
Dell™ Latitude™ 5000 Series Technical Guidebook *Haswell Launch*

August 2014



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

Table of Contents

Product View and Technical Specifications	4
Weight and Dimensions	5-10
Technical Specifications	11-22
Marketing Configurations	23
Operating System	24
Processors	25
Memory	26-27
Primary Storage and Intel Rapid Start Technology	28
Connectivity Options	29-30
Security	31-33
Keyboard Specifications	34-35

Detailed Technical Overview and Configuration Specifications	36
Storage	37-40
Memory	41-42
Ports and Connectors	43
Web Cam Specifications	44
Wireless Communications (WLAN)	45-54
Wired Communications	55
Wireless Communications (WWAN)	57-58
Security	59-61
Integrated Graphics Controlled	62-63
Display	64-72
Battery Specifications	73
Power Adapters	74-75
Keyboard	76-77
Keyboard Hot Key Definition	78
Touchpad Specifications	79
Operating Conditions & MIL-STD Testing	80



Latitude 5000 Series Technical Guide Book-Haswell

This presentation provides an a technical overview of the Dell Latitude™ 5000 series with Intel Haswell Processors.



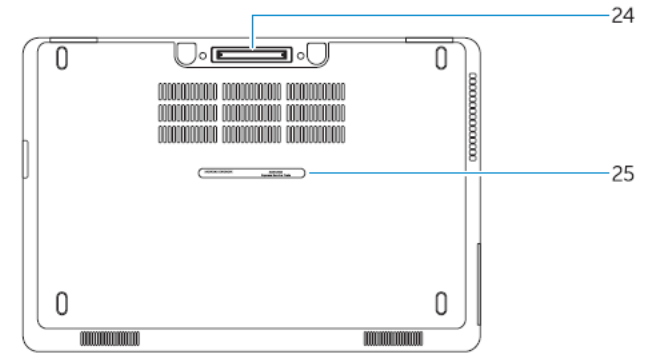
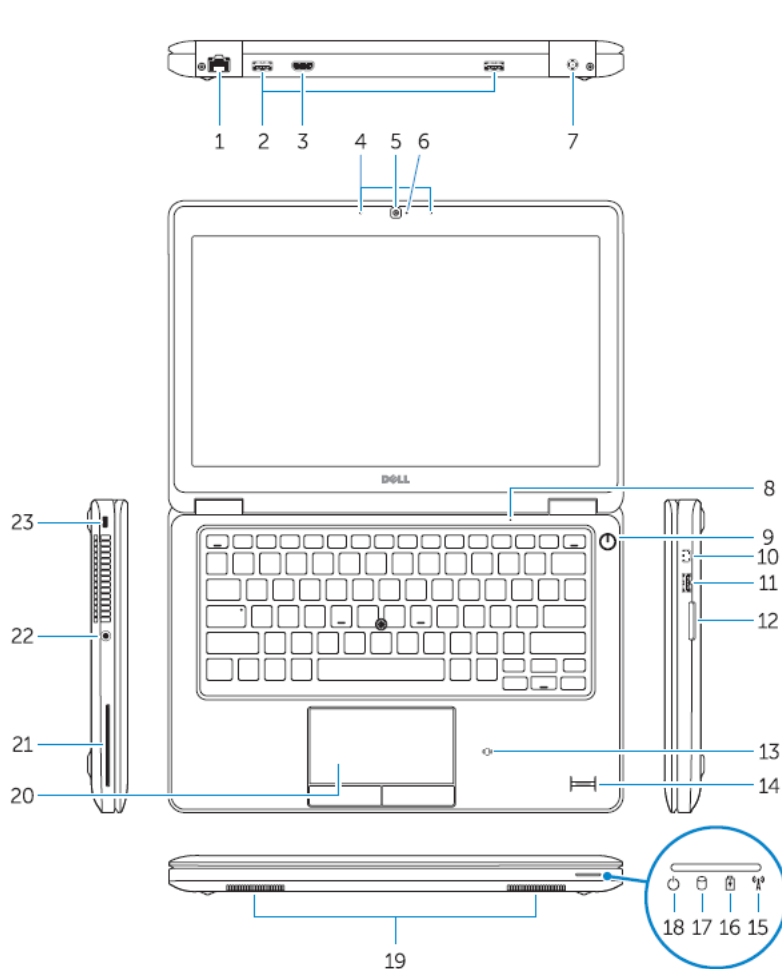
Any future features will be included in a *separate* Technical Guide Book published at a later date

Dell Latitude 5000 Series Product Views and Technical Specifications

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



Latitude 12 5000 Features



1. Network connector
2. USB 3.0 connectors
3. HDMI connector
4. Microphones (optional)
5. Camera
6. Camera-status light
7. Power connector
8. Microphone
9. Power button
10. Mini-DisplayPort connector
11. USB 3.0 connector with PowerShare
12. Memory-card reader
13. Contactless smart-card reader (optional)
14. Fingerprint reader (optional)
15. Wireless-status light
16. Battery-status light
17. Hard-drive activity light
18. Power-status light
19. Speakers
20. Touchpad
21. Smart-card reader (optional)
22. Headset connector
23. Security-cable slot
24. Dock connector (optional)
25. Service-tag label

