

SERVICE MANUAL

Ver.12-2007C

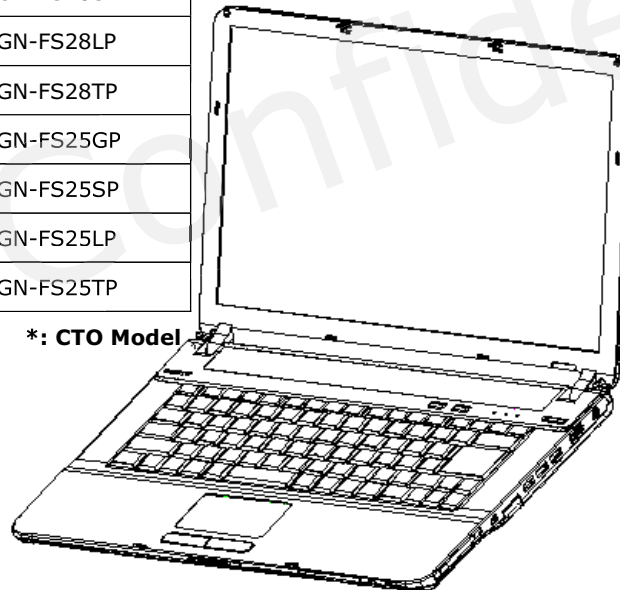
Revision History

J	VGN-FS71B
	VGN-FS51B
	VGN-FS31B
	VGN-FS21B
	VGN-FS21
	VGN-FS91PS *
	VGN-FS91PSY *
	VGN-FS91S *
AM	VGN-FS680/W
	VGN-FS660P/W
	VGN-FS660/W
	VGN-FS640/W
	VGN-FS675P/H
	VGN-FS635B/W
	VGN-FS625B/W
	VGN-FS645P/H
	VGN-FS670FG
	VGN-FS650F
	VGN-FS630F
	VGN-FS615F
	VGN-FS640Q/W

AM	VGN-FS655FP
	VGN-FS640FP
	VGN-FS610FP
	VGN-FS620P
	VGN-FS620
	VGN-FS630/W
	VGN-FS690P *
	VGN-FS690B *
AM	VGN-FS690 *
	VGN-FS690BH *
	VGN-FS295XP
	VGN-FS215Z
EU	VGN-FS215M
	VGN-FS295VP
	VGN-FS215B
	VGN-FS215E
	VGN-FS215SR
	VGN-FS215MR
	VGN-FS285M
	VGN-FS285B
	VGN-FS285E

EU	VGN-FS215S
	VGN-FS285H
AO	VGN-FS28C
	VGN-FS25C
	VGN-FS28GP
	VGN-FS28SP
	VGN-FS28LP
	VGN-FS28TP
	VGN-FS25GP
	VGN-FS25SP
	VGN-FS25LP
	VGN-FS25TP

*: CTO Model



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All other names of systems, products and services in this manual are trademarks or registered trademarks of their respective owners. In this manual, the (TM) or (R) mark are not specified.

The components identified by mark  contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100°C (212°F) or incinerate. Dispose of used battery promptly. Keep away from children.

CAUTION: Changing the back up battery.


- Overcharging, short circuiting, reverse charging, mutilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.
- If a cell has leaked or vented, it should be replaced immediately while avoiding to touch it without any protection.

Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the  mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.


5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270°C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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History of the changes is shown as the "Revision History" at the end of this data.

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CHAPTER 1. SPECIFICATIONS

1-1. Specifications

	J					
	VGN-FS71B	VGN-FS51B	VGN-FS31B	VGN-FS21B	VGN-FS21	VGN-FS1P/FS1PSY/FS91P*
CPU	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Celeron-M 370(Do1.5)	Celeron-M 360J(Do1.4)	Celeron-M 360J(Do1.4)	*1)
Graphic	NV44M	915GM	915GM	915GM	915GM	*2)
LCD	15.4" WXGA (Clear Black)	15.4" WXGA (Clear Black)	15.4" WXGA (Clear Black)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (Clear Black)
HDD	100GB	100GB	80GB	60GB	60GB	*3)
MEMORY(Slot1)	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	*4)
MEMORY(Slot2)	256MB DDR333	256MB DDR333	256MB DDR333	-	-	
QUANTITY(STANDARD,MAX)	512MB/2GB	512MB/2GB	512MB/2GB	256MB/2GB	256MB/2GB	Super Multi Drive DL/Combo /DVD-ROM
OPT-DRIVE	Super Multi Drive DL	Super Multi Drive DL	Super Multi Drive DL	Super Multi Drive DL	Super Multi Drive DL	
AC adaptor	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V10
Battery	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA
Wireless LAN	O	O	O	O	O	O/X
Memory Card Adapter	O	O	O	O	O	O
USB FLOPPY DISK DRIVE	X	O	O	X	X	X
OS	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home/XP Pro

*1)Celeron-M 360J,Celeron-M 370,Pentium-M 740,Pentium-M 770 *2)NV44M,915GM *3)100GB,80GB,60GB,40GB *4)512MB*2,256MB*1

*5)Celeron-M 360,Pentium-M 730,Pentium-M 740,Pentium-M 750,Pentium-M 760,Pentium-M 770 *6)NV44M,915GM *7)100GB,80GB,60GB,40GB,30GB

*8)512MB*1,512MB*2,256MB*1,256MB*2 *9)Combo,DVD+/-RW DL,DVD-ROM *10) 802.11b/g, 802.11a/b/g

	AM																				
	VGN-FS680/W	VGN-FS660P/W	VGN-FS660/W	VGN-FS640/W	VGN-FS675P/H	VGN-FS635B/W	VGN-FS625B/W	VGN-FS645P/H	VGN-FS670FG	VGN-FS650F	VGN-FS630F	VGN-FS615F	VGN-FS640Q/W	VGN-FS655FP	VGN-FS640FP	VGN-FS610FP	VGN-FS620P	VGN-FS620	VGN-FS630/W	*5)	
CPU	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 730(Do1.6)	Pentium-M 750(Do1.86)	Pentium-M 730(Do1.6)	Pentium-M 730(Do1.6)	Pentium-M 730(Do1.6)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Celeron-M 360J(Do1.4)	Celeron-M 360J(Do1.4)	Pentium-M 730(Do1.6)	Pentium-M 740(Do1.73)	Pentium-M 730(Do1.6)	Celeron-M 360J(Do1.4)	Pentium-M 730(Do1.6)	Pentium-M 730(Do1.6)	Pentium-M 740(Do1.73)	*5)	
Graphic	NV44M	NV44M	NV44M	915GM	NV44M	915GM	915GM	NV44M	915GM	915GM	915GM	915GM	915GM	915GM	915GM	915GM	915GM	915GM	915GM	915GM	*6)
LCD	15.4" WXGA (Clear Black)	15.4" WXGA (Clear Black)	15.4" WXGA (Clear Black)	15.4" WXGA (High Brightness)	15.4" WXGA (Clear Black)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (Clear Black)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)	15.4" WXGA (High Brightness)
HDD	100GB	80GB	80GB	80GB	100GB	60GB	40GB	80GB	80GB	60GB	40GB	80GB	80GB	80GB	60GB	60GB	80GB	80GB	80GB	80GB	*7)
MEMORY(Slot1)	512MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	*8)
MEMORY(Slot2)	512MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	512MB DDR333	-	-	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	
QUANTITY(STANDARD,MAX)	1GBB/2GB	1MB/2GB	1MB/2GB	512MB/2GB	1MB/2GB	512MB/2GB	256MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	1MB/2GB	512MB/2GB	256MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	
OPT-DRIVE	DVD+/-RW DL	DVD+/-RW DL	DVD+/-RW DL	DVD+/-RW DL	DVD+/-RW DL	Combo	Combo	DVD+/-RW DL	DVD+/-RW DL	DVD+/-RW DL	DVD+/-RW DL	Combo	DVD+/-RW DL	DVD+/-RW DL	Combo	Combo	Combo	Combo	Combo	Combo	*9)
AC adaptor	AC19V9	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V9	AC19V10	AC19V10	AC19V10	AC19V11	AC19V10	AC19V10	AC19V10	AC19V11	AC19V11	AC19V11	AC19V11	AC19V10 (w/o PR)/AC19V9 (W/ PR)
Battery	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA
Wireless LAN	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	*10)
Memory Card Adapter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
USB FLOPPY DISK DRIVE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OS	XP Home	XP Pro	XP Home	XP Home	XP Pro	XP Pro	XP Pro	XP Pro	XP Home	XP Home	XP Home	XP Home	XP Home	XP Pro	XP Pro	XP Pro	XP Home	XP Home	XP Home	XP Home	XP Pro/XP Home

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- The model that is accompanied by asterisk(*) is the CTO model. For the equipment configuration, refer to the CTO Information.
- The trademarks or registered trademarks of above, refer to page.2.

