

System Introduction

Features

This computer was designed with the user in mind. Here are just a few of its many features:

Platform

- q Mobile AMD Sempron™ processor 3000+ to 3100+ or higher with 128/256 KB L2 cache, supporting AMD Power Now! Technology and AMD HyperTransport technology (for Aspire 3010)
- q Chipset: ATI RADEON™ XPRESS 200M (for Aspire 3010)
- q AMD Athlon™ 64 processor 3000+ to 3700+ or higher with 1 MB L2 cache, supporting AMD HyperTransport™ technology (for Aspire 5010)
- q Chipset: ATI RADEON™ XPRESS 200M (for Aspire 5010)

Memory

- q 256/512 MB of DDR333 memory, upgradeable to 2 GB using dual soDIMM modules

Display

- q 15" XGA color TFT LCD with 1024x768 pixel resolution
- q 15.4" WXGA TFT LCD with 1280x800 pixel resolution, 16.7 million colors, supporting simultaneous multi-window viewing via Acer GridVista
- q 15.4" WXGA+ TFT LCD with 1680x1050 pixel resolution, 16.7 million colors, supporting simultaneous multi-window viewing via Acer GridVista

Graphics

- q ATI MOBILITY™ RADEON(R) X600 with 64 MB of DDR video RAM (for Aspire 3010)
- q ATI MOBILITY™ RADEON(R) X700 with 6/1284 MB of DDR video RAM (for Aspire 5010)
- q DualView™ support
- q MPEG-2/DDVD hardware-assisted capability
- q S-video/TV-out (NTSC/PAL) support
- q DVI-D (true digital video interface) support (for Aspire 5010 only)
- q Aspire-cinema vision video encoded technology
- q Aspire clear vision video input optimization technology

Audio

- q Audio system with two built-in speakers
- q ATI MOBILITY™ RADEON(R) X700 with 6/1284 MB of DDR video RAM (for Aspire 5010)
- q DualView™ support

Storage

- q 40/60/80/100 GB (4200rpm) or higher ATA/100 hard disk drive

Optical media drive

- q Optical drive options
 - DVD-Dual
 - DVD/CD-RW combo
- q Disc performance compatibility
 - DVD-Dual
 - Read: 4X DVD+R, 4X DVD+RW, 4X DVD-R, 4X DVD-RW, 8X DVD-ROM, 24X CD-ROM
 - Write: 4X DVD+R, 2.4X DVD+RW, 2X DVD-R, 2X DVD-RW, 16X CD-R, 10X CD-RW
 - DVD/CD-RW
 - Read: 8X DVD-ROM, 24X CD-ROM
 - Write: 24X CD-R, 10X CD-RW

Communication

- q Modem: 56K ITU V.92 with PTT approval; Wake-on-Ring ready
- q LAN: 10/100 Mbps Fast Ethernet (Aspire 3010) or gigabit Ethernet (Aspire 5010); Wake-on-LAN ready
- q WLAN (optional): integrated Acer InviLink™ 802.11g Wi-Fi CERTIFIED™ solution, supporting Acer SignalUp technology
- q WPAN (optional): integrated Bluetooth®