The docking spacer is recommended by Dell to improve alignment of notebook to dock, prevent docking port damage on notebook and to improve theft prevention

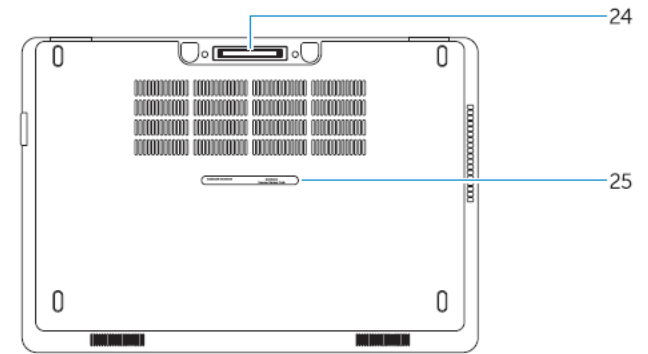
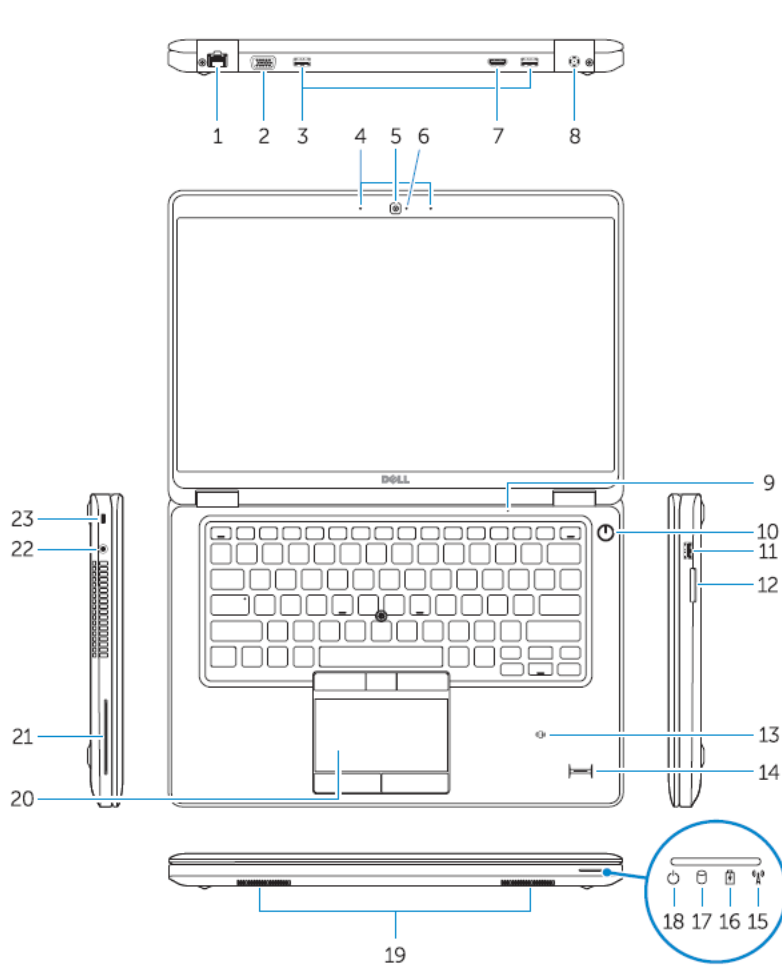
Latitude 12 5000 Weight and Dimensions

Latitude 12 5000 Series

	lbs.	kg.
Starting Weight	3.44	1.56
Non Touch HD panel without camera, WLAN only, NBL KB, docking, mSATA, 4GB RAM, 3 cell battery, UMA, no FPR		

Dimensions	inches	mm
Width	12.22	310.50
Depth	8.38	212.80
Height front	0.81	20.50
Height back (non touch Mag LCD cover)	0.89	22.70
Height back (touch Mag LCD cover)	0.97	24.60

Latitude 14 5000 Features



1. Network connector
2. VGA connector
3. USB 3.0 connectors
4. Microphones (optional)
5. Camera
6. Camera-status light
7. HDMI connector
8. Power connector
9. Microphone
10. Power button
11. USB 3.0 connector with PowerShare
12. Memory-card reader
13. Contactless smart-card reader (optional)
14. Fingerprint reader (optional)
15. Wireless-status light
16. Battery-status light
17. Hard-drive activity light
18. Power-status light
19. Speakers
20. Touchpad
21. Smart-card reader (optional)
22. Headset connector
23. Security-cable slot
24. Dock connector (optional)
25. Service-tag label

The docking spacer is recommended by Dell to improve alignment of notebook to dock, prevent docking port damage on notebook and to improve theft prevention

