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maintenance & service guide

Presario 1800 Series
Models: XL180, XL181, XL182, XL183, XL185,
and XL190, XL191, XL192

Specifications

Physical and Environmental

Specification	U.S.	Metric
Height	1.63 in	4.14 cm
Depth	12.99 in	33.00 cm
Width	11.02 in	28.00 cm
Weight: with 14.1" TFT Display with 15.0" Display	7.8 lbs	3.54 kg
Battery Power Requirements: Nominal Operating Maximum Average Peak Operating	Li-ion 3.2 Ahr W @ 14.8 V W @ 14.8 V W @ 14.8 V	
AC Power Requirements: Operating Voltage Operating Current Operating Frequency Maximum Transient	100-240 V 0.8/0.4 A RMS 47-63 Hz (meets IEC801-4 & 5) 1kV for 50 ns	
Operating Temperature*	50° to 95°F	10° to 35°C
Non-Operating Temperature*	-4° to 140°F	-20° to 60°C
Relative Humidity (noncondens.): Operating Non-Operating (tw = 38.7°C max)	10 to 90% 5 to 95%	35 to 90% 60 to 95%
Operating Altitude Non-Operating Altitude	0 to 10,000 ft 0 to 30,000 ft	0 to 3.05 km 0 to 9.14 km
Operating Shock Non-Operating Shock	10 G, 11 ms, half sine 240 G, 2 ms, half sine	
Operating Vibration Non-Operating Vibration	0.5 G 1.5 G	

**Applicable safety standards specify thermal limits for plastic surfaces.
 Presario 1800XL Notebooks operate well within this temperature range.*

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System Interrupts

Hardware IRQ	System Function	Hardware IRQ	System Function
IRQ0	System Timer	IRQ10	Available
IRQ1	Standard 101/102-Key or Microsoft Natural Keyboard	IRQ11	Intel® Pro/100S Mobile LAN on Motherboard
IRQ2	Programmable Interrupt Controller	IRQ11	Texas Instruments PCI-1410 CardBus Controller
IRQ3	Lucent 56K V.90 PCI DF Modem	IRQ11	ACPI IRQ Holder for PCI IRQ Steering
IRQ3	ACPI IRQ Holder for PCI IRQ Steering	IRQ11	Intel® 82371AB/EB PCI to USB Universal Host Controller
IRQ4	Communications Port (COM1)	IRQ11	ACPI IRQ Holder for PCI IRQ Steering
IRQ5	ESS SOLO-1 PCI AudioDrive	IRQ12	Synaptics PS/2 TouchPad
IRQ5	ACPI IRQ Holder for PCI IRQ Steering	IRQ13	Numeric Data Processor
IRQ5	RAGE Mobility AGP (English)	IRQ14	Intel® 82371AB/EB PCI Bus Master IDE Controller
IRQ6	Standard Floppy Disk Controller	IRQ14	Primary IDE Controller (Dual FIFO)
IRQ7	Printer Port (LPT1)	IRQ15	Intel 82371AB/EB PCI Bus Master IDE Controller
IRQ8	System CMOS/Real Time Clock	IRQ15	Secondary IDE Controller (Dual FIFO)
IRQ9	SCI IRQ used by ACPI Bus		

System DMA

Hardware DMA	System Function
DMA1	ESS SOLO-1 DOS Emulation
DMA2	Standard Floppy Disk Controller
DMA3	ECP Printer Port (LPT1)
DMA4	Direct Memory Access Controller

