

System Specifications

Features

Below is a brief summary of the computer's many features:

Operating System

- Genuine Windows® 7 Home Basic 64-bit
- Genuine Windows® 7 Home Premium 64-bit

Platform

- Intel® Core™ i7-820QM processor (8 MB L3 cache, 1.73 GHz with Turbo Boost up to 3.06 GHz, DDR3 1333 MHz, 45 W), i7-720QM processor (6 MB L3 cache, 1.60 GHz with Turbo Boost up to 2.80 GHz, DDR3 1333 MHz, 45 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i7-620M processor (4 MB L3 cache, 2.66 GHz with Turbo Boost up to 3.33 GHz, DDR3 1066 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i5-430M/i5-520M/i5-540M processor (3 MB L3 cache, 2.26/2.40/2.53 GHz with Turbo Boost up to 2.53/2.93/3.06 GHz, DDR3 1066 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i3-330M/i3-350M processor (3 MB L3 cache, 2.26 GHz, DDR3 1066 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Mobile Intel® HM55 Express Chipset

System Memory

- Dual-channel DDR3 SDRAM support:
 - Up to 4 GB of DDR3 system memory, upgradable to 16 GB using four soDIMM modules⁵ (only for models with Intel® Core™ i7-820QM/i7-720QM processor)
 - Up to 4 GB of DDR3 system memory, upgradable to 8 GB using two soDIMM modules⁵ (only for models with Intel® Core™ i7-620M, i5-430M/i5-520M/i5-540M, or i3-330M/i3-350M processor)

Display

- 18.4" Full HD 1920 x 1080 pixel resolution, high-brightness (220-nit) Acer CineCrystal™ LED-backlit TFT LCD
- Mercury free, environment friendly
- 8 ms response time
- 60% color gamutFrameless design
- 16:9 aspect ratio

TV Tuner

- Digital TV-tuner supporting DVB-T (Digital Video Broadcasting-Terrestrial) standard (6 to 8 MHz)
- I/O:
 - RF-in jack for digital TV antenna cable input
- Connectors:
 - PAL/SECAM-to-RF
 - NTSC-to-PAL/SECAM
- DVB-T antenna (UHF/VHF reception)
- Remote control

Graphics

- ATI Mobility Radeon™ HD 5850 with 1024 MB of dedicated DDR3 VRAM, supporting Unified Video Decoder (UVD), OpenEXR High Dynamic-Range (HDR) technology, Shader Model 5.0, Microsoft® DirectX® 11, OpenGL® 3.1, OpenCL™ 1.1
- ATI Mobility Radeon™ HD 5650 with 1024 MB of dedicated DDR3 VRAM, supporting Unified Video Decoder (UVD), OpenEXR High Dynamic-Range (HDR) technology, Shader Model 5.0, Microsoft® DirectX® 11, OpenGL® 3.1, OpenCL™ 1.1
- Dual independent display support
- 16.7 million colors
- External resolution / refresh rates:
 - VGA port up to 2048 x 1536: 85 Hz
 - HDMI™ port up to 1920 x 1080: 60 Hz
- MPEG-2/DVD decodingVC-1 and H.264 (AVC) decodingMicrosoft® DirectX® Video Acceleration (DXVA) application interface (API)
- HDMI™ (High-Definition Multimedia Interface) with HDCP (High-bandwidth Digital Content Protection) support

Audio subsystem

- Dolby® 7-optimized Acer CineSurround sound system with five built-in speakers and one subwoofer supporting low-frequency effects
- Optimized 3rd Generation Dolby® Home Theater®7 audio enhancement, featuring Dolby® Digital Live, Dolby® Pro Logic® IIx, Dolby® Headphone, Dolby® Natural Bass, Dolby® Sound Space Expander, Dolby® Inverse Filtering, Dolby® High Frequency Enhancer technologies
- True 5.1-channel surround sound output
- High-definition audio support
- S/PDIF (Sony/Philips Digital Interface) support for digital speakers
- MS-Sound compatible
- Acer PureZone technology with two built-in stereo microphones, featuring beam forming, echo cancellation, and noise suppression technologies

Storage subsystem

- Hard disk drive:
 - One or two 160/250/320/500/640 GB or larger
- Multi-in-1 card reader, supporting:
 - Secure Digital™ (SD), MultiMediaCard™ (MMC), Memory Stick™ (MS), Memory Stick PRO™ (MS PRO), xD-Picture Card™ (xD)

Optical Media Drive

- 4X Blu-ray Disc™ Writer / DVD-Super Multi double-layer drive:
 - Read: 24X CD-ROM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 8X DVD-ROM DL, 6X DVD-R DL, 6X DVD+R DL, 8X DVD-RW, 8X DVD+RW, 5X DVD-RAM, 4X BD-ROM, 4X BD-R, 2X BD-RE, 4X BD-ROM DL, 4X BD-R DL, 2X BD-RE DL
 - Write: 24X CD-R, 16X CD-RW, 8X DVD-R, 8X DVD+R, 6X DVD-RW, 6X DVD+RW, 5X DVD-RAM, 4X DVD+R DL, 4X DVD-R DL, 4X BD-R, 2X BD-RE, 4X BD-R DL, 2X BD-RE DL
- 4X Blu-ray Disc™ / DVD-Super Multi double-layer drive:
 - Read: 24X CD-ROM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 8X DVD-ROM DL, 6X DVD-R DL, 6X DVD+R DL, 8X DVD-RW, 8X DVD+RW, 5X DVD-RAM, 4X BD-ROM, 4X BD-R, 2X BD-RE, 4X BD-ROM DL, 4X BD-R DL, 2X BD-RE DL
 - Write: 24X CD-R, 16X CD-RW, 8X DVD-R, 8X DVD+R, 6X DVD-RW, 6X DVD+RW, 5X DVD-RAM, 4X DVD+R DL, 4X DVD-R DL
- 8X DVD-Super Multi double-layer drive:
 - Read: 24X CD-ROM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 6X DVD-ROM DL, 6X DVD-R DL, 6X DVD+R DL, 6X DVD-RW, 6X DVD+RW, 5X DVD-RAM
 - Write: 24X CD-R, 16X CD-RW, 8X DVD-R, 8X DVD+R, 4X DVD-R DL, 4X DVD+R DL, 6X DVD-RW, 8X DVD+RW, 5X DVD-RAM