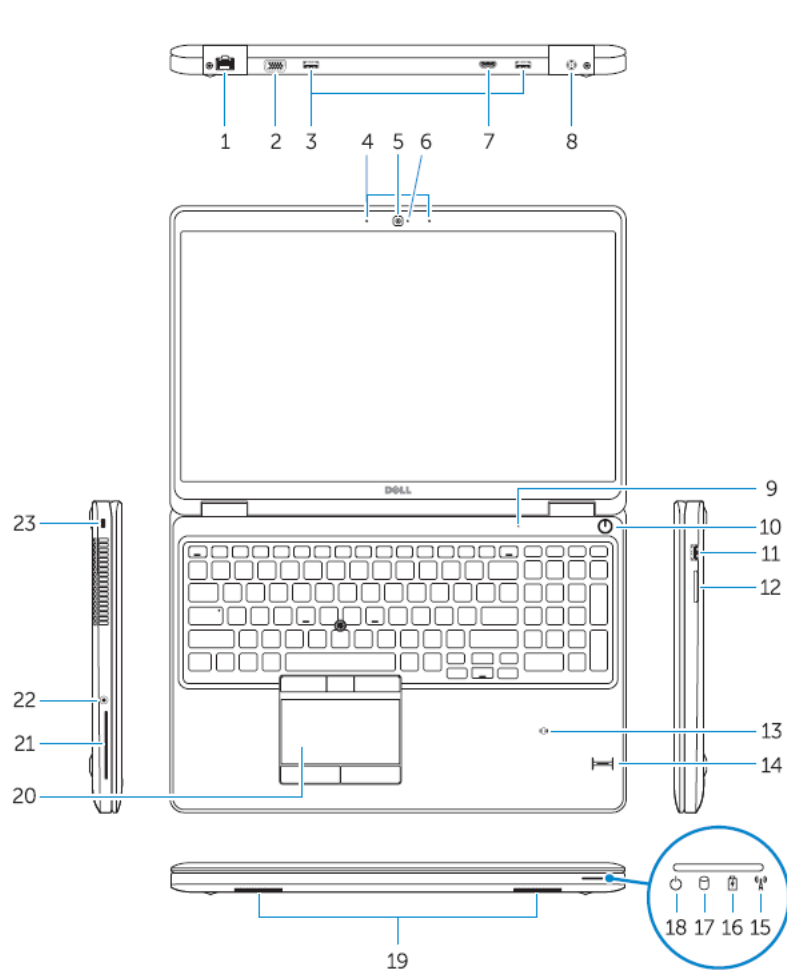
Latitude 14 5000 Weight and Dimensions

Latitude 14 5000 Series

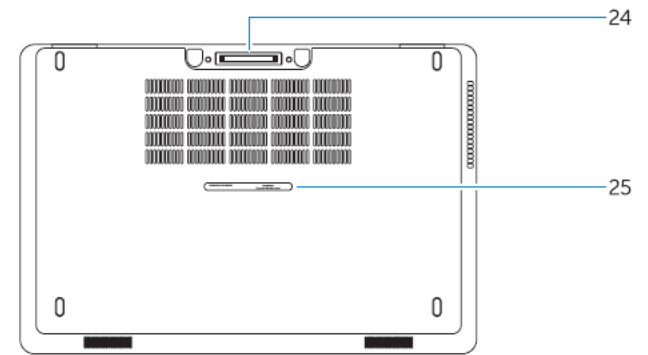
	lbs.	kg.
Starting Weight	3.98	1.85
Non Touch FHD panel with camera, WLAN only, NBL KB, docking, mSATA, 4GB RAM, 3 cell battery, UMA, non FPR		

Dimensions	inches	mm
Width	13.19	334.90
Depth	9.10	231.15
Height front	0.80	20.40
Height back (non touch Glass Fiber Reinforced Polymer)	0.91	23.10
Height back (non touch Mag cover)	0.90	22.85
Height back (touch Mag cover)	0.94	23.80

Latitude 15 5000 Features



1. Network connector
2. VGA connector
3. USB 3.0 connectors
4. Microphones (optional)
5. Camera
6. Camera-status light
7. HDMI connector
8. Power connector
9. Microphone
10. Power button
11. USB 3.0 connector with PowerShare
12. Memory-card reader
13. Contactless smart-card reader (optional)
14. Fingerprint reader (optional)
15. Wireless-status light
16. Battery-status light
17. Hard-drive activity light
18. Power-status light
19. Speakers
20. Touchpad
21. Smart-card reader (optional)
22. Headset connector
23. Security-cable slot
24. Dock connector (optional)
25. Service-tag label



The docking spacer is recommended by Dell to improve alignment of notebook to dock, prevent docking port damage on notebook and to improve theft prevention

Latitude 15 Weight and Dimensions

Latitude 15 5000 Series

	lbs.	kg.
Starting Weight	4.71	2.14

UMA, non edock, 3 cell battery, non touch FHD panel w camera, mSATA, 4GB Ram, WLAN only, non Security Palmrest

Dimensions	inches	mm
Width	14.84	376.90
Depth	10.05	255.20
Height front	0.81	20.60
Height back (non touch Glass Fiber Reinforced Plastic)	0.93	23.60
Height back (non touch Mag cover)	0.92	23.45
Height back (touch Mag cover)	0.95	24.25