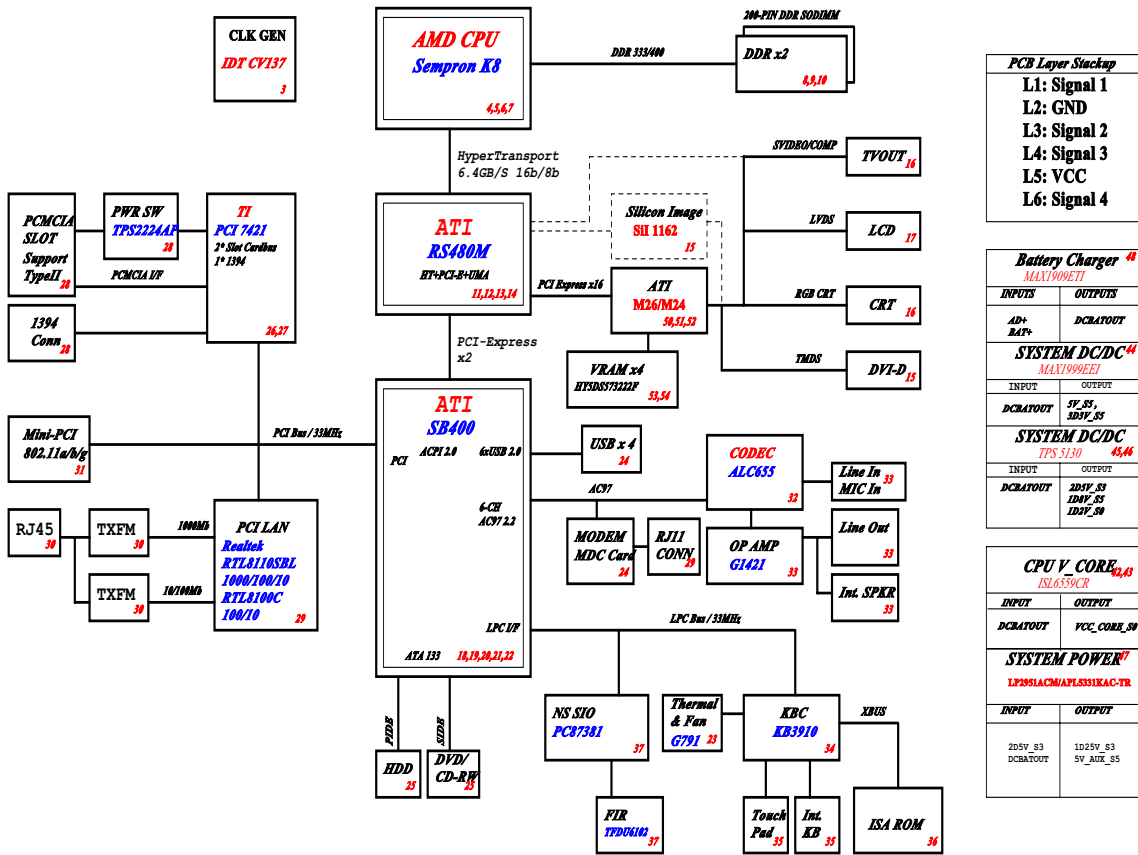
Special keys and controls

- q Standard 84-/85-/88-key keyboard, inverted “T” cursor layout with international language support
- q Embedded numeric keypad
- q Four easy-launch keys: internet browser, email with LED, Empowering Key, and one user-programmable button
- q Acer InviLink™ wireless button
- q Bluetooth® button
- q Built-in touchpad with 4-way integrated scroll button

I/O Ports

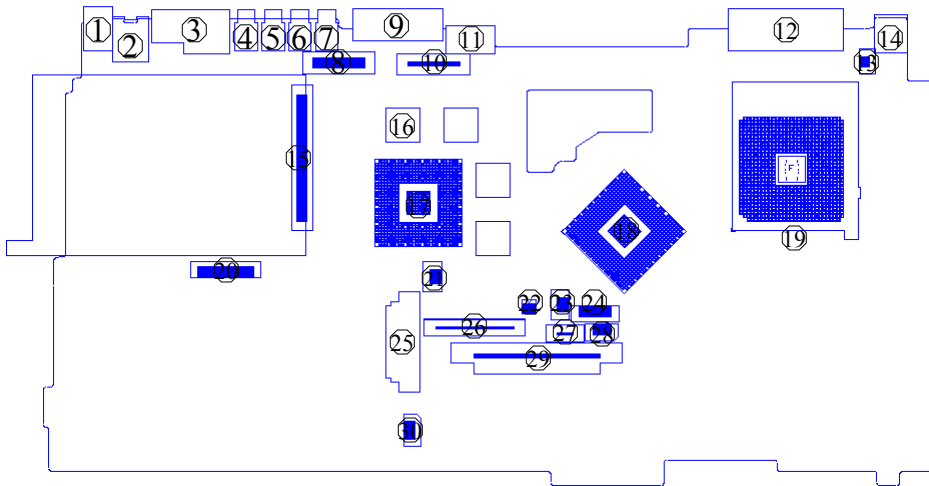
- q Four USB 2.0 ports
- q One IEEE 1394 port
- q Ethernet (RJ-45) port
- q Modem (RJ-11) port
- q S-video/TV-out (NTSC/PAL) port
- q External display (VGA) port
- q DVI-D port (only Aspire 5010)
- q Infrared (FIR) port
- q Microphone/line-in jack
- q Headphone/speaker/line-out port
- q PC card slot (one Type III or two Type II)
- q DC-in jack for AC adaptor

System Block Diagram



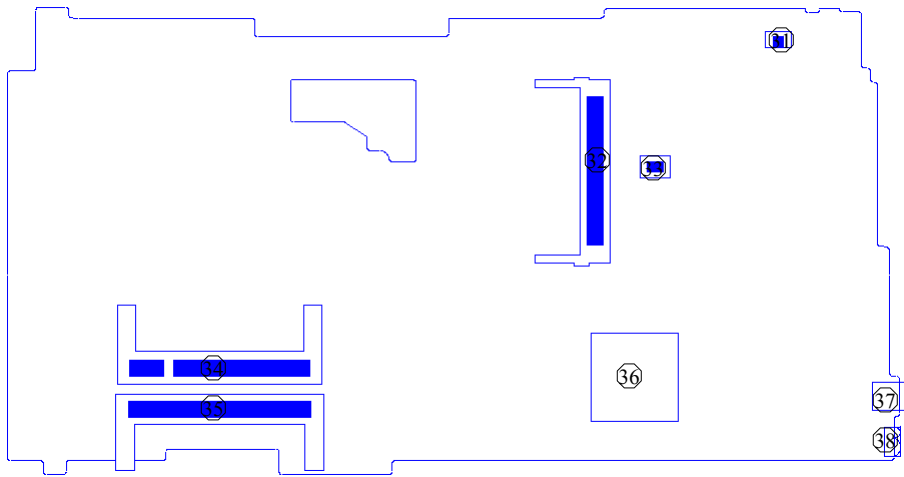
Board Layout

Top View



- | | | | |
|----|------------------------------|----|------------------------------|
| 1 | Line-in Port | 16 | Video Memory |
| 2 | Line-out Port | 17 | VGA Chip |
| 3 | RJ45+RJ11 | 18 | North Bridge |
| 4 | USB Port | 19 | CPU Socket |
| 5 | USB Port | 20 | Launch Board Cable Connector |
| 6 | USB Port | 21 | RTC Battery Connector |
| 7 | USB Port | 22 | Check Password Switch |
| 8 | LCD Inverter Cable Connector | 23 | Fan Connector |
| 9 | VGA Port | 24 | Bluetooth Cable Connector |
| 10 | LCD Coaxial Cable Connector | 25 | Optical Drive Connector |
| 11 | S-Video Port | 26 | Keyboard Connector |
| 12 | DVI Port | 27 | Touchpad Cable Connector |
| 13 | LCD Lid Switch | 28 | Fan 2 Connector |
| 14 | DC-in Port | 29 | HDD Connector |
| 15 | PCMCIA Slot | 30 | Speaker Cable Connector |

