig. 2)

Fig. 1: Connector layout

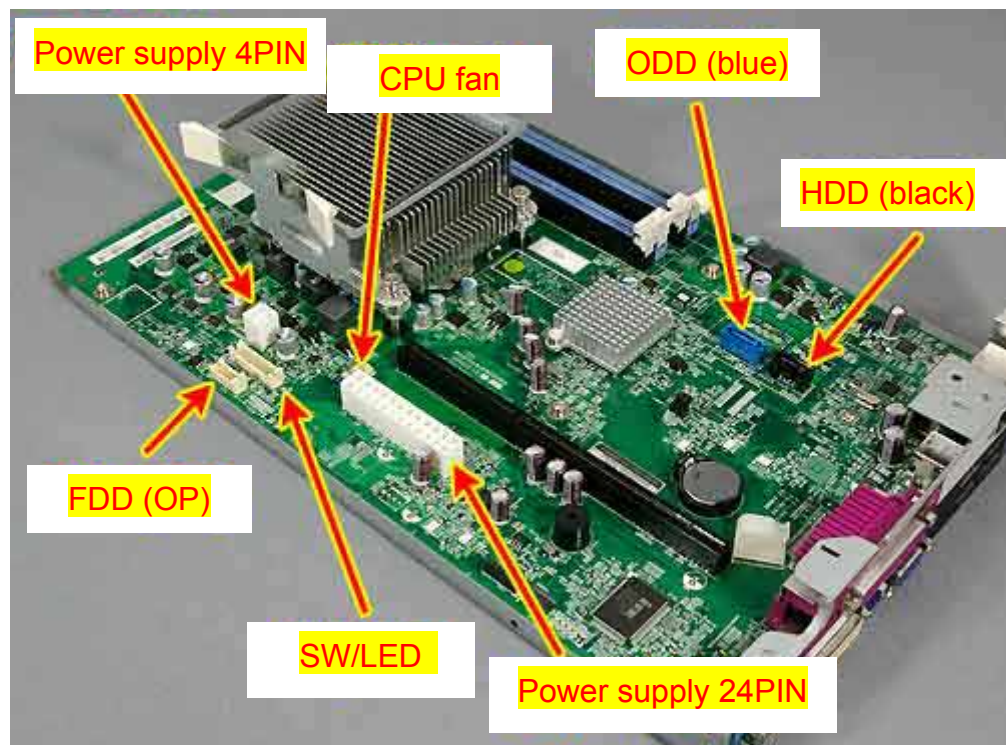


Fig. 2



Installation steps

Note: Store the extra length of the HDD and ODD cables in front of the power supply unit.

- (1) Insert the main board's metal tray from the rear side of the equipment and fix it in place with the screw. (Fig. 2)
- (2) Attach all the cables connected to the main board assembly. See Fig. 1 for the layout of connectors.
- (3) Attach the CPU fan. [\(0009\)](#)
- (4) Return the drive units to the equipment. [\(0005\)](#)
- (5) Install the slot board part. [\(0004\)](#)
- (6) Install the memory. [\(0003\)](#)
- (7) Attach the upper cover. [\(0002\)](#)
- (8) (Don't forget to set the system date and time as well.)

Replacing the lithium battery

0011

* Minimum work time: approx. 15 min.

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

⚠ CAUTION Replacement with an incorrect lithium battery could cause an explosion. Be sure to replace the battery only with the specified maintenance part. Also, since used lithium batteries are disposed of with ordinary waste follow the waste disposal rules or regulations of your local government when disposing of the battery.

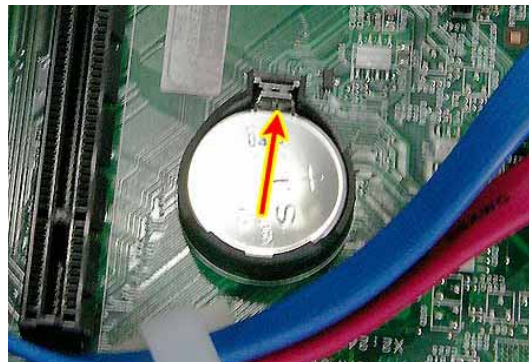
Removal steps

Note: Since removal of the lithium battery will clear CMOS data, be sure to make a note of the BIOS settings prior to replacement.

- (1) Remove the upper cover. [\(0002\)](#)
- (2) Remove the slot board. [\(0004\)](#)
- (3) Push the clip in the direction of the arrow to remove the lithium battery. (Fig. 1)

Note: Do not use metal objects or similar items to remove the battery, because doing so could cause a short circuit.

Fig. 1



Installation steps

Note: When installing the battery, be careful to get the polarity right.

Note: Since removal of the lithium battery will clear CMOS data, configure the BIOS settings after replacement.

- (1) Push the clip in the direction of the arrow to install the lithium battery.
- (2) Attach the slot board part. [\(0004\)](#)
- (3) Attach the upper cover. [\(0002\)](#)
- (4) Set the system date and time, and if necessary change the BIOS setup settings.

CMOS Clear

0012

* Minimum work time: approx. 10 min. (not including test time etc.)

⚠ WARNING Conduct this task after first turning off the power to the equipment and removing the power cable and connector cables. Failure to do so could lead to electric shock, fire, or damage.

⚠ CAUTION Be careful when working with the edges of the housing, protruding parts, etc., as these could cause injury.

Note: Clearing the boot password (important)

If the user has forgotten the password, it cannot be reset even by clearing the CMOS in the BIOS (for security reasons). For this reason, ordinarily a lost password is resolved by replacing the main board (at a fee, even during the free warranty period). The same applies to the HDD password. Cases of a lost HDD password usually are resolved by replacing the HDD (at a fee, even during the free warranty period).

Clearing the CMOS

Note: Since there is no short pin installed on the main board of this equipment, clear the CMOS by removing the lithium battery.

- (1) Remove the lithium battery. [\(0011\)](#)
- (2) Wait about 10-30 seconds, and then replace the lithium battery. [\(0003\)](#)

Note: Setup the BIOS after the computer has been assembled and can be powered up.

- Turn on the power while pressing the F2 key to start the BIOS setup.
- Under the "Default settings" menu, execute "Load default settings" and then set the system date and time. If necessary, change other settings.
- Select "Close and save settings" to end the BIOS setup.

Note: Check that the content of the BIOS setup is written correctly.

References (REF)

- [BIOS setup](#) (0100)
- [BIOS settings](#) (0101)
- [Info menu](#) (0102)
- [System menu](#) (0103)
- [Advanced menu](#) (0104)
- [Power menu](#) (0105)
- [Security](#) (0106)
- [End](#) (0107)

BIOS setup

0100

About the BIOS setup

The BIOS setup is a program for configuring the PC's environment. However, under conditions of ordinary use there is no need to configure (change) the environment using the BIOS setup. It is already configured when the PC is shipped.

Use the BIOS setup in the following cases:

- When setting a password so that only certain individuals can use the computer
- When an error message concerning BIOS setup has been displayed in POST.

Note: The content of configurations in the BIOS is stored in memory known as CMOS RAM in the computer. The content of this CMOS RAM is saved using the backup lithium battery. If the message "System CMOS checksum bad. Loaded default settings" is displayed in POST even though the BIOS setup was conducted correctly, the backup lithium battery might be fully discharged, so that the content of settings is not saved in the CMOS RAM.

Starting the BIOS setup

- (1) Complete the tasks for which the PC is used, and turn off its power. As necessary, save data in use.
- (2) Turn on the power to the equipment while pressing the F2 key.
- (3) When the BIOS setup screen is displayed after the OKI logo, stop pressing the F2 key.
- (4) Configure the BIOS setup as needed.

Note: When plugging the computer in to an AC outlet, the power will turn on and then immediately turn back off. This is part of the BIOS specifications and is not a bug.