Communication

- Webcam:
- Acer Video Conference, featuring:
 - Acer Crystal Eye high-def webcam with 1280 x 1024 resolution
 - Acer Video Conference Manager software, featuring Video Quality Enhancement (VQE) technology, supporting 640 x 480 resolution online video calls
 - Acer PureZone technology
- Wireless and networking:
- WLAN:
 - Intel® Centrino® Wireless-N 1000 b/g/n Wi-Fi CERTIFIED™ with Acer Nplify™, featuring MIMO technology (only for models with Intel® Core™ i7-820QM/i7-720QM processor)
 - Acer InviLink™ Nplify™ 802.11b/g/n Wi-Fi CERTIFIED™ Acer InviLink™ 802.11b/g Wi-Fi CERTIFIED™
 - Supporting Acer SignalUp™ wireless technology
- WPAN1:Bluetooth® 2.1+EDR
- LAN: Gigabit Ethernet, Wake-on-LAN ready

Privacy control

- Acer Bio-Protection fingerprint solution, featuring Windows® logon, computer protection, Acer FingerLaunch, ProfileLaunch, MusicLaunch, Password Bank, MyLaunch, FingerNav
- BIOS user, supervisor, HDD passwords
- Kensington lock slot

Dimensions and Weight

- 440 (W) x 295 (D) x 31/43.8 (H) mm (17.34 x 11.62 x 1.22/1.73 inches)
- 4.6 kg (10.1 lbs.)14 with 8-cell battery

Power Adapter and Battery

- ACPI 3.0 CPU power management standard: supports Standby and Hibernation power-saving modes
- 3-pin 120 W AC adapter (only for models with Intel® Core™ i7-820QM/i7-720QM processor)
 - 155 (W) x 67 (D) x 36.5 (H) mm (6.1 x 2.63 x 1.43 inches)
 - 570 g (1.25 lbs.)14 with 180 cm DC cable
- 3-pin 90 W AC adapter:
 - 133 (W) x 59 (D) x 31 (H) mm (5.23 x 2.32 x 1.22 inches)
 - 390 g (0.86 lbs.)14 with 180 cm DC cable
- Acer QuicCharge™ technology:
 - 80% charge in 1 hour
 - 2-hour rapid charge system-off
- 71 W 4800 mAh 8-cell Li-ion standard battery pack
- Estimated battery life: Up to 3 hours
- ENERGY STAR®

Special Keys and Controls

- 103-/104-/107-key keyboard, with inverted "T" cursor layout
- Multi-gesture touchpad, supporting two-finger scroll, pinch, rotate, flip
- Acer Bio-Protection fingerprint reader, featuring Acer FingerNav 4-way control function
- 10 function keys, four cursor keys, two Windows® keys, hotkey controls, independent numeric keypad, international language support
- Acer PowerSmart key
- Easy-launch keys: Acer Backup and Programmable1, WLAN, Bluetooth®
- Acer MediaTouch capacitive human interface device, including:
 - Acer Arcade™
 - Volume meter (volume up/down)
 - Media control (play/pause, stop, previous, next)
 - Mute and hold keys
- Acer Media Center remote control

I/O Ports

- Acer Bio-Protection fingerprint reader
- Multi-in-1 card reader (SD™, MMC, MS, MS PRO, xD)
- Five USB 2.0 ports
- eSATA port
- IEEE 1394 port
- HDMI™ port with HDCP support
- Consumer infrared (CIR) port
- External display (VGA) port
- Headphone/speaker/line-out jack with S/PDIF support
- Microphone-in jack
- Line-in jack
- Ethernet (RJ-45) port
- DC-in jack for AC adapter

Optional Items

- Acer Media Center remote control
- 2 GB / 4 GB DDR3 1066 MHz soDIMM module
- 8-cell Li-ion battery pack
- 3-pin 120 W AC adapter
- External USB floppy disk drive

Warranty

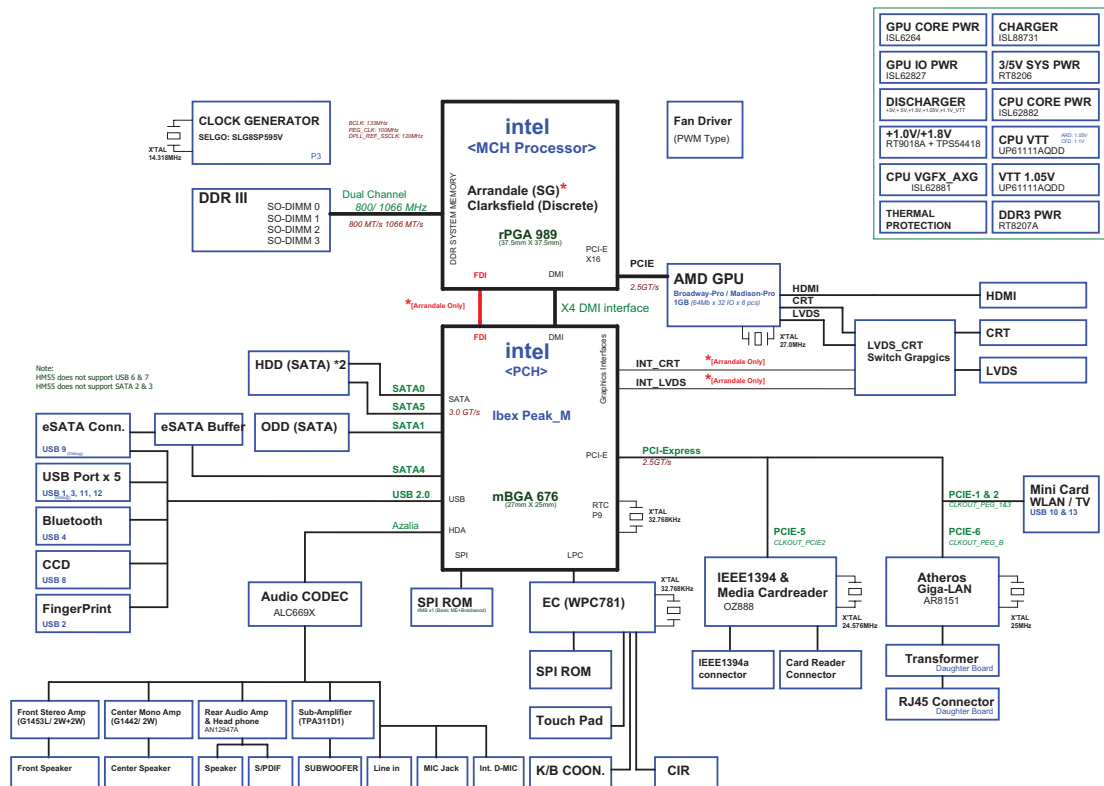
- One-year International Travelers Warranty (ITW)

Environment

- Temperature:
 - Operating: 5°C to 35°C
 - Non-operating: -20°C to 65°C
- Humidity (non-condensing):
 - Operating: 20% to 80%
 - Non-operating: 20% to 80%

NOTE: The specifications listed above are for reference only. The exact configuration of the PC depends on the model purchased.

