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# Dell™ Latitude™ E6440 Technical Guidebook



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July 2013

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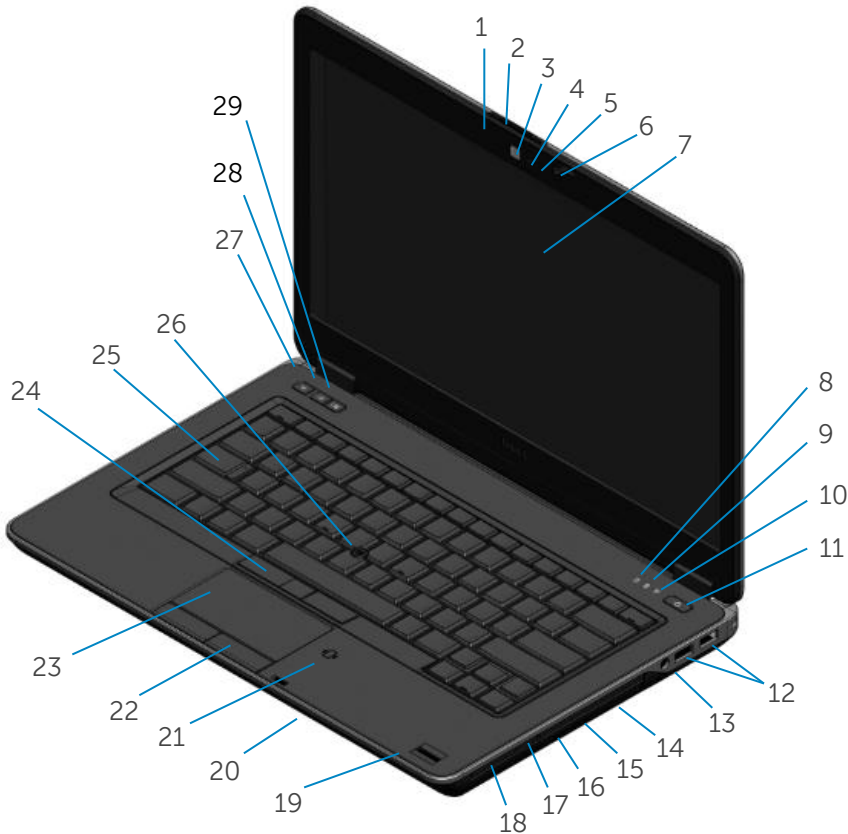
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# Latitude E6440 Product Views and Technical Specifications



# Latitude E6440 Weight, Dimensions, Top/Right View



1. Microphone
2. Display release button
3. Camera
4. Camera status indicator
5. Microphone
6. Display latch
7. Display
8. HDD activity indicator
9. Battery status indicator
10. Wireless status indicator
11. Power button
12. USB 3.0 connector.
13. Audio/microphone  
combo connector
14. E-module release button
15. ODD
16. ODD tray release button
17. Wireless switch.
18. Express card reader.
19. Fingerprint reader.
20. SD card reader
21. Contactless smart card reader
22. Touchpad button.
23. Touchpad.
24. Track stick buttons
25. Keyboard
26. Track stick
27. Mute button.
28. Volume down button.
29. Volume up button.

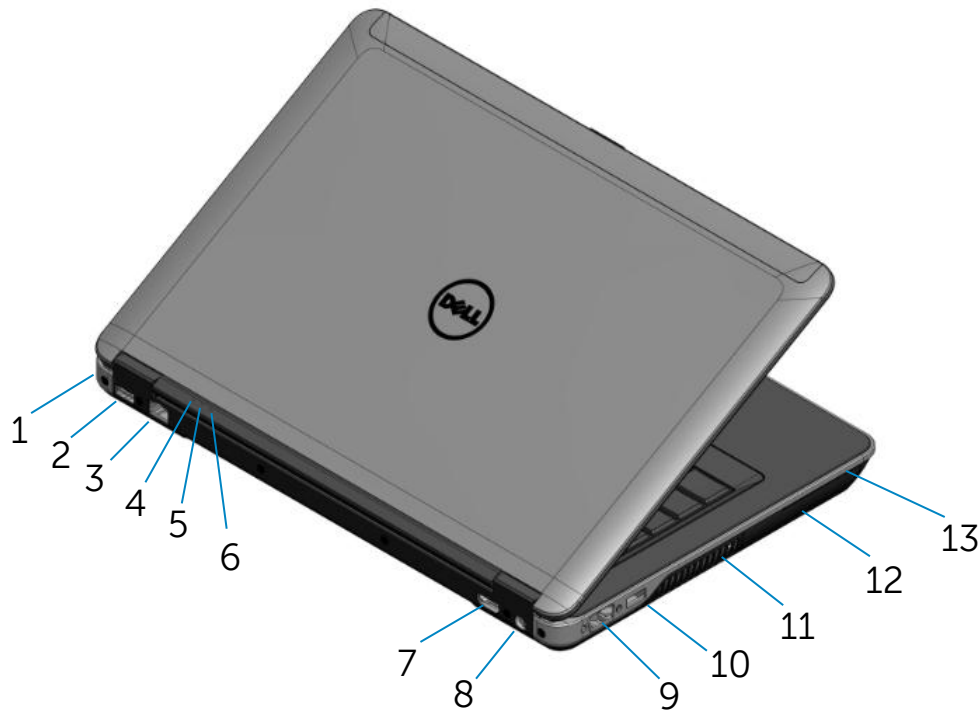
## Starting weight:

4.68lbs / 2.12kg (with 6-cell battery and ODD)

## Dimensions:

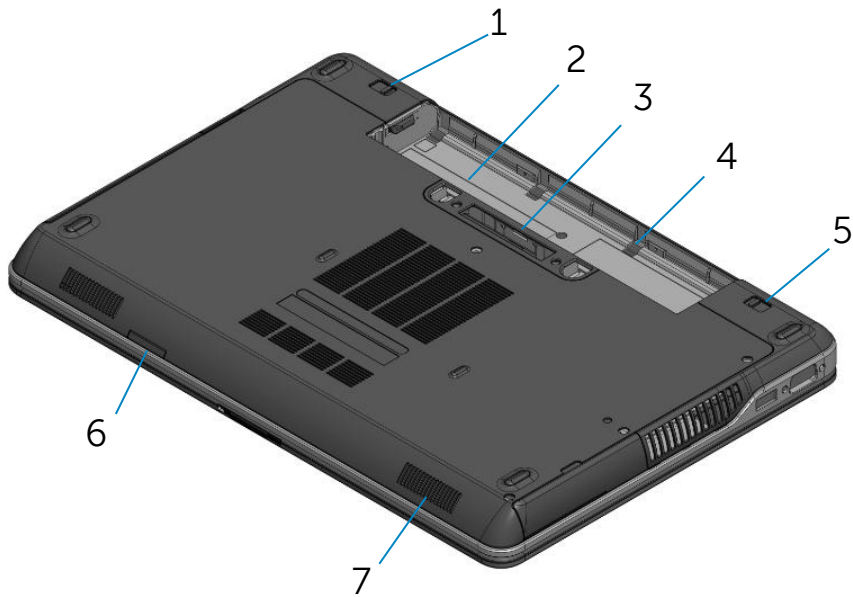
Width: 338.0 mm (13.31 inches)  
Depth: 232.6 mm (9.16 inches)  
Height: 30.8 mm (1.21 inches)