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EU													
	VGN-FS295XP	VGN-FS215Z	VGN-FS215M	VGN-FS295VP	VGN-FS215B	VGN-FS215E	VGN-FS215SR	VGN-FS215MR	VGN-FS285M	VGN-FS285B	VGN-FS285E	VGN-FS215S	VGN-FS285H
CPU	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Celeron-M 370(Do1.5)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Celeron-M 370(Do1.5)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)
Graphic	NV44M	NV44M	NV44M	NV44M	915GM	915GM	NV44M	NV44M	NV44M	915GM	915GM	NV44M	NV44M
LCD	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)
HDD	100GB	100GB	80GB	80GB	60GB	60GB	100GB	80GB	80GB	80GB	80GB	100GB	80GB
MEMORY(Slot1)	512MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333
MEMORY(Slot2)	-	256MB DDR333	256MB DDR333	-	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333
QUANTITY[STANDARD/MAX]	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	1GB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB
OPT-DRIVE	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL
AC adaptor	AC19V11	AC19V9	AC19V11	AC19V11	AC19V11	AC19V11	AC19V12	AC19V11	AC19V12	AC19V11	AC19V11	AC19V11	AC19V11
Battery	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA
Wireless LAN	O	O	O	O	O	O	O	O	O	O	O	O	O
Memory Card Adapter	X	X	X	X	X	X	X	X	X	X	X	X	X
USB FLOPPY DISK DRIVE	X	X	X	X	X	X	X	X	X	X	X	X	X
OS	XP Pro	XP Home	XP Home	XP Pro	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home

AO										
	VGN-FS28C	VGN-FS25C	VGN-FS28GP	VGN-FS28SP	VGN-FS28LP	VGN-FS28TP	VGN-FS25GP	VGN-FS25SP	VGN-FS25LP	VGN-FS25TP
CPU	Pentium-M 740(Do1.73)	Celeron-M 360J(Do1.4)	Pentium-M 760(Do2.0)	<-	<-	<-	Pentium-M 740(Do1.73)	<-	<-	<-
Graphic	NV44M	915GM	NV44M	<-	<-	<-	NV44M	<-	<-	<-
LCD	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	<-	<-	<-	15.4"WXGA (High Brightness)	<-	<-	<-
HDD	40GB	40GB	80GB	<-	<-	<-	60GB	<-	<-	<-
MEMORY(Slot1)	512MB DDR333	256MB DDR333	512MB DDR333	<-	<-	<-	512MB DDR333	<-	<-	<-
MEMORY(Slot2)	-	-	-	<-	<-	<-	-	<-	<-	<-
QUANTITY[STANDARD/MAX]	512MB/2GB	256MB/2GB	512MB/2GB	<-	<-	<-	512MB/2GB	<-	<-	<-
OPT-DRIVE	Combo	Combo	DVD+-RW DL	<-	<-	<-	DVD+-RW DL	<-	<-	<-
AC adaptor	AC19V10	AC19V10	AC19V10	<-	<-	<-	AC19V10	<-	<-	<-
Battery	BP2SA	BP2SA	BP2SA	<-	<-	<-	BP2SA	<-	<-	<-
Wireless LAN	O	O	O	<-	<-	<-	O	<-	<-	<-
Memory Card Adapter	X	X	X	<-	<-	<-	X	<-	<-	<-
USB FLOPPY DISK DRIVE	X	X	X	<-	<-	<-	X	<-	<-	<-
OS	XP Home	XP Home	XP Pro	<-	<-	<-	XP Pro	<-	<-	<-

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- The trademarks or registered trademarks of above ,refer to page2.

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1-2.CTO Information

Model name:VGN-FS91PS
Model number:PCG-7A1N (w/ W-LAN), PCG-7A2N(w/o W-LAN)
OS:WinXP Pro

CPU	Pentium-M 770 6-707-261-01 CPU PM 2.13	Pentium-M 740 6-707-268-01 CPU PM 1.73	Pentium-M 730 6-707-268-01 CPU CEL-M 1.5	Celeron-M 360J 6-707-715-01 CPU CEL-M 1.4		
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	60GB A-1108-908-A ASSY HDD 60GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(HI)		
LCD	15.4WXGA/ClearBlack A-1133-650-A ASSY LCD (HC-SXGA+WLAN)(S)(WHITE)	15.4WXGA/ClearBlack A-1133-651-A ASSY LCD (HC-XGA-WLAN)(S)(WHITE)	15.4WXGA/ClearBlack A-1127-878-A ASSY LCD (HC-SXGA+WLAN)(S)(GRAY)	15.4WXGA/ClearBlack A-1127-879-A ASSY LCD (HC-WXGA-WLAN)(S)(GRAY)		
Graphics	NV44M	915GM				
Memory	256MB*1 6-707-629-01 IC HY564D3202HDL-6-C	256MB*2 6-707-629-01 IC HY564D3202HDL-6-C	512MB*2 6-705-096-01 IC HY564D6402HBDL-6-C			
Opt.Drive	Super Multi +DL A-1127-946-A ASSY ODD PANA(SM+DL)(W)	Super Multi +DL A-1127-947-A ASSY ODD PANA(SM+DL)(B)	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	Combo A-1127-957-A ASSY ODD QSI(SBW 243)(B)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(C2732)(W)	DVD-ROM A-1127-959-A ASSY ODD Toshiba(C2732)(B)
W-LAN	802.11b(g)(n)el 1-761-864-61 WIRELESS LAN CARD	None				
Office	2003 Professional	2003 Personal	None			
Other Option	Memory card adapter 1-478-615-11 MEMORY CARD ADAPTER					
CHASSIS COLOR	White	Gray				

Model name:VGN-FS91PSY
Model number:PCG-7A1N (w/ W-LAN), PCG-7A2N(w/o W-LAN)
OS:WinXP Pro

CPU	Pentium-M 770 6-707-261-01 CPU PM 2.13	Pentium-M 740 6-707-268-01 CPU PM 1.73	Pentium-M 730 6-707-268-01 CPU CEL-M 1.5	Celeron-M 360J 6-707-715-01 CPU CEL-M 1.4
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	60GB A-1108-908-A ASSY HDD 60GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(HI)
LCD	15.4WXGA/ClearBlack A-1127-878-A ASSY LCD (HC-SXGA+WLAN)(S)(GRAY)	15.4WXGA/ClearBlack A-1127-879-A ASSY LCD (HC-WXGA-WLAN)(S)(GRAY)		
Graphics	915GM			
Memory	256MB*1 6-707-629-01 IC HY564D3202HDL-6-C	256MB*2 6-707-629-01 IC HY564D3202HDL-6-C	512MB*2 6-705-096-01 IC HY564D6402HBDL-6-C	
Opt.Drive	Super Multi +DL A-1127-947-A ASSY ODD PANA(SM+DL)(B)	Combo A-1127-957-A ASSY ODD QSI(SBW 243)(B)	DVD-ROM A-1127-959-A ASSY ODD Toshiba(C2732)(B)	
W-LAN	802.11b(g)(n)el 1-761-864-61 WIRELESS LAN CARD	None		
Office	2003 Professional	2003 Personal	None	
Other Option	Memory card adapter 1-478-615-11 MEMORY CARD ADAPTER			
CHASSIS COLOR	Gray			

Model name:VGN-FS91S
Model number:PCG-7A1N (w/ W-LAN), PCG-7A2N(w/o W-LAN)
OS:WinXP Home

CPU	Pentium-M 770 6-707-261-01 CPU PM 2.13	Pentium-M 740 6-707-268-01 CPU PM 1.73	Pentium-M 730 6-707-268-01 CPU CEL-M 1.5	Celeron-M 360J 6-707-715-01 CPU CEL-M 1.4		
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	60GB A-1108-908-A ASSY HDD 60GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(HI)		
LCD	15.4WXGA/ClearBlack A-1133-650-A ASSY LCD (HC-SXGA+WLAN)(S)(WHITE)	15.4WXGA/ClearBlack A-1133-651-A ASSY LCD (HC-XGA-WLAN)(S)(WHITE)	15.4WXGA/ClearBlack A-1127-878-A ASSY LCD (HC-SXGA+WLAN)(S)(GRAY)	15.4WXGA/ClearBlack A-1127-879-A ASSY LCD (HC-WXGA-WLAN)(S)(GRAY)		
Graphics	NV44M	915GM				
Memory	256MB*1 6-707-629-01 IC HY564D3202HDL-6-C	256MB*2 6-707-629-01 IC HY564D3202HDL-6-C	512MB*2 6-705-096-01 IC HY564D6402HBDL-6-C			
Opt.Drive	Super Multi +DL A-1127-946-A ASSY ODD PANA(SM+DL)(W)	Super Multi +DL A-1127-947-A ASSY ODD PANA(SM+DL)(B)	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	Combo A-1127-957-A ASSY ODD QSI(SBW 243)(B)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(C2732)(W)	DVD-ROM A-1127-959-A ASSY ODD Toshiba(C2732)(B)
W-LAN	802.11b(g)(n)el 1-761-864-61 WIRELESS LAN CARD	None				
Office	2003 Professional	2003 Personal	None			
Other Option	Memory card adapter 1-478-615-11 MEMORY CARD ADAPTER					
CHASSIS COLOR	White	Gray				