Functions of each key used in configuration

Key	Functions
"F1" key	Displays the standard help screen, which explains the keys used in operating the BIOS setup. To close the help screen, press the Esc key while pressing the "Continue" key.
"F7" key	Loads setting values without changes.
"F9" key	Loads the default setting values for the screen displayed.
"F10" key	Saves the content of changes and ends BIOS setup.
"Esc" key	Displays the "End" menu. When pressing this key on a submenu, goes back up one screen.
"Enter" key	Displays the submenu for the item indicated by ">" or displays the list of settings.
"PGDN" key	Goes to the next page.
"PGUP" key	Goes to the previous page.
"HOME" key	Goes to the first item.
"END" key	Goes to the last item.
"↑", "↓" keys	Moves the cursor to the menu or item to be configured.
"—", "space" keys	Changes setting values.

BIOS settings

0101 [Edition] 001

List of BIOS menus

The BIOS setup utility is split into the following menus by configuration items.

Menu	Settings	Description
Info	Menu displaying BIOS setup and PC data	(0102)
System	Menu for configuring date, time, drives, etc.	(0103)
Advanced	Menu for configuring devices	(0104)
Power	Menu for settings related to power-saving mode	(0105)
Security	Menu for setting up the PC so that only specific individuals can operate it	(0106)
Exit	Exits BIOS setup	(0107)

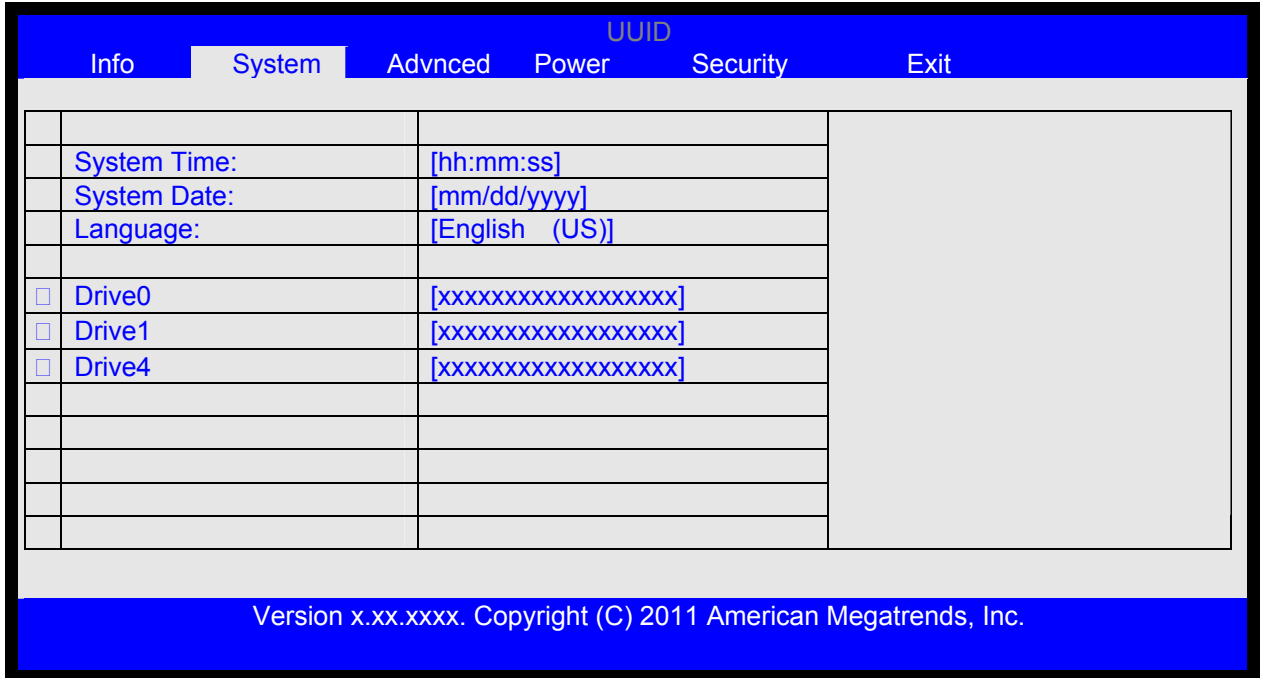
Item	Content	Notes
Product Name	Displays the equipment's model name	After M/B replacement: "None"
Configuration ID	Displays the BTO configuration as an ID no. Not displayed if none loaded	Not displayed after M/B replacement
Serial Number	Displays the equipment's serial no.	After M/B replacement: "None"
BIOS Version	Displays the BIOS version no. and BIOS date	The BIOS date is the build date
Processor Type	Display varies with CPU installed	
Total Memory	Display varies with memory installed	
DIMM1	Display varies with memory installed Displays "unused" if no memory installed	
DIMM2	Display varies with memory installed Displays "unused" if no memory installed	
DIMM3	Display varies with memory installed Displays "unused" if no memory installed	
DIMM4	Display varies with memory installed Displays "unused" if no memory installed	
Onboard MAC Address	Displays the MAC address of the main board	
UUID	Displays the equipment's UUID	

System menu

0103 [Edition] 001

Content of the System menu

Each setting is described below.



Item	Content	Notes
System Time	Displays current time [hh:mm:ss]	Input values from the keyboard. Press the Enter key to move the cursor from hours to minutes to seconds.
System Date	Displays current date [yyyy/mm/dd]	Input values from the keyboard. Press the Enter key to move the cursor from year to month to date.
Language	Initial value: English(US)	This setting does not change when loading default settings.
Drive0	Shows HDD installed	
Drive1	Shows HDD installed	Usually "none" is displayed, since no drive is installed here.
Drive4	Shows ODD installed	"None" is displayed if the model does not have an ODD.

Drive0

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

System

	Drive0	
Drive0:	[Enabled]	
Type:	Hard Disk	
Model:	xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
Capacity:	xxxxx GB (xxx,xxx,xxx,xxx,xxx byte)	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Initial value or display	Notes
Drive0	<u>Enabled</u>	
Type	Hard Disk	
Model	Varies with drive	
Capacity	Varies with drive	

Drive1

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

System

	Drive1	
Drive1:	[Enabled]	
Type:	Hard Disk	
Model:	xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
Capacity:	xxxxx GB (xxx,xxx,xxx,xxx,xxx byte)	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Initial value or display	Notes
Drive1	<u>Enabled</u>	If no drive is connected to SATA1, only "Drive1" will be displayed.
Type	Hard Disk	
Model	Varies with drive	
Capacity	Varies with drive	

Drive4

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

System

	Drive4	
Drive4:	[Enabled]	
Silent Mode:	[Performance]	
Type:	CD/DVD	
Model:	xxxxxxxxxxxxxxxxxxxxxxxxxxxx *1	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Initial value or display	Notes
Drive4	<u>Enabled</u>	
Silent Mode	Performance (speed)	Not displayed if the model does not have an ODD.
Type	CD/DVD	
Model	Varies with drive	

Advanced menu

0104

Content of the Advanced menu

Each setting is described below.

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.		
Info	System	Advanced
<input type="checkbox"/>	Boot Device Priority	
<input type="checkbox"/>	Hard Disk Drives Priority	
<input type="checkbox"/>	CD/DVD Drives Priority	
<input type="checkbox"/>	Network Boot Devices Priority	
	CSM:	[Disabled]
	Fast Boot:	[Disabled]
	Boot Menu:	[Enabled]
	Boot Time Diagnostic Screen:	[Disabled]
	Primary Video Adapter:	[PCI,PCI,IGD]
	Integrated Graphics(IGD):	[Auto]
	NumLock:	[On]
	Halt On Error:	[All,But keyboard]
	HT Technology:	[Enabled]
	Multi-core:	[Enabled]
	USB Controller:	[Enabled/All]
	USB3.0 Controller:	[Enabled]
	USB Legacy Support:	[Enabled]
	LAN Controller:	[Enabled]
	Onboard LAN Boot:	[PXE]
	SATA Mode:	[AHCI]
<input type="checkbox"/>	Serial Port Configurations	
<input type="checkbox"/>	Parallel Port Configurations	
<input type="checkbox"/>	Event Logging	
Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.		