# Latitude E6440 Back/Left View



1. Security cable slot
2. USB 3.0 with power share.
3. RJ45 connector.
4. Battery status indicator.
5. HDD activity indicator.
6. Power status indicator
7. HDMI connector
8. Power connector
9. VGA connector
10. USB 3.0 connector
11. Cooling vents
12. HDD
13. Smart card slot

# Latitude E6440 Bottom View



1. Battery release latch (right)
2. SIM card slot
3. E-dock connector
4. Battery bay.
5. Battery release latch (left)
6. SD card reader
7. Speaker

# Latitude E6440 Technical Specifications

Feature	Technical Specification
Model Number	Latitude E6440
Processor Options	4th Generation Intel® Core™ up to i7 processors
Operating System	Microsoft® Windows® 7 Home Premium 32/64 bit Microsoft® Windows® 7 Professional 32/64 bit Microsoft® Windows® 7 Ultimate 32/64 bit Linux Ubuntu 12.04
Memory <sup>2,5</sup> Options	DDR3L SDRAM 1600MHz; 2 slots supporting up to 16GB
Chipset	Mobile Intel® QM87 Express Chipset
Intel Responsiveness Technologies	Optional Intel® Rapid Start Technology <sup>3</sup> Optional Intel® Smart Response Technology <sup>1,7</sup> Optional Intel® Smart Connect Technology <sup>8</sup>
Graphics	Intel® Integrated HD Graphics 4600 Optional AMD Radeon HD 8690M Graphics with 2GB memory
Display	14" HD (1366x768) Anti-Glare LED 14" HD+ (1600x900) Anti-Glare LED
Storage <sup>5</sup> Options	Standard 320GB Hard Disk Drive Up to 1TB Solid State Hybrid drive 500GB FIPS Self-Encrypting Drive Up to 180GB Solid State Drives 256GB Self-Encrypting Solid State Drive Dell Fast Response Free Fall Sensor and HDD Isolation (standard on the motherboard)
Optical Drive Options	DVD-ROM, DVD+/-RW
Multimedia	High Quality Speakers Stereo global headset Integrated, noise reducing array microphones Integrated HD video webcam and Dell Webcam Central software
Battery Options	6-cell (60Wh) Lithium Ion battery with ExpressCharge™ 9-cell (97Wh) Lithium Ion battery with ExpressCharge™ 9-cell (87Wh) 3 Year Limited Hardware Warranty <sup>4</sup> Lithium Ion battery
Power Options	65 Watt or 90 Watt AC Adapter 90W Auto/Air DC adapter (optional)



# Latitude E6440 Technical Specifications

Connectivity options	<p>10/100/1000 Gigabit Ethernet</p> <p><b>Optional Wireless LAN Options:</b></p> <p>Intel® Centrino® Advanced-N 6235 + Bluetooth 4.0</p> <p>Intel® Centrino® Ultimate-N 6300</p> <p>Dell Wireless 1506 (802.11g/n 1x1)</p> <p><b>Optional Mobile Broadband &amp; GPS Options:</b></p> <p>Dell Wireless™ 5570<sup>10</sup> HSPA+ (42Mbps) Mini Card</p>
Ports, Slots & Chassis	<p>Stereo global headset jack</p> <p>Memory card reader</p> <p>Docking connector, VGA, HDMI, USB3.0 (4)</p> <p>Network connector (RJ-45), SIM card connector</p> <p>1 full (WWAN) and two half (WLAN, DDPE<sup>1</sup>) card slots</p> <p>Optional SmartCard Reader/Contactless Smartcard Reader/Fingerprint Reader with 34mm Express Card</p> <p>Kensington slot</p>
Dimensions & Weight	<p>Width: 338.00 mm (13.31 inches)</p> <p>Height: 31.8mm (1.25 inches)</p> <p>Depth: 232.60 mm (9.16 inches)</p> <p>Starting weight: 4.68lbs / 2.12kg<sup>6</sup></p>
Regulatory and Environmental Compliance	<p>Regulatory Model: P38G</p> <p>Regulatory Type: P38G001</p> <p>ENERGY STAR 5.2 (Windows OS)</p> <p>EPEAT Registered. For specific country participation and rating, please see <a href="http://www.epeat.net">www.epeat.net</a></p> <p>BFR/PVC free<sup>9</sup></p>
Input	<p>Single Pointing non-backlit Keyboard</p> <p>Dual Pointing Keyboard, Standard or Backlit</p> <p>Multi-touch Touchpad</p>
Systems Management	<p>Intel® vPro™ Technology's advanced management features (optional, requires Intel WiFi® Link WLAN)</p>
Warranty and Service	<p>Limited Hardware Warranty<sup>4</sup>; Standard 3-year On Site Service after Remote Diagnosis<sup>11</sup> (3-3-3); Optional 3-year Dell ProSupport™ for IT<sup>12</sup> ; 4 year and 5 year service and support options<sup>12</sup></p>





# Latitude E6440 Technical Specifications

## Footnotes:

<sup>1</sup> Some items will be available post-RTS. Offering may also vary by country and by configuration. For complete details, refer to the Technical Guidebook available on [dell.com](http://dell.com).

<sup>2</sup> A 64-bit operating system is required to support 4GB or more of system memory

<sup>3</sup> Intel Rapid Start requires a Solid-State Drive (SSD) or properly configured HDD + SSD

<sup>4</sup> Limited Hardware Warranty: For copy of Limited Hardware Warranty, write Dell USA LP, Attn: Warranties, One Dell Way, Round Rock, TX 78682 or see [www.dell.com/warranty](http://www.dell.com/warranty)

<sup>5</sup> GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

<sup>6</sup> Based on Dell lab testing using the following configuration: 6-cell battery, integrated Graphics, optical drive, 1G DDR3 memory and M-SATA drive. Weights vary depending on configuration and manufacturing variability.

<sup>7</sup> Intel Smart Response Technology requires a Performance Hybrid Drive as primary storage device

<sup>8</sup> Intel Smart Connect requires an SSD or mSATA drive and either Intel WLAN or DW1550 WLAN. System must be on or in sleep mode with application running to update.

