
Dell™ Latitude™ 13 Education Series Technical Guidebook

January 2013



Specific features/models/configs/options discussed in this document may not be available WW

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Dell Latitude 13 Education Series Product Views and Technical Specifications

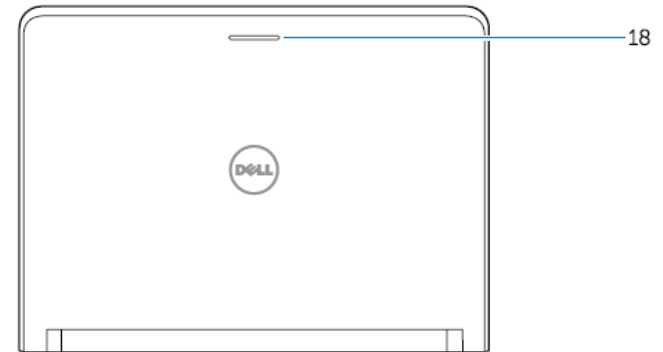
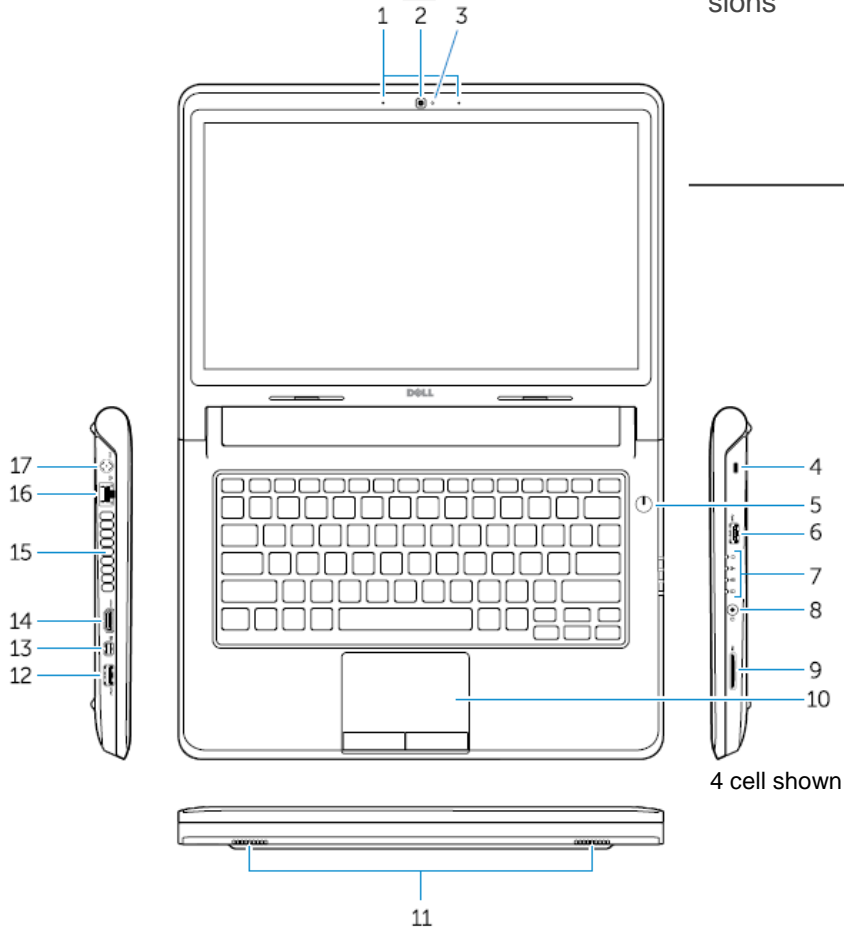
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Dell Latitude 13 Education Series

Weight, Dimensions and Views

	Non-Touch	Touch
Starting Weight	3.7lbs (1.7kg) 4-cell battery 3.9lbs (1.8kg) 6-cell battery	4.1lbs (1.9kg) 4-cell battery 4.3lbs (2.0kg) 6-cell battery
Dimensions	Width: 330.9 mm (13.0") Depth: 243.2 mm (9.6") Height: 22.7 mm (0.89") 4/6 cell (front) Height: 22.7 mm (0.89") 4 cell (rear) Height: 34.0 mm (1.34") 6 cell* <small>*6 cell height extend in the rear only</small>	Width: 330.9 mm (13.0") Depth: 243.5 mm (9.6") Height: 24.4 mm (0.96") 4/6 cell (front) Height: 25.6 mm (1.01") 4 cell (rear) Height: 35.9 mm (1.41") 6 cell* <small>*6 cell height extend in the rear only</small>



- | | |
|------------------------|---------------------------------------|
| 1. Microphone | 10. Touchpad |
| 2. Camera | 11. Speakers |
| 3. Camera status light | 12. USB 3.0 connector with PowerShare |
| 4. Security cable slot | 13. Mini DisplayPort connector |
| 5. Power button | 14. HDMI connector |
| 6. USB 3.0 connector | 15. Air vents |
| 7. Status lights | 16. Network connector |
| 8. Audio connector | 17. Power connector |
| 9. Memory card reader | 18. Network-status light |