Item	Content or initial value	Notes
Boot Device Priority	Uses a submenu to set priority of boot devices	Move the cursor to this item and press the Enter key to display the submenu screen.
Removable Drives Priority	Uses a submenu to set priority of boot devices	Move the cursor to this item and press the Enter key to display the submenu screen.
Hard Disk Drives Priority	Uses a submenu to set priority of boot devices	Move the cursor to this item and press the Enter key to display the submenu screen.
CD/DVD Drives Priority	Uses a submenu to set priority of boot devices	Move the cursor to this item and press the Enter key to display the submenu screen.
Network Boot Devices Priority	Uses a submenu to set priority of boot devices	Move the cursor to this item and press the Enter key to display the submenu screen.
CSM	Initial value: Disabled	This item may be selected and changed only when a supervisor password has been set. Otherwise, it will be displayed but cannot be selected or changed.
Fast Boot	Initial value: Disabled	
Primary Video Adapter	Initial value: PCIE,PCI,IGD	Detects primary displays in order from left.
Integrated Graphics(IGD)	Initial value: Auto	
NumLock	Initial value: On	
Halt On Error	Initial value: All ,But key board	[All, But keyboard] Displays an error and halts booting when detecting an error other than a keyboard error.
HT Technology	Initial value: Enabled	Displayed only when the processor is compatible with HT Technology.
Multi-core	Initial value: Enabled	Displayed only when multiple processors are installed
USB Controller	Initial value: Enabled / ALL	
USB3.0 Controller	Initial value: Enabled	When using the Windows XP OS, set to "Disabled."
USB Legacy Support	Initial value: Enabled	This item may be selected and changed only when the USB Controller setting is "Enabled." Otherwise, it will be displayed but cannot be selected or changed.
LAN Controller:	Initial value: Enabled	
Onboard LAN Boot	Initial value: PXE	* This item may be selected and changed only when the LAN Controller setting is "Enabled." Otherwise, it will be displayed but cannot be selected or changed. * When this setting is configured to "PXE," the equipment can boot from an OS available on the PXE server (connected to the LAN). * This is valid only for standard onboard LAN.
SATA Mode	Initial value: AHCI	Note: Changing the initial settings could cause problems with the system already installed.
Serial Port Configurations	Uses a submenu to configure serial ports	Move the cursor to this item and press the Enter key to display the submenu screen.
Parallel Port Configurations	Uses a submenu to configure parallel ports	Move the cursor to this item and press the Enter key to display the submenu screen.
Event Logging	Uses a submenu to configure event logging	Move the cursor to this item and press the Enter key to display the submenu screen.

Boot Device Priority

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

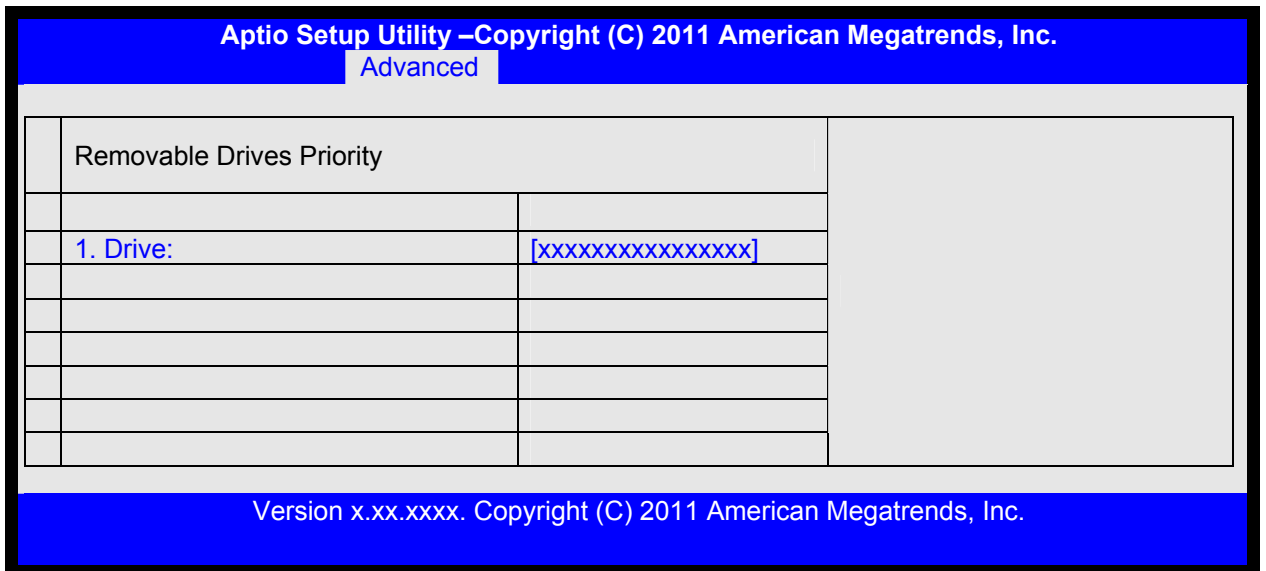
Advanced

Boot Device Priority		
1. Drive:	[CD/DVD Drives]	
2. Drive:	[! Removable Drives]	
3. Drive:	[Hard Disk Drives]	
4. Drive:	[Network Boot]	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

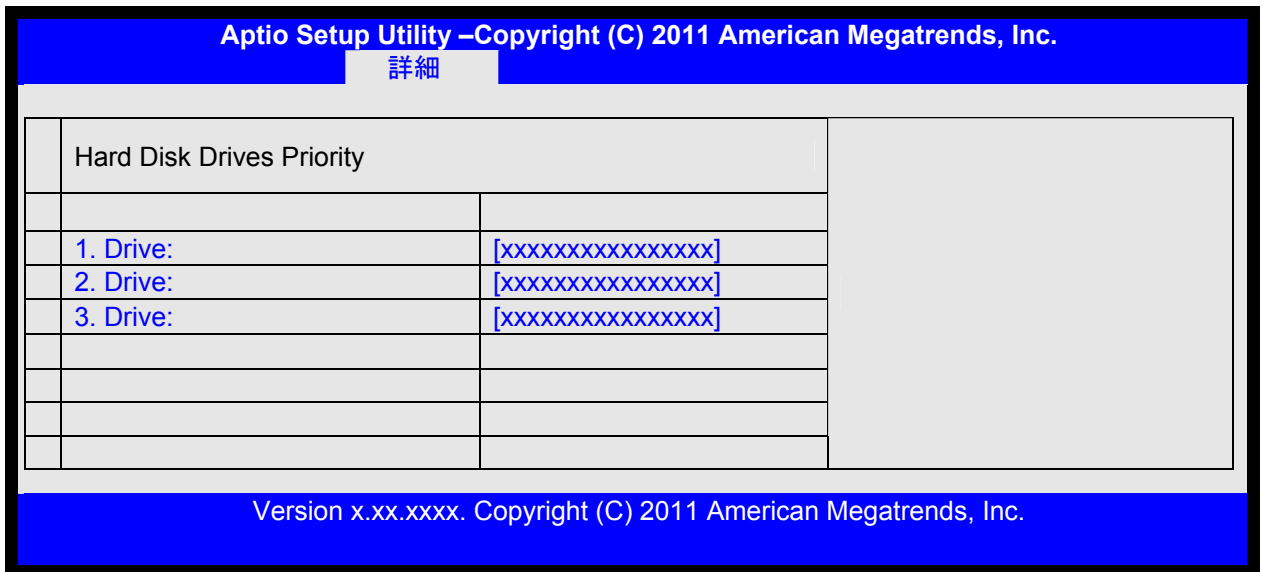
Item	Content	Notes
Boot device priority	1.Drive [CD/DVD Drives] 2.Drive [!Removable Drives] 3.Drive[Hard Disk Drives] 4.Drive[Network Boot]	Use the up and down arrow keys to select a priority and press the Enter key to choose from available devices. * An exclamation mark (!) next to a device means that no usable drive is available.
* Boot device priority default settings are shown below: 1.: CD/DVD Drives 2.: !Removable Drives 3.: Hard Disk Drives 4.: Network Boot		
* If no drive is available to use, this will be indicated by an exclamation mark (!) as shown below: ! Removable Drive ! Hard Disk Drives ! CD/DVD Drives ! Network Boot		