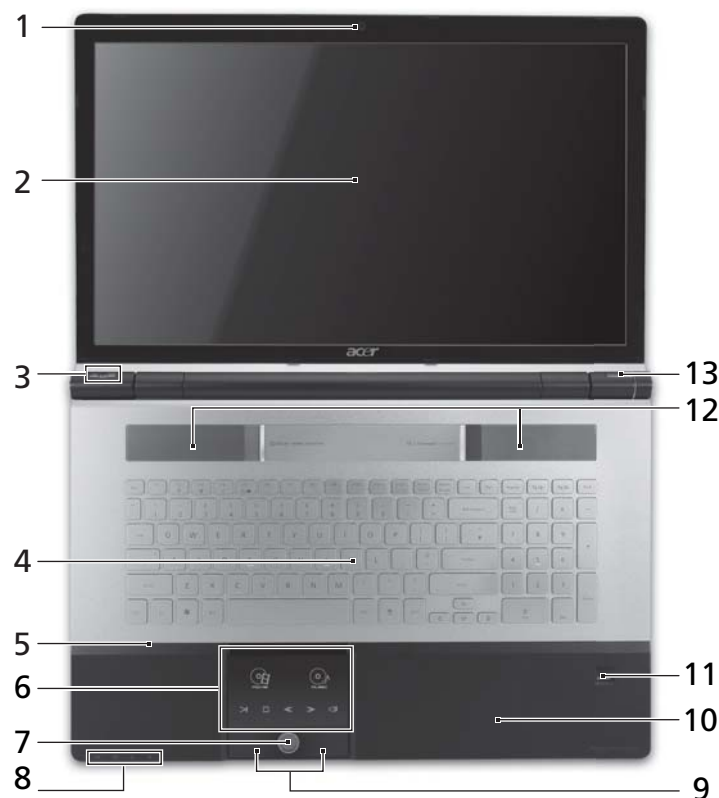
System Block Diagram
















Notebook Tour

This section provides an overview of the features and functions of the notebook.

Top View




#	Icon	Item	Description
1		Acer Crystal Eye webcam	Web camera for video communication. (only for certain models)
2		Display screen	Also called Liquid-Crystal Display (LCD), displays computer output (configuration may vary by model).
3		Arcade key	Launches InstantOn Arcade.
		P key / Acer PowerSmart key	Programmable key (configuration may vary by model). / Puts your computer into power-saving mode (configuration may vary by model).
4		Keyboard	For entering data into your computer
5		Microphone	Internal microphone for recording sound.

#	Icon	Item	Description
6		Touchpad/Media Console	Touch-sensitive pointing device which functions like a computer mouse*. / Touch sensitive controls for Acer Arcade, volume (up/down) and media (play/pause, stop, previous, next); with mute.
		Movie	Launch movie playback software.
		Music	Launch music playback software.
		Play/pause	Play or pause a selected media file.
		Stop	Stop playing the selected media file.
		Previous	Return to the previous media file.
		Next	Jump to the next media file.
		Mute	Turn the volume on or off.
		*Touchpad becomes inactive when Media Console is active.	
7		Media Console controller	Turns Media Console on or off.
8		Communication key	Enables/disables the computer's communication devices. (Communication devices may vary by configuration.)
		Backup key	Launches Acer Backup Management for three-step data backup.
		HDD indicator	Indicates when the hard disk drive is active.
		Power indicator	Indicates the computer's power status.
9		Click buttons (left, and right)	The left and right buttons function like the left and right mouse buttons.
10		Palmrest	Comfortable support area for your hand when using the computer.
11		Acer Bio-Protection fingerprint reader	Supports Acer FingerNav 4-way control function (only for certain models).
12		Speakers	Left and right speakers deliver stereo audio output.
13		Power button/	Turns the computer on and off.

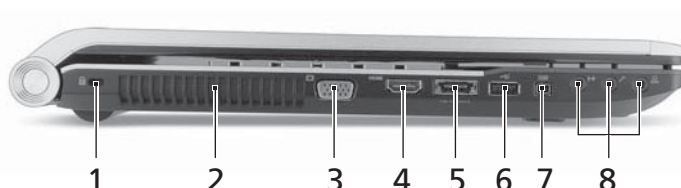
Closed Front View










#	Icon	Item	Description
1		Thumbwheel	Turn the volume up or down.

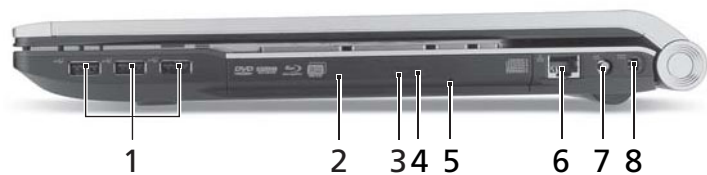
#	Icon	Item	Description
2		Multi-in-1 card reader	Accepts Secure Digital (SD), MultiMediaCard (MMC), Memory Stick (MS), Memory Stick PRO (MS PRO), xD-Picture Card (xD). Note: Push to remove/install the card. Only one card can operate at any given time.
3		CIR receiver	Receives signals from a remote control.