<sup>9</sup> Dell defines BFR/PVC Free as set forth in the Inemi Position Statement on the "definition of Low-Halogen Electronics BFR-/CFR-/PVC-free". Please see our corporate responsibility page at [www.dell.com/environment](http://www.dell.com/environment) for more information. Some external adapters, power cables and service parts are excluded from this definition unless specifically identified as BFR/PVC free.

<sup>10</sup> Mobile Broadband: Available in certain countries only. Subject to wireless provider's broadband subscription and coverage area; additional charges apply.

<sup>11</sup> Onsite Service after Remote Diagnosis: Remote Diagnosis is determination by online/phone technician of cause of issue; may involve customer access to inside of system and multiple or extended sessions. If issue is covered by Limited Hardware Warranty ([www.dell.com/warranty](http://www.dell.com/warranty)) and not resolved remotely, technician and/or part will be dispatched, usually within 1 business day following completion of Remote Diagnosis. Availability varies. Other conditions apply.

<sup>12</sup> Dell Services: Availability and terms of Dell Services vary by region. For more information, visit [www.dell.com/servicedescriptions](http://www.dell.com/servicedescriptions).



# Marketing System Configurations



# Latitude E6440 – Operating Systems

Windows operating system	Microsoft® Windows 7® Home Premium SP1 (32 and 64 bit), Microsoft® Windows 7® Home Premium w/MUI SP1 (32 and 64 bit), Microsoft® Windows 7® Professional w/MUI SP1 (32 and 64 bit), Microsoft® Windows 7® Professional SP1 (32 and 64 bit), Microsoft® Windows 7® Ultimate SP1 (32 and 64 bit)
Other	Linux Ubuntu 12.04 (32 bit)
OS Media Support	Optional



# Intel® processor Technology

## Haswell Architecture



### Latitude E6540 is built with Intel 4<sup>th</sup> Generation Core processor Technology

- Latest Intel 22nm Process Technology.
- 4<sup>th</sup> generation Standard Voltage (2-chip) Dual Core Processor and Chipset
- Intel® Integrated HD Graphics 4600
- Optional Intel® Rapid Start Technology
- Optional Intel® Smart Connect Technology
- Optional Intel® Smart Response Technology (post-launch)
- Optional Intel vPro™ technology (on i5 & i7) with Active Management Technology 9.0
- Intel® Wireless Display 4.1 driver included in Intel WLAN options.

Processors Support List	UMA Graphics	GSP
Intel® Core i7-4600M (Dual Core, 2.90GHz, 4M cache, 37W)	Intel® HD Graphics 4600	YES
Intel® Core i5-4300M (Dual Core, 2.60GHz, 3M cache, 37W)	Intel® HD Graphics 4600	YES
Intel® Core i5-4200M (Dual Core, 2.50GHz, 3M cache, 37W)	Intel® HD Graphics 4600	NO



# Memory

- Your computer supports a maximum of 16GB<sup>1</sup> of memory when you use two 8GB DIMMs; however, 32-bit operating systems, such as the 32-bit version of Microsoft® Windows® 7, can only use a maximum of 4GB of address space. Moreover, certain components within the computer require address space in the 4GB range. Any address space reserved for these components cannot be used by computer memory; therefore, the amount of memory available to a 32-bit operating system is less than 4GB.
- Greater than 4GB memory requires a 64-bit operating system.
- **ONLY MEMORY TYPE SUPPORTED: DDR3-LOW VOLTAGE (“DDR3L”)**
- **NOT BACKWARD COMPATIBLE WITH DDR3 MEMORY**

Memory	E6440
DIMM Slots	2
Minimum Memory Configuration	4GB
Maximum Memory Configuration*	16GB
DIMM Configurations:	
16G 1600MHz DDR3L (2x8G)	x
8G 1600MHz DDR3L (2x4G)	x
4G 1600MHz DDR3L (1x4G)	x



# Primary Storage and Intel Rapid Start Technology

Primary Storage	E6440
320GB 7200rpm	x
500GB <sup>1</sup> Solid State Hybrid (8GB cache)	x
500GB <sup>1</sup> 7200rpm Self Encrypting Drive, FIPS certified	x
1TB <sup>1</sup> Solid State Performance Hybrid	x
128GB <sup>1</sup> Mobility SSD	x
180GB <sup>1</sup> Mobility SSD	x
256GB <sup>1</sup> Mobility Self Encrypting SSD (SED)	x

**Mobility Solid State Drives** offer highly reliable, durable and lightweight storage. SSDs provide improved performance and operate quieter and cooler than standard hard drives.

**Self-Encrypting** drives provide hardware encrypted data protection which can be activated within a few seconds centrally and can be much safer and faster than software based encryption. Note: Encrypted drives require the system be configured in AHCI mode.

**Intel Rapid Start Technology dependencies with system memory and primary storage:**

- IRST is restricted against Self-Encrypting SSDs

<sup>1</sup> 1GB means 1 billion bytes



# Connectivity Options

	Connectivity Option	E6440
<b>WWAN (Full mini card)</b>	Dell Wireless™ 5570 <sup>1</sup> HSPA+ (42Mbps) Mini Card	X
	Intel® Centrino® Advanced-N 6235 + Bluetooth 4.0 (802.11a/b/g/n 2x2 Half Mini Card)	X
<b>WLAN (half mini card)</b>	Intel® Centrino® Ultimate®-N 6300 (802.11a/b/g/n 3x3 Half Mini Card)	X
	Dell Wireless™ DW1506 Wi-Fi (802.11b/g/n 1x1 Half Mini Card)	X

## WWAN Carriers & Countries

- US: not available
- Canada: not available
- Brazil: None (Generic)
- EMEA: None (Generic)
- APJ: None (Generic)

**NOTE :** Standalone Bluetooth 4.0 module is no longer available. Bluetooth 4.0 is only available via WLAN+BT combo cards, such as the Intel® Centrino® Advanced-N 6235 as indicated above

# Security and Keyboard specifications

<b>Security Hardware</b>	<b>E6440</b>
FIPS certified Trusted Platform Module (TPM)	X
Optional Dell ControlVault™ with Swipe Fingerprint Reader, Smart Card Reader, Contactless Smart Card Reader and 34mm Express Card	X
Optional Dell ControlVault™ with Smart Card Reader and 34mm Express Card	X

<b>Keyboard Specs</b>	
<b>Number of keys</b>	83 (U.S) 84 (Europe) 85 (Brazil) 87 (Japan)
<b>Layout</b>	QWERTY/AZERTY/Kanji
<b>Size</b>	Full sized (19.05-mm key pitch)
<b>Backlit keyboard option</b>	<ul style="list-style-type: none"><li>• Easy enable/disable via hotkey &lt;Fn+right arrow key&gt;</li><li>• 5 variable brightness levels</li></ul>



# Detailed Engineering Specifications



# 320GB 2.5" 7200rpm

<b>2.5" 320GB SATA2/SATA3 7200 RPM HDD</b>	
Capacity (bytes)	320,072,933,376
Dimensions inches (W x D x H)	Approximately (2.75 x 3.95 x 0.278 inches) for 7mm drive Approximately ( 2.75 x 3.95x0.374 inches) for 9.5mm drive
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0) Up to 3Gb/s (SATA 2.0)
Internal buffer size	16MB
Average Seek Time	13 ms
Rotational Speed	7200 rpm
Logical Blocks	625,142,448
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.7W, Active 3.25W(running IOMeter utility)
Spin Up Current (reference only)	5V (1A)
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Max Dew point Temperature	26°C
Altitude Range	-1000 ft to 10000 ft
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing
Max Dew point Temperature	33°C
Altitude Range	-1000 ft to 40000 ft

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.