Bottom View



- | | | | |
|----|-----------------------------|----|----------------|
| 31 | Modem Cable Connector | 35 | DIMM Socket 2 |
| 32 | Wireless LAN Card Connector | 36 | South Bridge |
| 33 | Modem Board Connector | 37 | IEEE 1394 Port |
| 34 | DIMM Socket 1 | 38 | FIR Port |

Panel

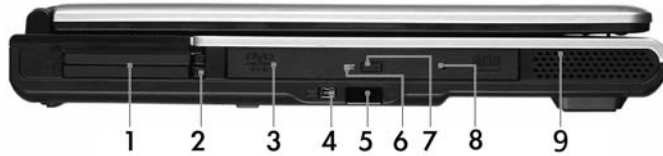
Ports allow you to connect peripheral devices to your computer as you would with a desktop PC.

Front View



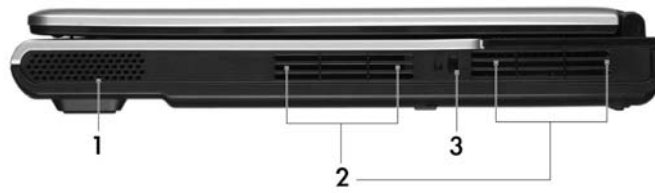
#	Item	Description
1	Display screen	Liquid-Crystal Display (LCD) provides visual output.
2	Status indicators	LEDs (Light Emitting Diodes) that turn on and off to show the status of the computer and its functions and components.
3	Power button	Turns the computer on and off.
4	Launch Keys	Buttons for launching frequently used programs.
5	Palmrest	Comfortable support area for your hands when you use the computer.
6	Click buttons & 4-way scroll key	The left and right buttons function like the left and right mouse buttons, the center button serves as a scroll up/down button.
7	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8	Keyboard	Inputs data into your computer.
9	Ventilation Slot	Enables the computer to stay cool, even after the prolonged use.

Left view



#	Icon	Item/ Port	Description
1		PC Card slots	Supports two Type II or one Type III CardBus PC Card(s).
2		PC Card slot eject button	Eject PC cards from the card slots.
3		Optical drive	Internal optical drive; accepts CDs or DVDs depending on the optical drive type.
4		IEEE 1394 port	Connects to IEEE 1394 devices.
5		CIR Receiver	Receive remote control infrared signals.
6		LED indicator	Lights up when the optical drive is active.
7		Optical drive eject button	Ejects the optical drive tray from the drive.
8		Emergency eject slot	Ejects the optical drive tray when the computer is turned off. There is a mechanical eject button on the DVD/CD-ROM combo or DVD-ROM drive. Simply insert the tip of a pen or paperclip and push to eject the tray.
9		Speakers	Left and right speakers deliver stereo audio output.

Right View



#	Item/ Port	Description
1	Speakers	Left and right speakers delivers stereo audio output.
2	Ventilation slots	Enable the computer to stay cool, even after prolonged use.
3	Security keylock	Connects to a Kensington-compatible computer security lock.

Rear Panel

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#	Icon	Port	Description
1		Power Jack	Connects to an AC adapter
2		DVI-D port (Aspire 5010 only)t	For digital visual input.
3		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
4		S-video port	Connects to a television or display device with S-video input.
5		External display port	Connects to a display device (e.g., external monitor, LCD projector).
6		Four USB 2.0 ports	Connects to any Universal Serial Bus devices(e.g., USB mouse, USB camera).
7		Network jack	Connects to an Ethernet LAN network
8		Modem jack	Connects to the phone line
9		Speaker/line-out/ headphone jack	Connects to audio line-out devices (e.g., speakers and headphones).
10		Line-in/mic-in jack	Accepts audio line-in devices (e.g., audio CD player and stereo walkman).

Bottom View









#	Item	Description
1	Battery bay	Houses the computer's battery pack.
2	Battery release latch	Release the battery for removal.
3	Memory compartment	Houses the computer's main memory and mini PCI card.

Indicators

The computer provides an array of seven indicators located below the display screen, showing the status of the computer and its components.



#	Icon	Function	Description
		Wireless indicator	Lights to indicate the status of wireless LAN communications.
1		Power	Lights when the computer is on.
2		Sleep	Lights when the computer enters Standby mode and blinks when it enters into or resumes from hibernation mode.
3		Media Activity	Indicates when the hard disk or optical drive is active.
4		Battery Charge	Lights when the battery is being charged. Charging: The light shows amber when the battery is charging. Fully charged: The light shows green when in AC mode.
5		Caps Lock	Lights when Caps Lock is activated.
6		Num Lock	Lights when Numeric Lock is activated.

Using the keyboard

The keyboard has full-sized keys and an embedded keypad, separate cursor keys, two Windows keys and twelve function keys.

Lock keys and embedded numeric keypad

The keyboard has three lock keys which you can toggle on and off.



Lock key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num Lock (Fn-F11)	When NumLock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators $+$, $-$, $*$, and $/$). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad.
Scroll Lock (Fn-F12)	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.










The embedded numeric keypad functions like a desktop numeric keypad. It is indicated by small characters located on the upper right corner of the keycaps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys.

Desired access	Num lock on	Num lock off
Number keys on embedded keypad	Type numbers using embedded keypad in a normal manner.	
Cursor-control keys on embedded keypad	Hold Shift while using cursor-control keys.	Hold Fn while using cursor-control keys.
Main keyboard keys	Hold Fn while typing letters on embedded keypad.	Type the letters in a normal manner.