Removable Drives Priority



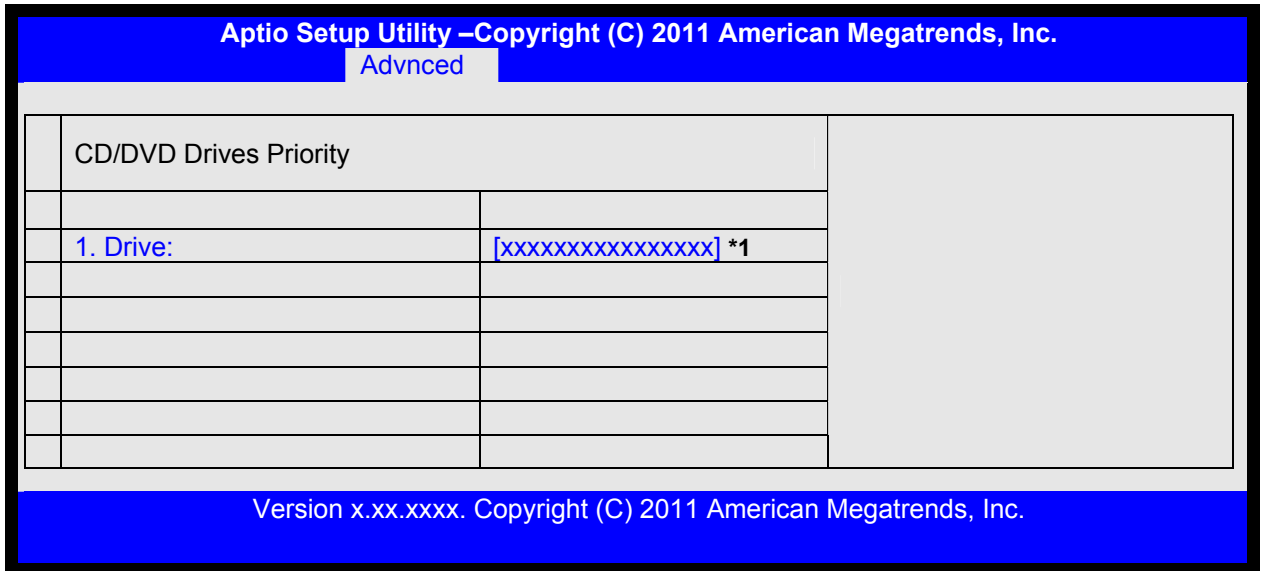
Item	Content	Notes
Removable Drives Priority	1.Drive[xxxxxxxxxxxxxxxxxx]	Use the up and down arrow keys to select a priority and press the Enter key to choose from available devices.

Hard Disk Drives Priority



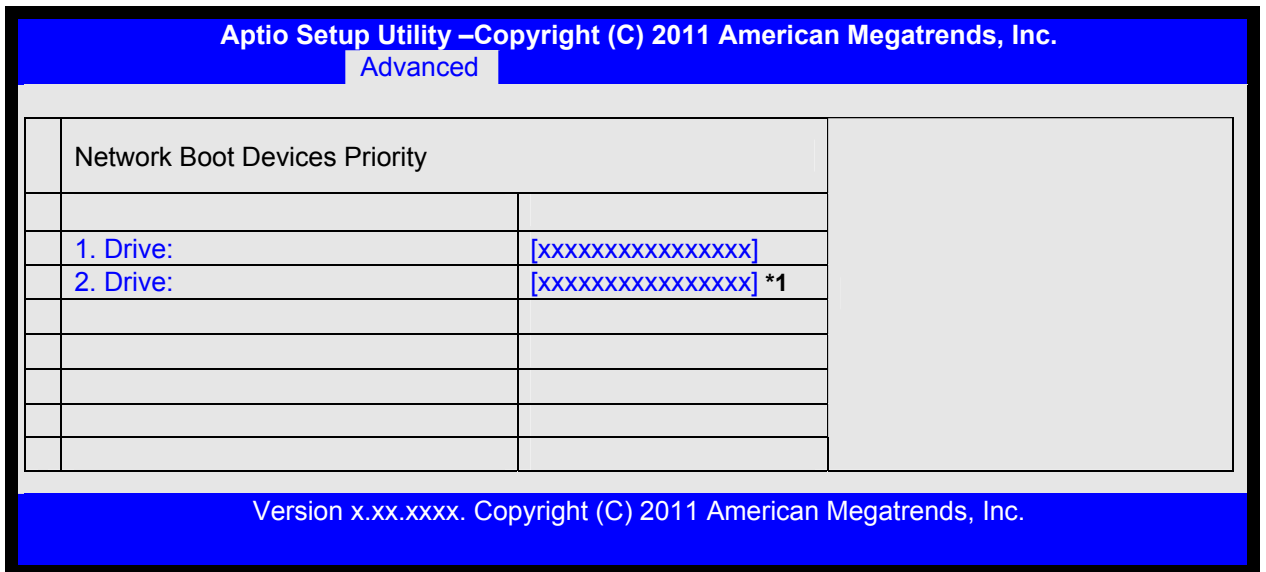
Item	Content	Notes
Hard Disk Drives Priority	1.Drive[xxxxxxxxxxxxxxxxxx]	Use the up and down arrow keys to select a priority and press the Enter key to choose from available devices.

CD/DVD Drives Priority



Item	Content	Notes
CD/DVD Drives Priority	1.Drive[xxxxxxxxxxxxxxxxxxxx]	Use the up and down arrow keys to select a priority and press the Enter key to choose from available devices.

Network Boot Devices Priority



Item	Content	Notes
Network Boot Devices Priority	1.Drive[xxxxxxxxxxxxxxxxxxxx]	Use the up and down arrow keys to select a priority and press the Enter key to choose from available devices.

Serial Port Configurations

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

Advanced

Serial Port Configurations		
Serial Port:	[Enabled]	
Base I/O, Interrupt:	[3F8/IRQ 4]	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Content	Notes
Serial Port	Initial value: Enabled	
Base I/O,Interrupt	Initial value: 3F8/IRQ4	

Parallel Port Configurations

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

Advanced

Parallel Port Configurations		
Parallel Port:	[Enabled]	
Mode:	[Bi-directional]	
Base I/O, Interrupt:	[378/IRQ 7]	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Content	Notes
Parallel Port	Initial value: Enabled	
Mode	Initial value: Bi-directional	
Base I/O,Interrupt	Initial value: 378/IRQ7	
DMA Channel	Initial value: DMA1	* Displayed only when the parallel port mode is "ECP."

Event Logging

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

Advanced

	Event Logging	
	Event Log Capacity:	Space Available
	Event Log Validity:	Valid
	View Event Log	[Enter]
	Clear All Event Logs	[Enter]
	Event Logging:	[Enabled]

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Content	Notes
Event Log Capacity	Space Available	Indicate whether an event log can be saved
Event Log Validity	Valid	Indicates whether the content of the event log is valid
View Event Log	[Enter]	Press the Enter key to display the details of the event log
Clear All Event Logs	[Enter]	Press the Enter key to delete the content of the event logs currently displayed
Event Logging	Initial value: Enabled	Configure whether to save an event log when an event occurs