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Model name:VGN-FS690P
Model number:PCG-7A1L(802.11a/b/g),PCG-7A2L(802.11b/g)
OS:WinXP Pro

CPU	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.85	Pentium-M 740 E-707-258-01 CPU PM 1.73	Pentium-M 730 E-707-252-01 CPU PM 1.6	Celeron-M 360J E-707-715-01 CPU CEL-M 1.4
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	80GB A-1108-908-A ASSY HDD 80GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(H)	30GB A-1108-911-A ASSY HDD 30GB(H)	
LCD	15.4WXGA High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(WHITE)					
Graphics	NV44M	915GM				
Memory	256MB*1 E-707-029-01 IC HY864D3220HDL-6-C	256MB*2 E-707-029-01 IC HY864D3220HDL-6-C	512MB*1 E-707-029-01 IC HY864D4020HDL-6-C	512MB*2 E-707-029-01 IC HY864D4020HDL-6-C		
Opt Drive	DVD-RW A-1127-951-A ASSY ODD SONY(DVD-DL)(W)	Combo A-1127-956-A ASSY ODD SONY(SBW 243)(W)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(CZ732)(W)			
W-LAN	802.11b/g(mn)	802.11a/b/g 1-781-854-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

Model name:VGN-FS690
Model number:PCG-7A1L(802.11a/b/g),PCG-7A2L(802.11b/g)
OS:WinXP Home

CPU	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.85	Pentium-M 740 E-707-258-01 CPU PM 1.73	Pentium-M 730 E-707-252-01 CPU PM 1.6	Celeron-M 360J E-707-715-01 CPU CEL-M 1.4
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	80GB A-1108-908-A ASSY HDD 80GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(H)	30GB A-1108-911-A ASSY HDD 30GB(H)	
LCD	15.4WXGA High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(WHITE)					
Graphics	NV44M	915GM				
Memory	256MB*1 E-707-029-01 IC HY864D3220HDL-6-C	256MB*2 E-707-029-01 IC HY864D3220HDL-6-C	512MB*1 E-707-029-01 IC HY864D4020HDL-6-C	512MB*2 E-707-029-01 IC HY864D4020HDL-6-C		
Opt Drive	DVD-RW A-1127-951-A ASSY ODD SONY(DVD-DL)(W)	Combo A-1127-956-A ASSY ODD OS(SBW 243)(W)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(CZ732)(W)			
W-LAN	802.11b/g(mn)	802.11a/b/g 1-781-854-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

Model name:VGN-FS690B
Model number:PCG-7A1L(802.11a/b/g),PCG-7A2L(802.11b/g)
OS:WinXP Pro

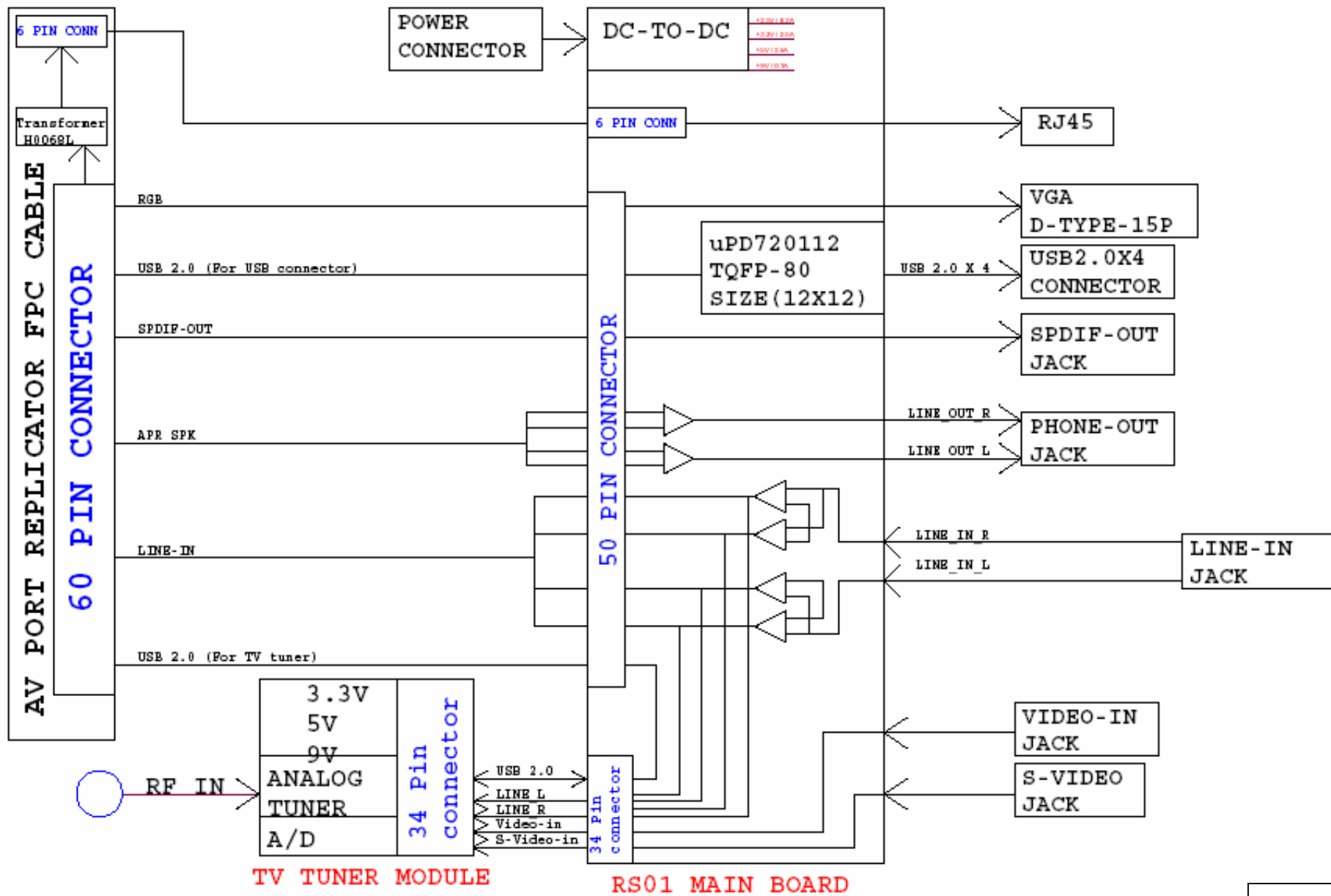
CPU	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.85	Pentium-M 740 E-707-258-01 CPU PM 1.73	Pentium-M 730 E-707-252-01 CPU PM 1.6	Celeron-M 360J E-707-715-01 CPU CEL-M 1.4
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	80GB A-1108-908-A ASSY HDD 80GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(H)	30GB A-1108-911-A ASSY HDD 30GB(H)	
LCD	15.4WXGA High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(WHITE)					
Graphics	NV44M	915GM				
Memory	256MB*1 E-707-029-01 IC HY864D3220HDL-6-C	256MB*2 E-707-029-01 IC HY864D3220HDL-6-C	512MB*1 E-707-029-01 IC HY864D4020HDL-6-C	512MB*2 E-707-029-01 IC HY864D4020HDL-6-C		
Opt Drive	DVD-RW A-1127-951-A ASSY ODD SONY(DVD-DL)(W)	Combo A-1127-956-A ASSY ODD OS(SBW 243)(W)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(CZ732)(W)			
W-LAN	802.11b/g(mn)	802.11a/b/g 1-781-854-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

Model name:VGN-FS690BH
Model number:PCG-7A1L(802.11a/b/g),PCG-7A2L(802.11b/g)
OS:WinXP Home

CPU	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.85	Pentium-M 740 E-707-258-01 CPU PM 1.73	Pentium-M 730 E-707-252-01 CPU PM 1.6	Celeron-M 360J E-707-715-01 CPU CEL-M 1.4
HDD	100GB A-1127-961-A ASSY HDD 100GB(TO)	80GB A-1108-905-A ASSY HDD 80GB(TO)	80GB A-1108-908-A ASSY HDD 80GB(TO)	40GB A-1108-910-A ASSY HDD 40GB(H)	30GB A-1108-911-A ASSY HDD 30GB(H)	
LCD	15.4WXGA High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(WHITE)					
Graphics	NV44M	915GM				
Memory	256MB*1 E-707-029-01 IC HY864D3220HDL-6-C	256MB*2 E-707-029-01 IC HY864D3220HDL-6-C	512MB*1 E-707-029-01 IC HY864D4020HDL-6-C	512MB*2 E-707-029-01 IC HY864D4020HDL-6-C		
Opt Drive	DVD-RW A-1127-951-A ASSY ODD SONY(DVD-DL)(W)	Combo A-1127-956-A ASSY ODD OS(SBW 243)(W)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(CZ732)(W)			
W-LAN	802.11b/g(mn)	802.11a/b/g 1-781-854-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