Windows keys

The keyboard has two keys that perform Windows-specific functions.

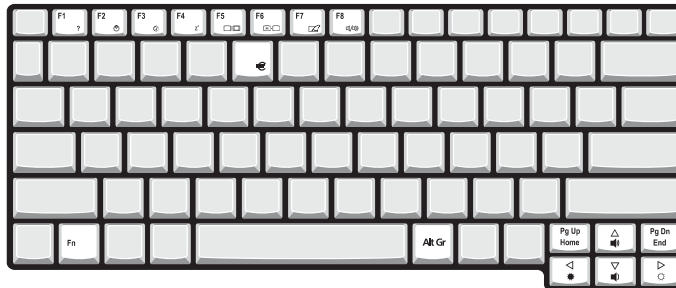


Keys	Description
Windows logo key 	Start button. Combinations with this key perform shortcut functions. Below are a few examples:  + Tab (Activates next taskbar button)  + E (Opens the My Computer window)  + F1 (Opens Help and Support)  + F (Opens the Find: All Files dialog box)  + R (Opens the Run dialog box)  + M (Minimize all windows) <shift>+  + M (Undoes the minimize all windows action)
Application key 	This key has the same effect as clicking the right mouse button; it opens the application's context menu.


Hot Keys

The computer employs hot keys or key combinations to access most of the computer's controls like screen contrast and brightness, volume output and the BIOS Utility.

To activate hot keys, press and hold the **Fn** key before pressing the other key in the hot key combination.



Hot Key	Icon	Function	Description
Fn+F1	?	Hotkey help	Displays help on hotkeys.
Fn+F2		Acer eSettings	Launches the Acer eSettings in Acer eManager.
Fn+F3		Acer ePowerManagement	Launches the Acer ePowerManagement in Acer eManager.
Fn+F4	Z ^z	Sleep	Puts the computer in Sleep mode.
Fn+F5		Display toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.
Fn+F6		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
Fn+F7		Touchpad toggle	Turns the internal touchpad on and off.
Fn+F8		Speaker toggle	Turns the speakers on and off; mutes the sound.
Fn+		Volume up	Increases the sound volume.
Fn+		Volume down	Decreases the sound volume.
Fn+		Brightness up	Increases the screen brightness.

Hot Key	Icon	Function	Description
Fn+		Brightness down	Decreases the screen brightness.
Fn+PgUp	Pg Up Home	Home	Functions as the PgUp key.
Fn+PgDn	Pg Dn End	End	Functions as the PgDn key.

Special keys

You can locate the Euro symbol at the upper-center and/or bottom-right of your keyboard. To type



The Euro symbol

1. Open a text editor or word processor.
2. Either directly press the Euro key at the bottom-right of the keyboard, or hold <Alt Gr> and then press the Euro key at the upper-center of the keyboard.





NOTE: Some of fonts and software do not support the Euro symbol. Please refer to www.microsoft.com/typography/fag/faq12.htm. for more information.

Launch Keys

Located at the upper-left above the keyboard are four buttons. These buttons are called launch keys. They are designated as mail, Web browser, Acer Empowering keys and one user-programmable button.

Press the Empowering key to run the Acer eManager. The mail and Web browser are default for Email and Internet programs, but can be reset by users. To set the Web browser, mail and programmable keys, run the Acer Launch Manager.



#	Icon	Function	Description
1		Mail	Email application (user-programmable)
2		Web browser	Internet browser application (user-programmable)
3		e	Acer eManager (user-programmable)
4		P	User-programmable
5		Bluetooth (optional)	Enables your Bluetooth
6		Wireless (optional)	Enables your 802.11g WLAN

Hardware Specifications and Configurations

System Board Major Chips

Item	Controller
System core logic	ATI RS480M+ATI SB400
Super I/O controller	NS PC87381
Audio controller	Realtek ALC 655
Video controller	ATI M26 (RADEON X600) for Aspire 3010 Series ATI M24 (RADEON X700) for Aspire 5010 Series
Hard disk drive controller	Embedded in ATI SB400
Keyboard controller	KB3910
CardBus controller	TI PCI 7421
LAN controller/chipset	10/100: Realtek RT8100C; Giga LAN: Realtek RT8110SBL
Memory Controller	Built-in CPU
Bluetooth Controller/Chipset (Does this chipset support voice function??)	Embedded in Realtek ALC 655
Modem Controller/Chipset	Embedded in ATI SB400
Optical disc drive controller	Embedded in ATI SB400
USB Controller	Embedded in ATI SB400
PCMCIA Controller	TI PCI 7421

Processor

Item	Specification
CPU type	Mobile AMD Sempron processor 3000+ to 3100+ or higher (for Aspire 3010) AMD Athlon™ 64 processor 3000+ to 3700+ or higher (for Aspire 5010)
CPU package uOG	uOG 754 pin
CPU core voltage	1.5V
CPU I/O voltage	High speed: 1.2V => for RAM 2.5V Low speed: 1.2V =>for Hypertransport 1.2V

BIOS

Item	Specification
BIOS vendor	Phoenix BIOS
BIOS Version	1.0
BIOS ROM type	Flash ROM
BIOS ROM size	512KB
BIOS package	32 Pin PLCC
Supported protocols	ACPI 2.0, SMBIOS 2.3, PCI 2.3, Boot Block, PXE 2.0, Mobile PC2001, Hard Disk Password, INT 13h Extensions, PCI Bus Power Management interface Specification, El Torito-Bootable CD-ROM Format Specification V1.0, Simple Boot Flag 1.0