# 500GB 2.5" Hybrid HDD

<b>2.5" 500GB SATA3 5400 RPM HYBRID HDD W/8GB FLASH</b>	
Capacity (bytes)	500,107,862,016
Cache	Dynamic
Dimensions inches (W x D x H)	Approximately (2.75 x 3.95 x 0.278 inches)
Interface type and Maximum speed	Up to 6Gb/s
Internal buffer size	64MB
Flash size	8GB
Average Seek Time	12 ms
Rotational Speed	5400 rpm
Logical Blocks	976,773,168
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.7W, Active 3.25W
Spin Up Current (reference only)	5V (1A)
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Max Dew point Temperature	26°C
Altitude Range	-1000 ft to 10000 ft
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing
Max Dew point Temperature	33°C
Altitude Range	-1000 ft to 40000 ft

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.



# 500GB 2.5" 5400rpm Self Encrypting Drive

<b>2.5" 500GB SATA 5400 RPM SELF ENCRYPTING DRIVE</b>	
Capacity (bytes)	500,107,862,016
Dimensions inches (W x D x H)	Approximately (3.93 x 2.75 x 0.374 inches)
Interface type and Maximum speed	Up to 3Gb/s
Internal buffer size	16 MB
Average Seek Time	13 ms (Read)
Rotational Speed	5400 rpm
Logical Blocks	976,773,168
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.7W, Active 3.25W
Spin Up Current (reference only)	5V (1A)
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Maximum Dew Point Temperature	26°C
Altitude Range	-1000 ft to 10000 ft
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing
Maximum Wet Bulb Temperature	33°C
Altitude Range	-1000 ft to 40000 ft

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.



# 1TB 2.5" Hybrid HDD

<b>2.5" 1000GB SATA3 5400 RPM HYBRID HDD W/8GB FLASH</b>	
Capacity (bytes)	1000204886016
Cache	Dynamic
Dimensions inches (W x D x H)	Approximately (2.75 x 3.95 x 0.374 inches)
Interface type and Maximum speed	Up to 6Gb/s
Internal buffer size	64MB
Flash size	8GB
Average Seek Time	15 ms
Rotational Speed	5400 rpm
Logical Blocks	1953525168
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.7W, Active 3.25W
Spin Up Current (reference only)	5V (1A)
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Max Dew point Temperature	26°C
Altitude Range	-1000 ft to 10000 ft
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing
Max Dew point Temperature	33°C
Altitude Range	-1000 ft to 40000 ft

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.



# 1TB 2.5" Performance Hybrid

<b>2.5" 1000GB SATA3 5400 RPM HYBRID HDD W/32GB FLASH</b>	
Capacity (bytes)	1000204886016
Cache	Dynamic
Dimensions inches (W x D x H)	Approximately (2.75 x 3.95 x 0.374 inches)
Interface type and Maximum speed	Up to 6Gb/s
Internal buffer size	64MB
Flash size	32GB
Average Seek Time	15 ms
Rotational Speed	5400 rpm
Logical Blocks	1953525168
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.7W, Active 3.25W
Spin Up Current (reference only)	5V (1A)
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Max Dew point Temperature	26°C
Altitude Range	-1000 ft to 10000 ft
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing
Max Dew point Temperature	33°C
Altitude Range	-1000 ft to 40000 ft

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.



# 128GB SSD

<b>128GB<sup>1</sup> SATA SOLID STATE DRIVE</b>	
Capacity (GB)	128
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	1.2M hours
Logical Blocks	250,069,680
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.5W, Active 2.5W

<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	0°C to 70°C
Relative Humidity Range	10 to 90%
Op Shock (@0.5ms)	1,500G
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5 to 95%

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.



# 180GB SSD

<b>180GB<sup>1</sup> SATA SOLID STATE DRIVE</b>	
Capacity (GB)	180
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	1.2M hours
Logical Blocks	1,230,918,888
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.5W, Active 2.5W

<b>Environmental Operating Conditions (Non-Condensing):</b>	
Temperature Range	0°C to 70°C
Relative Humidity Range	10 to 90%
Op Shock (@0.5ms)	1,500G
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5 to 95%

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.





# 256GB mSATA SED SSD (Opal certified)

## 256GB<sup>1</sup> MSATA OPAL SELF-ENCRYPTING DRIVE – SOLID STATE DRIVE

Capacity (GB)	256
Dimensions inches (W x D x H)	Approximately (1.175 x 2.00 x 0.150 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	1.2M hours
Logical Blocks	500,118, 192
<b>Power Source</b>	
Power Consumption (reference only)	Idle 0.5W, Active 2.5W

### Environmental Operating Conditions (Non-Condensing):

Temperature Range	0°C to 70°C
Relative Humidity Range	10 to 90%
Op Shock (@0.5ms)	1,500G

### Environmental Non-Operating Conditions (Non-Condensing):

Temperature Range	-40°C to 70°C
Relative Humidity Range	5 to 95%

<sup>1</sup> For hard drives, GB means 1 billion bytes ; actual capacity varies with preloaded material and operating environment and will be less.