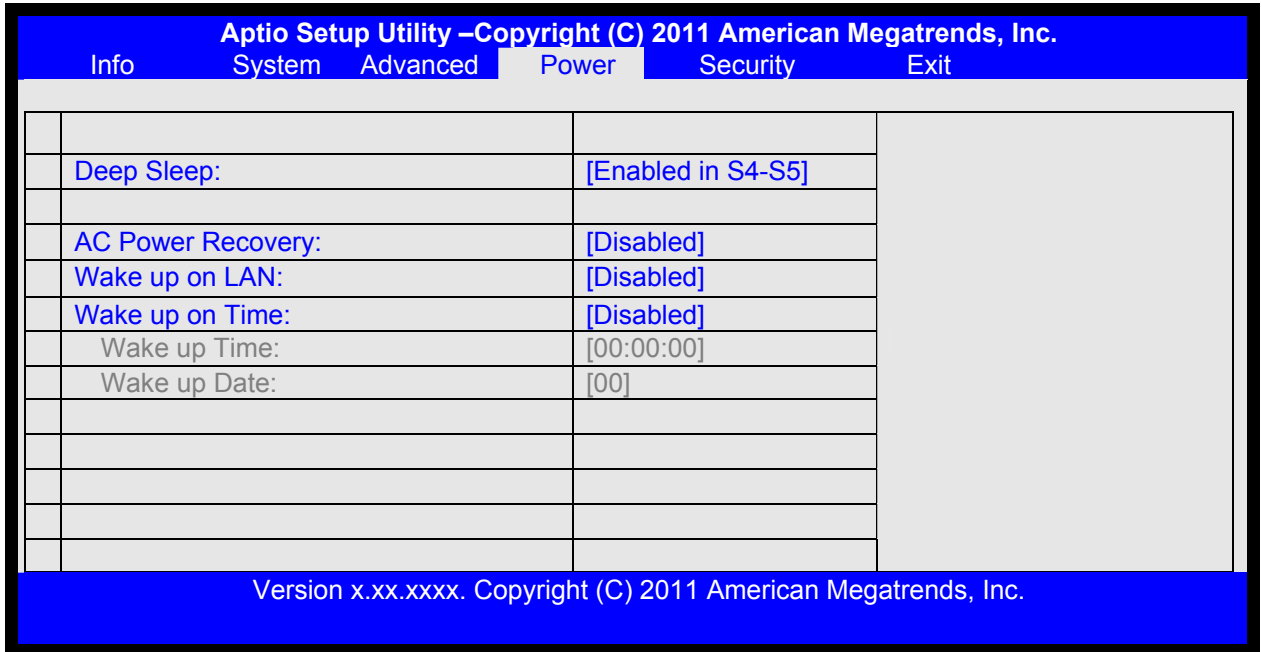
Power

0105

Content of the Power menu

Each setting is described below.

POWER



Item	Content	Notes
Deep Sleep	Initial value: Enabled in S4-S5	Configure whether to save power when on standby
AC Power Recovery	Initial value: Disabled	Configure whether to reboot when power is restored after being cut off due to a power failure or other reason
Wake up on LAN	Initial value: Disabled	Configure whether to turn on power when an onboard LAN device or PCI expansion LAN device receives a Magic Packet
Wake up on Time	Initial value: Disabled	Configure whether to turn on power at the specified time
Wake up Time	00:00:00 (initial value) - 23:59:59	Configure when "Wake up on Time" is set to "Enabled."
Wake up Date	00 (Initial value) - 31	Configure when "Wake up on Time" is set to "Enabled." * 00 means every day

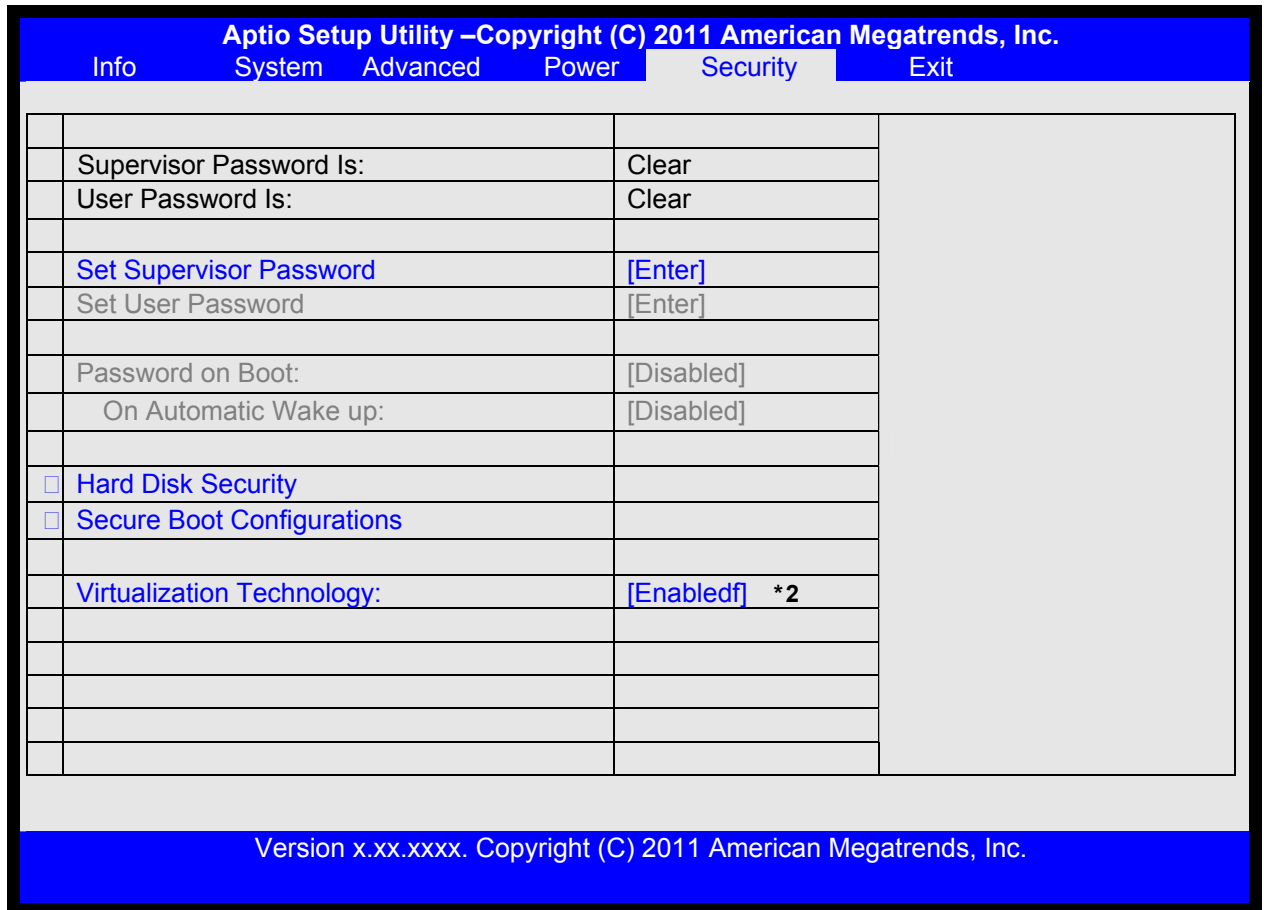
Security

0106

Security content

Each setting is described below.

Security



Item	Content and initial value	Notes
Supervisor Password Is	Initial value: Clear	Supervisor password
User Password Is	Initial value: Clear	User password
Set Supervisor Password	Enter	Press the Enter key to set a supervisor password
Set User Password	Enter	Press the Enter key to set a user password. * May be selected and input only when a supervisor password has been set.
Password on Boot	Initial value: Disabled	* May be selected and input only when a supervisor password has been set.
On Automatic Wake up	Initial value: Disabled	* May be selected and input only when a supervisor password has been set.
Hard Disk Security	Press the Enter key to display the sub menu	Configure the hard disk password protection function
Secure Boot Configurations		Configure secure boot settings
Virtualization Technology	Initial value: Enabled	* Displayed only when equipped with a processor compatible with Virtualization Technology

Security

Aptio Setup Utility –Copyright (C) 2011 American Megatrends, Inc.

Security

Hard Disk Security	
Drive0 Password Is:	Clear
Drive1 Password Is:	Not Available
Drive4 Password Is:	Not Available
Set Drive0 Password	[Enter]
Set Drive1 Password	[Enter]
Set Drive4 Password	[Enter]
Password Entry on Boot:	[Enabled]
<p>Hard Disk Password cannot be set nor changed if the system is rebooted from OS. Choose [Save & Turn-Off] in Exit Menu to shutdown the system, then Hard Disk Password can be set or changed on next boot.</p>	

Version x.xx.xxxx. Copyright (C) 2011 American Megatrends, Inc.

