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maintenance & service guide

Presario 1400 Series

Model XL240, XL241, XL242, XL244, XL245, XL246, XL247, XL250, XL340, XL341, XL342, XL343, XL344, XL345, XL346, XL350, XL352, XL355, and XL356

Specifications

Physical and Environmental

This section covers the following specifications of Compaq Presario 1400 Series Portable Notebooks.

Notebook Specifications		
	U.S.	Metric
Dimensions		
Height	1.67 in	42.40 cm
Depth	13.11 in	33.30 cm
Width	11.02 in	27.99 cm
Weight		
with 13.0 inch Display	6.40 lb	2.90 kg
with 13.3 inch Display	6.22 lb	2.82 kg
Stand-Alone (Battery Pack)		
Li-Ion Pack		
Power Requirements	W @ 14.8 V	
Nominal Operating	W @ 14.8 V	
Maximum Average	W @ 14.8 V	
NiMH Pack		
Power Requirements	W @ 9.6 V	
Nominal Operating	W @ 9.6 V	
Maximum Average	W @ 9.6 V	
AC Power Requirements (Input)		
Operating Voltage	100-240 V	
Operating Current	60 W	
Operating Frequency	50/60 Hz ~1.5A	
Maximum Transient	Meets IEC801-4 & IEC801-5	
Output	1 kV for 50 ns	
	19 V, 3.16 A	
Temperature		
Operating	50° to 95° F	10° to 35° C
Non Operating	-4° to 140° F	-20° to 60° C

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Notebook Specifications		
	U.S.	Metric
Relative Humidity (non-condensing)		
Operating	10% to 90%	
Non Operating (tw = 38.7 degree C max)	5% to 95%	
Altitude		
Operating	0 to 10,000 ft	
Non-Operating	0 to 30,000 ft	
Shock		
Operating	10 G, 11 ms, half sine	
Non-Operating	240 G, 2 ms, half sine	
Vibration		
Operating	0.5 G	
Non-Operating	1.5 G	
Note: Applicable product safety standards specify thermal limits for plastic surfaces. Compaq Presario 1400 Series Portable Notebooks operate well within this range of temperatures.		



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System Interrupts

System Interrupts			
Hardware IRQ	System Function	Hardware IRQ	System Function
IRQ0	System Timer	IRQ10	SCI IRQ used by ACPI Bus
IRQ1	Standard 101/102-key or Microsoft Natural Keyboard	IRQ11	ACPI IRQ Holder for PCI IRQ Steering
IRQ2	Programmable Interrupt Controller	IRQ11	VIA Tech 3038 PCI to USB Universal Host Controller
IRQ4	Communications Port (COM1)	IRQ11	ACPI IRQ Holder for PCI IRQ Steering
IRQ6	Standard Floppy Disk Controller	IRQ11	Compaq PCI Modem Enumerator
IRQ7	Printer Port (LPT1)	IRQ12	Synaptics PS/2 TouchPad
IRQ8	System CMOS/Real Time Clock	IRQ13	Numeric Data Processor
IRQ9	VIA PCI Audio Controller	IRQ14	VIA Bus Master PCI IDE Controller
IRQ9	Texas Instruments PCI-1211 CardBus Controller	IRQ14	Primary IDE Controller (Dual FIFO)
IRQ9	Trident CyberBlade i1 AGP (51)	IRQ15	VIA Bus Master PCI IDE Controller
		IRQ15	Secondary IDE Controller (Dual FIFO)



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System DMA

System DMA	
Hardware DMA	System Function
DMA 2	Standard Floppy Disk Controller
DMA 4	Direct Memory Access Controller