# DVD-ROM

DVD-ROM	Ultra-slim
<b>External Dimensions</b> inches/centimeters (Without Bezel – W x H x D)	128.0 mm (5.04)/ 9.5mm (0.37 in)/ 126.1mm (4.97in)
<b>Weight (max)</b> pounds/kilograms	140g
<b>Interface type and speed</b>	SATA 1.5Gbit/s
<b>Disc Capacity</b>	Standard
<b>Internal buffer size</b>	supplier dependent
<b>Access Times (typical)</b>	supplier dependent
<b>Maximum Data Transfer Rates</b>	
Writes	N/A
Reads	8x DVD/ 24x CD
<b>Power Source</b>	
DC Power Requirements	5V
DC Current	800mA <sup>1</sup>
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Operating Temperature Range	5C to 50C
Relative Humidity Range	20% to 80% RH
Maximum Wet Bulb Temperature	29C
Altitude Range	-200 to 3048m
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Operating Temperature Range	-40C to 65C
Relative Humidity Range	5% to 95% RH
Maximum Wet Bulb Temperature	38C
Altitude Range	-200 to 10600m



# DVD-RW

DVD +/- RW:	Ultra-slim
<b>External Dimensions</b> inches/centimeters (Without Bezel – W x H x D)	128.0 mm (5.04)/ 9.5mm (0.37 in)/ 126.1mm (4.97in)
<b>Weight (max)</b> pounds/kilograms	140g
<b>Interface type and speed</b>	SATA 1.5Gbit/s
<b>Disc Capacity</b>	Standard
<b>Internal buffer size</b>	supplier dependent
<b>Access Times (typical)</b>	supplier dependent
<b>Maximum Data Transfer Rates</b>	
Writes	8x DVD / 24x CD
Reads	8x DVD/ 24x CD
<b>Power Source</b>	
DC Power Requirements	5V
DC Current	800mA <sup>2</sup>
<b>Environmental Operating Conditions (Non-Condensing):</b>	
Operating Temperature Range	5C to 50C
Relative Humidity Range	20% to 80% RH
Maximum Wet Bulb Temperature	29C
Altitude Range	-200 to 3048m
<b>Environmental Non-Operating Conditions (Non-Condensing):</b>	
Operating Temperature Range	-40C to 65C
Relative Humidity Range	5% to 95% RH
Maximum Wet Bulb Temperature	38C
Altitude Range	-200 to 10600m



# Ports and Connectors

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## E6440

<b>USB</b>	Total 4 USB connectors. USB 3.0 (4)
<b>Video</b>	VGA, HDMI (video output)
<b>Network Adapter</b>	RJ-45 network adapter
<b>Audio</b>	Four channel high definition audio Realtek ALC3226 Controller Stereo conversion: 24-bit (analog-to-digital and digital-to-analog)  Internal Interface - high-definition audio codec. External Interface - microphone-in and stereo headphone/headset combo connector  Speakers: Average Power / Peak Power : 2X1W / 2x1.5W Internal speaker amplifier: 1 watt per channel, 4 ohms Internal microphone: digital microphone array (dual microphone with camera option) Volume control buttons
<b>Expansion slots</b>	Memory card reader 1 full-size slot for WWAN & mSATA SSD 1 half mini-card slot for WLAN 1 half mini-card slot for GPE Card

# Webcam Specifications



## Easy Remote Collaboration:

- Videoconference online with an optional built-in camera.
- Dell Webcam Central software pre-installed for camera setup on MS Windows 7 configurations only

Webcam Features	E6440
Camera Type	HD fixed focus
Sensor Type	CMOS sensor technology
Resolution: Motion Video	Up to 1280 x 720 (0.92 MP)
Resolution: Still Image	Up to 1280 x 720 (0.92MP)
Imaging Rate	Up to 30 frames per second

# Wireless Communications: Wi-Fi (WLAN)

## Intel® 6235 2X2 802.11n + Bluetooth 4.0 + WiDi

<b>Host interface</b>	Half Mini Card form factor, based on PCIe electrical interface
<b>Network standard</b>	IEEE 802.11a/b/g/n
<b>Wi-Fi Alliance Certifications</b>	Wi-Fi Certified for 802.11a, 802.11b, 802.11g, 802.11n, WMM, WPA, WPA2, and WPS Wi-Fi Direct for peer to peer device connections
<b>Operating Frequency Bands</b>	2.4 GHz and 5 GHz
<b>Dual Stream N</b>	Support for two transmit and receive antennas enable better wireless at the same distance when compared to older 802.11a/b/g solutions.
<b>Data Rate</b>	Up to 300 Mbps
<b>Power Consumption</b>	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
<b>Authentication Authentication Protocols Encryption Product Safety</b>	WPA and WPA2, 802.1X,(EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2 64-bit and 128-bit WEP, AES-CCMP, TKIP UL, C-UL, CB(IEC60950-1)
<b>Management Capabilities Alerting</b>	AMT 8.0
<b>Government Compliance</b>	FIPS (Windows® 7 only), FISMA
<b>Client Utility</b>	Intel® PROSet/Wireless Software v15.x
<b>Software Support</b>	Microsoft® WHQL certified for Windows® 7, and Windows® 8; Linux
<b>Radio On/Off</b>	Supported in both hardware and software
<b>LED output</b>	Single WLAN-LED (as per Mini Card specification)
<b>Roaming</b>	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/n)
<b>Wake On Wireless</b>	Supported when VPro/AMT is activated, or Windows® 8 without Intel AMT
<b>Wireless Display</b>	Intel WiDi Wireless Display, supports external display resolutions up to 1080p

# Wireless Communications: Wi-Fi (WLAN)

## Intel® 6235 2X2 802.11n + Bluetooth 4.0 + WiDi

<b>Wireless PAN Standard</b>	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)
<b>Bluetooth Data rates</b>	Up to 13Mbps
<b>Bluetooth Operating Frequency Bands</b>	2.4GHz
<b>Bluetooth Profiles Supported</b>	Includes Streaming Stereo Quality Audio (A2DP), File Transfer (FTP), Dial-up Networking (DUN), Mice/Keyboards (HID), Printing (BPP), Digital Image Management (transfer, print, remote camera operation) (BIP), AVRCP
<b>Bluetooth Data Encryption</b>	128-bit encryption
<b>Bluetooth Output Power</b>	Power class 1
<b>Temperature</b>	operating temperature 0° to +80° C storage temperature of -40° to +70° C
<b>Humidity</b>	Up to 90% RH non-condensing (at temperatures of 25° C to 35° C)