Second Level Cache

Item	Specification
Cache controller	Built-in CPU

Second Level Cache

Item	Specification
Cache size	128KB or 256KB for AMD Sempron CPU 1MB for AMD Athlon 64 DTR CPU
1st level cache control	Always Enabled
2nd level cache control	Always Enabled
Cache scheme control	Fixed-in write back

System Memory

Item	Specification
Memory controller	AMD Sempron K8
Onboard memory size	0MB
DIMM socket number	2 Sockets
Supports memory size per socket	256/512/1024MB (if available)
Supports maximum memory size	2048MB (Please confirm if 1024MB has passed the test or not)
Supports DIMM type	DDR-DRAM
Supports DIMM Speed	333 MHz
Supports DIMM voltage	2.5 V
Supports DIMM package	200-pin so-DIMM
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications.

Memory Combinations

Slot 1	Slot 2	Total Memory
0MB	128MB	128 MB
128MB	0MB	128 MB
128MB	128MB	256 MB
256MB	0MB	256MB
0MB	256MB	256MB
256MB	128MB	384MB
128MB	256MB	384MB
256MB	256MB	512MB
0MB	512MB	512MB
512MB	128MB	640MB
256MB	512MB	768MB
128MB	512MB	640MB
512MB	256MB	768MB
256MB	128MB	384MB
512MB	512MB	1024MB

Above table lists some system memory configurations. You may combine DIMMs with various capacities to form other combinations.

LAN Interface

Item	Specification
Chipset	10/100: Realtek RT8100C; Giga LAN: Realtek RT8110SBL
Supports LAN protocol	10/100Mbps for Aspire 3010; 10/100/1000Mbps for Aspire 5010
LAN connector type	RJ45

LAN Interface

Item	Specification
LAN connector location	Rear side
PXE Version	2.0

Modem Interface

Item	Specification
Chipset	Embedded in ATI SB400
Fax modem data baud rate (bps)	14.4K
Data modem data baud rate (bps)	56K
Supports modem protocol	V.92MDC
Modem connector type	RJ11
Modem connector location	Rear side

Hard Disk Drive Interface

Item			
Vendor & Model Name	HGST Moraga IC25N030ATMR04 Fujitsu V-40 MHT2030AT Seagate N1 ST93015A	HGST Moraga IC25N040ATMR04- TOSHIBA Pluto 40G MK4025GAS Fujitsu V40+ MHT2040AT Seagate N1 ST94019A	HGST Moraga IC25N060ATMR04-0 TOSHIBA Neptune MK6021GAS
Capacity (MB)	30000	40000	60000
Bytes per sector	512	512	512
Logical heads	16	16	16
Logical sectors	63	63	63
Drive Format			
Logical cylinders	16383	16383	16383
Physical read/write heads	2/Not show/2	2/Not show/2/2	3/4
Disks	1/Not show/1	1/Not show/1/1	2
Spindle speed (RPM)	4200RPM	4200RPM	4200RPM
Performance Specifications			
Buffer size	2MB	2MB/8MB for Toshiba	2MB/8MB for HGST
Interface	ATA-5 for other vendors /ATA-6 for HGST and Toshiba	ATA-5 for other vendors /ATA-6 for HGST	ATA-5/ATA-6 for HGST
Data transfer rate (disk-buffer, Mbytes/s)	350	350	350
Data transfer, rate (host-buffer, Mbytes/s)	100 MB/Sec	100 MB/Sec	100MB/Sec
DC Power Requirements			
Voltage tolerance	5 +/- 5%	5 +/- 5%	5 +/- 5%

CD-ROM Interface

Items	Specification
Vendor & Model Name	QSI SCR242 Mitsumi SR244W1
Performance Specification	
Burst Data Transfer rate	PIO mode 4: 16.7 MB/sec Max. (Mode 0~4) Multi-word DMA mode 2: 16.7 MB/sec Max. (Mode 0~2) Ultra DMA mode 2: 33.3MB/sec Max.
Access time (typ.)	QSI- Random: 90 ms Full Stroke: 180 ms Mitsumi- Random: 100 ms Full Stroke: 240 ms
Rotation speed	5100 rpm for QSI 5400 rpm for Mitsumi 24X CAV mode
Data Buffer Capacity	128 KB (built-in)
Interface	Compliant to ATA/ATAPI-6
Applicable disc format	QSI: CD-DA, CD-ROM Mode-1, CD-ROM/XA Mode-2, Form-1 and Mode-2 Form-2, CD-i Ready, Video-CD (MPEG-1), Karaoke CD, Photo-CD, Enhanced CD, CD Plus, CD Extra, i-trax CD, CD-Text, CD-R and CD-RW Mitsumi: CD-DA, CD-ROM (Mode 1 and Mode2) CD-ROM XA (Mode 2 Form 1 and Form2), CD-I (Mode2 Form 1 and Form 2), CD-I Bridge (Photo CD, CD EXTRA), Enhanced CD, CD-RW, CD-R, CD-TEXT
Loading mechanism	Drawer with soft eject and emergency eject hole
Power Requirement	
Input Voltage	+5V[DC] +/-5%

DVD-ROM Interface

Item	Specification	
Vendor & model name	MKE SR-8177	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Average Sustained: CAV mode 775~1800 blocks/sec (10.3X to 24X) 1550~3600kBytes/sec (Mode 1) 1768~4106 kBytes/sec (Mode 2)	DVD-5: Normal Speed (1X) 11.08 Mbits/sec CAV mode 36.67~88.64 Mbits/sec DVD-9/DVD-R: Normal Speed (1X) 11.08 Mbits/sec CAV mode 36.67~88.64 Mbits/sec