Dell Latitude 13 Education Series Technical Specifications

Feature	Technical Specification
Model Number	Latitude 13 Education Series (Model 3340)
Processor Options	4th Generation Intel® Celeron and Core™ Processors up to i5
Operating System Options	Microsoft® Windows 8.1 Pro 64 bit Microsoft® Windows 8.1 64 bit Microsoft® Windows 8.1 Single Language 64 bit Microsoft® Windows® 7 Professional 32/64-bit (available through downgrade rights from Windows® 8.1 Pro 64-bit) Microsoft® Windows 7 Professional 32/64 bit Linux Ubuntu 12.04 SP1
Memory⁶ Options	DDR3L SDRAM 1600MHz; 2 slots supporting up to 8GB ^{6,7}
Chipset	Integrated with the processor
Intel Responsiveness Technologies	Optional Intel® Rapid Start Technology ^{8, 18} Optional Intel® Smart Response Technology ¹⁹ Intel® Rapid Storage Technology ¹⁷ Optional Intel® Smart Connect Technology ^{9, 18}
Graphics⁶ Options	Intel® Integrated HD Graphics for Celeron CPU Intel® Integrated HD Graphics 4400 for Core i CPUs
Display Options	Non-Touch: 13.3" 16:9 HD (1366 X 768) 200 nits, Trim options: Black/Cosmic Red/Sonic Blue Touch: 13.3" 16:9 HD (1366 X 768) 200 nits, Corning® Gorilla® Glass NBT™, anti-reflective, anti-smudge, Trim option: Black
Storage Options	Up to 500GB ² 7200RPM Standard Hard Disk Drive 500GB ² Solid State Hybrid Drive w/ 8GB Cache 500GB ² High-Performance Solid State Hybrid Drive w/ 16GB Cache 80GB ² SSD, mSATA 128GB ² SSD, 2.5inch 7mm
Optical Drive Options	External Options only

Dell Latitude 13 Education Series Technical Specifications

Feature	Technical Specification
Multimedia	High Quality Speakers Stereo Global Headset Jack (global headset jack + microphone + line in) Dual Array Microphone with Waves Noise Cancelling Software HD Video Webcam, Dell Webcam Central Software (Windows® 7), Native support on Windows® 8.1 Network Activity Light
Battery Options	4 cell (43 WHr) Lithium Ion Battery with ExpressCharge™ 6 cell (65 WHr) Lithium Ion Battery with ExpressCharge™ Optional Long Life Cycle Battery available on 6-cell
Power Options	65W AC Adapter 90W AC Adapter (India only) 65W BFR/PVC Free AC Adapter (optional) 65W Wall Adapter (optional)
Connectivity Options	10/100/1000 Ethernet Wireless LAN Options Dell Wireless™ 1707 802.11n 1X1 Single Band Wi-Fi + BT 4.0LE Wireless Card Intel® 2X2 Dual Band Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0 LE Wireless Card* <small>*WiDi requires an Intel wireless card, a compatible Media Adapter (sold separately) and an HDMI or composite AV-enabled display</small> Mobile Broadband Options ¹¹ Dell Wireless™ DW5570 HSPA+/42Mbps Mobile Broadband Card (EMEA /APJ/ROW) Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5808 for AT&T, Verizon, Sprint Wireless, US, Canada, generic)
Ports, Slots & Chassis	mDP, HDMI, (2) USB 3.0 (1 w/ Power share); SD 4.0 card reader; RJ-45; universal mic/headset
Security	Dell Data Protection Security Tools Dell Data Protection Encryption Software Upsell Options Dell Data Protection Protected Workspace (1 year subscription included, Windows® 7) TPM 1.2 Lock slot