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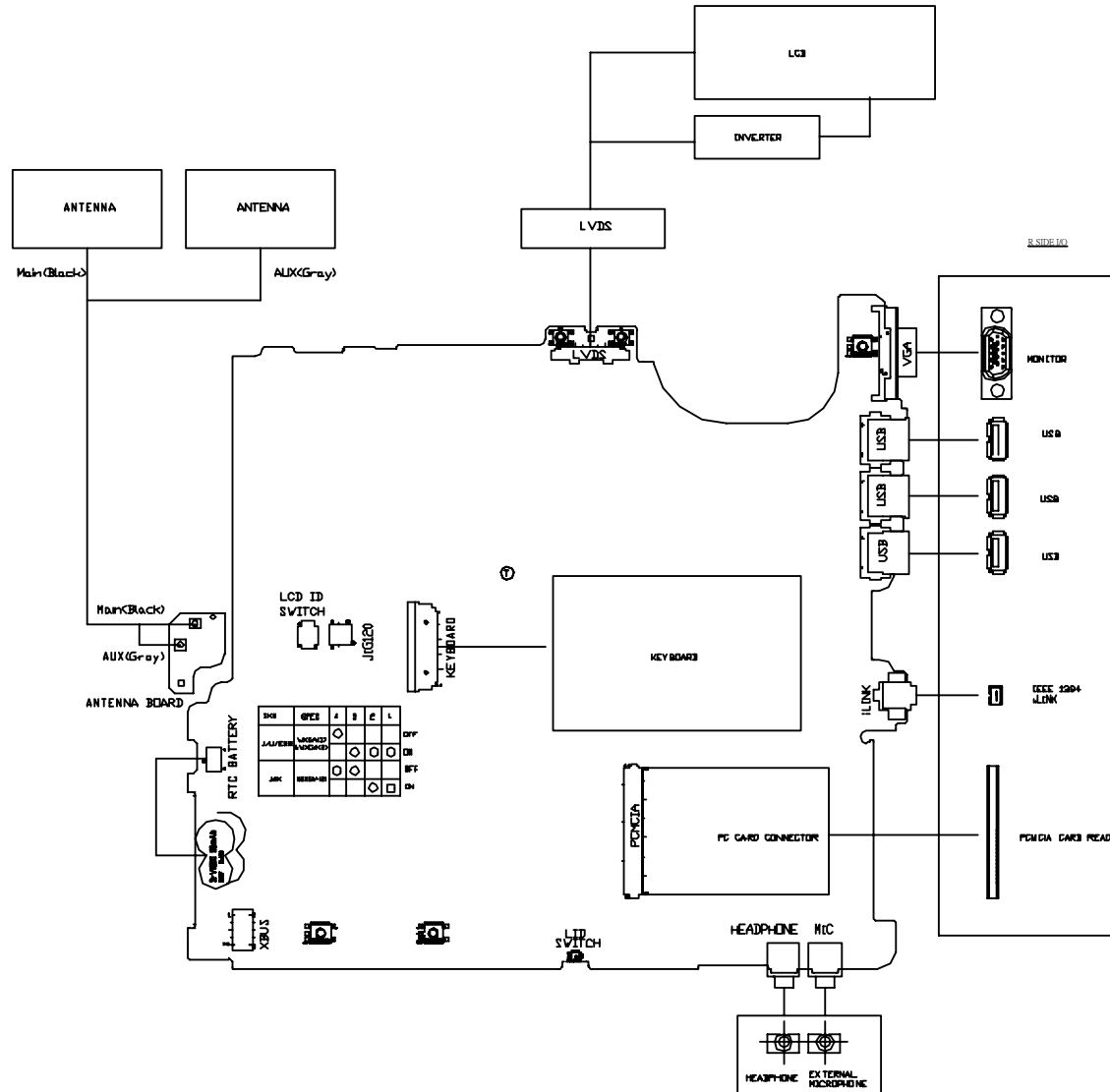
2-2. Port Replicator (VGP-PRFS10V)



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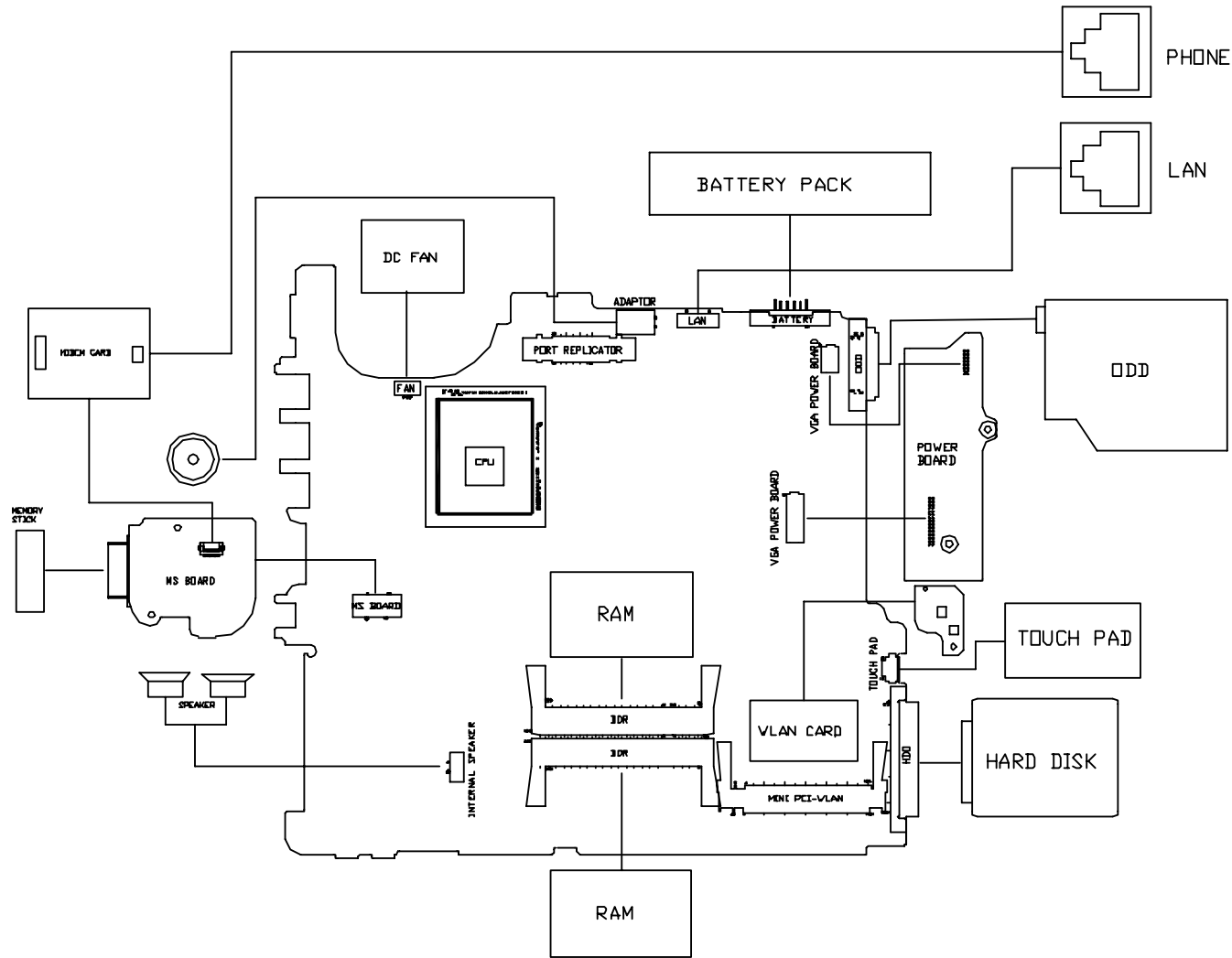
CHAPTER 3. FRAME HARNESS DIAGRAM

3-1 VGN-FS Series (TOP)