Item	Content	Notes
Drive0 Password Is	Clear	* Displays "Clear," "Set," or "Not Available" depending on the hard disk password settings.
Drive1 Password Is	Not Available	Same as above
Drive4 Password Is	Not Available	Same as above
Set Drive0 Password	Enter	Press the Enter key to set a hard disk password
Set Drive1 Password		Press the Enter key to set a hard disk password
Set Drive4 Password		Press the Enter key to set a hard disk password
Password Entry on Boot	Enabled	* This item may be selected and changed only when a supervisor password has been set. Otherwise, it will be displayed but cannot be selected or changed.

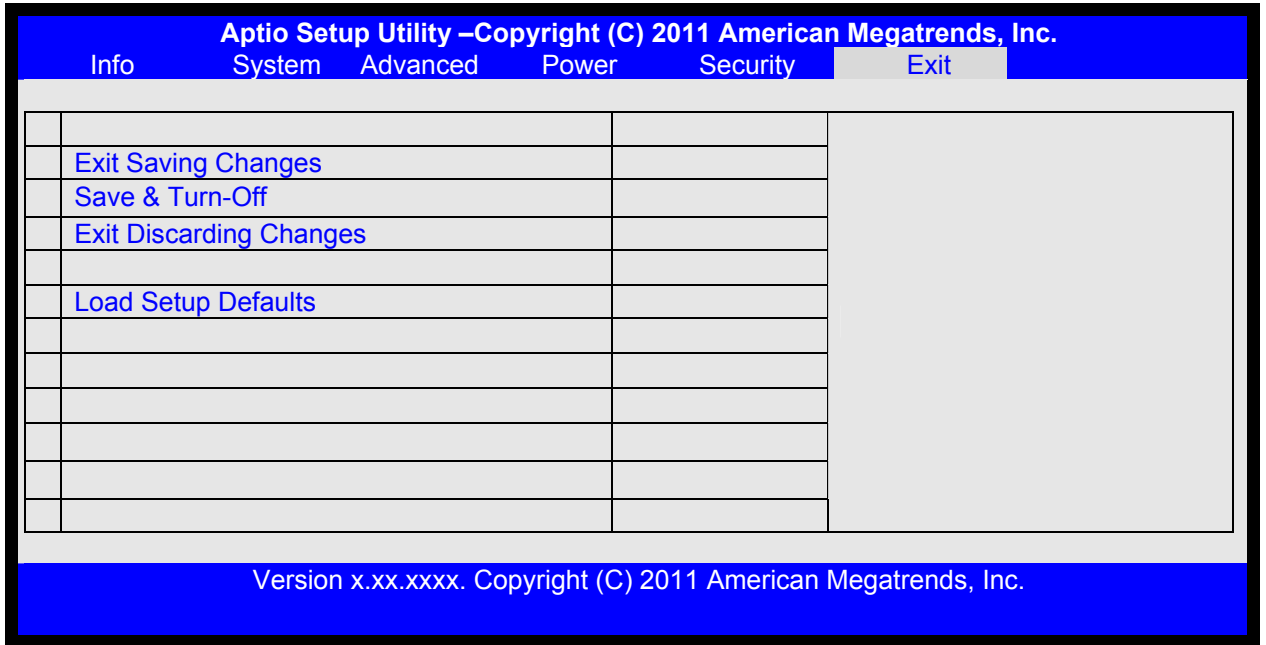
Exit

0107

Exit menu

Use this menu for tasks such as saving and loading settings or exiting the BIOS setup utility.

Exit



Item	Content	Notes
Exit Saving Changes	Save settings and exit the BIOS setup utility	The equipment will reboot
Save & Turn-Off	Save settings and exit the BIOS setup utility	The equipment will power off
Exit Discarding Changes	Exit the BIOS setup utility without saving settings	The equipment will remain booted
Load Setup Defaults	Return all settings to defaults	For some setting items, the defaults will not be loaded but current settings will be maintained.

Troubleshooting

1. Trouble during startup and shutdown

1-1 Power does not turn on

- Is the power cable connected?
- Is the main switch on the back of the PC main unit turned on?
- Is voltage supplied to the power outlet?
- If using a power strip with a power switch, is the strip's switch turned on?

1-2 Beeping sound

- In some cases a beeping sound may be heard during self-diagnostics (POST) after turning on the power.

The beep sounds an error code depending on the length and number of beeps, such as a single long beep, a single short beep, or two or three short beeps.

Causes of beeping noises and responses are shown below.

- Memory test error

There is a possibility that the memory is not installed correctly, or that memory unsupported by the PC has been installed.

In the event of a memory test error, nothing will be displayed on screen.

Check whether the memory is installed correctly.

- ROM error in PCI device

A ROM error has occurred in a PCI device. If an optional PCI card is installed in the computer, check whether it is installed correctly.

In the event of a memory test error or a ROM error in a display card, nothing will be displayed on screen.

1-3 Message displayed

- Sometimes a message will be displayed on screen during the self diagnostics (POST) after turning on the power.

Message	Explanation
B	
Boot Failure Press any key to continue	This message is displayed when no OS has been found. It also could be displayed depending on the combination of the OS used and the BIOS settings. Check whether an OS is installed on the designated drive, or check the BIOS setup configuration.
BOOT: Couldn't find NTLDR Please insert another disk	This message is displayed when the power has been turned on while a non-system floppy disk is set in the floppy disk drive. Remove the floppy disk and press any key.
Bootable Device was not found	This message is displayed when no bootable device has been found. It also could be displayed depending on the combination of the OS used and the BIOS settings ("Secure boot" settings under the Security menu). Press the Enter key to run the BIOS setup utility, and then choose "Boot device priority" under the Advanced menu and check whether a bootable device is displayed.
Bus:xxh Dev:xxh Fun:xxh PCI Parity Error	An error has occurred in an onboard device or expansion card. Check whether the expansion cards are installed correctly.
Bus:xxh Dev:xxh Fun:xxh PCI System Error	An error has occurred in an onboard device or expansion card. Check whether the expansion cards are installed correctly.

C	
CPU Fan Error	Check whether the CPU fan is broken and whether the fan's power cable is connected properly. Then, run the BIOS setup utility and choose "Exit Saving Changes" or "Save & Turn-Off" from the Exit menu.

K	
Keyboard/Interface Error.	An error has occurred during the keyboard test. Turn off the power, check whether the keyboard is connected properly, and then turn on the power again after waiting 30 seconds. To use the PC without a keyboard connected, set "Halt On Error" under the Advanced menu of the BIOS setup utility to "All,But keyboard."

N	
Non - System disk or disk error Replace and press any key to ready	This message is displayed when the power has been turned on while a non-system floppy disk is set in the floppy disk drive. Remove the floppy disk and press any key.
NTLDR is missing Press any key to restart	This message is displayed when the power has been turned on while a non-system floppy disk is set in the floppy disk drive. Remove the floppy disk and press any key.

Message	Explanation
P	
Press F1 to resume Press F2 to Run Setup	This message is displayed prior to booting the OS when an error has occurred during POST. Press the F1 key to start booting the OS. Press the F2 key to run the BIOS setup utility and change the settings.
PXE-T01:File not found	An error has occurred while running the Preboot Execution Environment. The computer was unable to get the boot image file on the boot server. Either properly configure the boot server or set "Network Boot" under the Advanced menu of the BIOS setup utility to "Disabled."
PXE-E32:TFTP open timeout	An error has occurred while running the Preboot Execution Environment. Network boot failed. Either properly configure the boot server or set "Network Boot" under the Advanced menu of the BIOS setup utility to "Disabled."
PXE-E51: No DHCP or proxyDHCP offers were received	An error has occurred while running the Preboot Execution Environment. This error occurs when the boot server is not recognized by the client. Either properly configure the boot server or set "Network Boot" under the Advanced menu of the BIOS setup utility to "Disabled."
PXE-E53:No boot filename received	An error has occurred while running the Preboot Execution Environment. This error occurs when the boot server is not recognized by the client. Either properly configure the boot server or set "Network Boot" under the Advanced menu of the BIOS setup utility to "Disabled."
PXE-E61:Media test failure, Check cable	An error has occurred while running the Preboot Execution Environment. The LAN cable is not connected properly. Connect the LAN cable properly.
PXE-E78:Could not locate boot server	An error has occurred while running the Preboot Execution Environment. This error occurs when the boot server is not recognized by the client. Either properly configure the boot server or set "Network Boot" under the Advanced menu of the BIOS setup utility to "Disabled."
PXE-E89:Could not download boot image	An error has occurred while running the Preboot Execution Environment. The computer was unable to get the boot image file on the boot server. Either properly configure the boot server or set "Network Boot" under the Advanced menu of the BIOS setup utility to "Disabled."