Dell Latitude 13 Education Series Technical Specifications

Feature	Technical Specification		
Dimensions & Starting Weight¹	<table border="0"> <tr> <td style="vertical-align: top;"> <p>Non-Touch: Width: 330.9 mm (13.0") Depth: 243.2 mm (9.6") Height: 22.7 mm (0.89") 4/6 cell <small>(front)</small> Height: 22.7 mm (0.89") 4 cell <small>(rear)</small> Height: 34.0 mm (1.34") 6 cell* *6 cell height extend in the rear only</p> <p>Starting weight: 3.7lbs (1.7kg) 4-cell battery 3.9lbs (1.8kg) 6-cell battery</p> </td> <td style="vertical-align: top;"> <p>Touch: Width: 330.9 mm (13.0") Depth: 243.5 mm (9.6") Height: 24.4 mm (0.96") 4/6 cell <small>(front)</small> Height: 25.6 mm (1.01") 4 cell <small>(rear)</small> Height: 35.9 mm (1.41") 6 cell* *6 cell height extend in the rear only</p> <p>Starting weight: 4.1lbs (1.9kg) 4-cell battery 4.3lbs (2.0kg) 6-cell battery</p> </td> </tr> </table>	<p>Non-Touch: Width: 330.9 mm (13.0") Depth: 243.2 mm (9.6") Height: 22.7 mm (0.89") 4/6 cell <small>(front)</small> Height: 22.7 mm (0.89") 4 cell <small>(rear)</small> Height: 34.0 mm (1.34") 6 cell* *6 cell height extend in the rear only</p> <p>Starting weight: 3.7lbs (1.7kg) 4-cell battery 3.9lbs (1.8kg) 6-cell battery</p>	<p>Touch: Width: 330.9 mm (13.0") Depth: 243.5 mm (9.6") Height: 24.4 mm (0.96") 4/6 cell <small>(front)</small> Height: 25.6 mm (1.01") 4 cell <small>(rear)</small> Height: 35.9 mm (1.41") 6 cell* *6 cell height extend in the rear only</p> <p>Starting weight: 4.1lbs (1.9kg) 4-cell battery 4.3lbs (2.0kg) 6-cell battery</p>
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Regulatory and Environmental Compliance	Regulatory Model: P47G Regulatory Type: P47G001 Energy STAR® 6.0 Qualified EPEAT® Gold Registered ¹² BFR/PVC Free ¹⁰ California (CEC) Battery Charger Regulation		
Input	Single Pointing non-backlit Keyboard Multi-touch Touchpad		
Configuration Services¹³	Factory Image Load, BIOS Customization, Hardware Customization, Asset Tagging and Reporting		
Warranty and Service	Limited Hardware Warranty ¹⁴ ; Standard 1-year On Site Service after Remote Diagnosis ¹⁵ (1-1-1); Optional 1-year Dell ProSupport™ for IT ¹⁶ ; 2,3,4 and 5 year service and support options ¹⁶		
Recommended Accessories for Student and Classroom	<ul style="list-style-type: none"> • Dell backpacks: Adventure, Halfday, Urban; Dell slip case • Dell Mobile Computing Cart (managed and unmanaged) • Dell Projectors: Interactive Touch S520, Interactive S320wi 		

NOTE: Optional features listed in this document are suggested offering for US only. Regional optional features may vary in other countries. EPEAT registration varies by country. Please see www.epeat.net for specific country registration and rating.



Dell Latitude 13 Education Series Technical Specifications

Footnotes:

¹Based on Dell lab testing. Weights vary depending on configuration and manufacturing variability

² GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less

⁶GB means 1 billion bytes and TB equals 1 trillion bytes; significant system memory may be used to support graphics, depending on system memory size and other factors

⁷A 64-bit operating system is required to support greater than 4GB of system memory

⁸ Requires an SSD or High Performance Solid State Hybrid Drive

⁹ Requires an SSD and an Intel WLAN

¹⁰ Dell Latitude laptops are brominated flame retardant free (BFR-free) and polyvinyl chloride free (PVC-free); meeting the definition of BFR-/PVC-free as set forth in the iNEMI Position Statement on the 'Definition of Low-Halogen Electronics (BFR-/CFR-/PVC-free)'. Plastic parts contain less than 1,000 ppm (0.1%) of bromine (if the Br source is from BFRs) and less than 1,000 ppm (0.1%) of chlorine (if the Cl source is from CFRs or PVC or PVC copolymers). All printed circuit board (PCB) and substrate laminates contain bromine/chlorine total less than 1,500 ppm (0.15%) with a maximum chlorine of 900 ppm (0.09%) and maximum bromine being 900 ppm (0.09%). Unless specifically stated, external power cords, adapters, peripherals and service parts are excluded.

¹¹Mobile Broadband: Subject to wireless provider's broadband subscription and coverage area; additional charges apply.

¹² EPEAT registration varies by country. Please see www.epeat.net for specific country registration and rating

¹³Availability and terms of Dell Services vary by Region. For more information visit, www.dell.com/servicedescriptions

¹⁴Limited 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

¹⁵ 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) 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.

¹⁶ Dell Services: Availability and terms of Dell Services vary by region. For more information, visit www.dell.com/servicedescriptions.

¹⁷ Requires an SSD, High Performance Solid State Hybrid Drive, Solid State Hybrid Drive or Standard Hard Disk Drive

¹⁸ Requires Intel Core iX CPUs

¹⁹ Requires a High Performance Solid State Hybrid Drive



Marketing System Configurations

Specific features/models/configs/options discussed in this document may not be available WW



Dell Latitude 13 Education Series– Operating Systems



Windows 8.1	<ul style="list-style-type: none">• Microsoft® Windows 8.1 Pro 64 bit• Microsoft® Windows 8.1 64 bit• Microsoft® Windows 8.1 Single Language 64 bit
Windows 7	<ul style="list-style-type: none">• Microsoft® Windows 7 Home Basic EM 32/64 bit• 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 SP1
Windows Downgrade	<ul style="list-style-type: none">• Microsoft® Windows® 7 Professional 32/64-bit (available through downgrade rights from Windows® 8.1 Pro 64-bit)
Other	<ul style="list-style-type: none">• Linux Ubuntu 12.04
OS Media Support	<ul style="list-style-type: none">• 100% Drop in the box provided for Windows 8.1 on Downgrade• Optional RDVD or USB upsell (select one)



Intel® processor Technology

Haswell Architecture



Dell Latitude 13 Education Series is built with Intel 4th Generation Core processor Technology