Dell Latitude 12 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 12 5000 Series (E5250/5250)-September 2014-April 2015
Processor Options ¹	4th Generation Intel® Celeron (late 2014) and Core™ i3/5 Processors
Operating System ^{1,2}	Microsoft® Windows® 7 Professional 32/64 bit Microsoft® Windows® 7 Professional 32/64-bit (available through downgrade rights from Windows® 8.1 Pro 64-bit) Microsoft® Windows® 8.1 64-bit Microsoft® Windows® 8.1 Pro 64-bit Microsoft® Windows® 8.1 Single Language 64-bit UBUNTU Linux 14.04 LTS (64-bit)
Memory Options ^{1,2,3}	DDR3L SDRAM 1600MHz; up to 2 slots supporting up to 8GB
Chipset ¹	Integrated with the Processor
Intel Responsiveness Technologies ¹	Intel® Rapid Storage Technology ⁷ Optional Intel® Smart Connect Technology ⁸
Graphics ^{1,13}	Intel® Integrated HD Graphics (Celeron) (Late 2014) Intel® Integrated HD Graphics 4400 (Core x)
Display ¹	12.5" HD (1366 x 768) Anti Glare (16:9) WLED, 200 nits, Magnesium LCD back 12.5" FHD Touch with Corning® Gorilla® Glass NBT, (1920 x 1080) Anti Finger Print (16:9), WLED, 360 nits, Magnesium LCD back
Storage Options ^{1,5}	500GB 7200rpm HDD 128GB SSD 256GB SSD 128GB mSATA Dell Fast Response Free Fall Sensor and HDD Isolation (standard feature)
Security ¹	FIPS Certified TPM Optional Swipe Fingerprint Reader Optional Smart Card Reader Optional Contactless Smart Card Reader/NFC Optional FIPS Certified Hardware Crypto Accelerator (HCA) Optional Dell Control Vault™ Optional Computrace ⁶ DDP Security Tools DDP Protected Workspace (1 year subscription included) Optional DDP E Encryption Software

Dell Latitude 12 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 12 5000 Series (E5250/5250)-September 2014-April 2015
Docking Options ¹	eDocking Base Non-eDocking Base
Optical Drive Options	External Options Only
Multimedia ¹	High Quality Speakers Headset/mic combo jack Optional, noise reducing array microphones Optional HD or FHD video webcam
Battery Options ¹	38 Whr (3 Cell) Lithium Polymer battery with ExpressCharge™ 51 Whr (4 Cell) Lithium Polymer battery with ExpressCharge™ 51 Whr (4 Cell) Long Life Cycle Lithium Polymer battery with ExpressCharge™
Power Options ¹	65 Watt AC Adapter 90 Watt AC Adapter (regional offering) Optional 65W BFR/PVC Free AC Adapter
Connectivity options ^{1,14,15}	10/100/1000 Ethernet Wireless LAN Options: Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0 LE Wireless Card (1x1) Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2) Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (Indonesia) (2x2) Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card (2x2) Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) (2x2) Optional Mobile Broadband Options:¹⁰ Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5809E (EMEA/APJ/ROW)

Dell Latitude 12 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 12 5000 Series (E5250/5250)-September 2014-April 2015
Ports, Slots & Chassis ¹	Universal Jack SD 4.0 Memory card reader Optional Edocking connector, 3 USB 3.0 (one with PowerShare), HDMI, mDP Network connector (RJ-45), SIM card slot optional Two M.2 Expansion slots: 1 WWAN/HCA and 1 WLAN/BT/WiGig Optional SmartCard Reader and optional Fingerprint Reader Lock slot
Dimensions & Weight ^{1,16}	Width: 12.2" / 310.5mm Height (rear): 0.9" / 22.7 Depth: 8.4" / 212.8mm Starting weight: 3.44 lbs. / 1.56 kg (3 cell battery, mSATA, non touch HD LCD)
Regulatory and Environmental Compliance ¹	Regulatory Model: P25S Regulatory Type: P25S001 ENERGY STAR 6.0 EPEAT Gold Registered. For specific country participation and rating, please see www.epeat.net BFR/PVC free ⁹
Input ¹	Single Pointing non-backlit Keyboard Single Pointing backlit Keyboard Multi-touch Touchpad
Systems Management ¹	Intel® vPro™ Technology's advanced management features (optional, requires Intel WiFi® Link WLAN and a vPro compatible processor)
Warranty and Service ¹	Limited Hardware Warranty ⁴ ; Standard 3 year On-Site Service after Remote Diagnosis ¹¹ ; optional 4 year and 5 year hardware warranty extensions and 3-5 year Dell ProSupport contracts available ¹²
Peripheral Ecosystem ¹	Dell E-Port Replicator, Dell 23 Monitor, Dell Wireless Keyboard & Mouse, Dell Professional Topload Carrying Case, Dell Portable Power Companion (Fall 2014)

Dell Latitude 12 5000 Series Technical Specifications

Footnotes

¹ Offering may also vary by country and by configuration

² A 64-bit operating system is required to support 4GB or more of system memory.

³ GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

⁴ 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

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

⁶ COMPUTRACE Not a Dell offer. Certain conditions apply. For full details, see terms and conditions at www.absolute.com/en/about/legal/agreements.

⁷ Intel Rapid Storage Technology requires a HDD, mSATA, or an SSD, as primary storage device

⁸ Intel Smart Connect Technology: Requires an SSD or mSATA drive only and a recognized Internet connection. System must be on or in sleep mode with application running to update.

⁹ Dell Latitude 5000 Series 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%).

¹⁰ Mobile Broadband Subject to service provider's broadband subscription and coverage area; additional charges apply.