# Wireless Communications: Wi-Fi (WLAN)

## Intel® Centrino® Ultimate®- N 6300

<b>Host interface</b>	Half Mini Card form factor, based on PCIe electrical interface
<b>Network standard</b>	IEEE 802.11a/b/g/n
<b>Wi-Fi Alliance Certifications</b>	Wi-Fi Certified for 802.11a, 802.11b, 802.11g, 802.11n, WMM, WPA, WPA2, and WPS
<b>Operating Frequency Bands</b>	2.4 GHz and 5.0 GHz
<b>Multi-Stream N</b>	Support for three transmit and receive antennas result in a more reliable and predictable Wi-Fi connection.
<b>Data Rate</b>	Up to 450 Mbps
<b>Power Consumption</b>	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
<b>Authentication</b>	WPA and WPA2, 802.1X,(EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
<b>Authentication Protocols</b>	PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2
<b>Encryption</b>	64-bit and 128-bit WEP, AES-CCMP, CKIP, TKIP
<b>Product Safety</b>	UL, C-UL, CB(IEC60950-1)
<b>Management Capabilities Alerting</b>	AMT 6.0 / DASH 1.0
<b>Government Compliance</b>	FIPS (Microsoft® Windows® Vista, and Windows® 7 only), FISMA
<b>Client Utility</b>	Intel® PROSet/Wireless Software v14.0
<b>Software Support</b>	Microsoft® WHQL certified for Windows® XP, Windows® Vista, and Windows® 7; Linux
<b>Radio On/Off</b>	Supported in both hardware and software
<b>LED output</b>	Single WLAN-LED (as per Mini Card specification)
<b>Humidity Non-Operating</b>	50% to 90% RH non-condensing (at temperatures of 25° C to 35° C)
<b>Operating Temperature</b>	0 to +60° C
<b>Roaming</b>	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/n)
<b>Wake On Wireless</b>	Supported when VPro/AMT is activated
<b>Wireless Display</b>	Intel WiDi Wireless Display, supports external display resolutions up to 1080p (driver release post RTS for WFA Wifi Display)



# Wireless Communications: Wi-Fi (WLAN)

## Dell Wireless™ DW1506 Wi-Fi

<b>Host interface</b>	PCI Express™ Half Mini-Card
<b>Network standard</b>	802.11b, 802.11g, and 802.11n
<b>Wi-Fi Alliance Certifications</b>	802.11b, 802.11g, WPA, WPA2, WMM
<b>Operating Frequency Bands</b>	2.4 GHz (802.11b/g/n)
<b>Dual Diversity Antenna Switching</b>	Dual diversity antenna switching for systems designed with main and auxiliary antennas.
<b>Data Rate</b>	802.11n - Up to 150 Mbps for HT40MHz ; 802.11n – Up to 72.2 Mbps for HT20MHz 802.11g - Up to 54 Mbps ; 802.11b - Up to 11 Mbps
<b>Receive Sensitivity</b>	802.11n: -65 dBm @ 150 Mbps ; -68 dBm @ 72.2Mbps 802.11g: -70 dBm @ 54 Mbps ; -88 dBm @ 6 Mbps 802.11b: -85 dBm @ 11 Mbps ; -90 dBm @ 1 Mbps
<b>Power Consumption</b>	TX Average: 1023 mW, RX Average: 594 mW
<b>Security</b> <b>Authentication</b> <b>EAP Methods</b> <b>Single Sign On</b> <b>Encryption</b> <b>Cisco Compatible Extensions</b>	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK, CCKM MD5, LEAP, EAP-FAST, EAP-TLS, PEAP(TLS, MS-CHAPv2, GTC) Open, Shared, MD5, LEAP, EAP-FAST, EAP-TLS, PEAP(TLS, MS-CHAPv2, GTC), Smart Cards WEP (64 bit/128 bit), CKIP (XP), TKIP, AES-CCMP Version 5 (Windows 7)
<b>Client Utility</b>	Passpoint (Hotspot2.0), UnifiedApp, Trouble shooting
<b>Software Support</b>	Microsoft® WHQL certified for Windows® 7 and Windows® 8
<b>Radio On/Off</b>	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
<b>LED output</b>	Wireless enable.
<b>Humidity</b>	5-90% (non-condensing)
<b>Temperature</b>	Operating 0 to +75C ; Storage -40 to +85C
<b>Roaming</b>	Seamless roaming between 802.11b, 802.11b/g, and 802.11n access points
<b>Wake On Wireless</b>	Supported when using Magic Packet over the Air



# Wireless Communications: Mobile Broadband

## Dell Wireless™ DW5570 HSPA+ Mini Card

<b>Carrier</b>	AT&T Mobility	Vodafone	TeliaSonera	Rogers	Telstra
<b>Network</b>	HSPA+/3G	HSPA+/3G	HSPA/3G	HSPA+/3G	HSPA+/3G
<b>Speed (Downlink)</b>	< 21.1 Mbps <sup>8</sup>	< 21.1 Mbps <sup>8</sup>	< 7.2 Mbps <sup>8</sup>	< 21.1 Mbps <sup>8</sup>	< 21.1 Mbps <sup>8</sup>
<b>Speed (Uplink)</b>	< 5.76 Mbps <sup>8</sup>	< 5.76 Mbps <sup>8</sup>	< 2.0 Mbps <sup>8</sup>	< 5.76 Mbps <sup>8</sup>	< 5.76 Mbps <sup>8</sup>
<b>Fallback Network</b>	EDGE/GPRS	EDGE/GPRS	EDGE/GPRS	EDGE/GPRS	EDGE/GPRS
<b>Fallback Speed</b>	EDGE 247.4 Kbps <sup>8</sup>	EDGE 247.4 Kbps <sup>8</sup>	EDGE 247.4 Kbps <sup>8</sup>	EDGE 247.4 Kbps <sup>8</sup>	EDGE 247.4 Kbps <sup>8</sup>
	GPRS 85.6 Kbps <sup>8</sup>	GPRS 85.6 Kbps <sup>8</sup>	GPRS 85.6 Kbps <sup>8</sup>	GPRS 85.6 Kbps <sup>8</sup>	GPRS 85.6 Kbps <sup>8</sup>
<b>Frequency Bands</b>	850/1900 HSPA/WCDMA 850/1900 EDGE/GPRS	900/2100 HSPA/WCDMA 900/1800 EDGE/GPRS	900/2100 HSPA/WCDMA 900/1800 EDGE/GPRS	850/1900 HSPA/WCDMA 850/1900 EDGE/GPRS	850/2100 HSPA/WCDMA 900/1800 EDGE/GPRS
<b>SIM</b>	Yes	Yes	Yes	Yes	Yes
<b>GPS</b>	Autonomous, A-GPS	Autonomous, A-GPS	Autonomous, A-GPS	Autonomous, A-GPS	Autonomous, A-GPS

# Wired Communications

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## Integrated Modem

V.92 Data/Fax Internal Modem	Optional
Bus	HDA Bus

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## Network Adapter (NIC) – Intel – E6540

Intel® I217 Gigabit Ethernet Controller	Integrated on system board
External connector type	RJ-45
Data Rates	10/100/1000 Mbps
Controller bus architecture	PCI-e V1.1x1
Power consumption (full operation per data rate connection speed)	1000 Mbps: 535 mW 100 Mbps: 260 mW 10 Mbps: 304 mW
Power consumption (standby operation)	No Link (low power mode): 17 mW No Link (w/ WOL): N/A (can't wake on LAN when there is no cable/link) 10 Mbps Idle (w/ WOL): 73 mW 100 Mbps Idle (w/ WOL): 180 mW
IEEE standards compliance	802.3, 802.3ab, 802.3u, 802.az
Boot ROM Support	PXE
Network Transfer Rate	Full duplex at 10, 100, or 1000 Mbps and half duplex at 10 or 100 Mbps.
Operating Temp/Storage Temp	0C to 85C/-40C to 125C
Operating Humidity	20% to 80% (non-condensing)
Operating System Driver support	DOS, Win Server 2008/2012, Linux, Win7, Win8
Manageability	WOL, PXE
Management Capabilities Alerting	AMT 9.0 / DASH 1.1