Left View



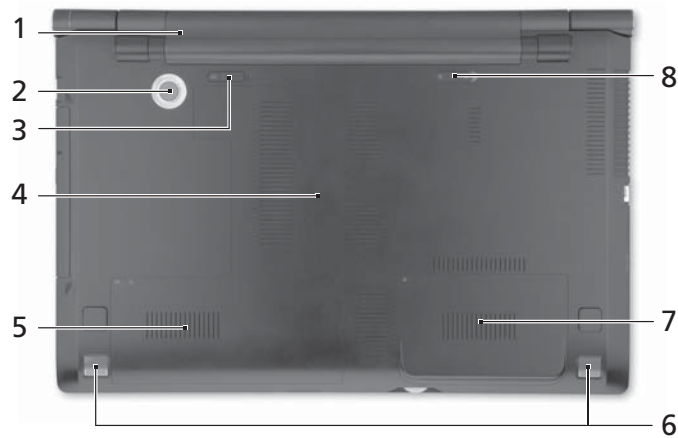
#	Icon	Item	Description
1		Kensington lock slot	Connects to a Kensington-compatible computer security lock. Note: Wrap the computer security lock cable around an immovable object such as a table or handle of a locked drawer. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are also available.
2		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
3		External display (VGA) port	Connects to a display device (e.g. external, LCD monitor, LCD projector).
4	HDMI	HDMI port	Supports high definition digital video connections.
5	 / eSATA	USB 2.0 / eSATA port	Connects to USB 2.0 or eSATA devices (only for certain models). Note: If you plug an eSATA device you will have three USB ports available in the meantime.
6		USB 2.0 port	Connects to USB 2.0 devices (e.g., USB mouse, USB camera).
7		4-pin IEEE 1394 port	Connects to IEEE 1394 devices.
8		Line-in jack	Accepts audio line-in devices (e.g., audio CD player, stereo walkman, mp3 player)
		Microphone jack	Accepts inputs from external microphones.
		Headphones/speaker/line-out jack with S/PDIF support.	Connects to audio line-out devices (e.g., speakers, headphones).




Right View






#	Icon	Item	Description
1		USB 2.0 port	Connects to USB 2.0 devices (e.g., USB mouse, USB camera).
2		Optical drive	Internal optical drive; accepts CDs or DVDs.
3		Optical disk access indicator	Lights up when the optical drive is active.
4		Optical drive eject button	Ejects the optical disk from the drive.
5		Emergency eject hole	Ejects the optical drive tray when the computer is turned off. Note: Insert a paper clip to the emergency eject hole to eject the optical drive tray when the computer is off.
6		Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000-based network.
7		RF-in port	Accepts input signals from digital TV-tuner devices.
8		DC-in jack	Connects to an AC adapter.

Base View







#	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack. Note: The battery shown is for reference only. Your PC may have a different battery depending on the model purchased.
2		Subwoofer	Emits low frequency sound output.
3		Battery release latch	Releases the battery for removal.
4		Memory compartment	Houses the computer's main memory.

#	Icon	Item	Description
5		Hard disk bay- Main	Houses the computer's hard disk (secured with screws)
6		Speakers	Left and right speakers deliver stereo audio output.
7		Hard disk bay- Secondary	Houses the computer's hard disk (secured with screws) (for certain models only)
8		Battery lock	Locks the battery in position

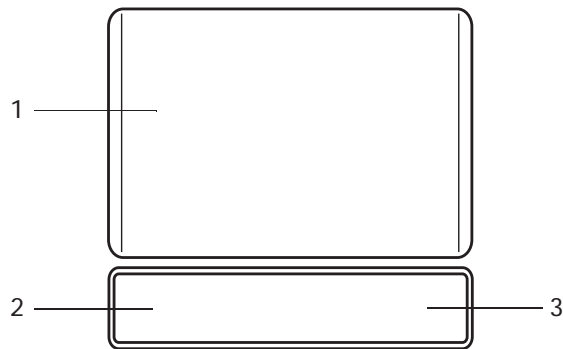
Indicators

The computer has several easy-to-read status indicators. The following indicators are visible even when the computer cover is closed.

Icon	Function	Description
	Communication key	Enables/disables the computer's communication devices. (Communication devices may vary by configuration.)
	Backup key	Launches Acer Backup Management for three-step data backup.
	HDD indicator	Indicates when the hard disk drive is active.
	Power	Indicates the computer is on or off.

TouchPad Basics

The following items show you how to use the TouchPad:



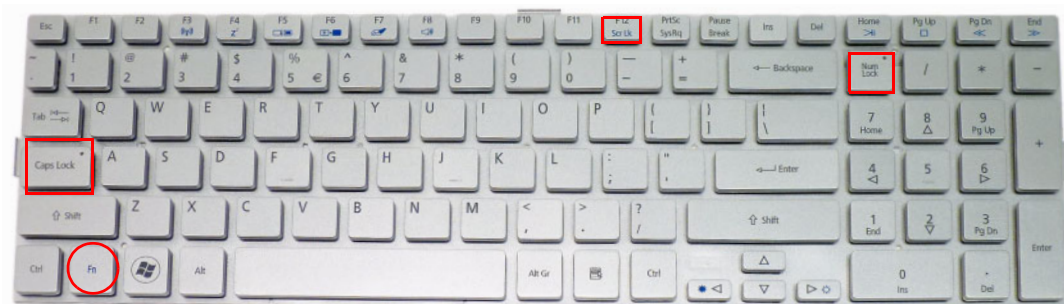
- Move your finger across the TouchPad (1) to move the cursor.
- Press the left (2) and right (3) buttons located beneath the TouchPad to perform selection and execution functions. These two buttons are the equivalent of the left and right buttons on a mouse. Tapping on the TouchPad is the same as clicking the left button.

Function	Left Button (2)	Right Button (3)	Main TouchPad (1)
Execute	Quickly click twice.		Tap twice (at the same speed as double-clicking a mouse button).
Select	Click once.		Tap once.
Drag	Click and hold, then use finger on the TouchPad to drag the cursor.		Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the TouchPad on the second tap and drag the cursor.
Access context menu		Click once.	

NOTE: When using the TouchPad, keep it - and your fingers - dry and clean. The TouchPad is sensitive to finger movement; hence, the lighter the touch, the better the response. Tapping too hard will not increase the TouchPad’s responsiveness.

Using the Keyboard

Your copmputer has a close-to-full-sized keyboard and an embedded numeric keypad, separate cursor, lock, function and special 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	When Num Lock 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 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.