S	
System CMOS checksum bad	The CMOS checksum is incorrect. All BIOS settings have been changed to their defaults. If this message appears every time the computer is booted up, the CMOS backup battery might be discharged. Replace the lithium battery.
System Disabled.	An incorrect password was entered three times.
System Fan Error	Check whether the system fan is broken and whether the fan's power cable is connected properly. Then, run the BIOS setup utility and choose "Exit Saving Changes" or "Save & Turn-Off" from the Exit menu.

1-4 Nothing displayed on screen

- Is the power lamp lit?

Press the power button to start up the PC.

- Check the following items related to the display.
 - Are any of the display cable connector's pins damaged?
 - Are the displays' brightness and contrast settings adjusted correctly?
 - If connected to a digital display or multiple displays, was the display's power turned on prior to turning on the power to the PC?

Be sure to turn the display's power on prior to turning on the power to the PC.

Sometimes nothing will be displayed on screen if the display's power was turned on after turning on the power to the PC. In such a case, turn off the power and then turn it on again.

1-5 Windows does not boot, and the power cannot be turned off

- Shut down Windows using the following steps.
 1. Press the Ctrl, Alt, and Delete keys simultaneously and click on the "shutdown" icon at the lower right of the screen.

If this fails to force the computer to shut down, hold the power button down for at least four seconds to turn off the power and then turn it back on after waiting at least 30 seconds.

Important

- When forcing the computer to shut down, any unsaved work in programs will be lost.
- Running a hard disk check is recommended after forcing the computer to shut down.

1-6 Frequent freezing or other unstable operation

- Check the following items:
 - Scan the hard disk using antivirus software

Periodically scanning the hard disk is recommended.
 - Check that there is enough free space on the C drive.

Windows operation may become unstable if there is not enough free space on the C drive, where Windows stores its system files.

If there is not enough free space on the C drive, increase the amount of free space. Possible ways of increasing free space are:

- Emptying the Recycle Bin
- Deleting unneeded files or software
- Disk cleanup
- Checking the hard disk for errors

If problems still occur frequently after checking these items, run a system recovery.

1-7 Windows or software runs slowly

- The inside of the PC may be hot due to dust attached to the air intake vents or elsewhere.
- If the PC is a 24-hour model or other PC run for a long period of time, reboot it.

2. Hardware-related trouble

BIOS

2-1 Forgotten BIOS password

- If you forget the supervisor password, you will not be able to change the settings or disable the password. If you forget the hard disk password, you will not be able to use the password or to disable its security features.

No repairs are necessary for a forgotten user password.

Hard disk

2-2 The hard disk makes a rattling noise

- The hard disk could make a rattling noise in the following cases:
 - Immediately after shutting down Windows
 - Immediately after entering power-save mode (sleep mode, suspended mode)
 - When you have temporarily stopped use of the computer (i.e., there has been no hard disk access for several seconds)
 - When you have started use of the computer again after stopping use
 - When resident software has conducted some operation (i.e., accessed the hard disk), even if no user is operating the computer

These are normal for hard disks. They are not defects, and you can continue using the computer without need for repair.

CD/DVD

2-3 Unable to read data from disk

- Is the disk properly set in the tray?
Set the disk properly, making sure it is not upside down.
- Is the disk dirty or are there drops of water on it?
If the disk is dirty or has drops of water on it, wipe it with a slightly damp cloth, from the center of the disk outward, and then dry it with a dry cloth.
- Is the disk scratched or extremely warped?
Replace the disk.
- Are you trying to use a nonstandard disk.
Use a standard disk for the drive.

LAN

2-4 Unable to connect to network

- Is the network cable attached properly?
- Check the following points concerning the network cable:
 - Is the cable connector or the cable itself damaged?
 - Use an appropriate cable for the network environment used.

2-5 Speed of communication is slow

- Turn on the power to the PC after first turning on the power to network devices. Also, do not remove the LAN cable or turn off the power to network devices while using the PC.

Doing so may make it impossible to connect to network devices or may slow down communication speed considerably.

Ex.: Speed may fall from 1 Gbps to 10 Mbps.

If you are unable to connect to a network device, check that the power to the network device is one and that the PC and the network device are connected by LAN cables, and then reboot the computer.

Diagnostic Program

Use the Diagnostic Program to diagnose whether there is any fault in the hardware (e.g., CPU, memory, or HDD).

Run a simple diagnostic using the Diagnostic Program in the BIOS boot menu.

While the Diagnostic Program usually takes 5-10 minutes, it may take longer depending on the PC environment (e.g., memory capacity).

Important

- A keyboard and monitor are required for the Diagnostic Program.
- Start the Diagnostic Program after first fully turning off the power.
- Return the BIOS settings to their initial factory settings.
- Disconnect any peripherals before running the Diagnostic Program.

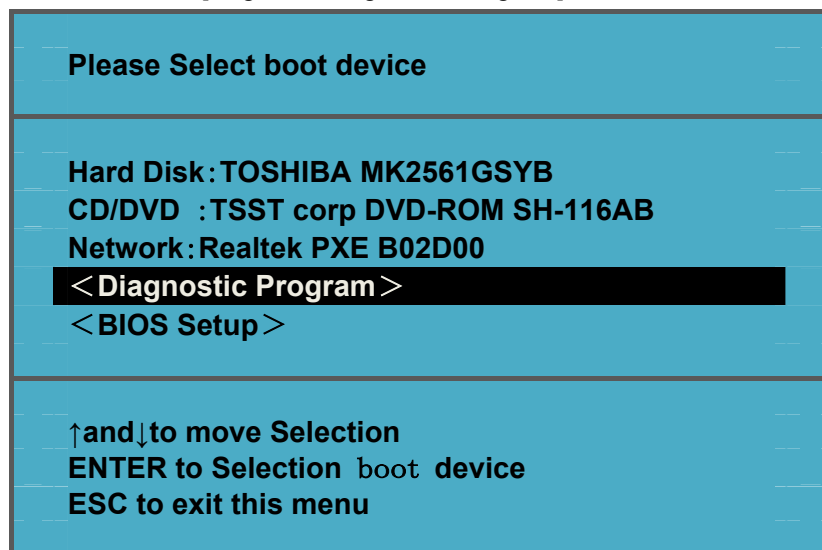
Remove any peripherals that could be recognized as hard disks or removable media, such as USB memory or external hard disks, before running the Diagnostic Program.

- The Diagnostic Program screens will display in the Language (English/Japanese) set in the BIOS settings. (Initial value: English)

Operation

- 1) Turn on the power to the PC while keeping the F12 key on the keyboard pressed.
- 2) When the boot menu is displayed after the OKI logo, release the F12 key.
- 3) Use the up and down cursor arrow keys to choose <Diagnostic Program> and then press the Enter key.