System I/O Addresses

System I/O Addresses	
I/O Address (Hex)	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-0075h	System CMOS/Real Time Clock
0081h-008Fh	Direct Memory Access Controller
00A0h-00A1h	Programmable Interrupt Controller
00C0h-00DFh	Direct Memory Access Controller
00F0h-00FFh	Numeric Data Processor
0170h-0177h	VIA Bus Master PCI IDE Controller
0170h-0177h	Secondary IDE Controller (dual FIFO)
01F0h-01F7h	VIA Bus Master PCI IDE Controller
01F0h-01F7h	Primary IDE Controller (dual FIFO)
0200h-0207h	Gameport Joystick
02F8h-02FFh	Compaq 56K V.90 HSF Mini PCI Modem
0376h-0376h	Secondary IDE Controller (dual FIFO)
0376h-0376h	VIA Bus Master PCI IDE Controller



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System I/O Addresses	
I/O Address (Hex)	System Function (Shipping Configuration)
0378h-037Fh	Printer Port (LPT1)
03B0h-03BBh	Trident CyberBlade i1 AGP (51)
03C0h-03DFh	Trident CyberBlade i1 AGP (51)
03E8h-03EFh	Symphony Port (COM3)
03F0h-03F5h	Standard Floppy Disk Controller
03F6h-03F6h	VIA Bus Master PCI IDE Controller
03F6h-03F6h	Primary IDE Controller (dual FIFO)
03F7h-03F7h	Standard Floppy Disk Controller
03F8h-03FFh	Communications Port (COM1)
0CF8h-0CFFh	PCI Bus
1000h-10FFh	VIA PCI Audio Controller (WDM)
1400h-141Fh	VIA Tech 3038 PCI to USB Universal Host Controller
1420h-1427h	Primary IDE Controller (dual FIFO)
1420h-142Fh	VIA Bus Master PCI IDE Controller
1428h-142Fh	Secondary IDE Controller (dual FIFO)
1430h-1433h	VIA PCI Audio Controller (WDM)
1434h-1437h	VIA PCI Audio Controller (WDM)
1438h-143Fh	Compaq PCI Modem Enumerator



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System Memory Catalog

System Memory Catalog	
Memory Address	System Function
00000000h-0009FFFFh	System Board Extension for ACPI BIOS
000A0000h-000AFFFFh	Trident CyberBlade i1 AGP (51)
000B0000h-000BFFFFh	Trident CyberBlade i1 AGP (51)
000C0000h-000CBFFFFh	Trident CyberBlade i1 AGP (51)
000DC000h-000DFFFFh	System Board Extension for ACPI BIOS
000E0000h-000FFFFFFh	System Board Extension for ACPI BIOS
03800000h-03800FFFh	Texas Instruments PCI-1211 CardBus Controller
F4000000h-F400FFFFh	Compaq PCI Modem Enumerator
F4100000h-F411FFFFh	Trident CyberBlade i1 AGP (51)
F4100000h-F57FFFFFFh	PCI Standard PCI-to-PCI Bridge
F4120000h-F412FFFFh	Trident CyberBlade i1 AGP (51)
F4800000h-F4FFFFFFh	Trident CyberBlade i1 AGP (51)
F5000000h-F57FFFFFFh	Trident CyberBlade i1 AGP (51)
F8000000h-FBFFFFFFh	PCI Standard Host CPU Bridge
FFFE0000h-FFFFFFFh	System Board Extension for ACPI BIOS

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HPA Display

12.1-in and 13-in HPA Display			
	12.1-in		13.0-in
Active Area			
Height	9.56 in (245 mm)		10.39 in (263.98 mm)
Width	7.17 in (183.8 mm)		7.79 in (197.98 mm)
Display Dimensions			
Height	7.9 in (202.5 mm)		11.6 in (295.0 mm)
Width	10.7 in (275.0 mm)		8.58 in (218.0 mm)
Depth	.31 in (8.0 mm)		.31 in (8.0 mm)
Contrast Ratio**	40:1	40:1	50:1
Brightness**	70nits*2	100nits*10	100nits*4
Response Time**	150ms	150ms	150ms*3
Refresh Rate**	100-150Hz	60-150Hz	60-150Hz