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System I/O Address

I/O Address	System Function (Shipping Configuration)
0000h - 000Fh	Direct Memory Access Controller
0020h - 0021h	Programmable Interrupt Controller
0040h - 0043h	System Timer
0060h - 0060h	Standard 101/102-Key or Microsoft Natural Keyboard
0061h - 0061h	System Speaker
0062h - 0062h	ACPI Embedded Controller
0064h - 0064h	Standard 101/102-Key or Microsoft Natural Keyboard
0066h - 0066h	ACPI Embedded Controller
0070h - 0071h	System CMOS/Real Time Clock
0081h - 008Fh	Direct Memory Controller
00A0h - 00A1h	Programmable Interrupt Controller
00C0h - 00DFh	Direct Memory Access Controller
00F0h - 00FEh	Numeric Data Processor
0170h - 0177h	Intel® 82371AB/EB PCI Bus Master IDE Controller
0170h - 0177h	Secondary IDE Controller (Dual Fifo)
01F0h - 01F7h	Intel® 82371AB/EB PCI Bus Master IDE Controller
01F0h - 01F7h	Primary IDE Controller (dual fifo)
0200h - 0203h	Gameport Joystick
0220h - 022Fh	ESS SOLO-1 DOS Emulation
0330h - 0331h	ESS SOLO-1 DOS Emulation
0376h - 0376h	Secondary IDE Controller (Dual FIFO)
0376h - 0376h	Intel® 82371AB/EB PCI Bus Master IDE Controller
0378h - 037Fh	Printer Port (LPT1)
0388h - 038Bh	ESS SOLO-1 DOS Emulation
03B0h - 03BBh	RAGE Mobility AGP (English)
03C0h - 03DFh	RAGE Mobility AGP (English)
03F0h - 03F5h	Standard Floppy Disk Controller
03F6h - 03F6h	Intel® 82371AB/EB PCI Bus Master IDE Controller
03F6h - 03F6h	Primary IDE Controller (Dual FIFO)
03F7h - 03F7h	Standard Floppy Disk Controller

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I/O Address	System Function (Shipping Configuration)
03F8h - 03FFh	Communications Port (COM1)
04D0h - 04D1h	Motherboard Resources
0CF8h - 0CFFh	PCI Bus
1000h - 10FFh	Lucent 56K V.90 PCI DF Modem
1400h - 143Fh	ESS SOLO-1 PCI AudioDrive
1440h - 147Fh	Intel® PRO/100 S Mobile LAN on Motherboard
1480h - 149Fh	Intel® 82371AB/EB PCI to USB Universal Host Controller
14A0h - 14A7h	Primary IDE Controller (Dual FIFO)
14A0h - 14AFh	Intel® 82371AB/EB PCI Bus Master IDE Controller
14A8h - 14AFh	Secondary IDE Controller (Dual FIFO)
14B0h - 14BFh	ESS SOLO-1 PCI AudioDrive
14C0h - 14CFh	ESS SOLO-1 PCI AudioDrive
14D0h - 14D7h	Lucent 56K V.90 PCI DF Modem
14D8h - 14DBh	ESS SOLO-1 PCI AudioDrive
14DCh - 14DFh	ESS SOLO-1 PCI AudioDrive
2180h - 218Fh	Motherboard Resources
8000h - 803Fh	Motherboard Resources
9000h - 9FFFh	Intel® 82443BX Pentium® III Processor to AGP Controller
9000h - 90FFh	RAGE Mobility AGP (English)

System Memory Catalog

Memory Address	System Function
00000000h - 0009FFFFh	Not Available For Use By Devices
000A0000h - 000AFFFFFh	RAGE Mobility AGP (English)
000B0000h - 000BFFFFh	RAGE Mobility AGP (English)
000C0000h - 000CBFFFFh	RAGE Mobility AGP (English)
000E0000h-000E7FFFh	Not Available For Use By Devices
000E9000h-03FFFFFFh	Not Available For Use By Devices
04000000h - 04000FFFh	Texas Instruments PCI-1410 CardBus Controller
F4000000h - F4000FFFh	Intel® PRO/100 S Mobile LAN on Motherboard
F4100000h-F4100FFFh	Intel® PRO/100 S Mobile LAN on Motherboard

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Memory Address	System Function
F4101000h-F41010FFh	Lucent 56K V.90 PCI DF Modem
F4200000h-F4200FFFh	RAGE Mobility AGP (English)
F4200000h-F5FFFFFFh	Intel® 82443BX Pentium® III Processor to AGP Controller
F4220000h-F423FFFFh	RAGE Mobility AGP (English)
F5000000h-F5FFFFFFh	RAGE Mobility AGP (English)
F8000000h - FBFFFFFFh	Intel® 82443BX Pentium® III Processor to PCI Bridge
FFF80000h - FFFFFFFFh	Motherboard Resources