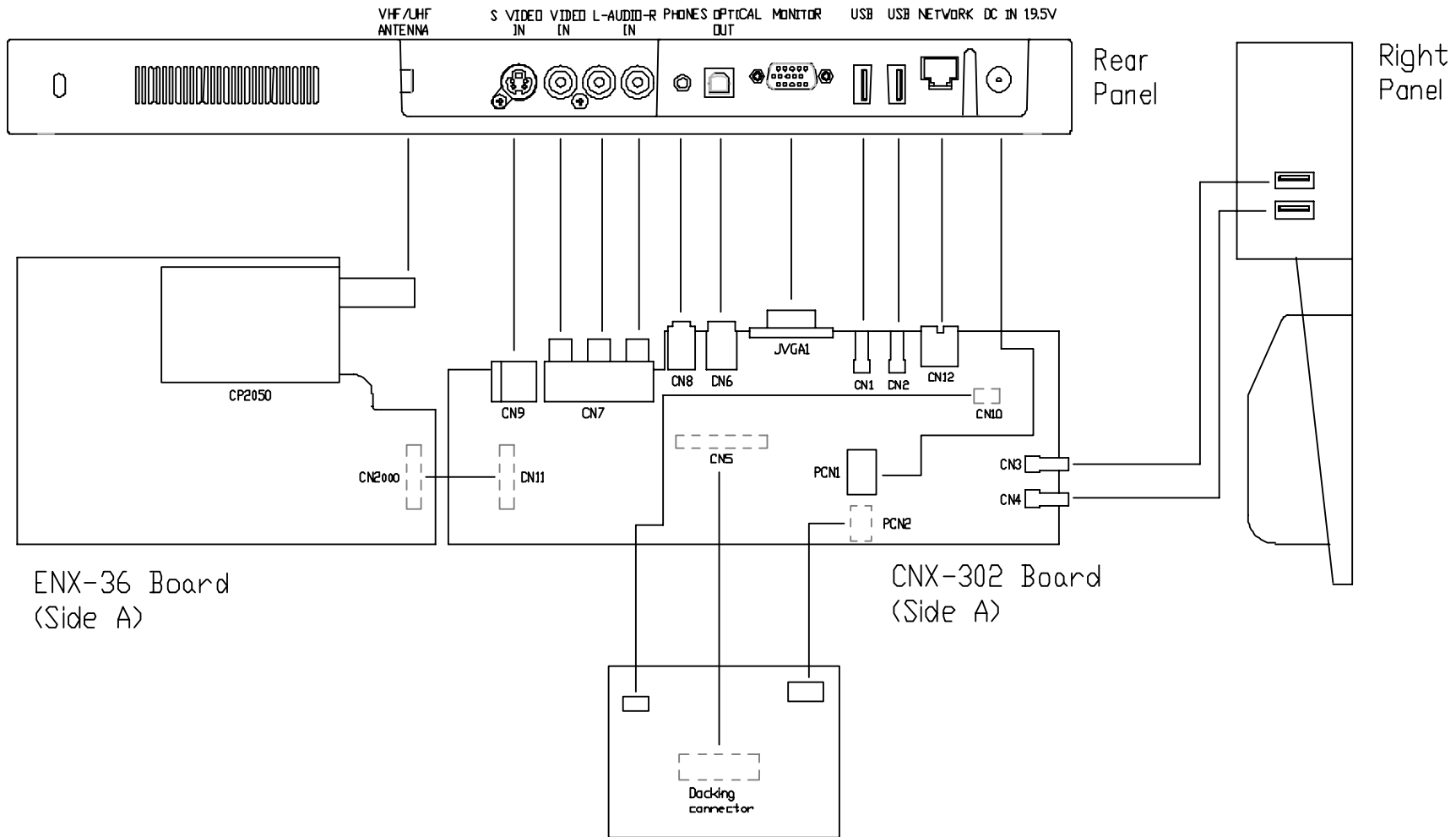
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3-1 VGN-FS Series (BOTTOM)



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3-2 Port Replicator (VGP-PRFS10V)



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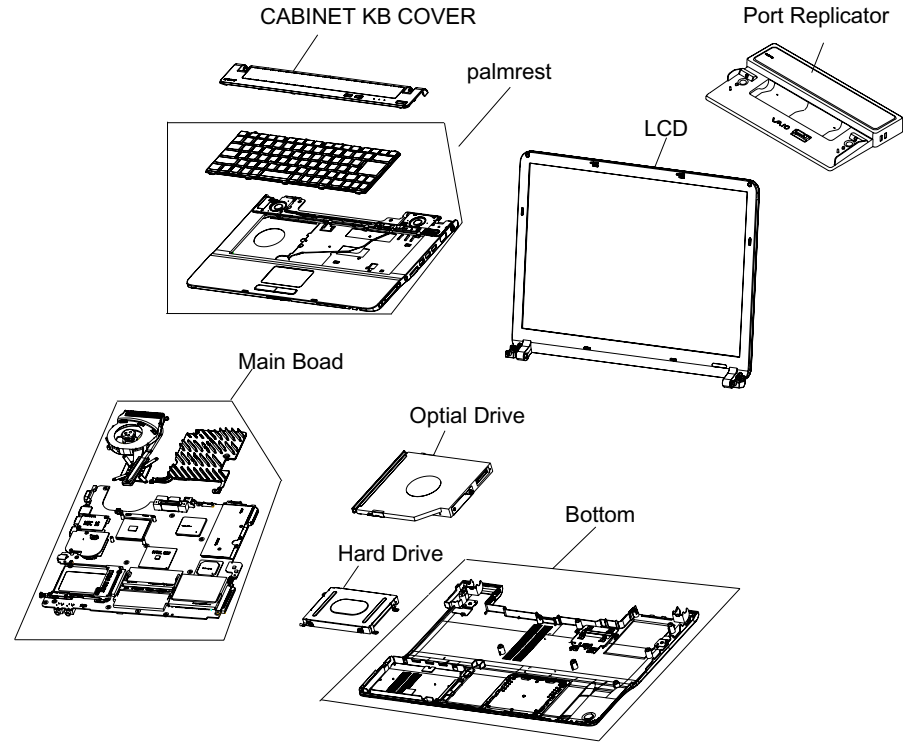
CHAPTER 4

EXPLODED VIEWS AND PARTS LIST

· The parts list is compiled by blocks of a Palmrest and bottom etc.
 The sections of the parts list are different depending on the model.
 Please refer to list of contents shown in the below.



Section Page


Screws	
S-1.Screws.....	4-2
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P-1.Palmrest.....	4-3
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B-1.BOTTOM.....	4-7
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T-1.SUBSTITUTION PARTS LIST.....	4-21
DIP Switch	4-22



NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- When two or more parts are shown, use the part described first as the main part.
- The parts marked "&" are the "Customer Replacable Parts(CRP)" that can be replaced by Filed Customer Support. These parts can be sold. Especially the parts with the <&> mark require the special attention to use them. Be sure to confirm the targetted parts by referring to the exploded view.


The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

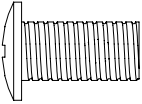

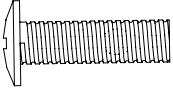
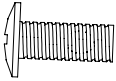
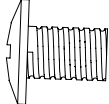


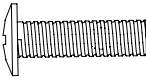
Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.










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S-1. SCREWS

S-1

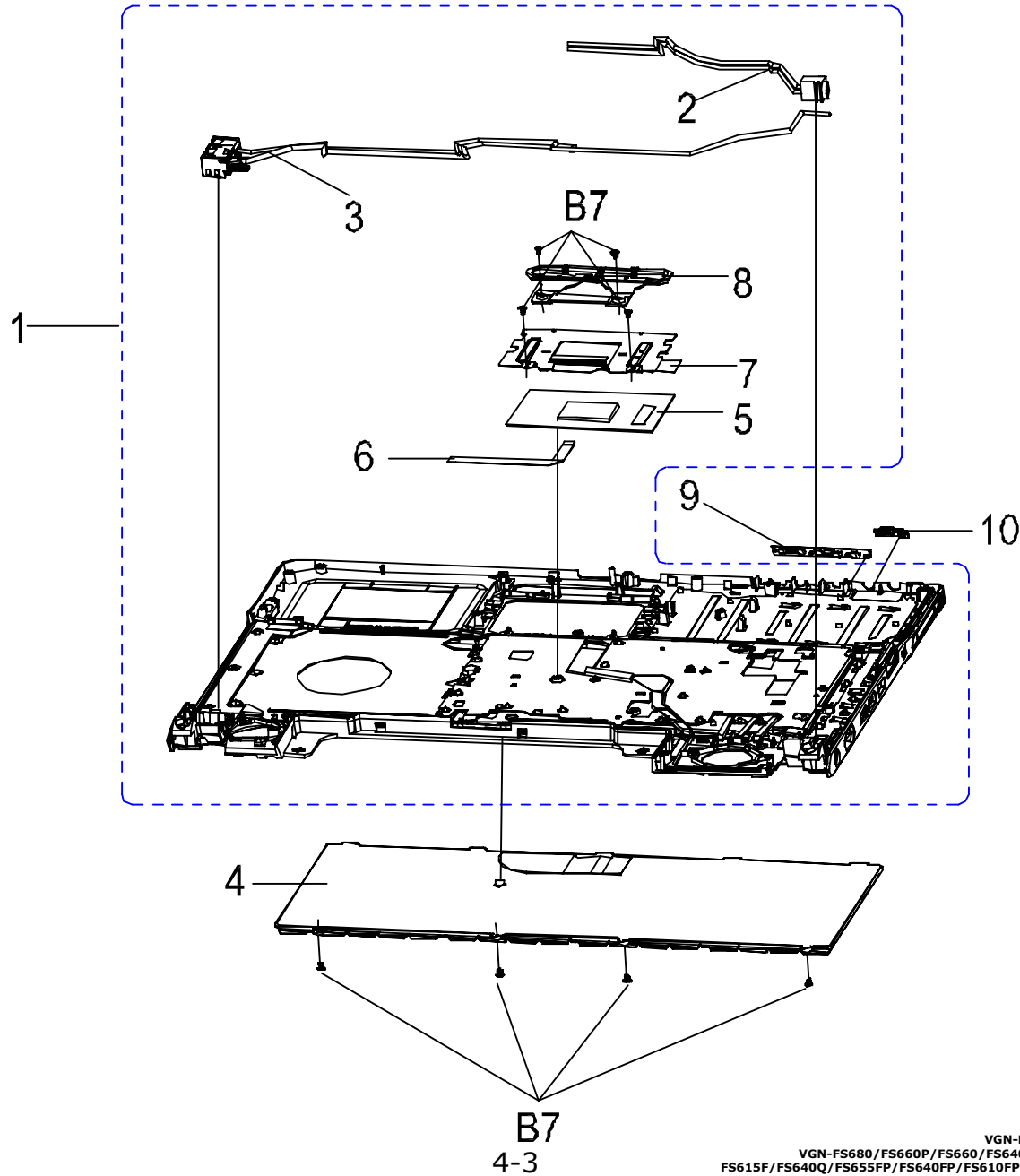
 [DEL] ~~B0~~

B1	B2	B3	B4	B5	B6	B7	B9
							
M3*6	M2*1.6	M2*7	M2*5	M3*3.5	M2*2	M2*3	M2*6
Black	Black	Black	Silver	Silver	Silver	Black	Silver