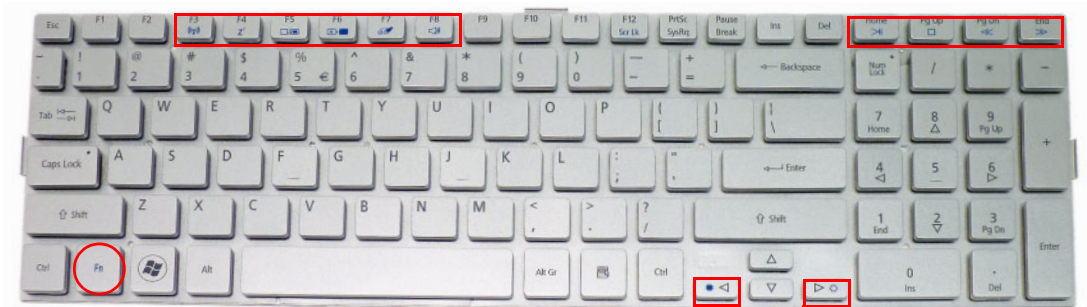
Windows Keys

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

Key	Description
 Windows key	<p>Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions:</p> <ul style="list-style-type: none"><  >: Open or close the Start menu<  > + <D>: Display the desktop<  > + <E>: Open Windows Explore<  > + <F>: Search for a file or folder<  > + <L>: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain)<  > + <M>: Minimizes all windows<  > + <R>: Open the Run dialog box<  > + <U>: Open Ease of Access Center<  > + <BREAK>: Display the System Properties dialog box<  > + <TAB>: Cycle through programs on the taskbar<CTRL> + <  > + <F>: Search for computers (if you are on a network) <p>Note: Depending on your edition of Windows 7, some shortcuts may not function as described.</p>
 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 hotkeys or key combinations to access most of the computer's controls like screen brightness and volume output.



To activate hotkeys, press and hold the **<Fn>** key before pressing the other key in the hotkey combination.

Hotkey	Icon	Function	Description
<Fn> + <F3>		Communication switch	Enables/disables the computer's communication devices. (Communication devices may vary by configuration.)
<Fn> + <F4>		Sleep	Puts the computer in Sleep mode.
<Fn> + <F5>		Display toggle	Switches display output between the display screen, external monitor (if connected) and both.
<Fn> + <F6>		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
<Fn> + <F7>		Touchpad toggle	Turns the touchpad on and off.
<Fn> + <F8>		Speaker toggle	Turns the speakers on and off.
<Fn> + <F9>		Brightness up	Increases the screen brightness.
<Fn> + <F10>		Brightness down	Decreases the screen brightness.
<Fn> + <Home>		Play/Pause	Plays or pauses media files
<Fn> + <Pg Up>		Stop	Stops media file
<Fn> + <Pg Dn>		Previous	Plays the previous media file in the play sequence
<Fn> + <End>		Next	Plays the next media file in the play sequence

Special Keys

On models that support the Euro symbol and the US dollar sign, the symbols can be located at the upper-center and/or bottom-right of your keyboard.

The Euro symbol

1. Open a text editor or word processor.
2. Hold <Alt Gr> and then press the <5> key at the upper-center of the keyboard.

NOTE: Some fonts and software do not support the Euro symbol. See www.microsoft.com/typography/faq/faq12.htm for more information.

The US dollar sign

1. Open a text editor or word processor.
2. Hold <Shift> and then press the <4> key at the upper-center of the keyboard.

NOTE: This function varies according to the language settings.

Hardware Specifications and Configurations

Processor

Item	Specification
CPU	<ul style="list-style-type: none">CPU Intel Arrandale (DC) / Clarksfield (QC) processor
Type	<ul style="list-style-type: none">MCP (Multi-Chip Package) CPU
CPU Package	989 pins-rPGA socket
Power	65 Watts
On-die Cache	<ul style="list-style-type: none">Two or Four-core processor for mobile with enhanced performance32-KB instruction and 32 -KB data first-level cache (L1) for each cor e256-KB shared instruction/data second -level cache (L2) for each coreUp to 8-MB shared instruction/data last -level cache (L3), shared among all cores
Front Side Bus	800/1066M/1333Hz

Processor Specifications

Item	CPU Speed	Cores	Bus Speed (GT/s)	Cache Size	Package	Core Voltage	Acer P/N
Ci3330M	2.13	2	2.5	3 MB	PGA988	35W	KC.33001.DMP
Ci3350M	2.26	2	2.5	3 MB	PGA988	35W	KC.35001.DMP
Ci5430M	2.26	2	2.5	3 MB	PGA988	35W	KC.43001.DMP
Ci5520M	2.24	2	2.5	3 MB	PGA988P	35W	KC.52001.DMP
Ci5540M	2.53	2	2.5	3 MB	PGA988	35W	KC.54001.DMP
Ci7620M	2.66	2	2.5	4 MB	PGA988P	35W	KC.62001.DMP
Ci7720QM	1.6	4	2.5	6 MB	PGA988	45W	KC.72001.QMP
Ci7820QM	1.73	4	2.5	8 MB	PGA988	45W	KC.82001.QMP

CPU Fan True Value Table (UMA)

CPU Temperature (Celcius)	Fan Speed (RPM)	SPL Spec (dBA)
45	2500	31
55	3100	34
65	3500	38
75	3900	40
85	4200	42

Throttling 50%: On= 100°C; OFF=85°C

OS shut down at 105°C; H/W shut down at 110°C

CPU Fan True Value Table (Discrete)

CPU Temperature (Celcius)	Fan Speed (RPM)	SPL Spec (dBA)
40	2500	31
50	3100	34
60	3500	38
70	3900	40
80	4200	42

Throttling 50%: On= 100°C; OFF=85°C

OS shut down at 105°C; H/W shut down at 110°C

Core Logic Specifications

Item	Specification
Chipset	Intel Ibex-Peak (HM55)
Package	1071-pins FCBGA 27mm x 25mm
Features	<ul style="list-style-type: none">• PCI Express* Base Specification, Revision 2.0 support for up to eight ports.• PCI Local Bus Specification, Revision 2.3 support for 33 MHz PCI operations (supports up to four Req/Gnt pairs).• ACPI Power Management Logic Support, Revision 3.0b• Enhanced DMA controller, interrupt controller, and timer functions• Integrated Serial ATA host controllers with independent DMA operation on up to six ports.• FIS-based Port Multiplier support on SATA Ports 4 and 5 in AHCI/RAID mode.• USB host interface with support for up to twelve USB ports; two EHCI high-speed USB 2.0 Host controllers, 2 rate matching hubs, six UHCI host controllers;• System Management Bus (SMBus) Specification, Version 2.0 with additional support for I2C devices• Supports IntelR High Definition Audio• Supports IntelR Matrix Storage Technology• Supports IntelR Active Management Technology• Supports IntelR Virtualization Technology for Directed I/O• Supports IntelR Trusted Execution Technology• Supports buffered through mode generating extra clocks from a clock chip.• Analog and Digital Display ports<ul style="list-style-type: none">• Analog CRT• HDMI• DisplayPort 1.1 (dGPU only)• LVDS• Low Pin Count (LPC) interface• Serial Peripheral Interface (SPI) support• IntelR Anti-Theft Technology• JTAG Boundary Scan support