¹¹ 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.

¹² Dell Services: Availability and terms of Dell Services vary by region. For more information, visit www.dell.com/service-descriptions.

¹³ GB 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.

¹⁴ Miracast Wireless Technology: Requires a compatible media adapter (sold separately) and an HDMI-enabled display.

¹⁵ Intel Wireless Display: Requires an Intel wireless card, a compatible media adapter (sold separately) and an HDMI or composite AV-enabled display.

¹⁶ Weights vary depending on configuration and manufacturing variability.



Dell Latitude 14 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 14 5000 Series (E5450/5450), September 2014-April 2015
Processor Options ¹	4th Generation Intel® Celeron (late 2014) and Core™ i3/5 Processors
Operating System ^{1,2}	Microsoft® Windows® 7 Professional 32/64 bit Microsoft® Windows® 7 Professional 32/64-bit (available through downgrade rights from Windows® 8.1 Pro 64-bit) Microsoft® Windows® 8.1 64-bit Microsoft® Windows® 8.1 Pro 64-bit Microsoft® Windows® 8.1 Single Language 64-bit UBUNTU Linux 14.04 LTS (64-bit)
Memory Options ^{1,2,3}	DDR3L SDRAM 1600MHz; up to 2 slots supporting up to 8GB
Chipset ¹	Integrated with the Processor
Intel Responsiveness Technologies ¹	Intel® Rapid Storage Technology ⁷ Optional Intel® Smart Connect Technology ⁸
Graphics ^{1,13}	Intel® Integrated HD Graphics (Celeron) (Late 2014) Intel® Integrated HD Graphics 4400 (Core x)
Display ¹	14.0" HD (1366 x 768) Anti Glare (16:9) WLED, 200 nits, Glass Fiber Reinforced Polymer LCD back 14.0" FHD (1920 x 1080) Anti Glare (16:9) WLED, 300 nits, Magnesium LCD back 14.0" FHD Touch with Corning® Gorilla® Glass NBT (1920 x 1080) (16:9) WLED, 270 nits, Magnesium LCD back
Storage Options ^{1, 5}	500GB 7200rpm HDD 128GB SSD Dell Fast Response Free Fall Sensor and HDD Isolation (standard feature)
Security ¹	FIPS Certified TPM Optional Swipe Fingerprint Reader Optional Smart Card Reader Optional Contactless Smart Card Reader/NFC Optional FIPS Certified Hardware Crypto Accelerator (HCA) Optional Dell Control Vault™ Optional Computrace ⁶ DDP Security Tools DDP Protected Workspace (1 year subscription included) Optional DDP E Encryption Software



Dell Latitude 14 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 14 5000 Series (E5450/5450), September 2014-April 2015
Docking Options ¹	EDocking Base Non-eDocking Base
Optical Drive Options	External Options Only
Multimedia ¹	High Quality Speakers Headset/mic combo jack Optional, noise reducing array microphones Optional HD video webcam
Battery Options ¹	38 Whr (3 Cell) Lithium Polymer battery with ExpressCharge™ 51 Whr (4 Cell) Lithium Polymer battery with ExpressCharge™ 51 Whr (4 Cell) Long Life Cycle Lithium Polymer battery with ExpressCharge™
Power Options ¹	65 Watt AC Adapter 90 Watt AC Adapter (regional offering) Optional 65W BFR/PVC Free AC Adapter
Connectivity options ^{1,14,15}	10/100/1000 Ethernet Wireless LAN Options: Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0 LE Wireless Card (1x1) Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2) Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (Indonesia) (2x2) Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card (2x2) Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) (2x2) Optional Mobile Broadband Options:¹⁰ Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5809E (EMEA/APJ/ROW))

Dell Latitude 14 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 14 5000 Series (E5450/5450), September 2014-April 2015
Ports, Slots & Chassis ¹	Universal Jack SD 4.0 Memory card reader Optional E Docking connector, 3 USB 3.0 (one with PowerShare), HDMI, VGA Network connector (RJ-45), SIM card slot optional Two M.2 Expansion slots: 1 WWAN/HCA and 1 WLAN/BT/WiGig Optional SmartCard Reader and optional Fingerprint Reader Lock slot
Dimensions & Weight ^{1,16}	Width: 13.2" / 334.9mm Height (rear): 0.9" / 22.85mm Depth: 9.1" / 231.15mm Starting weight: 3.98 lbs. / 1.81 kg (3 cell battery, mSATA, non touch, FHD LCD)
Regulatory and Environmental Compliance ¹	Regulatory Model: P48G Regulatory Type: P48G001 ENERGY STAR 6.0 EPEAT Gold Registered. For specific country participation and rating, please see www.epeat.net BFR/PVC free ⁹
Input ¹	Single Pointing non-backlit Keyboard Dual Pointing backlit Keyboard Multi-touch Touchpad
Systems Management ¹	Intel® vPro™ Technology's advanced management features (optional, requires Intel WiFi® Link WLAN and a vPro compatible processor)
Warranty and Service ¹	Limited Hardware Warranty ⁴ ; Standard 3 year On-Site Service after Remote Diagnosis ¹¹ ; optional 4 year and 5 year hardware warranty extensions and 3-5 year Dell ProSupport contracts available ¹²
Peripheral Ecosystem ¹	Dell E-Port Replicator, Dell 23 Monitor, Dell Wireless Keyboard & Mouse, Dell Professional Topload Carrying Case, Dell Portable Power Companion (Fall 2014)



Dell Latitude 14 5000 Series Technical Specifications

Footnotes

¹ Offering may also vary by country and by configuration

² A 64-bit operating system is required to support 4GB or more of system memory.

³ GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

⁴ 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

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

⁶ COMPUTRACE Not a Dell offer. Certain conditions apply. For full details, see terms and conditions at www.absolute.com/en/about/legal/agreements.

⁷ Intel Rapid Storage Technology requires a HDD, mSATA, or an SSD, as primary storage device

⁸ Intel Smart Connect Technology: Requires an SSD or mSATA drive only and a recognized Internet connection. System must be on or in sleep mode with application running to update.

⁹ Dell Latitude 5000 Series 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%).

¹⁰ Mobile Broadband Subject to service provider's broadband subscription and coverage area; additional charges apply.

¹¹ 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.

¹² Dell Services: Availability and terms of Dell Services vary by region. For more information, visit www.dell.com/servicedescriptions.

¹³ GB 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.

¹⁴ Miracast Wireless Technology: Requires a compatible media adapter (sold separately) and an HDMI-enabled display.

¹⁵ Intel Wireless Display: Requires an Intel wireless card, a compatible media adapter (sold separately) and an HDMI or composite AV-enabled display.

¹⁶ Weights vary depending on configuration and manufacturing variability.



Dell Latitude 15 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 15 5000 Series (E5550/5550), September 2014-April 2015
Processor Options ¹	4th Generation Intel® Core™ i3/5 Processors
Operating System ^{1,2}	Microsoft® Windows® 7 Professional 32/64 bit Microsoft® Windows® 7 Professional 32/64-bit (available through downgrade rights from Windows® 8.1 Pro 64-bit) Microsoft® Windows® 8.1 64-bit Microsoft® Windows® 8.1 Pro 64-bit Microsoft® Windows® 8.1 Single Language 64-bit UBUNTU Linux 14.04 LTS (64-bit)
Memory Options ^{1,2,3}	DDR3L SDRAM 1600MHz; up to 2 slots supporting up to 8GB
Chipset ¹	Integrated with the Processor
Intel Responsiveness Technologies ¹	Intel® Rapid Storage Technology ⁷ Optional Intel® Smart Connect Technology ⁸
Graphics ^{1,13}	Intel® Integrated HD Graphics 4400 (Core x)
Display ¹	15.6" HD (1366 x 768) Anti Glare (16:9) WLED, 200 nits, Glass Fiber Reinforced Polymer LCD Back 15.6" FHD (1920 x 1080) Anti Glare (16:9) IPS WLED, 300 nits, Magnesium LCD back 15.6" FHD Touch with Corning® Gorilla® Glass NBT (1920 x 1080) (16:9) WLED, 270 nits, Magnesium LCD back
Storage Options ^{1,5}	500GB 7200rpm HDD 128GB SSD Dell Fast Response Free Fall Sensor and HDD Isolation (standard feature)
Security ¹	FIPS Certified TPM Optional Swipe Fingerprint Reader Optional FIPS Fingerprint Reader Optional Contactless Smart Card Reader/NFC Optional Smart Card Reader Optional Dell Control Vault™ Optional FIPS Certified Hardware Crypto Accelerator (HCA) Optional Computrace ⁶ DDP Security Tools DDP Protected Workspace (1 year subscription included) Optional DDP E Encryption Software



Dell Latitude 15 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 15 5000 Series (E5550/5550), September 2014-April 2015
Docking Options ¹	EDocking Base Non-eDocking Base
Optical Drive Options	External Options Only
Multimedia ¹	High Quality Speakers Headset/mic combo jack Optional, noise reducing array microphones Optional HD video webcam
Battery Options ¹	38 Whr (3 Cell) Lithium Polymer battery with ExpressCharge™ 51 Whr (4 Cell) Lithium Polymer battery with ExpressCharge™ 51 Whr (4 Cell) Long Life Cycle Lithium Polymer battery with ExpressCharge™
Power Options ¹	65 Watt AC Adapter 90 Watt AC Adapter (regional offering) Optional 65W BFR/PVC Free AC Adapter
Connectivity options ^{1,14,15}	10/100/1000 Ethernet Wireless LAN Options: Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0 LE Wireless Card (1x1) Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2) Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (Indonesia) (2x2) Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card (2x2) Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) (2x2) Optional Mobile Broadband Options:¹⁰ Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5809E (EMEA/APJ/ROW)