***Display Legend**

- 1) Measured at 3.5mArms lamp current
- 2) Measured at 4.5mArms lamp current
- 3) 150ms typical, 180ms maximum
- 4) 100nits typical, 80 minimum
- 5) 60ms typical, 100ms maximum
- 6) 50ms typical, 100ms maximum
- 7) Measured at 6mArms lamp current
- 8) Measured at 6mArms lamp current
- 9) 60ms typical, 100ms maximum
- 10) Minimum 80nits

**Display specifications—contrast ratio, brightness, response time, refresh rate—may vary depending on model.

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TFT Display

12.1-in and 13.3-in TFT Display				
	12.1-in			13.3-in
Dimensions Width	Information Not Available			Information Not Available
Display Dimensions	Information Not Available			Information Not Available
Height				
Width				
Depth				
Contrast Ratio**	250:1	200:1	200:1	200:1
Brightness**	100nits*1	130nits*7	145nits*8	130nits
Response Time**	50ms	50ms*6	60ms*9	60ms*5
Refresh Rate**	60 Hz	60 Hz	60 Hz	60 Hz

***Display Legend**

- 1) Measured at 3.5mArms lamp current
- 2) Measured at 4.5mArms lamp current
- 3) 150ms typical, 180ms maximum
- 4) 100nits typical, 80 minimum
- 5) 60ms typical, 100ms maximum
- 6) 50ms typical, 100ms maximum
- 7) Measured at 6mArms lamp current
- 8) Measured at 6mArms lamp current
- 9) 60ms typical, 100ms maximum
- 10) Minimum 80nits

**Display specifications—contrast ratio, brightness, response time, refresh rate—may vary depending on model.



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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)	1.44 MB/720 KB
Diskette Size	3.5 in
Number of LED Indicators (Read/Write)	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 Drive			
Drive Type	6.0 GB	12.0 GB	18.0 GB
Capacity Per Drive	6.0 GB	12.0 GB	18.0 GB
Logical Configuration			
Cylinders	8647	11968	11968
Heads	4	6	6
Sectors per track	190/330	190/330	190/330
Bytes per sector	512	512	512
Seek Times (Typical, including settling in ms)			
Single track	4	4	4
Average	14	14	14
Full stroke	24	24	24
Transfer Rate At Interface	33.3 MB/s	33.3 MB/s	33.3 MB/s

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CD/DVD Drive

CD/DVD Drive		
	24x CD-ROM	DVD
Dimensions	128 x 129 x 12.7 mm	128 x 129 x 12.7 mm
Weight	0.175 kg	0.28 kg
Rotational Speed	4225 rpm	3450 rpm
Typical Transfer Rate Sustained Data Transfer Rate	3600 KB/s	8100 KB/s
Access Time Average Random Access Time	120 ms	140 ms
Spin Up Time	2.7 s	<15 s
Data Buffer Capacity	128 KB	512 KB

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Battery Pack

Battery Packs		
Type	Lithium Ion (Li-ion)	Nickel Metal Hydride (NiMH)
Dimensions		
Height	0.8 inch (20.3 mm)	0.8 inch (20.3 mm)
Length	5.7 inch (145 mm)	5.7 inch (145 mm)
Width	3.1 inch (78.7 mm)	3.1 inch (78.7 mm)
Weight		
	0.90 pounds (408.2 g)	1.01 lbs (458.1 g)
Operating Lifetime		
	2 hr 30 min*	2 hr 30 min*
Energy		
Nominal Open	14.4 V	9.6 V
Circuit Voltage	14.4 V	9.6 V
Capacity	3000 mAh	4500 mAh
Power	43.2 WH	43.2 WH
Temperature Requirements		
Operating	32° F to 113° F (0° to 50° C)	32° F to 113° F (0° to 50° C)
Non-operating	-4° F to 140° F (-20° C -60° C)	-4° F to 140° F (-20° C -60° C)
Charging	40° F to 113° F (5° C -45° C)	40° F to 113° F (5° C -45° C)

**The battery operating lifetime changes depending on the use of power management settings, system components, options, and applications.*