System Memory

Item	Specification
Memory size	0MB (No on-board Memory)
DIMM socket number	4 sockets
Supports memory size per socket	4GB
Supports maximum memory size	16GB
Supports DIMM type	DDR3
Supports DIMM Speed	800/1066 MT/s

Memory Combinations

Slot 1	Slot 2	Total Memory
0MB	512MB	512MB
0MB	1024MB	1024MB
0MB	2048MB	2048MB
512MB	512MB	1024MB
512MB	1024MB	1536MB
512MB	2048MB	2560MB
1024MB	0MB	1024MB
1024MB	512MB	1536MB
1024MB	1024MB	2048MB
1024MB	2048MB	3072MB
2048MB	0MB	2048MB
2048MB	512MB	2560MB
2048MB	1024MB	3072MB
2048MB	2048MB	4096MB

NOTE: Above table lists some system memory configurations. You may combine DIMMs with various capacities to form other combinations. On above table, the configuration of slot 1 and slot 2 could be reversed.

Video Interface

Item	Specification	
Chipset	VGA chip Build-in Intel Graphics Media Accelerator HD	Broadway-Pro/Madison-Pro
Type	Arrandale HM55 PCH	MCP (Multi-Chip Package) CPU
Package	rPGA 989	<ul style="list-style-type: none"> 962-pins FCBGA 29mm x 29mm
Features	<ul style="list-style-type: none"> The integrated graphics controller contains a refresh of the 5th generation graphics core. IntelR Dynamic Video Memory Technology support IntelR Smart 2D Display Technology (IntelR S2DDT) IntelR Clear Video Technology <ul style="list-style-type: none"> MPEG2 Hardware Acceleration WMV9/VC1 Hardware Acceleration AVC Hardware Acceleration ProcAmp Advanced Pixel Adaptive De-interlacing Sharpness Enhancement De-noise Filter High Quality Scaling Film Mode Detection (3:2 pull - down) and Correction IntelR TV Wizard Microsoft DirectX*11 support Analog CRT DAC Interface Support (300MHz DAC/up to QXGA/Hot - Plug) Dual-Channel LVDS interface support 2x24 bpp panels 	<ul style="list-style-type: none"> Fully compliant with PCI Express Base Specification Rev. 2.1 Support CRT/LVDS/HDMI/DP interface (concurrent) Dual-channel LVDS interface support: single channel 24 bpp dual link HDCP compliance embed-in Full POWERPLAYTM 8.0 support LVDS / Engine and Memory / DP Spread Spectrum Support H.264 implementation is based on the ISO/IEC 14496-10 specification. VC-1 implementation is based on the SMPTE 421M specification. MPEG2 implementation is based on the ISO 13818 -2 Supports top quality DVD and Blu -Ray disc with the lowest CPU usage. VDDC (GPU core power supply) VDDCI (GPU I/O power supply) 1V (DP PLL power supply) 1.5V (VRAM and memory control power supply) 1.8V (CRT DAC and LVDS power supply) 3V (Peripheral power supply)

VRAM

Item	Specification
Chipset	AMD Broadway or Madison
Memory size	1GB
Interface	DDRIII

USB Port

Item	Specification
Chipset	Intel Ibex-Peak (HM55)
USB compliance level	2.0
UHCI	6
Number of USB port(s)	5
Location	3 Right side, 2 Left side
Serial port function control	N/A

HDMI Port

Item	Specification
Compliance level	1.3
Throughput	2.5Gbps
Number of HDMI port(s)	1
Location	Left side

PCMCIA Port(not included in this model)

Item	Specification
PCMCIA controller	
Supports card type	
Number of slots	
Access location	
Supports ZV (Zoomed Video) port	
Supports 32-bit CardBus	

System Board Major Chips

Item	Specification
Core logic	Intel Arrandale (DC) / Clarksfield (QC)
VGA	VGA chip Build-in Intel Graphics Media Accelerator HD Broadway-Pro/Madison-Pro
LAN	AR8151
USB 2.0	Intel Ibex-Peak (HM55)
Super I/O controller	N/A
Bluetooth	Intel Ibex-Peak (HM55)
Wireless (type=802.11 b+g)	Intel Ibex-Peak (HM55)
PCMCIA	N/A
Audio codec	ALC669X
Card reader	OZ888

Hard Disk Drive Interface

Item	Specification							
Capacity (MB)	160				250			
Vendor & Model Name	Seagate	HGST	Toshiba	WD	Seagate	HGST	Toshiba	WD
Bytes per sector	512				512			
Data heads	2		1		2		3	2
Drive Format								
Disks	1		1		1		2	1
Spindle speed (RPM)	5400				5400			
Performance Specifications								
Buffer size	8 MB				8 MB			
Interface	SATA				SATA			
Max. Media Transfer Rate (Mbytes/sec max.)	300	384	384	384	300	384	384	384
Max. Data Transfer Rate (Mbytes/sec)	150400	108160		108544	150400	112000		108544
DC Power Requirements								
Voltage tolerance	5V ±5%				5V ±5%			

Hard Disk Drive Interface (continued)

Item	Specification							
Capacity (MB)	320				500			
Vendor & Model Name	Seagate	HGST	Toshiba	WD	Seagate	HGST	Toshiba	WD
Bytes per sector	512				512			
Data heads	3	3	2	2	2		3	2
Drive Format								
Disks	2	2	1		1		2	1
Spindle speed (RPM)	5400				5400			
Performance Specifications								
Buffer size	8 MB				8 MB			
Interface	SATA				SATA			
Max. Media Transfer Rate (Mbytes/sec max.)	300	384	384	384	300	384	384	384
Max. Data Transfer Rate (Mbytes/sec)	150400	112000		108544	150400	112000		108544
DC Power Requirements								
Voltage tolerance	5V ±5%				5V ±5%			