- Latest Intel 22nm Process Technology.
- 4th generation ULT (Single-chip) Processor and Chipset
- Intel® Integrated HD Graphics 4400 and Intel® HD Graphics
- Optional Intel® Rapid Start Technology
- Optional Intel® Smart Connect Technology
- Optional Intel® Smart Response Technology
- Intel® Rapid Storage Technology
- For storage/OS/CPU/WLAN restrictions/requirements on Responsiveness Technologies please see the Train the Trainer document

Processors Support List

UMA Graphics

Intel® Core™ i5-4200U	Intel® HD Graphics 4400
Intel® Core™ i3-4010U	Intel® HD Graphics 4400
Intel® Celeron™-4005U (<i>post RTS</i>)	Intel® HD Graphics 4400
Intel® Celeron™-2957U	Intel® HD Graphics

Memory

Your computer supports a maximum of 8GB of memory when you use two 4GB 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.

Memory modules can be installed in single or dual DIMM configurations. If the memory modules are not installed in matched pairs, the computer will continue to operate.

Memory	Dell Latitude 13 Education Series
DIMM Slots	2
Minimum Memory Configuration	2GB (via CFI only)
Maximum Memory Configuration*	8GB
DIMM Configurations:	
16G 1600MHz DDR3L (2x8G)	*Test Only
8G 1600MHz DDR3L (2x4G)	✓
4G 1600MHz DDR3L (1x4G)	✓
2G 1600MHz DDR3L (1x2G)	Via CFI only



Primary Storage and Intel Rapid Start Technology

Primary Storage	Dell Latitude 13 Education Series
500GB ¹ 5400RPM	✓
500GB ¹ Value Hybrid 8GB	✓
500GB ¹ Performance Hybrid 16GB	✓
80GB ¹ mSATA	✓
128GB ¹ Mobility SSD	✓

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.

For storage/OS/CPU/WLAN restrictions/requirements on Responsiveness Technologies please see the Train the Trainer document

¹ 1GB means 1 billion bytes

Connectivity Options

Connectivity Option	Dell Latitude 13 Education Series	Regions	Carriers	
WWAN (Full mini card)	Dell Wireless™ DW5570 HSPA+/42Mbps Full Mini Card (EMEA /APJ/ROW)	✓	APJ/EMEA/ROW	EMEA: generic & Telefonica APJ: generic (no SIM)
	Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5808 for AT&T, Verizon Wireless, US. Canada, generic)	✓	US/Canada	US: AT&T, Verizon* and Sprint Canada: Generic
WLAN (Half mini card)	Dell Wireless™ 1707 802.11n Single Band Wi-Fi + BT 4.0LE Wireless Card	✓	All	NA
	Intel® Dual Band Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0 LE Wireless Card	✓	802.11AC WLAN cards cannot be sold into Ukraine, Russia, Kuwait, Egypt and Indonesia	NA

*Verizon TA is PRTS March 25, 2014

*Telus/Rogers TA is PRTS March 18, 2014

Security and Keyboard specifications

Security Hardware

	Dell Latitude 13 Education Series
Standard Trusted Platform Module (TPM)	✓
Internal fingerprint reader	NA
Internal Smart Card Reader	NA

Keyboard Specs

Number of keys	82 (U.S) 86 (Japan) 83 (UK)
Layout	US/UK/Japanese
Size	full sized (19.05mm key pitch)
Backlit keyboard option	NA

- Supports passive stylus
- Does not support active stylus

Detailed Engineering Specifications

Specific features/models/configs/options discussed in this document may not be available WW



500GB HDD 5400 RPM

500 GB HDD 5400 RPM	
Capacity (GB)	500GB
Dimensions inches (W x D x H)	Approximately (2.760 x 3.959 x 0.276 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	550,000 hours
Logical Blocks	976,773,168
Power Source	
Power Consumption (reference only)	Idle 0.7W, Active 3.10 W

Environmental Operating Conditions (Non-Condensing):	
Temperature Range	5°C to 60°C
Relative Humidity Range	5 to 90%
Op Shock (@2ms)	350G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5 to 95%

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



500GB Hybrid 8GB

500GB HYBRID 8GB	
Capacity (GB)	500GB
Dimensions inches (W x D x H)	Approximately (2.760 x 3.959 x 0.276 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	550,000 hours
Logical Blocks	625,142,448
Power Source	
Power Consumption (reference only)	Idle 0.7W, Active 3.10 W

Environmental Operating Conditions (Non-Condensing):	
Temperature Range	5°C to 60°C
Relative Humidity Range	5 to 90%
Op Shock (@2ms)	350G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5 to 95%

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500GB Hybrid 16GB

500GB HYBRID 16 GB	
Capacity (GB)	500GB
Dimensions inches (W x D x H)	Approximately (2.760 x 3.959 x 0.276 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	550,000 hours
Logical Blocks	625,142,448
Power Source	
Power Consumption (reference only)	Idle 0.7W, Active 3.10 W

Environmental Operating Conditions (Non-Condensing):	
Temperature Range	5°C to 60°C
Relative Humidity Range	5 to 90%
Op Shock (@2ms)	350G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5 to 95%

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80GB mSATA

80GB MSATA	
Capacity (GB)	80GB MSATA
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	1M hours
Logical Blocks	156,301,488
Power Source	
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%

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



128GB SSD 2.5"

128 GB SSD 2.5"	
Capacity (GB)	128GB SSD
Dimensions inches (W x D x H)	Approximately (2.75 x 3.937 x 0.268 inches)
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	1M hours
Logical Blocks	250,069,680
Power Source	
Power Consumption (reference only)	Idle 0.7W, 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%

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Memory

Your computer supports a maximum of 8GB of memory when you use two 4GB 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.