	<u>Ref.No.</u>	<u>Part No</u>	<u>Description</u>
 [DEL]	B0	A-1133-648-A	SCREW ASSY
 [ADD]	B1	4-654-811-01	SCREW M3
 [ADD]	B2	2-582-816-01	APPEARANCE SCREW M2
 [ADD]	B3	2-590-600-01	SCREW (M2), EXTERIOR VIEW
 [ADD]	B4	4-645-214-61	GRIP, M2
 [ADD]	B5	4-673-018-02	SCREW, SPECIAL HEAD
 [ADD]	B6	4-671-538-01	SCREW, SPECIAL HEAD
 [ADD]	B7	4-672-836-01	SCREW, M2 SPECIAL HEAD, EG GRIP
 [ADD]	B9	4-672-836-21	SCREW, M2 SPECIAL HEAD, EG GRIP

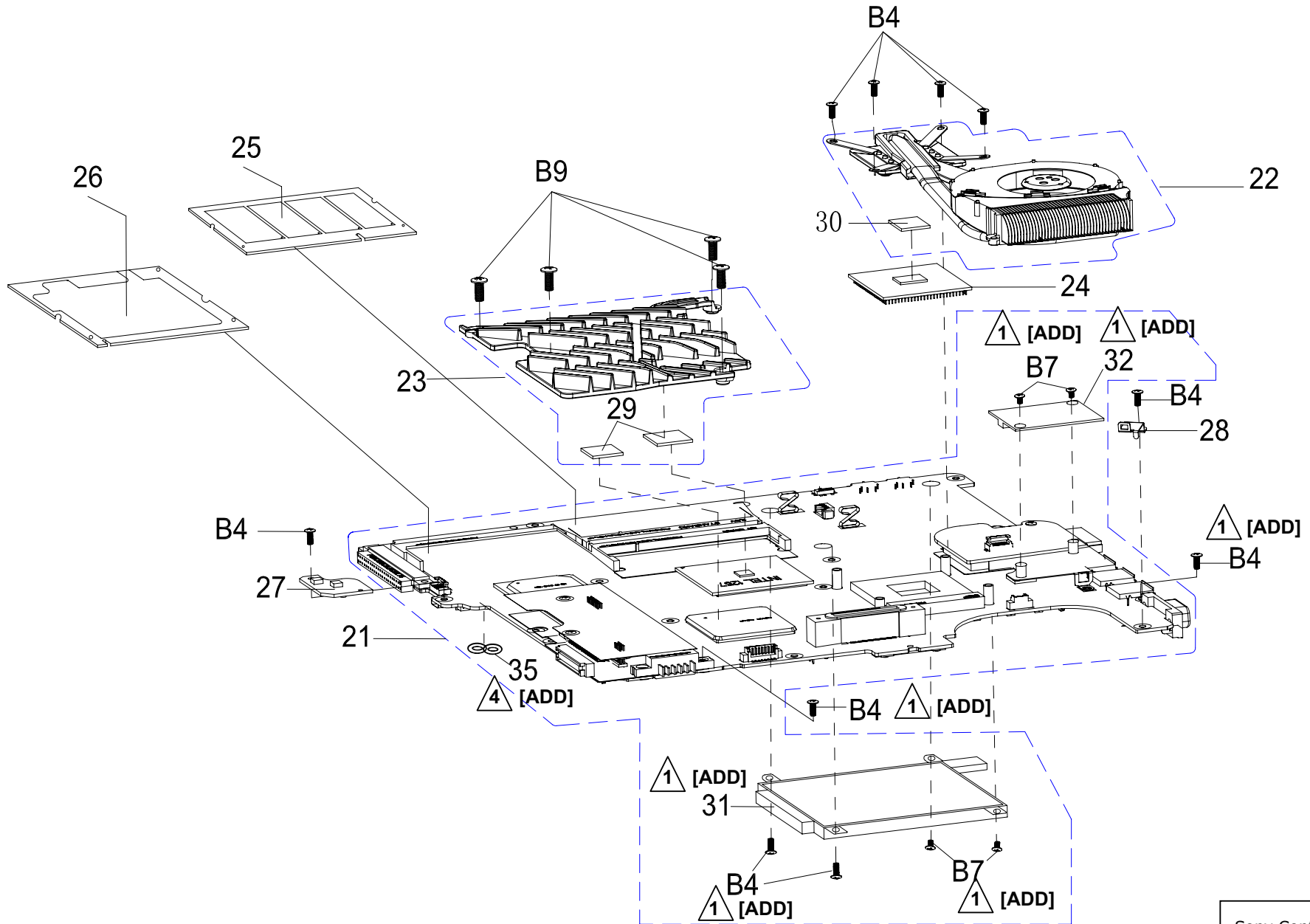
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P-1. Palmrest