BIOS

Item	Specification
BIOS vendor	Insyde BIOS
BIOS version	3.5
BIOS ROM type	Flash
Features	<ul style="list-style-type: none">Flash ROM 4MBSupport ISIPPSupport Acer UISupport multi-bootSuspend to RAM (S3)/Disk (S4)Various hot-keys for system controlSupport SMBIOS 2.3, PCI2.2.Refer to Acer BIOS specification.DMI utility for BIOS serial number configurable/asset tagSupport PXESupport Y2K solutionSupport WinFlashWake on LAN from S3Wake on LAN form S4 in AC modeSystem information

LCD 18.47”

Item	Specification
Vendor/model name	ChiMei N184H6 - L02
Screen Diagonal (mm)	18.47 inches
Display resolution (pixels)	1920 x 1080
Driver Element	a-si TFT active matrix
Pixel Pitch (mm)	0.213 (H) x 0.213 (V)
Display Mode	Normally White
Typical White Luminance (cd/m ²) (also called Brightness)	200
Contrast Ratio	650 typical
Response Time (Optical Rise Time/Fall Time) msec	Tr 2, Tf 6
White Variation	1.25 typical
Electrical Interface	LVDS
Support Color	262K
Viewing Angle (up/down/right/ left)	20/45/45/45
Temperature Range (°C) Operating Storage (shipping)	0 to +50 -20 to +60

LCD Inverter(not included in this model)

Item	Specification
Vendor & model name	
Brightness conditions	
Input voltage (v)	
Input current (mA)	
Output voltage (V, RMS)	
Output current (mA, RMS)	
Output voltage frequency (KHz)	

LCD Display Supported Resolution

Resolution	24 bits	30 bits	36 bits	48 bits
640x480p/60Hz 4:3	Yes	Yes	Yes	Yes
720x480p/60Hz 4:3	Yes	Yes	Yes	Yes
720x480p/60Hz 16:9	Yes	Yes	Yes	Yes
1280x720p/60Hz 16:9	Yes	Yes	Yes	Yes
1920x1080i/60Hz 16:9	Yes	Yes	Yes	Yes
1440x480i/60Hz 4:3	Yes	Yes	Yes	Yes
1440x480i/60Hz 16:9	Yes	Yes	Yes	Yes
1920x1080p/60Hz 16:9	Yes	Yes	Yes	Yes
720x576p/50Hz 4:3	Yes	Yes	Yes	Yes
720x576p/50Hz 16:9	Yes	Yes	Yes	Yes
1280x720p/50Hz 16:9	Yes	Yes	Yes	Yes
1920x1080i/50Hz 16:9	Yes	Yes	Yes	Yes
1440x576i/50Hz 4:3	Yes	Yes	Yes	Yes
1440x576i/50Hz 16:9	Yes	Yes	Yes	Yes
1920x1080p/50Hz 16:9	Yes	Yes	Yes	Yes

Bluetooth

Item	Specification		
Bluetooth Controller	Foxconn BCM2070 BT2.1+EDR (T77H114.01)	Foxconn BCM2046 BT2.1+EDR Module (T60H928.33)	Foxconn AR3011 BT Module (T77H056.00)
Features	<ul style="list-style-type: none"> Bluetooth 2.1 compliant Point-to-multipoint operation External USB interface for data Onboard antenna and SMA RF connector Coexistence support 	<ul style="list-style-type: none"> Fully Qualified Bluetooth v2.1 with Class 2 specification RF output power. Enhanced Data Rate (EDR) compliant. Full Piconet and Scatternet operation. Integrated PIFA Antenna with better RF performance. USB 2.0 compliant interface. F/W upgradable via Flash downloads. Very low power consumption. Support Coexistence with Intel WCS (Wireless Coexistence System) & AFH (Adaptive Frequency Hopping). 	<ul style="list-style-type: none"> Single-chip Bluetooth v2.1 + EDR solution USB 2.0 full-speed device interface with support for Device Firmware Upgrade(DFU) SPI interface supports external serial flash devices Two on-chip 1.2V linear voltage regulators Integrated 32-bit CPU with 32KB data RAM and 256KB program RAM On-board PLL On-chip low power oscillator(LPO) WLAN coexistence interface Standard USB HCI interface

Audio Subsystem

Item	Specification
Audio Codec	
Chipset	Realtek ALC669X-GR
Package	Intel Ibex Peak_M mBGA 676
Speaker Amplifier	TPA6047A4
Audio port	
Internal	
Compatibility	<ul style="list-style-type: none"> EAX™ 1.0 & 2.0 compatible Direct Sound 3D™ compatible I3DL2 compatible
Sampling rate	<ul style="list-style-type: none"> Primary 16/20/24-bit SPDIF-OUT supports 32k/44.1k/48k/88.2k/96k/192kHz sample rate Secondary 16/20/24-bit SPDIF-OUT supports 32k/44.1k/48k/88.2k/96k/192kHz sample rate
External	<ul style="list-style-type: none"> Mic jack Headphone jack Line-in jack

LAN Interface

Item	Specification
LAN Chipset	ATHEROS AR8151
Package	48pin QFN
Features	<ul style="list-style-type: none">• The AR8151 is the fifth generation Gigabit Ethernet (GbE) controller solution from Atheros. It is an ultra-high performance, ultralow cost, and ultra-low power fully integrated 10/100/1000 Mbps NIC/LOM Ethernet controller perfectly suited for both PC and embedded applications.• The AR8151 combines a 10/100/1000BASE-T GbE media access controller (MAC), a triplespeed Ethernet physical layer transceiver (PHY), a PCI Express bus interface, and a 25 MHz shared-source clock input and the AR8151 contains an embedded 256 byte Onetime Programmable (OTP) memory (using on-die eFuse technology).• The AR8151 is compliant with IEEE 802.3u specification for 10/100 Mbps Ethernet and IEEE 802.3ab specification for 1000 Mbps Ethernet. The AR8151 device combines pulse shaping, Tx/Rx PCS, echo canceller, NEXT canceller, equalizer, decoder, and timing recovery functions to deliver robust signal performance in noisy environments• The AR8151 GbE controller supports checksum offload features for IP, TCP, and UDP, lowering CPU utilization and optimizing network performance.