Memory modules can be installed in single or dual DIMM configurations. If the memory modules are not installed in matched pairs, the computer will continue to operate.

Memory	Dell Latitude 13 Education Series
DIMM Slots	2
Minimum Memory Configuration	2GB (via CFI only)
Maximum Memory Configuration*	8GB
DIMM Configurations:	
16G 1600MHz DDR3L (2x8G)	*Test Only
8G 1600MHz DDR3L (2x4G)	✓
4G 1600MHz DDR3L (1x4G)	✓
2G 1600MHz DDR3L (1x2G)	Via CFI only



Ports and Connectors

Dell Latitude 13 Education Series

USB	USB 3.0 (2)- one PowerShare capable
Video	mDP, HDMI
Network Adapter	RJ-45 network adapter
Modem	NA
Audio	Two channel high definition audio Realtek ALC3234-CG Controller Stereo conversion: 24-bit (analog-to-digital and digital-to-analog) Internal Interface - high-definition audio codec. External Interface - microphone-in and stereo headphones/speakers universal connector Speakers: Power / Peak Power: 2X2Wrms/2X2.5Wpeak Internal speaker amplifier: 2 watt per channel Internal microphone: digital microphone (dual microphone with camera) No volume control buttons, only support hot-key keyboard button
Expansion	SD 4.0 Memory card reader 1 3042, 1 3030 M.2 slots
Express Card	NA



Webcam Specifications



Easy Remote Collaboration:

- Videoconference online with a built-in camera
- Dell Webcam Central software pre-installed for camera setup on MS Windows 7 configurations only
- The camera is natively supported on Windows 8.1

Webcam Features	Dell Latitude 13 Education Series
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)

Dell Wireless™ 1707 802.11n 1X1 Single Band Wi-Fi + BT 4.0LE Wireless Card

Host interface	M.2 1630 form factor (WiFi – PCIe, Bluetooth – USB)
Network standard	802.11b, 802.11g, and 802.11n
Wi-Fi Alliance Certifications	802.11b, 802.11g, WPA, WPA2, WMM
Operating Frequency Bands	2.4 GHz (802.11b/g/n)
Dual Diversity Antenna Switching	Dual diversity antenna switching for systems designed with main and auxiliary antennas.
Data Rate	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
Receive Sensitivity	802.11n: -61 dBm @ 150 Mbps ; -64 dBm @ 72.2Mbps 802.11g: -65 dBm @ 54 Mbps 802.11b: -79 dBm @ 11 Mbps
Security	
Authentication	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK, CCKM
EAP Methods	MD5, LEAP, EAP-FAST, EAP-TLS, PEAP(TLS, MS-CHAPv2, GTC)
Single Sign On	Open, Shared, MD5, LEAP, EAP-FAST, EAP-TLS, PEAP(TLS, MS-CHAPv2, GTC), Smart Cards
Encryption	WEP (64 bit/128 bit), CKIP (XP), TKIP, AES-CCMP
Cisco Compatible Extensions	Version 5 (Windows 7)
Software Support	Microsoft® WHQL certified for Windows® 7 and Windows® 8.1
Radio On/Off	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
LED output	Wireless enable.
Humidity Non-Operating	Up to 80%
Temperature	Operational 0 to 70C; Storage -20 to 70C
Roaming	Seamless roaming between 802.11b, 802.11b/g, and 802.11n access points
Wake On Wireless	Supported when using Magic Packet over the Air



Wireless Communications: Wi-Fi (WLAN)

Dell Wireless™ 1707 802.11n 1X1 Single Band Wi-Fi + BT 4.0LE Wireless Card

Wireless PAN Standard	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)
Bluetooth Data rates	Up to 2169kbps
Bluetooth Operating Frequency Bands	2.4GHz
Transmission	FHSS (Frequency Hopping Spread Spectrum)
Bluetooth Data Encryption	128-bit encryption
Bluetooth Output Power	-6~4dBm
Receiver Sensitivity	-70dBm
Temperature	Operational 0 to 70C; Storage -20 to 70C
Humidity	Up to 80%

Wireless Communications: Wi-Fi (WLAN)

Intel® 2X2 Dual Band Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0 LE Wireless Card*