[English : Diagnostic Program]

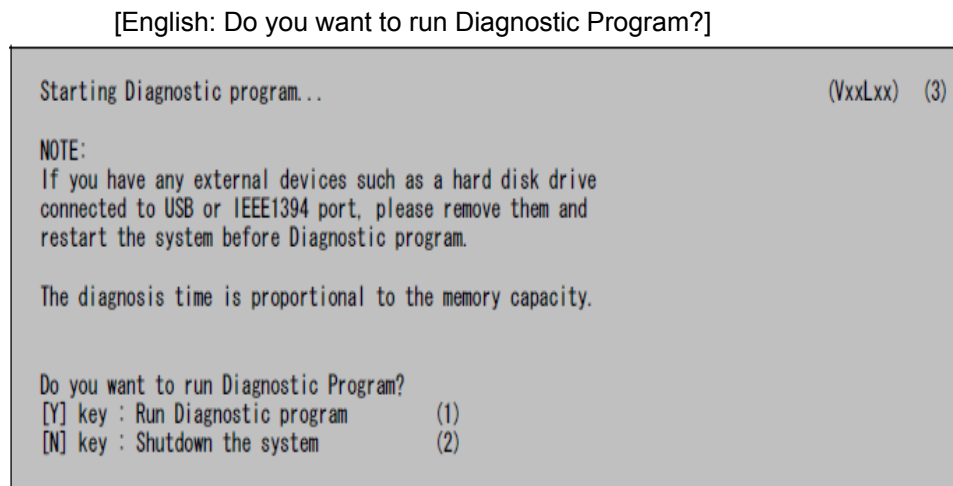


POINT

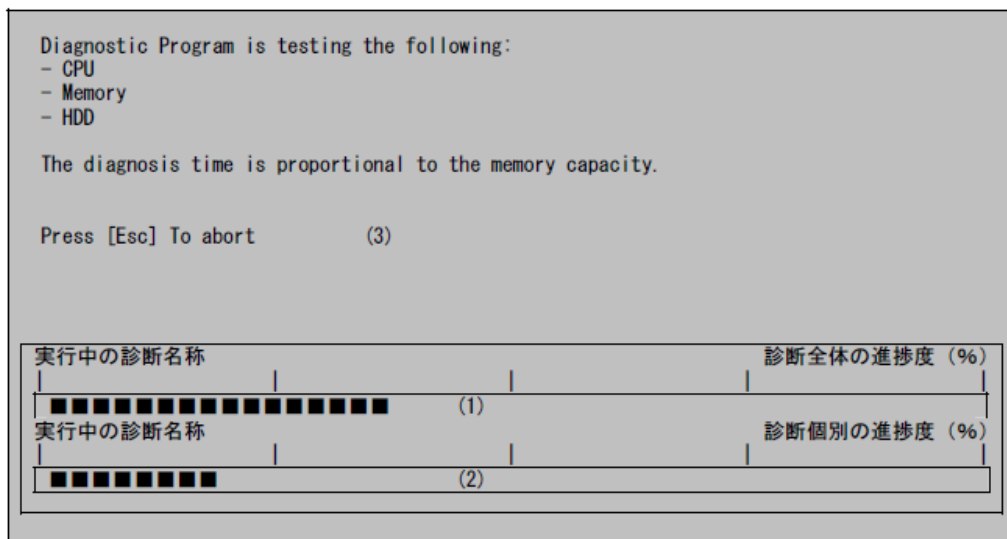
If the boot menu is not displayed but Windows boots instead, turn off the power to the computer and try the above steps again.

4) The message “Do you want to run Diagnostic Program?” will be displayed.

Press the “Y” key.



The hardware diagnosis will start.



5) After the hardware diagnosis is complete, the results of the diagnosis will be displayed.

```

Model : XXXXXXXX          (1)
Serial Number : XXXXXXXXX (2)
Configuration ID : XXXX-XXXX-XXXX-XXXX (3)

Memory: xxxx MB          (4)
HDD0          (5)

Initial Diagnostic Test completed successfully.
Hit any Key.          (6)

```

- (1) The equipment's F model name*¹
- (2) The equipment's serial number*¹
- (3) The configuration number will be displayed only when the equipment supports it.*¹
- (4) Memory capacity
- (5) List of installed hard disks. The numeral at the end is a serial number.
- (6) Press any key to reboot the OS. (When doing so, the underlined message will not be displayed.)

*¹ Not displayed on equipment for which the M/B has been replaced. (0 will be displayed instead.)

Example of a screen displayed when the Diagnostic Program has discovered an error:

```

Model : XXXXXXXXX
Serial Number : XXXXXXXXX
Configuration ID : XXXX-XXXX-XXXX-XXXX
Starting Date of Guarantee : mm/dd/YYYY

Memory: xxxx MB
HDD0

Error Code: XXX-Y-ZZZZ          (1)
Diagnostic Result: Maybe hardware error on DDD.          (2)
Please contact to Customer Support Center with error code and
diagnostic result.          (3)
Please turn off the PC to hit [Y] key.

```

- (1) Error code
- (2) Indicates the location on the DDD where the error was detected (CPU/memory/hard disk)
- (3) Press the "Y" key to turn off the PC.

Monitor error codes

Individual diagnostic results can be determined by the first three digits of the error code.

The first three digits of error codes output by this monitor are 001.

The details of this monitor's error codes are shown below.

Error code	Meaning	Response
001-1-0101	Interface error between BIOS and Diagnostic Program.	Replacing the main board is recommended.
001-1-0102	Monitor failed in calling diagnostic component.	
001-1-0103	Screen display could not be conducted correctly.	

CPU diagnostic error codes

Error code	Meaning	Response
101-1-1001	Unsupported CPU	Replacing the main board is recommended.
101-1-1002	Failed to start second or later CPU(AP)	
101-1-1003	Error in APIC DESCRIPTION information	
101-1-1004	EAX register comparison error	
101-1-1005	EBX register comparison error	
101-1-1006	ECX register comparison error	
101-1-1007	EDX register comparison error	
101-1-1008	ES register comparison error	
101-1-1009	FS register comparison error	
101-1-1010	GS register comparison error	
101-1-1011	EBP register comparison error	
101-1-1012	Unable to set carry bit	
101-1-1013	Unable to clear carry bit	
101-1-1014	Unable to set parity bit	
101-1-1015	Unable to clear parity bit	
101-1-1016	Unable to set A carry bit	
101-1-1017	Unable to clear A carry bit	
101-1-1018	Unable to set zero bit	
101-1-1019	Unable to clear zero bit	
101-1-1020	Unable to set sign bit	
101-1-1021	Unable to clear sign bit	
101-1-1022	Unable to set overflow bit	
101-1-1023	Unable to clear overflow bit	
101-1-1024	Unable to set D flag bit	
101-1-1025	Unable to clear D flag bit	
101-1-1028	MMX0 register comparison error	
101-1-1029	MMX1 register comparison error	
101-1-1030	MMX2 register comparison error	
101-1-1031	MMX3 register comparison error	
101-1-1032	MMX4 register comparison error	
101-1-1033	MMX5 register comparison error	
101-1-1034	MMX6 register comparison error	
101-1-1035	MMX7 register comparison error	
101-1-1036	Data comparison error	
101-1-1037	Status error after 0 clear	
101-1-1101	No response from second or later CPU(AP)	
101-1-1102	Unable to secure enough memory for diagnostic	Reboot the computer and run the Diagnostic Program again. If this error occurs again after rebooting, replacing the memory is recommended.

Memory diagnostic error codes

Error code	Meaning	Response
102-1-1004	Unable to secure enough memory for diagnostic	Replace the memory and then run the Diagnostic Program again. If the same error is displayed, reboot the computer and run the Diagnostic Program again. If this error occurs again even after rebooting, replacing the main board is recommended.
102-1-1101	Failed in analysis of memory map for diagnostic	Reboot the computer and run the Diagnostic Program again. If this error occurs again, replacing the main board is recommended.
102-1-1302	Data comparison error in MASEST test	Replacing the memory is recommended.

HDD diagnostic error codes

Error code	Meaning	Response
104-1-1001	No HDD subject to diagnostics is connected.	Check that the HDD is properly connected to the main unit.
104-1-1002	Failed to obtain protocol to access HDD.	Check that the HDD is properly connected to the main unit, and then try the diagnostics again. If the same error appears, replace the HDD, and then try the diagnostics again. If the same error still appears, replacing the main board is recommended.
104-1-1003	Failed to open HDD.	Replacing the HDD is recommended.
104-1-1004	Unable to secure enough memory for diagnostic	Reboot the computer and run the Diagnostic Program again. If this error occurs again, replacing the memory is recommended.
104-1-1005	Failed in analysis of partition table.	Replacing the HDD is recommended.
104-1-1006	Failed to read MBR-format partition data.	
104-1-1007	Failed to read GPT-format partition data.	
104-1-1008	Failed to read sector.	
104-1-1009	Failed to read sector.	