DVD-ROM Interface

Item	Specification
Average Full Access time (typ.)	Random CAV mode 110 msec typical 150 msec average max Full Stroke CAV mode 200 msec typical 260 msec average max DVD-5: Random 120 msec typical 160 msec average max Full Stroke 270 msec typical 350 msec average max DVD-9: Random 150 msec typical 200 msec average max Full Stroke 340 msec typical 450 msec average max DVD-RAM (2.6G) Random 200 msec typical 300 msec average max Full Stroke 300 msec typical 600 msec average max DVD-RAM (4.7G) Random 180 msec typical 300 msec average max Full Stroke 320 msec typical 700 msec average max
Data Buffer Capacity	512 kBytes
Interface	IDE
Applicable disc format	DVD: DVD-5, DVD-9, DVD-10, DVD-R (3.95G), DVD-RAM (2.6G), DVD-RAM (4.7G) CD: CD-Audio, CD-ROM (mode 1 and mode 2), CD-ROM XA (mode 2, form 1 and form 2), CD-I (mode 2, form 1 and form 2), CD-I Ready, CD-I Bridge, CD-WO, CD-RW, Photo CD, Video CD, Enhanced Music CD, CD-TEXT
Loading mechanism	Soft eject (with emergency eject hole)
Power Requirement	
Input Voltage	+5V[DC]±5%

Combo Drive Interface

Item	Specification
Vendor & model name	KME UJDA750
Performance Specification	

Combo Drive Interface

Item	Specification
Transfer rate (KB/sec)	Read Sustained: DVD-ROM MAX 8X CAV (MAX 10800 KB/sec) CD-ROM MAX 24X CAV (MAX 3600 KB/sec) Write: CD-R 4X, 8X (CLV), Max 16X, MAX 24X (ZCLV) CD-RW 4X (CLV) HS-RW 4X,8X, 10X (CLV) ATAPI Interface: PIO mode 16.6 MB/sec :PIO Mode 4 DMA mode 16.6 MB/sec:Multi word mode 2 Ultra DMA mode 33.3MB/sec: Ultra DMA mode 2
Buffer rate	2MB
Access time	DVD-ROM 180 ms typ. (1/3 stroke) CD-ROM 130 ms typ. (1/3 stroke)
Start up time	less than 15s
Stop time	less than 6s
Acoustic noise	less than 50 dBA
Interface	Enhanced IDE (ATAPI) compatible
Master/Slave	Set by Cable Select (By host)
PC compatible	PC2001 compatible
Applicable disc format	CD: CD-DA, CD-ROM, CD-ROM XA, CD-R, CD-RW, PhotoCD (multiSession), Video CD, CD-Extra(CD+), CD-text DVD: DVD-ROM, DVD-R, DVD-RW (Ver.1.1), DVD-VIDEO, DVD-RAM (2.6GB, 4.7GB)
Slope	15 degree (Any direction)
Dimensions, Weight	128X129X12.7mm (WXDXH) (except protrusion) 200g+- 10g
Eject	Soft Eject (with emergency eject hole)

DVD Dual Interface

Item	Specification
Vendor & model name	Liteon DVD-Dual SDW-431S
Disc type for read/write application	
Applicable Formats	CD-DA, CD-TEXT, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Form-2, CD-I Ready, Video-CD (MPEG-1), Karaoke-CD, Photo-CD, Enhance CD, CD extra, I-Trax CD and UDF DVD-ROM, DVD-Video, DVD-Audio, DVD-R single/multi border(s) DVD+R single/multi session(s) DVD-RW DVD+RW
Applicable Media Type	CD-ROM, CD-R and CD-RW DVD-ROM (4.7G/8.54G) single layer on single/double side (read only), DVD-ROM dual layer (PTP/OTP) on single/double side (read only) DVD-R (3.9G, 4.7G for General and Authoring), DVD-RW, DVD+RW (4.7G) DVD+R

DVD Dual Interface

Item	Specification
Disc Diameter	12cm and 8cm
Capacity	2048 bytes/sector (DVD) 2048 bytes/block (CD Mode-1 and Mode-2 Form-1) 2336 bytes/block (Mode-2) 2328 bytes/block (Mode-2 Form-2)
Operation environment for "write/rewrite" application	
Host Machine	IBM compatible PC (Pentium 166 MHz or above)
OS	MS-Windows 90/ME/2000/XP/NT 4.0
Memory	Min. 128MB required
Hard Disk	Empty Storage Capacity: 100 MB or more Average access time: 20ms or less
Disc Diameter	12cm and 8cm
Recommended Media	<p>CD-R: AMT, CMC, Csita, Delphi, EverMedia, Imation, LeadData(Silver-Sil), Maxell, MCC (Bagdad), Mirage, Mitsui, MoserBaer(India), MPO, NanYa, Plasmon, Prodisc, RAMedia, Ricoh, Ritek(JS, S, Richodye), SAST (ultra green), SKC(Korea), TDK, TY (DX dye)</p> <p>Low Speed CD-RW: CMC, Daxon, Fonet, Gigastorage, Imation, Infodisc, LeadData, MCC, Nanya, Princo, Prodisc, Ricoh, Ritek</p> <p>High Speed CD-RW: AMT, CMC, Infodisc, Nanya, Postech, Prodisc, Ritek, Ricoh, MCC, SKC(Korea)</p> <p>Ultra Speed CD-RW: Daxon, Imation, Infodisc, MCC, Prodisc, Ritek</p> <p>DVD+R: BEALL, CMC, Daxon, Fuji, HP, Maxell, MCC, Memorex, OPTODISC, PRODISC, Ricoh, RICOH, Ritek, SONY, TDK, TYUDE</p> <p>DVD+RW: CMMC, Daxon, Imation, MCC, Philips, Ricoh, Ritek, Sony</p> <p>DVD-R: BeAll, CMMC, DAXON, DVSN Fornex, GSC, Imation, LeadData, Maxell, Mitsubishi, Nanya, Pioneer, Princo, Prodisc, Ritec, Ritek, SKC, Sony, That's</p> <p>DVD-RW: CMC, Mitsubishi, Princo Ritek</p>
Mechanism	
Pick-up	<p>NA: CD: 0.51 DVD: 0.65</p> <p>Focusing: Astigmatism</p> <p>Tracking: CD: DPP DVD-ROM: DPD DVD+R/RW: DPP</p> <p>Wave length: CD: 785+/- 5 nm DVD: 650+/- 15 nm</p> <p>Output power: Read CD: 1.5 mw max@objective lens DVD: 1.0 mw max Write CD: 65 mw max2@objective lens DVD: 20 mw max</p>
Traverse mechanism	DC Stepping motor driven
Spindle motor	DC burshless motor