Keyboard

Item	Specification
Type	ACER AC7T_A10B AC7T Internal 17
Total number of keypads	103/104/107
Windows logo key	Yes
Internal & external keyboard work simultaneously	Yes
Features	<ul style="list-style-type: none">• Supports application keys for Windows 7 version

Media Card Reader

Item	Specification
Chipset	AU6437-GBL -GR
Package	LQFP
Features	<ul style="list-style-type: none">• Fully compatible with USB2.0 High Speed and backward compatible with USB1.1 specifications• Supports multiple flash card interfaces, including SD/MMC/xD/MS.• Supports single LUN• Supports both Windows and Mac OS

I/O Ports

Item	Specification
I/O support	<ul style="list-style-type: none">• Acer Bio-Protection fingerprint reader• Multi-in-1 card reader (SD™, MMC, MS, MS PRO, xD)• Five USB 2.0 ports• eSATA port• IEEE 1394 port• HDMI™ port with HDCP support• Consumer infrared (CIR) port• External display (VGA) port• Headphone/speaker/line-out jack with S/PDIF support• Microphone-in jack• Line-in jack• Ethernet (RJ-45) port• DC-in jack for AC adapter

Camera 1.3M

Item	Specifications		
Vendor and model	SUYIN HF1315-S32B-OV0	Chicony CNF9157	Liteon 09P2BF127 / Liteon 09P2SF119
Type	CMOS image sensor with SXGA	CMOS image sensor with SXGA	CMOS image sensor with SXGA
Interface	USB Port 2.0	USB Port 2.0	USB Port 2.0
Focusing distance	70cm	70 cm	60 cm
Dimensions (L x W x H mm)	65 x 8.0 x 3.74 mm	65.0±0.3 X 8.0±0.1 X 3.69±0.11/-0.2 mm	65.0 x 8.0 x 3.53 ± 0.2mm
Sensor type	OV9665		OV9665
Pixel resolution	1280x1024	1280x1024	1280x1024
Pixel size	2 µm x 2 µm		2 µm x 2 µm
Image size	3.89mm(H) X 2.43mm(V)Part number		

Wireless LAN

Item	Specification		
Type	Atheros HB95	Atheros HB93	Intel MM#903341
Wireless Standards Supported	b, g	b, g, n	b, n

3G Card (not included in this model)

Item	Specification
	<ul style="list-style-type: none">•

Super-Multi Drive Module

Item	Specification				
Vendor & model name	HLDS GT30N		HLDS CT21N		
Performance Specification	With CD Diskette	With DVD Diskette	With CD Diskette	With DVD Diskette	With BD Diskette
Transfer rate (MB/sec)	Sustained: 3,600 KB/s (24x) max.	Sustained: 11.08 Mbytes/s (8x) max.	Sustained: 3,600 kB/s (24x) max.	Sustained: 11.08 Mbytes/s (8x) max.	Sustained: 215.79 Mbits/s (6x) max.
Buffer Memory	1 MB		2 MB		
Interface	SATA				
Applicable disc formats	DVD-ROM, DVD-R (Ver.1.0, Ver. 2.0 for Authoring) DVD-R (Ver. 2.1 for General), DVD-R DL (Dual Layer), DVD-RW, DVD-RAM (Ver.2.2), DVD+R, DVD+R DL (Double Layer), and +RW CD-ROM, CD-ROM XA, CD-I, Video CD, CD-Extra and CD-Text Photo CD (Single and Multi session) CD-DA Super Audio CD (Compatible layer in Hybrid type) CD-R discs conforming to “Orange Book Part 2” CD-RW discs conforming to “Orange Book Part 3” CPRM (DVD-R/RW/RAM) supported		DVD-ROM, BD-ROM (SL/DL), BD-R (SL/DL) and BD-RE (SL/DL) DVD-R (SL/DL), DVD-RW (SL), DVD-RAM, DVD+R (SL/DL) and +RW CD-ROM, CD-ROM XA, CD-I, Video CD, CD-Extra and CD-Text Photo CD (Single and Multi session) CD-DA CD-R discs conforming to “Orange Book Part 2” CD-RW discs conforming to “Orange Book Part 3” DVD-R(SL/DL) / -RW / RAM with CPRM “CD layer” of Super Audio CD Hybrid type		
Loading mechanism	Drawer (Solenoid Open) Tact SW (Open) Emergency Release (draw open hole)				
Power Requirement					
Input Voltage	DC 5 V +/- 5%				

Battery

Item	Specification	
Vendor & model name	Panasonic NCR-B/811	Quanta : Acer AS10C7E
Battery Type	Lithium-Ion	Lithium-Ion
Pack nominal capacity	6140mAh	5900mAh
Number of battery cell	6 cell	8 cell
Package configuration	2P4S	4S2P

AC Adapter

Item	Specification
Input	100 - 240V ~ 2.0A
Input Frequency Range	50 ~ 60 Hz
Inrush current	less than 150A at 240V
Efficiency	85% min. at 115Vac input

System Power Management

Item	S5_ON	SUSON	MAINON	VRON	+NB_CORE
Initial	0	0	0	0	0
On (S0)	1	1	1	1	1
Standby (S1)	1	1	1	1	1
Suspend (S3)	1	1	0	0	0
Hibernate (S4)	1	0	0	0	0
Soft Off (S5)	1	0	0	0	0

System LED Indicator

Item	Specification
Power	Power on = Blue Suspend = Orange
Battery Charging	In charge = Orange Charge finish = Blue
Wireless	On = Blue
Backup	On = Blue
Power save	On = Blue

Power Specification

Item	Specification					
	Initial	On	Stand by	Suspend	Hibernate	Soft Off
Initial		1				
ON (S0)			2	3	4	5
Standby (S1)		6				
Suspend (S3)		7				
Hibernate (S4)		8				
Soft Off (S5)		9				

*Mechanical off is a condition where all power except the RTC battery has been removed from the system.

1. Initial to On state: When the AC adapter or Battery pack has been plugged into the system, the I WPC781 will be reset and initial all output pins then the system goes into Initial state and waiting for power on event. If the power button is pressed then the system will go into the ON state.
2. ON to Standby state: The system will go into the Standby state when HM55 receives the POS command.
3. ON to Suspend state: The system will go into Suspend state when HM55 receives the S2R command.
4. ON to Hibernate state: The system will go into Hibernate state when HM55 receives the S2D command.
5. ON to Soft Off state: The system will go into Soft Off state when HM55 receives the Soft off command.
6. Standby to ON state: The system will go into ON state when the system receives any wake up events, for example, keyboard, mouse.
7. Suspend to ON state: The system will go into ON state when the power button is pressed.
8. Hibernate to ON state: The system will go into ON state when the power button is pressed.
9. Soft Off to ON state: The system will go into ON state when the power button is pressed.