Host interface	M.2 2230 form factor (WiFi – PCIe, Bluetooth – USB)
Network standard	IEEE 802.11a/b/g/n/ac
Wi-Fi Alliance Certifications	802.11ac, 802.11n, 802.11w, WPA, WPS, WMM, WFD, Wi-Fi Direct
Operating Frequency Bands	2.4 GHz and 5 GHz
Dual Stream N	Support for two transmit and receive antennas enable better wireless at the same distance when compared to older 802.11a/b/g solutions.
Data Rate	Up to 867 Mbps
Power Consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication Authentication Protocols Encryption Product Safety	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)
Management Capabilities Alerting	Support for Intel® AMT 9.5 on Shark Bay ULT Platforms, and AMT 9.0 on Shark Bay Traditional Platforms
Government Compliance	FIPS (Windows® 7 only), FISMA
Client Utility	Intel® PROSet/Wireless Software v16.x
Software Support	Microsoft® WHQL certified for Windows® 7 and Windows® 8.1; Linux
Radio On/Off	Supported in both hardware and software
LED output	Single WLAN-LED
Roaming	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/n)
Wake On Wireless	Supported when VPro/AMT is activated, or Windows® 8 without Intel AMT
Wireless Display	Intel WiDi Wireless Display, supports external display resolutions up to 1080p

COUNTRY RESTRICTIONS: 802.11AC WLAN cards cannot be sold into Ukraine, Russia, Kuwait, Egypt and Indonesia

*WiDi requires an Intel wireless card, a compatible Media Adapter (sold separately) and an HDMI or composite AV-enabled display



Wireless Communications: Wi-Fi (WLAN)

Intel® 2X2 Dual Band Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0 LE Wireless Card

Wireless PAN Standard	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)
Bluetooth Data rates	Up to 3Mbps
Bluetooth Operating Frequency Bands	2.4GHz
Bluetooth Profiles Supported	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
Bluetooth Data Encryption	128-bit encryption
Bluetooth Output Power	Power class 1
Temperature	operating temperature 0° to +80° C storage temperature of -40° to +70° C
Humidity	Up to 90% RH non-condensing (at temperatures of 25° C to 35° C)

Wired Communications

Network Adapter (NIC) – Intel

Intel® i218LM 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): 68 mW 100 Mbps Idle (w/ WOL): 176 mW
IEEE standards compliance	802.3, 802.3ab, 802.3u, 802.az
Boot ROM Support	Support boot from PXE option ROM
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	Win Server 2008/2012, Linux, Win7, Win8
Manageability	WOL, PXE
Management Capabilities Alerting	AMT 9.5 / DASH 1.1

Wireless Communications: Mobile Broadband

Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5808 for AT&T, Verizon*, Spring Wireless, US. Canada, generic)

Carrier	Verizon	AT&T	Sprint
Network	LTE	LTE	LTE
Min/Max Speed (Downlink)	Min = 0 Mbps Max = 100 Mbps	Min = 0 Mbps Max = 100 Mbps	Min = 0 Mbps Max = 100 Mbps
Min/Max Speed (Uplink)	Min = 0 Mbps Max = 50 Mbps	Min = 0 Mbps Max = 50 Mbps	Min = 0 Mbps Max = 50 Mbps
Fallback Network	EV-DO Rev A CDMA 1xRTT	HSPA+ EDGE/GPRS	EV-DO Rev A CDMA 1xRTT
Fallback Speed	EV-DO Rev A < 3.1 Mbps CDMA 1XRTT < 153 Kbps	Max HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps	EV-DO Rev A < 3.1 Mbps CDMA 1XRTT < 153 Kbps
Frequency Bands	Band 25 LTE 850/1900 CDMA/EV-DO	Band 4, 17 LTE 850/1900 HSPA/WCDMA 850/1900 EDGE/GPRS	Band 13 LTE 850/1900 CDMA/EV-DO
SIM	Yes	Yes	Yes
GPS	Standalone Autonomous A-GPS	Standalone Autonomous A-GPS	Standalone Autonomous A-GPS

*Verizon TA is PRTS March 25, 2014

*Telus/Rogers TA is PRTS March 18, 2014



Wireless Communications: Mobile Broadband

Dell Wireless™ DW5570 HSPA+/42Mbps Full Mini Card (EMEA /APJ/ROW)		
Carrier Network	Telefonica (Dell Netready) HSPA+/3G	Generic HSPA/3G
Speed (Downlink)	< 42 Mbps	< 42 Mbps
Speed (Uplink)	< 5.76 Mbps	< 5.76 Mbps
Fallback Network	EDGE/GPRS	EDGE/GPRS
Fallback Speed	EDGE 247.4 Kbps GPRS 85.6 Kbps	EDGE 247.4 Kbps GPRS 85.6 Kbps
Frequency Bands	850/900/1900/2100 HSPA/WCDMA 800/900/1800/1900 EDGE/GPRS	850/900/1900/2100 HSPA/WCDMA 800/900/1800/1900 EDGE/GPRS
SIM	Yes	No
GPS	Autonomous, A-GPS	Autonomous, A-GPS

Security

Security Hardware

	Dell Latitude 13 Education Series
Standard Trusted Platform Module (TPM 1.2)	✓
Internal fingerprint reader	NA
Internal Smart Card Reader	NA