DVD Dual Interface

Item	Specification
Loading mechanism	Manual load/DC brushless motor system

Audio Interface

Item	Specification
Audio Controller	VT 1612A
Audio onboard or optional	Built-in
Mono or Stereo	Stereo
Resolution	20 bit stereo Digital to Analog converter 18 bit stereo Analog to Digital converter
Compatibility	Microsoft PC98/PC99, AC97 2.1
Mixed sound source	Line-in, CD, Video, AUX
Voice channel	8/16 bit, mono/stereo
Sampling rate	44.1 KHz
Internal microphone	Yes
Internal speaker / Quantity	Yes/2
Supports PnP DMA channel	DMA channel 0 DMA channel 1
Supports PnP IRQ	IRQ10

Video Interface

Item	Specification
Vendor & Model Name	ATI M26 (for Aspire 3010) ATI M24 (for Aspire 5010)
Chip voltage	N/A
Supports ZV (Zoomed Video) port	NO
Graph interface	PCIE X16
Maximum resolution (LCD)	1024 x768 (32bit colors)
Maximum resolution (CRT)	1600x1200 (32 bit colors)

VGA Display Resolution

Display device	Source image in the frame buffer					
	640x480	800x600	1024x768	1280x1024	1400x1050	1600x1200
800x600 LCD	Expanded	True image	Partial image	Partial image	Partial image	Partial image
1024x768 LCD	Expanded	Expanded	True image	Partial image	Partial image	Partial image
1280x1024 LCD	Expanded	Expanded	Expanded	True image	Partial image	Partial image
1400x1050 LCD	Expanded	Expanded	Expanded	Expanded	True image	Partial image
1600x1200 LCD	Expanded	Expanded	Expanded	Expanded	Centered	True image
640x480 CRT	True image	Partial image	Partial image	Partial image	Partial image	Partial image
800x600 CRT	True image	True image	Partial image	Partial image	Partial image	Partial image
1024x768 CRT	True image	True image	True image	Partial image	Partial image	Partial image
1280x1024 CRT	True image	True image	True image	True image	Partial image	Partial image
1600x1200 CRT	True image	True image	True image	True image	True image	True image

Video Memory

Item	Specification
Fixed or upgradeable	Fixed for UMA models upgradeable for ATI M26/M24
Video memory size	64MB for ATI M26 (Aspire 3010) 64/128 MB for ATI M24 (Aspire 5010)

LCD Display Resolution

Resolution	8 bit (256colors)	16 bits (Hi color)	24 bits (True color)	32 bits (True color)
640x480	Yes	Yes	Yes	Yes
720x480	Yes	Yes	Yes	Yes
800x600	Yes	Yes	Yes	Yes
848x480	Yes	Yes	Yes	Yes
1024x768	Yes	Yes	Yes	Yes

CRT Display Resolutions

Resolution	8 bit (256colors)	16 bits (Hi color)	24 bits (True color)	32 bits (True color)
640x480	Yes	Yes	Yes	Yes
720x480	Yes	Yes	Yes	Yes
800x600	Yes	Yes	Yes	Yes
848x480	Yes	Yes	Yes	Yes
1024x768	Yes	Yes	Yes	Yes
1152x864	Yes	Yes	Yes	Yes
1280x1024	Yes	Yes	Yes	Yes
1400x1050	Yes	Yes	Yes	Yes
1600x1200	Yes	Yes	Yes	Yes

USB Port

Item	Specification
USB Compliancy Level	1.1/2.0 support
OHCI	USB 2.0
Number of USB port	4 5V/500 mA per slot
Location	Rear side

PCMCIA Port

Item	Specification
PCMCIA controller	TI PCI 7421
Supports card type	Type II, Tpye III
Number of slots	Two type II, one type III
Access location	Left side
Supports ZV (Zoomed Video) port	Yes
Supports 32 bit CardBus	Yes (IRQ17)

Keyboard

Item	Specification
Keyboard controller	KB3910
Keyboard vendor & model name	Darfon/Sunrex
Total number of keypads	84-/85-/88-key
Windows keys	Yes
Internal & external keyboard work simultaneously	Yes