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# Integrated Graphics Controller

Integrated Graphics Controller	Intel HD, HD 4600 (Intel Haswell i3/i5/i7 Processors)
Model	E6440
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Clock Speeds	Core i7: 400 MHz graphics core Core i5: 400 MHz graphics core Core i3: N/A
Max Graphics dynamic frequency	Core i7: 1300MHz Core i5: 1250MHz or 1150MHz depending on CPU SKU Core i3: N/A
Estimated Maximum Power Consumption	NA
Display Support	LVDS (internal), Analog VGA, HDMI, DisplayPort (using E-Port Replicator/Plus)
Maximum Color Depth	32bit
Maximum Vertical Refresh Rate	Up to 85Hz depending on resolution
Operating Systems Graphics/ Video API Support	DirectX 11,1 (Windows 8 only), OpenGL 3.2
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max Digital: (HDMI) 1920x1080/32bpp @60Hz Max Digital: (DisplayPort) 2560x2048/32bpp @60Hz Analog: (VGA) 1600x1200/32bpp @ 85Hz or 1920x1200/32bpp @ 60Hz
Numbers of Displays Supported	3 max

# AMD Discrete Graphics Controller

Graphics Controller	AMD® Radeon HD™ 8690M (GDDR5 2GB) Discrete Graphics with AMD PowerXpress™
Models	E6440
Graphics Memory	2GB GDDR5
Bus Type	Internal PCIe
Memory Interface	64-Bit
Clock Speeds	975 MHz graphics core
Estimated Maximum Power Consumption	26W
Display Support	LVDS, Analog VGA, HDMI, DisplayPort, DVI(requires optional E-Port or E-Port Plus)
Maximum Color Depth	32bit (16.7 million)
Maximum Vertical Refresh Rate	Up to 85Hz depending on resolution
Operating Systems Graphics/ Video API Support	DirectX 11.1, OpenGL 4.1
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max Digital: 2560x1600/32bpp @60Hz Analog: 1920x1200/32bpp @ 110Hz or 2048x1536/32bpp @ 85Hz Min: 800x600/16bpp @ 440Hz
Numbers of Displays Supported*	Un-Docked – 3 max Docked – 3 max Note : Docked requires optional E-port or E-Port Plus

\* All display outputs are driven by the Intel graphics solution. Discrete graphics does not directly drive any display outputs

# Display

## E6440

### 14.0" HD Anti-Glare LCD display with LED backlight

Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions	
Height	205.6mm(maximum)
Width	320.9mm(maximum)
Diagonal	14.0"
Native Resolution	1366 x 768
Megapixels	1.05
Pixels per Inch (PPI)	112
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 40 degrees
Vertical View Angle	+10/-30 degrees
Pixel Pitch	0.2265 mm
Power Consumption (maximum)	3.8 W

# Display

## E6440

### 14.0" HD+ Anti-Glare LCD display with LED backlight

Type	HD+ Anti-Glare
Luminance (typical)	300 nits
Dimensions	
Height	205.6mm(maximum)
Width	320.9mm(maximum)
Diagonal	14.0"
Native Resolution	1600 x 900
Megapixels	1.44
Pixels per Inch (PPI)	131
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 40 degrees
Vertical View Angle	+10/-30 degrees
Pixel Pitch	0.1932 mm
Power Consumption (maximum)	6.3 W

# Latitude E6440 – Battery Specification

	6cell 65Whr	9cell 97Whr
Battery Type	Lithium ion	Lithium ion
Dimension		
Length	208.00 mm (8.18")	214.00 mm (8.43")
Width	48.08 mm (1.9")	71.79 mm (2.83")
Height	20.00 mm (0.79")	20.00 mm (0.79")
Weight	348.00 g (0.77 lb)	524.00 g (1.16 lb)
Voltage	11.1VDC	11.1VDC
Typical Amp-hour capacity	6.0Ahr	9.0Ahr
Typical Watt-hour capacity	65Whr	97Wh
Temperature		
Operating	Charge: 0 °C to 50 °C, 32 °F to 158 °F Discharge: 0 °C to 70 °C, 32 °F to 122 °F	Charge: 0 °C to 50 °C, 32 °F to 158 °F Discharge: 0 °C to 70 °C, 32 °F to 122 °F
Non-Operating	-20 °C to 65 °C 4 °F to 149 °F	-20 °C to 65 °C 4 °F to 149 °F
Charging time	0~15degC: 4 hour 16~45degC: 2 hours 46~60degC: 3 hours	0~15degC: 4 hour 16~45degC: 2 hours 46~60degC: 3 hours
ExpressCharge Capable	Yes	Yes
BATTMAN Capable	Yes	Yes

## Express charge benefits

- For a battery advertised as having the ExpressCharge™ feature, the battery typically will have greater than 80% charge after about an hour of charging with the system off, and fully charge in about 2 hours with the system off.
- Enabling Expresscharge™ requires that both the Latitude notebook and the battery that is used on the system be ExpressCharge™ capable. If any of the above requirements is missing, ExpressCharge™ will not be enabled.



# Power Adapters

Adapter Specifications	90W Auto/Air DC	E4 65W	65W BFR/PVC free	E5 65W	E5 90W	E4 130W
<b>Input voltage</b>	11-16VDC	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
<b>Input current (max)</b>	9.0 A	1.5 A	1.5 A	1.5 A	1.6 A	1.8 A
<b>Input frequency</b>	N/A	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
<b>Output current</b>	4.62 A (continuous)	3.34 A (continuous)	3.34 A (continuous)	3.34 A (continuous)	4.62 A (continuous)	6.7A (continuous)
<b>Rated output voltage</b>	19.5 VDC	19.5 VDC	19.5 VDC	19.5 VDC	19.5 VDC	19.5 VDC
<b>Weight (lbs)</b>	0.26	0.64	0.64	0.51	0.70	1.15
<b>Weight (kg)</b>	0.12	0.29	0.29	0.23	0.32	0.52
<b>Dimensions (inches)</b>	3.2 x 0.81	1.1 x 1.9 x 4.3	1.1 x 1.9 x 4.3	0.87 x 2.60 x 4.17	0.87 x 2.60 x 5.12	1.0 x 3.0 x 6.1
<b>Dimensions (mm)</b>	81.8 x 20.6	28 x 47 x 108	28 x 47 x 108	22 x 66 x 106	22 x 66 x 130	25.4 x 76.2 x 154.7
<b>Temperature range:</b>	0° to 45°C	0° to 40°C	0° to 40°C	0° to 40°C	0° to 40°C	0° to 40°C
<b>Operating</b>	32° to 113F	32° to 104°F	32° to 104°F	32° to 104°F	32° to 104°F	32° to 104°F
<b>Storage</b>	-40° to 70°C	-40° to 70°C	-40° to 70°C	-40° to 70°C	-40° to 70°C	-40° to 70°C
	-40° to 158°F	-40° to 158°F	-40° to 158°F	-40° to 158°F	-40° to 158°F	-40° to 158°F