M-1. Main Board

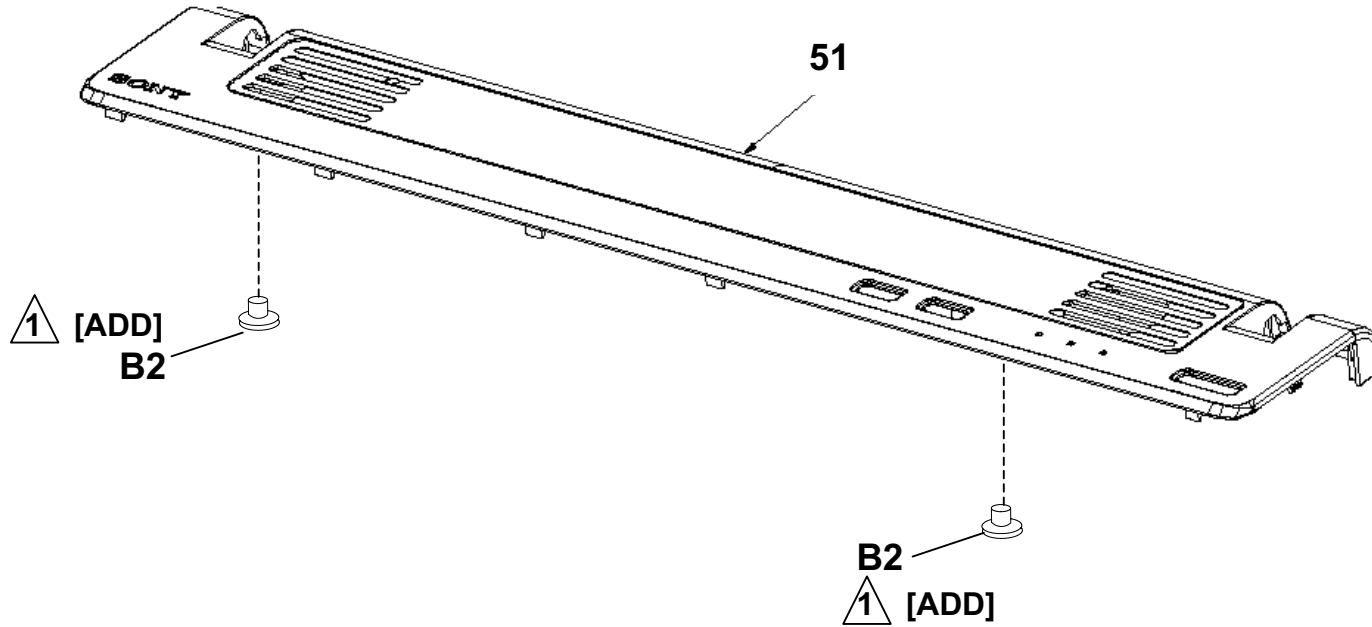
M-1



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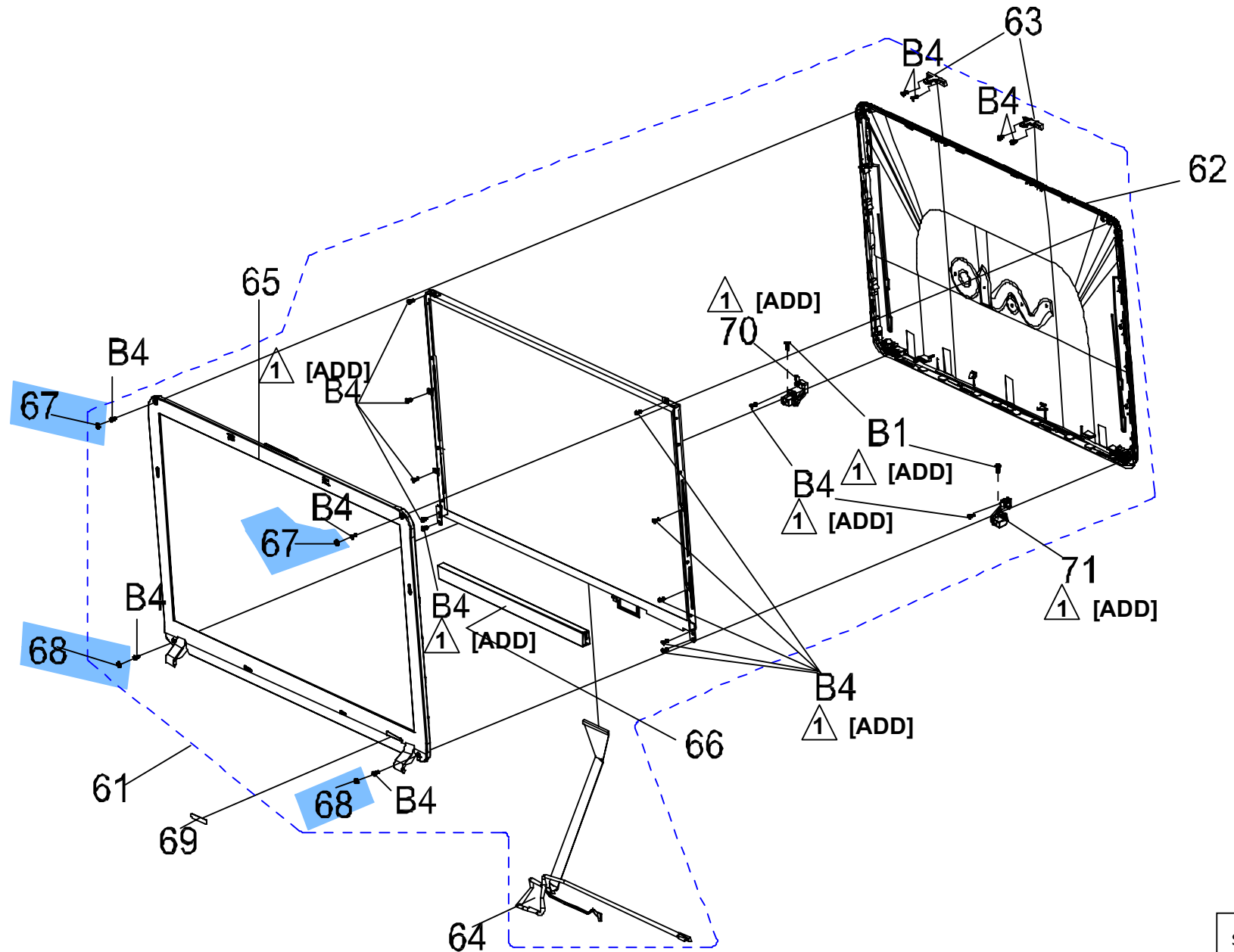
C-1. CABINET KBCOVER

C-1



Ref.No.	Part No.	Description
	51	X-2048-486-1 MS01 CABINET KBCOVER
△ [ADD]	B2	2-582-816-01 APPEARANCE SCREW M2 M2 1.6mm Black

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A-1. ACCESSORIES

2001
Memory Card Adapter



2006
AC Adapter



2031
SPEAKER



2035
RAY-CATCHER



2004
Floppy Disk Drive



2007
Battery Pack



2032
Adapter, AC (SPEAKER)



2036
REMOTE COMMANDER



2005
Power Cord



2030
Port Replicator



2034
CORD, POWER (SPEAKER)



2037
RF CORD WITH F TERMINAL








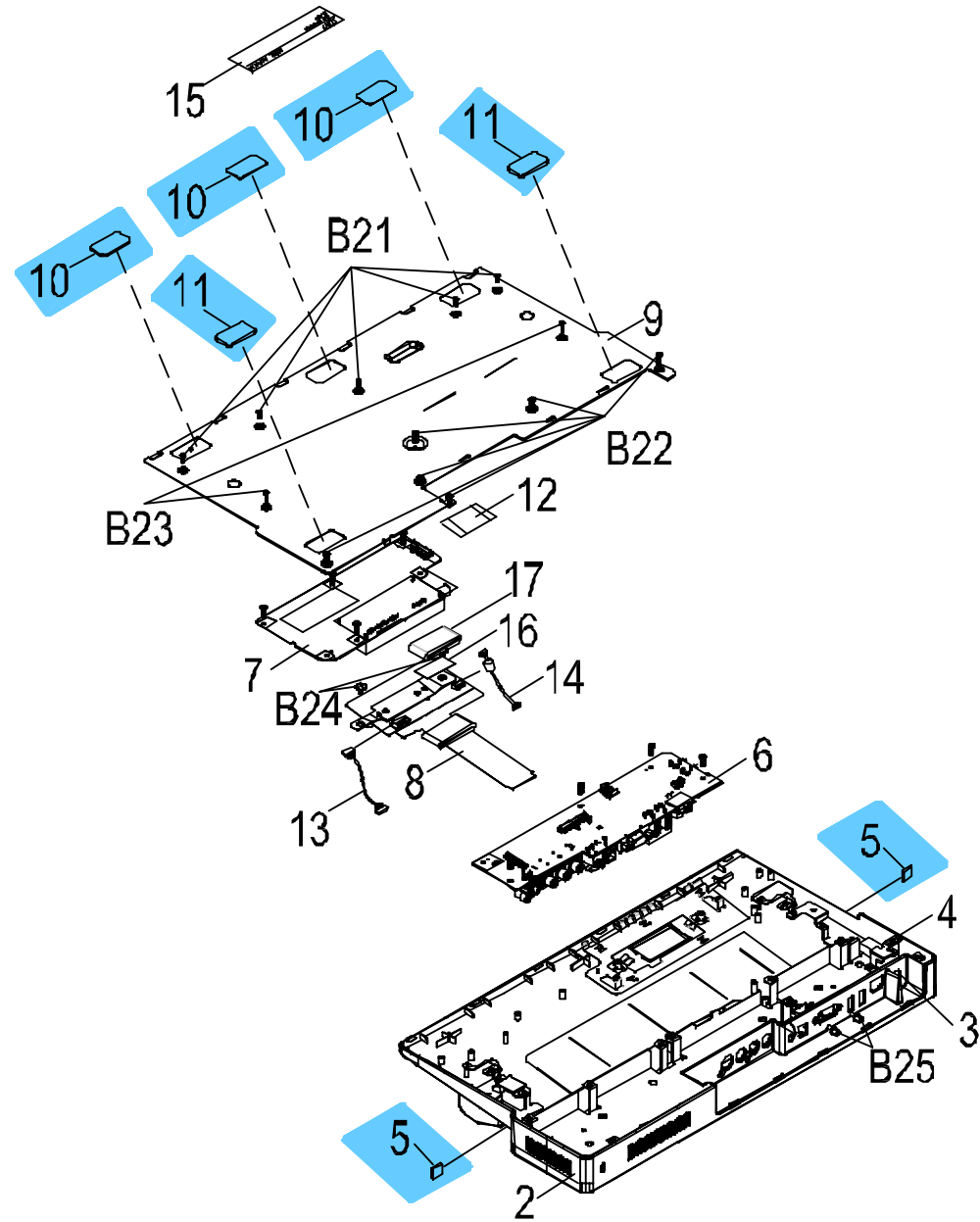
Refer to A-2 . Accessories

- 1) The Ref. 2030-2037 are included only in the models supplied with the Port Replicator.

A-2. ACCESSORIES

B20

B21		M3*8	Black
B22		M2*6	Black
B23		M2*8	Black
B24		M3*5	Black
B25		M2*2	Silver



Note: Screw are supplied with B20,a whole set

DIP Switch

The DIP switch setting is following table.

J		15.4inch WXGA(BR)
AM		15.4inch WXGA(HC)
EU		15.4inch WSXGA+(HC)
AO	<p>(A-1133-649-A) (A-1108-878-A)</p>	<p>15.4inch WXGA(BR)</p> <p>A-1108-878-A ASSY LCD for VGN-FS25GP</p>

The DIP switch setting is different depending the types of LCD.
Set the DIP switch of CTO model in accordance with the [FOR CTO MODEL].