Battery

Item	Specification
Vendor & model name	Normal: Sanyo/Simplo; Highrate: Sanyo/Sony
Battery Type	Li-ION
Pack capacity	2000mAH
Number of battery cell	8
Package configuration	4 serial 2 parallel
Output voltage	14.4Vdc (nominal)

LCD

Item			
Vendor & model name	LCD 15.4" WXGA QDI	LCD 15.4" WXGA AU B154EW01	LCD 15.4" WXGA HITACHI
Screen Diagonal (mm)	390.1	391	391
Active Area (mm)	331.2x207.0	331.2x207.0	331.2x207.0
Display resolution (pixels)	1280x800 WXGA	1280x800 WXGA	1280x800 WXGA
Pixel Pitch	0.2588x0.2588	0.2588x0.2588	0.25875x0.25875
Pixel Arrangement	R.G.B. Vertical Stripe	R.G.B. Vertical Stripe	R.G.B. Vertical Stripe
Display Mode	Normally White	Normally White	Normally White
Typical White Luminance (cd/m ²) also called Brightness	185	195 min (5 point average) 220 Typ. (5 point average)	185
Luminance Uniformity	1.4 (5pts)	1.25 max. (5pts) 1.50 max. (13pts)	N/A
Contrast Ratio	400	400	200
Response Time (Optical Rise Time/Fall Time)	5/20	18/7	30/20
Nominal Input Voltage VDD	+3.3V Typ.	+3.3V Typ.	+3.3V Typ.
Typical Power Consumption (watt)	4.38	6.5	N/A
Weight	585	580	620
Physical Size(mm)	344x222.0x6.35 max	344x222.0x6.5 max	344.5x222.5x6.5 max
Electrical Interface	1 channel LVDS	1 channel LVDS	1 channel LVDS
Support Color	262K colors (RGB 6-bit data driver)	262K colors (RGB 6-bit data driver)	262K colors (RGB 6-bit data driver)
Viewing Angle (degree) Horizontal: Right/Left Vertical: Upper/Lower	15/35 45/45	70/70 60/60	60/60 35/65

LCD

Item			
Temperature Range(° C)			
Operating	0 to +50	0 to +50	0 to +50
Storage (shipping)	-25 to +60	-20 to +60	-20 to +60

AC Adapter

Item	Specification
Vendor & model name	Liteon, 135W power supply
Input Voltage	
Low Range	90(min.)/137(max.)/100-127(nominal)
High Range	180(min.)/265(max.)/200-240(nominal)
Input current	2.2A(max)
Nominal frequency (Hz)	50-60
Frequency variation range (Hz)	47-63
Efficiency	It should provide an efficiency of 85% minimum, when measured at maximum load under 115Vac.
Output Requirements	
DC output voltage	19V
Noise + Ripple	380mV as output voltage is 19V
Peak Load	18.5V-19.71V
Dynamic Output Characteristics	
Turn-on delay time	5 sec (@ 115Vac)
Hold up time	5ms (@115Vac, Full load)
Over Voltage Protection (OVP)	29V
Short circuit protection	9.5A @19V output voltage
Electrostatic discharge (ESD)	15KV (at air discharge) 8KV (at contact discharge)
Dielectric Withstand Voltage	
Primary to secondary	2150VDC for 1 sec.
Ground leakage current	less than 250uA

Power Management

Power Saving Mode	Phenomenon
Standby Mode Enter Standby Mode when 1.Standby/Hibernation hot-key is pressed and system is not ready to enter Hibernation mode. 2.System standby/ Hibernation timer expires and system is not ready to enter Hibernation mode.	q The buzzer beeps q The Sleep indicator lights up
Hibernation Mode Enter Hibernation Mode (suspend to HDD) when 1.Hibernation hot-key is pressed and system is ready to enter Hibernation mode 2.System Hibernation timer expires and system is ready to enter Hibernation mode.	q All power shuts off

Power Management

Power Saving Mode	Phenomenon
Display Standby Mode Keyboard, built-in touchpad, and an external PS/2 pointing device are idle for a specified period.	q The display shuts off
Hard Disk Standby Mode Hard disk is idle within a specified period of time.	q Hard disk drive is in standby mode. (spindle turned-off)

Environmental Requirements

Item	Specification
Temperature	
Operating	+5~+35 °C
Non-operating	-20~+60 °C
Humidity	
Operating	10% to 95% RH, non-condensing without disktte 10% to 80% RH, non-condensing with disktte
Non-operating	20% to 80% RH, non-condensing (Unpacked)
Non-operating	20% to 90% RH, non-condensing (Storage package)
Vibration	
Operating	5~250Hz 0.5Grms, 15mins per axis
Non-operating (unpacked)	1.04 Grms, 2-200Hz 15 mins per axis
Non-operating (packed)	1.04 Grms, 2-200Hz 15 mins per axis

Mechanical Specification

Item	Specification
Dimensions	361(W) x 292.5(D) x 47.3(H)mm (14.2 x 11.5 x 1.8 inches)
Weight	3.6kg (7.9lbs)
I/O Ports	Four USB 2.0 ports One IEEE 1394 port Ethernet (RJ-45) port Modem (RJ-11) port S-video/TV-out (NTSC/PAL) port External display (VGA) port DVI-D port (only Aspire 5010) Infrared (FIR) port Microphone/line-in jack Headphone/speaker/line-out port PC card slot (one Type III or two Type II) DC-in jack for AC adaptor
Drive Bays	One
Material	Plastic
Indicators	Wireless Communication, Power, Sleep, Media Activity, Battery Charge, Caps Lock and NumLock
Switch	Power