Dell Latitude 15 5000 Series Technical Specifications

Feature	Technical Specification
Model Number ¹	Latitude 15 5000 Series (E5550/5550), September 2014-April 2015
Ports, Slots & Chassis ¹	Universal Jack SD 4.0 Memory card reader Optional Edocking connector, 3 USB 3.0 (one with PowerShare), HDMI, VGA Network connector (RJ-45), SIM card slot optional Two M.2 Expansion slots: 1 WWAN/HCA and 1 WLAN/BT/WiGig Optional SmartCard Reader and optional Fingerprint Reader Lock slot
Dimensions & Weight ^{1,16}	Width: 14.8" / 376.9mm Height (rear): 0.9" / 23.45mm Depth: 10.1" / 255.2mm Starting weight: 4.71 lbs. / 2.14 kg (3 cell battery, mSATA, non touch FHD LCD)
Regulatory and Environmental Compliance ¹	Regulatory Model: P37F Regulatory Type: P37F001 ENERGY STAR 6.0 EPEAT Gold Registered. For specific country participation and rating, please see www.epeat.net BFR/PVC free ⁹
Input ¹	Dual Pointing non-backlit Keyboard Dual Pointing backlit Keyboard Multi-touch Touchpad
Systems Management ¹	Intel® vPro™ Technology's advanced management features (optional, requires Intel WiFi® Link WLAN and a vPro compatible processor)
Warranty and Service ¹	Limited Hardware Warranty ⁴ ; Standard 3 year On-Site Service after Remote Diagnosis ¹¹ ; optional 4 year and 5 year hardware warranty extensions and 3-5 year Dell ProSupport contracts available ¹²
Peripheral Ecosystem ¹	Dell E-Port Replicator, Dell 23 Monitor, Dell Wireless Keyboard & Mouse, Dell Professional Topload Carrying Case, Dell Portable Power Companion (Fall 2014)



Dell Latitude 15 5000 Series Technical Specifications

Footnotes

¹ Offering may also vary by country and by configuration

² A 64-bit operating system is required to support 4GB or more of system memory.

³ GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

⁴ 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

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

⁶ COMPUTRACE Not a Dell offer. Certain conditions apply. For full details, see terms and conditions at www.absolute.com/en/about/legal/agreements.

⁷ Intel Rapid Storage Technology requires a HDD, mSATA, or an SSD, as primary storage device

⁸ Intel Smart Connect Technology: Requires an SSD or mSATA drive only and a recognized Internet connection. System must be on or in sleep mode with application running to update.

⁹ Dell Latitude 5000 Series 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%).

¹⁰ Mobile Broadband Subject to service provider's broadband subscription and coverage area; additional charges apply.

¹¹ 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.

¹² Dell Services: Availability and terms of Dell Services vary by region. For more information, visit www.dell.com/servicedescriptions.

¹³ GB 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.

¹⁴ Miracast Wireless Technology: Requires a compatible media adapter (sold separately) and an HDMI-enabled display.

¹⁵ Intel Wireless Display: Requires an Intel wireless card, a compatible media adapter (sold separately) and an HDMI or composite AV-enabled display.

¹⁶ Weights vary depending on configuration and manufacturing variability.



Marketing System Configurations

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



Dell Latitude 5000 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 Professional 32/64 bit
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">• Ubuntu 14.04 LTS (64 bit)
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



Intel® processor Technology

Haswell Architecture



Latitude 5000 Series is built with Intel 4th Generation Core processor Technology

- 4th generation Dual Core Processor
- Intel 22nm Process Technology
- Intel® Integrated HD Graphics and Intel® Integrated HD Graphics 4400
- Optional Intel® Smart Connect Technology*
- Intel® Rapid Storage Technology*
- Optional Intel® vPro™ technology (on i5) with Active Management Technology 9.0
- Intel® Wireless Display 5.0 driver included in Intel WLAN options

Processors Support List	UMA Graphics	GSP
Intel® Celeron 2981U (Dual Core, 1.4GHz, 2M cache, 15W) <i>POST RTS</i>	Intel® HD Graphics	NO
Intel® Core i3-4030U (Dual Core, 1.9GHz, 3M cache, 15W)	Intel® HD Graphics 4400	NO
Intel® Core i5-4210U (Dual Core, 1.7 GHz, 3M cache, 15W)	Intel® HD Graphics 4400	NO
Intel® Core i5-4310U (Dual Core, 2.0 GHz, 3M cache, 15W)	Intel® HD Graphics 4400	NO

*Intel Smart Connect Technology requires mSATA or SSD + Intel WLAN or WiGig and Core iX

*Intel Rapid Storage Technology requires HDD, mSATA, SSD

*Intel Rapid Storage Technology is 100% when applicable

*Restricted against Ubuntu

*Ensure you have the necessary WLAN/WiGig and storage for the desired Intel Responsiveness Technologies



Memory

- Your computer supports a maximum of 16GB¹ 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	5000 Series
DIMM Slots <i>(some PWAs support 1 DIMM)</i>	2
Minimum Memory Configuration	4GB
Maximum Memory Configuration <i>Max memory offered on 4th gen offering is 8GB</i>	16GB
DIMM Configurations:	
16G 1600MHz DDR3L (2x8G)	Post-launch
8G 1600MHz DDR3L (1x8G)	x
4G 1600MHz DDR3L (1x4G)	x



These Two Motherboards Have One DIMM slot

Two non EDock motherboards have one DIMM slot (wired or physical)

Form Factor	Mother Board	Edock	Graphics	CPU	Comment
12	3	No	UMA	i3	One DIMM on the mother board
14	9	No	UMA	i3	One DIMM on the mother board



Storage-Latitude 5000 Series

Primary Storage	12"	14"	15"
500GB 7200rpm HDD	X	X	X
128GB SSD	X	X	X
256GB SSD	X	NA	NA
128GB mSATA	X	NA	NA