Display Information

Specifications	15.0-in. (Diagonal) TFT with LVDS	14.1-in. (Diagonal) TFT with LVDS
Unit Height	9.48 in. (24.05 cm)	8.92 in. (22.65 cm)
Unit Width	12.43 in. (31.55 cm)	11.76 in. (29.85 cm)
Display Height	8.99 in. (22.81 cm)	8.44 in. (21.43 cm)
Display Width	11.98 in. (30.41 cm)	11.26 in. (28.57 cm)
Weight	24.36 oz (690 g)	19.94 oz (565 g)
Contrast Ratio	150:1 mini	150:1 mini
Brightness	120 cd/mm ³	120 cd/mm ³
Response Time	50 ms	50 ms
Refresh Rate	60 Hz	60 Hz

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Memory Expansion

Memory Expansion		
System Memory	Expansion Board Memory	Total Memory
64 MB	none	64 MB
64 MB	32 MB	96 MB
64 MB	64 MB	128 MB
64 MB	128 MB	192 MB
64 MB	256 MB	320 MB

Diskette Drive

Diskette Drive	
Capacity per Diskette (High/Low)	1.44Mb/720 Kb
Diskette Size	3.5 in
Number of LED Indicators	0
Number of Drives Supported	1
Drive Rotation (rpm)	300
Transfer Rate (Kbps)	500
Bytes per Sector	512
Sectors per Track (High/Low)	18/9
Tracks per Side (High/Low)	80
Access Times	
Track-to-Track (ms)	3
Average (ms)	94
Setting Time (ms)	15
Latency Average (ms)	100
Cylinders (High/Low)	80
Number of Read/Write Heads	2

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Hard Drive

Hard Drives			
Specification	6.0 GB	12.0 GB	18.0 GB
Drive Type	Ultra DMA 66.7	Ultra DMA 66.7	Ultra DMA 66.7
Cylinders	15200	15200	15200
Heads	2	4	6
Sectors per Track	63	63	63
Bytes per Sector	512	512	512
Seek Times (typical)			
Read/Write (incl. settling)	13 ms	13 ms	13 ms
Single track	3 ms	3 ms	3 ms
Full stroke	24 ms	24 ms	24 ms
Transfer Rate at Interface			
Ultra DMA mode (max)	66.7 Mb/s	66.7 Mb/s	66.7 Mb/s
PIO mode	16.6 Mb/s	16.6 Mb/s	16.6 Mb/s

CD or DVD Drive

CD or DVD Drive				
Specification	6x DVD	8x DVD	CD-RW	24x CD
Width	128 mm	128 mm	128 mm	128 mm
Height	12.7 mm	12.7 mm	12.7 mm	12.7 mm
Depth	129 mm	129 mm	129 mm	129 mm
Weight	280 g	270 g	300 g	<270 g
Rotational Speed Approx.	3450 rpm	2300 rpm	4200 rpm (CD)	4225 rpm
Sustained Data Transfer Rate (typical)	8100 Kb/s	5400Kb/s	Reading: 3000 Kb/s (20x CD) 2100 Kb/s (14x CD-RW) Writing:600 Kb/s (4x)	3600 Kb/s
Random Access Time (Avg.)	140 ms	140 ms	150 ms (Typ.)	120 ms
Spin Up Time	<15 s	3.8 s	<10 s	2.7 s
Data Buffer Capacity	512 Kb	128 Kb	2Mb	128 Kb

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Battery Pack

Battery Pack	
Type	Lithium Ion (Li-Ion)
Height	0.8 in (20.3 mm)
Length	5.7 in (145 mm)
Width	3.1 in (78.7 mm)
Weight	0.90 lb (408.2 g)
Discharge/Use Limit*	2 hr 30 min*
Energy	
Circuit Voltage	14.4 V
Capacity	3000 mAH
Power	43.2 WH
Temperature Requirements	
Operating	32°F (0-50° C)
Non-Operating	-20°C - 60° C
Charging	5°C - 45° C

**The battery discharge/use limit changes depending on the power management settings, system components such as installed PC cards, and the applications in use.*