Integrated Graphics Controller

Integrated Graphics Controller	Intel HD (Hawesell Celeron), HD 4400 (Intel Haswell i3/i5 Processors)
Model	Dell Latitude 13 Education series
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Clock Speeds	Core i5 4200U: 1.6GHz Core i3 4010U: 1.7GHz Celeron 2957U: 1.4GHz
Max Graphics dynamic frequency	Core i5 4200U: 200/1000 MHz Core i3 4010U: 200/1000 MHz Celeron 2957U: 200/1000 MHz
Graphics Level	i5-4200U: Intel HD 4400: GT2 I3-4010U: Intel HD 4400: GT2 Celeron 2957U: Intel HD Graphic: GT1
Estimated Maximum Power Consumption (TDP)	15W
Display Support	eDP (internal), HDMI, DisplayPort
Maximum Color Depth	32bit
Maximum Vertical Refresh Rate	Up to 85Hz depending on resolution
Operating Systems Graphics/ Video API Support	DirectX 11,1 (Windows 8.1 only), OpenGL 4.0
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max Digital: (HDMI) 1920x1080@60Hz Max Digital: (DisplayPort) 3200x2000@60Hz Analog: (VGA) through mDP docking 1920x1200/32bpp @ 60Hz
Numbers of Displays Supported	3 max



Display

Dell Latitude 13 Education Series		13.3" Display for Touch and Non-Touch SKU
Type		HD Anti-Glare
Luminance (typical)		HD 200nits
Dimensions		
Height		165 mm (maximum)
Width		293.4 mm (maximum)
Diagonal		13.3"
Native Resolution		HD 1366x768
Megapixels		HD 1.04
Pixels per Inch (PPI)		118 for HD
Contrast Ratio (min)		300:1 for HD
Response Time (max)		HD 25msec typ rise/fall
Refresh Rate		60 Hz
Horizontal View Angle		HD +40/- 40 degrees
Vertical View Angle		HD +10/-30 degrees
Pixel Pitch		HD 0.2148mm
Power Consumption (maximum)		HD 2.9W

Dell Latitude 13 Series Battery Specification

	4-cell (43 WHr)	6-cell (65 WHr)
Battery Type	Lithium ion	Lithium ion
Dimension		
Length	228.3mm (8.99")	228.3mm (8.99")
Width	49.15mm (1.94")	49.15mm (1.94")
Height	22.7mm (0.89")	33.95mm (1.34")
Weight	259.00 g (0.57 lb)	364.00 g (0.8 lb)
Voltage	14.4VDC	11.1VDC
Typical Amp-hour capacity	3.0Ahr	6.0Ahr
Typical Watt-hour capacity	43Whr	65Whr
Temperature		
Operating	Charge: 0 °C to 50 °C, 32 °F to 122 °F Discharge: 0 °C to 70 °C, 32 °F to 158 °F	Charge: 0 °C to 50 °C, 32 °F to 122 °F Discharge: 0 °C to 70 °C, 32 °F to 158 °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 charged 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.

Dell Latitude 13 Education Series Power Adapters

Adapter Specifications	E5 65W	E4 65W BFR/PVC free	E4 90W (India only)
Input voltage	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
Input current (max)	1.7 A	1.7 A	2.5 A
Input frequency	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Output current	3.34 A (continuous)	3.34 A (continuous)	4.62 A (continuous)
Rated output voltage	19.5 VDC	19.5 VDC	19.5 VDC
Weight (lbs)	0.51	0.64	0.73
Weight (kg)	0.23	0.29	0.33
Dimensions (inches)	0.87 x 2.60 x 4.17	1.1 x 1.9 x 4.3	1.3 x 2.0 x 5.0
Dimensions (mm)	22 x 66 x 106	28 x 47 x 108	32 x 52 x 128
Temperature range:	0° to 40°C	0° to 40°C	0o to 40oC
Operating	32° to 104°F	32° to 104°F	32o to 104oF
Storage	-40° to 70°C	-40° to 70°C	-40o to 70oC
	-40° to 158°F	-40° to 158°F	-40o to 158oF

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

Dell Latitude 13 Education Series

Power Cord + Adapter: Length and Weight

E5 65W Standard Power Cord+ Adapter

Weight	Grams	Pounds
E5	310	0.68
Length	Meters	Feet + Inches
E5	2.9	9' 2.2"



Dell Latitude 13 Education Series Keyboard

Keyboard Specs

Number of keys	82 (U.S) 86 (Japan) 83 (UK)
Layout	US/UK/Japanese
Size	full sized (19.05mm key pitch)
Backlit keyboard option	NA

- No backlit keyboard option offered
- No numpad offered
- Single pointing only
- Sealed KB membrane and touchpad
- Supports passive stylus
- Does not support active stylus



Dell Latitude 13 Education Series Keyboards Hot Key Definition

Fn Key Combination	Function
Fn+ESC	Fn Toggle
Fn + F1	Speaker Mute
Fn + F2	Volume Down
Fn + F3	Volume Up
Fn + F4	Mic Mute
Fn + F5	Num Lock
Fn + F6	Scroll Lock
Fn + F8	Display Toggle (Win + P)
Fn + F9	Search
Fn + F10	Increase Keyboard Backlight Brightness
Fn + F11	Panel Brightness Down
Fn + F12	Panel Brightness Up
Fn + Prt Scr	Toggle Radio On/Off
Fn + Insert	Sleep
Fn + Left Cursor	Home
Fn + Right Cursor	End

Fn Key Mode:

Standard = The F1-F12 keys behave as function keys. Holding <Fn> is required to access their secondary functions.