- AC adapters are compliant with the ErP II Lot 6 new Europe Regulatory Power Requirements effective 1/3/2013

# Latitude Keyboards Hot Key Definition

## Keyboard Shortcuts

**Fn+F1 – Standby** Puts the system into Standby (S3) - does not wake the system.

**Fn+F2 – Num Lock** Used as Num Lock key.

**Fn+F3 – Scroll lock** Used as Scroll Lock key.

**Fn+F5 – Touchpad and Stick** Enables/disables the Touchpad and Stick. The hot key cycles through the following states when pressed:  
Touchpad disable (Stick enabled) ->  
Stick disable (Touchpad enabled) ->  
Touchpad and Stick disable -> Touchpad and Stick enable -> ...

**Fn+F8 – LCD and Projector display** Determines video output to LCD and external Video device(s) when attached and display(s) present. While running the OS, the scan-code is passed from the BIOS to the OS and will cycle through the following states when pressed: Computer only -> Duplicate -> Extend -> Projector only – based on priority see reference below (example: LCD only -> duplicate LCD & DP -> extended LCD & DP -> DP only). When in DRMK/DOS, the video only cycles through attached devices one at a time, not extended (example: LCD only -> DP only -> DVI only -> VGA only).

## Keyboard Shortcuts

**Fn+F10– Audio Previous** Used for selecting the previous audio track

**Fn+F11 – Audio Play/Pause** Used for playing and pausing audio tracks.

**Fn+F12 – Audio Next** Used for selecting the next audio track.

**Fn+Home – SysRq (System Request)** Used as SysRq key.

**Fn+End – Print Screen** Used as Print Screen key.

**Fn+Insert – Pause** Used as Pause key.

**Fn+(embedded keypad)** Used for converting the keyboard keys into a replicated number pad starting from keys 7, 8, & 9 down to “/” key (see keyboard for reference).

**Fn+UpArrow – Brightness Increase** Increases the stepping of LCD brightness for each press unless maximum is reached.

**Fn+DownArrow – Brightness Decrease** Decreases the stepping of LCD brightness for each press unless minimum is reached.

**Fn+RightArrow – KB Illumination/Backlight** Determines the Keyboard Illumination/Backlight brightness levels. The hot key cycles through the following brightness states when pressed: Disabled, 25%, 50%, 75%, 100%.

# Touch Pad Specifications

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## Touch Pad

<b>X/Y position resolution</b>	X: 25.33+/-2.53 counts/mm = 643.38+/-64.26 DPI Y: 37.06+/-3.71 counts/mm = 941.32+/-94.23 DPI
<b>Size</b>	Sensor-active area: <ul style="list-style-type: none"><li>• Width: 77mm (3.03")</li><li>• Height: 41.5mm (1.63")</li></ul>
<b>Multi-Touch</b>	Configurable Single Finger and Multi-Finger gestures

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<b>Supported Gestures</b>	<b>Windows 7</b>
<b>Circular Scrolling</b>	Supported (disabled by default)
<b>Drag Lock</b>	Supported
<b>Edge Swipe</b>	Not supported
<b>Horizontal / Vertical Scroll Zones</b>	Supported (disabled by default)
<b>Zoom Zones</b>	Supported (disabled by default)
<b>Zig Zag</b>	Supported (no checkbox to disable)
<b>2-finger Pan / Scroll</b>	Supported
<b>2-finger Pinch Zoom</b>	Supported (disabled by default)
<b>2-finger Rotate</b>	Supported (disabled by default)
<b>2-finger Tap</b>	Not supported
<b>3-finger Flick Right/Left/Up/Down</b>	Supported

# Operating conditions and MIL-STD-810G Testing

Models	E6440
Temperature Range	Operating 0° to 35°C (32° to 95°F) Storage -40° to 65°C (-40° to 149°F)
Relative humidity (maximum)	Operating 10% to 90% (noncondensing) Storage 5% to 95% (noncondensing)
Altitude (maximum)	Operating -15.2 to 3048 m (-50 to 10,000 ft) Storage -15.2 to 10,668 m (-50 to 35,000 ft)
<b>MIL-STD-810G Tests Performed and Passed</b>	<ol style="list-style-type: none"> <li>1. Altitude Storage/Air Transport (Method 500.5 I)</li> <li>2. Altitude Operation/Air Carriage (Method 500.5 II)</li> <li>3. High Temperature Storage &amp; Transition (Method 501.5 I)</li> <li>4. High Temperature Operational (Method 501.5 II)</li> <li>5. Low Temperature (Exaggerated) (Method 502.5 I)</li> <li>6. Low Temperature (Method 502.5 II)</li> <li>7. Thermal Shock (Method 503.5-3 C)</li> <li>8. Humidity Aggravated Cycle (Method 507.5 II)</li> <li>9. Sand and Dust Blowing Dust (Method 510.5 I)</li> <li>10. Shock Material to be Packaged (Method 516.5 II)</li> <li>11. Shock Crash Hazard (Method 516.5 V)</li> <li>12. Shock Functional Shock (Method 516.6 I)</li> <li>13. Shock Bench Handling (Method 516.6 VI)</li> <li>14. Vibration Operational (Method 514.6 I Cat 4)</li> <li>15. Vibration Non-Operational (Method 514.6 I Cat 24)</li> <li>16. IEC IP5x Dust Ingress Protection (IEC60529<sup>1</sup>)</li> <li>17. Keyboard Spill Test</li> </ol>

Link to Product Safety, EMC and Environmental Data Sheets:

[http://www.dell.com/content/topics/global.aspx/about\\_dell/values/regulatory\\_compliance/dec\\_conform?c=us&cs=04&l=en&s=bsd&redirect=1](http://www.dell.com/content/topics/global.aspx/about_dell/values/regulatory_compliance/dec_conform?c=us&cs=04&l=en&s=bsd&redirect=1)

<sup>1</sup> Tests completed by independent 3<sup>rd</sup> party ISO/IEC-17025 certified laboratories.