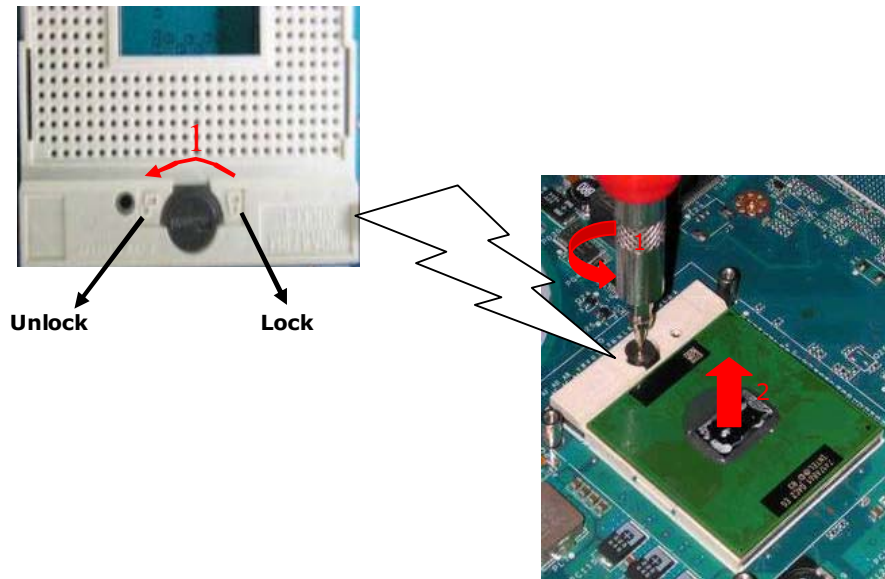
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CHAPTER 5. OTHERS

5-1.Replacing the CPU

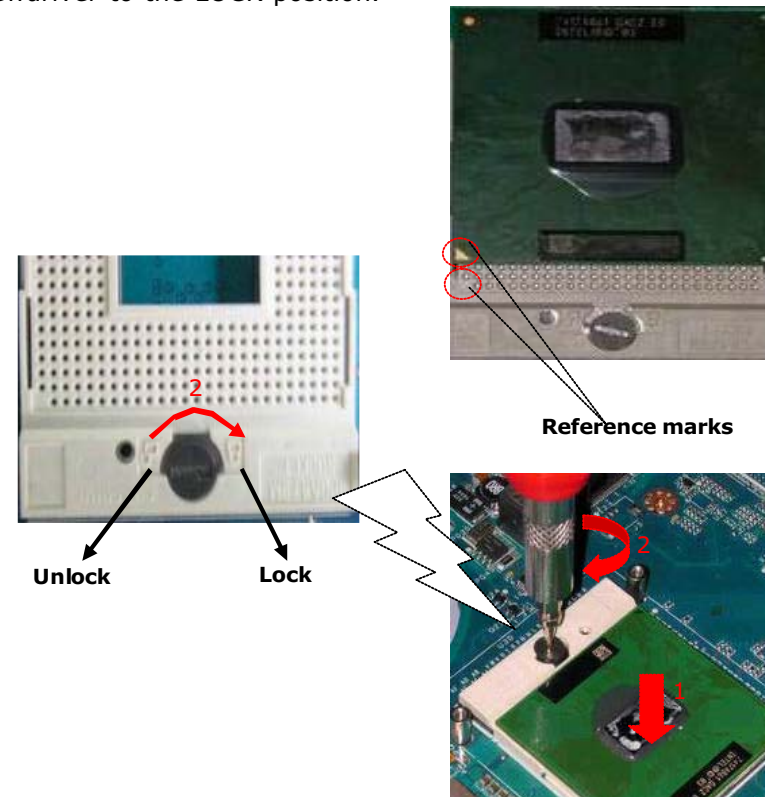
1. Removing the CPU

1. Insert a flat-blade screwdriver into the notch as shown illustration and rotate it so that the protrusion comes to the lock release position.
2. Pull the CPU gently upward to lift it out of the CPU socket



2. Installing the CPU

1. Align the triangle reference mark of the mark the CPU with that of the CPU socket and insert all the pins of the CPU to the corresponding holes of the CPU socket.
2. Insert the flat head (-) screwdriver into the specified position and rotate the screwdriver to the LOCK position.



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5-2. Wiring the W-LAN Cable

* The MS02 PWA ANTENNA is installed also in the models without Wireless LAN.
Refer to the instruction below to see how to wire the CABLE.



Using KAPTION TAPE to secure the Cable.

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VGN-FS71B/FS51B/FS31B/FS21B/FS21/FS91PS/FS91PSY/FS91S (J)

VGN-FS680/FS660P/FS660/FS640/FS675P/FS635B/FS625B/FS645P/FS670FG/FS650F/FS630F/FS615F/ FS640Q/FS655FP/FS640FP/FS610FP/FS620P/FS620/FS630/FS690P/FS690B/FS690/FS690BH (AM)

VGN-FS295XP/FS215Z/FS215M/FS295VP/FS215B/FS215E/FS215SR/ FS215MR/FS285M/FS285B/FS285E/FS215S/FS285H (EU)

VGN-FS28C/FS25C/FS28GP/FS28SP/FS28LP/FS28TP/ FS25GP/ FS25SP/ FS25LP/ FS25TP (AO)

List of VGN-F Series (As of Mar, 2007)

Service Manual Part No.	Model Name											
	J		AM			EU		AO				
9-876-414-XX	VGN-FS70B	VGN-FS20	VGN-FS570	VGN-FS520B		VGN-FS195XP	VGN-FS195VP		VGN-FS18CP	VGN-FS18TP		
	VGN-FS50B	VGN-FS90PS *	VGN-FS550	VGN-FS500 *		VGN-FS115Z	VGN-FS115B		VGN-FS15C	VGN-FS15GP		
	VGN-FS30B	VGN-FS90S *	VGN-FS550P	VGN-FS500P *		VGN-FS115S	VGN-FS115ZR		VGN-FS18GP	VGN-FS15SP		
			VGN-FS540P	VGN-FS500B *		VGN-FS115M	VGN-FS115MR		VGN-FS18SP	VGN-FS15LP		
			VGN-FS530B	VGN-FS550F		VGN-FS115E			VGN-FS18LP	VGN-FS15TP		
9-876-425-XX	VGN-FS71B	VGN-FS21	VGN-FS680/W	VGN-FS670FG	VGN-FS620P		VGN-FS295XP	VGN-FS215MR		VGN-FS28C	VGN-FS28TP	
	VGN-FS51B	VGN-FS91PS *	VGN-FS660P/W	VGN-FS650F	VGN-FS620		VGN-FS215Z	VGN-FS285M		VGN-FS25C	VGN-FS25GP	
	VGN-FS31B	VGN-FS91PSY *	VGN-FS660/W	VGN-FS630F	VGN-FS630/W		VGN-FS215M	VGN-FS285B		VGN-FS28GP	VGN-FS25SP	
	VGN-FS21B	VGN-FS91S *	VGN-FS640/W	VGN-FS615F	VGN-FS690P *		VGN-FS295VP	VGN-FS285E		VGN-FS28SP	VGN-FS25LP	
			VGN-FS675P/H	VGN-FS640Q/W	VGN-FS690B *		VGN-FS215B	VGN-FS215S		VGN-FS28LP	VGN-FS25TP	
			VGN-FS635B/W	VGN-FS655FP	VGN-FS690 *		VGN-FS215E	VGN-FS285H				
			VGN-FS625B/W	VGN-FS640FP	VGN-FS690BH *		VGN-FS215SR					
			VGN-FS645P/H	VGN-FS610FP								

*: CTO Model

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Revision History

Suffix	Ver.	Date	Contents	QM No.
-01	Ver.1	2005.06.07	First Edition	
-02	Ver.2	2005.08.24	① Page4-4, Page4-5,Page4-6, Page4-8,Page4-9,Page4-10, Page4-11, Page4-12, Page4-13, Page4-14,Page4-16,Page4-19,Page4-20, Page4-21	N2005_037CK
-03	Ver.3	2005.10.11	② Front Page (Model Line Up), Page1-1, Page1-4, Page4-4, Page4-6, Page4-8, Page4-11,Page4-12,Page4-13,Page4-14,Page4-16, Page4-17,Page4-19, Page4-20, Page4-21,Back Cover	N2005_045AK
-04	Ver.4	2005.11.01	③ Front Page, Page4-20	N2005_061CK
-05	Ver.5	2006.03.01	④ Page4-5,Page4-6,Page4-20	N2006_034CK
-06	Ver.6	2006.04.03	⑤ Page4-11,Page4-20	N2006_063CK
-07	Ver.7	2006.05.25	⑥ Page4-20	N2006_080CK
-08	Ver.8	2006.07.04	⑦ Page4-2,Page4-4,Page4-6,Page4-8,Page4-9,Page4-11,Page4-12, Page4-13,Page4-14	N2006_089CK
-09	Ver.9	2006.11.01	⑧ Page4-16, Page4-20	N2006_178CK
-10	Ver.10	2007.01.11	⑨ Page4-20	N2006_202CK
-11	Ver.11	2007.02.01	⑩ Page4-20	N2007_006CK
-12	Ver.12	2007.03.14	⑪ Page4-7, Page4-8	
<Remarks>				