Secondary~14~ = The F1-F12 keys control the secondary functions. <Fn> is required to access the standard functions.

Dell Latitude 13 Education Series Touch Pad Specifications

Touch Pad

X/Y position resolution	600dpi
Size	Sensor-active area: <ul style="list-style-type: none"> • Width: 82.7mm • Height: 50.7mm
Multi-Touch	Configurable Single Finger and Multi-Finger gestures

Supported Gestures	Windows 7	Windows 8.1
Circular Scrolling	Supported (disabled by default)	Not supported
Drag Lock	Supported	Supported
Edge Swipe	Not supported	Supported
Horizontal / Vertical Scroll Zones	Supported (disabled by default)	Not supported
Zoom Zones	Supported (disabled by default)	Not supported
Zig Zag	Supported (no checkbox to disable)	Supported (no checkbox to disable)
2-finger Pan / Scroll	Supported	Supported
2-finger Pinch Zoom	Supported (disabled by default)	Supported
2-finger Rotate	Supported (disabled by default)	Supported (disabled by default)
2-finger Tap	Not supported	Supported (no checkbox to disable)
3-finger Flick Right/Left/Up/Down	Supported (disabled by default)	Supported (disabled by default)

Optional USB Docking

Key Features	What they are	Benefits
High Compatibility	<ul style="list-style-type: none"> ▪ Docking station is compatible with virtually any notebook 	<ul style="list-style-type: none"> ▪ Helps create an easy buying decision for users who may be unsure what docking station ideally suits their notebook. ▪ IT purchasers can buy one device that is compatible with different notebooks to help make simple purchasing decisions.
Dual Video Ports	<ul style="list-style-type: none"> ▪ 2 video ports for connecting 2 displays to the notebook and docking station. 	<ul style="list-style-type: none"> ▪ User can create more workable screen space on their displays by connecting 2 displays to the device, allowing for more programs that can be opened on screen at one time.
2 SuperSpeed™ USB 3.0 Ports	<ul style="list-style-type: none"> ▪ USB 3.0 ports integrated into the device. 	<ul style="list-style-type: none"> ▪ Faster data transfer than USB 2.0 for USB 3.0-enabled devices
Gigabit Ethernet Port	<ul style="list-style-type: none"> ▪ Ethernet port for connection to wired networks 	<ul style="list-style-type: none"> ▪ Allows user to keep the device plugged in to wired network and helps manage cords that may cause clutter in the workspace.
4 USB Ports	<ul style="list-style-type: none"> ▪ USB Ports for connecting USB-enabled various devices 	<ul style="list-style-type: none"> ▪ Helps create various usage scenarios for devices that have USB ports.
Security Lock Slot (Security Lock not included)	<ul style="list-style-type: none"> ▪ Gives users the ability to use a cord lock to connect the device to a desk or workspace 	<ul style="list-style-type: none"> ▪ Helps deter theft of the docking station and offers peace of mind when away from the workspace and docking station.



Docking Station	
Connectivity	USB 2.0 (2ft USB 2.0 cable included)
Power	6.5A AC Adapter (included)
Color & Finish	Black
Dimensions (H x L x W inches)	1.77 x 5.91 x 12.2
Weight (lbs)	1.98



Dell Latitude 13 Education Series

Operating conditions and MIL-STD 810G Testing

Models	Dell Latitude 13 Education Series
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% (non-condensing) Storage 5% to 95% (non-condensing)
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)
MIL-STD-810G Tests Performed¹	<ol style="list-style-type: none"> 1. METHOD 500.5 LOW PRESSURE (ALTITUDE) Procedure I - Storage/Air Transport 2. METHOD 500.5 LOW PRESSURE (ALTITUDE) Procedure II - Operation/Air Carriage 3. "METHOD 501.5 HIGH TEMPERATURE Procedure I Induced (Storage and Transition) Conditions" 4. "METHOD 501.5 HIGH TEMPERATURE Procedure II – Operation Cycling temperature exposure" 5. METHOD 502.5 LOW TEMPERATURE Procedure I (Exaggerated) 6. METHOD 502.5 LOW TEMPERATURE Procedure II 7. "METHOD 507.5 HUMIDITY Procedure I - Induced (Storage & Transit) and Natural and Cycles Table 507.5-I Hot-humid (Cycle B3)" 8. METHOD 510.5 SAND AND DUST Procedure I 9. IP5x Dust Ingress Duration: 8 hours (Current result: failed) 10. METHOD 514.6 VIBRATION Procedure I 11. METHOD 514.6 VIBRATION Procedure I 12. Method 516.6 SHOCK Procedure I: Functional Shock 13. "Method 516.6 SHOCK Procedure IV: Transit Drop; Modified to be dropped at 30"'" 14. Method 516.5 SHOCK Procedure II: Material to be Packaged 15. Method 516.5 SHOCK Procedure V: Crash Hazard Shock 16. Method 516.6 SHOCK Procedure VI: Bench Handling

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

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