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



Connectivity Options

	Connectivity Option	Dell Latitude 5000 Series	Regions	Carriers
WWAN M.2	Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5809E (EMEA/APJ/ROW). (HSPA+, not LTE for China/Indonesia))	X	APJ/EMEA/ROW, Except Malaysia	EMEA: generic (no SIM) APJ: generic (no SIM)
WLAN M.2	Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0 LE Wireless Card (1x1)	X	All	NA
	Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2)	X	WW except Ukraine, Russia, Kuwait, Egypt and Indonesia	NA
	Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND (2x2)	X	Indonesia	NA
	Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card (2x2)	X	All, Except Indonesia	NA
	Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) (2x2)	X	All, Except Indonesia	NA

WWAN Carriers & Countries

- US: No WWAN
- Canada: No WWAN
- Brazil: Generic, no SIM
- EMEA: Generic, no SIM
- APJ: Generic, no SIM

PRTS WLAN countries due to local regulatory (subject to change)

- DR Congo: 9/29/14
- Tunisia 10/9/14
- Nicaragua 1/7/15
- South Africa 9/24

- **WWAN and HCA (Hardware Crypto Accelerator) cannot coexist**
- **Certain PWAs do not have a SIM slot (see next slide)**
- **WWAN must be made at POS**
- **No WWAN and WLAN CUST kits**
- **Bottom door removal required for SIM slot access**



These Motherboards are Do Not Support WWAN

Form Factor	MotherBoard	Edock	Graphics	CPU	Comment
12	3	No	UMA	i3	No WWAN slot, no SIM slot
14	6	Yes	UMA	i3	No WWAN slot, no SIM slot
14	9	No	UMA	i3	No WWAN slot, no SIM slot
14	10	No	UMA	i5V	No WWAN slot, no SIM slot
15	15	No	UMA	i3	No WWAN slot, no SIM slot



Security

Security Hardware	5000 Series
FIPS certified Trusted Platform Module (TPM 1.2)	X
Optional Swipe Fingerprint Reader	X
Optional FIPs Fingerprint Reader	15" only
Optional Smartcard Reader	X
Optional Contactless Smartcard Reader/NFC <i>With Win 8.1 at launch. With Win 7 in early 2015</i>	X
Optional FIPS Certified Hardware Crypto Accelerator (HCA) <i>HCA can only be supported on systems with UMA and edock connector</i>	X
Optional Dell Control Vault	X
Optional Computrace	X
DDP Security Tools	X
DDP Protected Workspace (1 year subscription) <i>Win 7 + Downgrade at RTS, Win 8.1 in early 2015</i>	X
Optional DDP E Encryption Software	X



RFID Contactless Smartcard Support List and Schedule

Manufacturer	Card	Houston at RTS	Houston with ST 1.5 in January Block
HID	Transparent (HID ICAO type B card)	No	Yes
HID	HID PIV-II CHVID card	No	Yes
HID	HID iClass DL with HID production key	Yes	Yes
HID	HID iClass EL with HID production key	Yes	Yes
HID	HID iClass 16K CL with HID production key	Yes	Yes
HID	HID DESFire card (14443a)	No	Yes
HID	HID jCOP readertest3 A card (14443a)	No	Yes
HID	HID jTOP B card (14443b)	No	Yes
HID	Infineon 32k dual interface T=0	No	Yes
HID	Infineon 32k dual interface T=1	No	Yes
HID	Mifare DESFire 8K White PVC Cards	No	Yes
HID	Mifare Classic 1K White PVC Cards	Yes	Yes
HID	NXP Mifare Classic S50 ISO Card	Yes	Yes
HID	NXP Mifare Mifare Ultralight	No	Yes
HID	CD21 QQI 12909 ISO-B	No	Yes
Oberthur	CS PIV End Point v1.08	No	Yes
Oberthur	Oberthur ID-One Cosmo 64 RSA D V5.4 T=0 card	No	Yes
G&D	SCE3.2 testchip P5CD144	No	No
HID	HID 2022B GGMNM	Yes	Yes
HID	HID 2080PMSMV	Yes	Yes
HID	HID 2002PGGMN	Yes	Yes
HID	HID 2004PGGMN	Yes	Yes
HID	HID 2080 PGSMV	Yes	Yes
HID	HID iclass 2K DL (2000 PGGMN)	Yes	Yes
HID	HID iclass 16K CL (2001 PGGMN)	Yes	Yes
HID	HID 1430 1L	Yes	Yes
HID	HID DESFire D8H	No	Yes
Gemalto	PIV Card 2.0	No	Yes
Gemalto	PIV Card 1.5.5 DLv2	No	Yes
Oberthur	OSC 5.2 80K	Yes	Yes
G&D	SCE 3.2 144K	No	No



These Motherboards Do Not Support the HCA Card (Hardware Crypto Accelerator)

The HCA slot is not present or the notebooks is not wired for HCA

Form Factor	MotherBoard	Edock	Graphics	CPU	Comment
12	3	No	UMA	i3	Not populated for neither HCA nor WWAN
14	6	Yes	UMA	i3	Not populated for neither HCA nor WWAN
14	9	No	UMA	i3	Not populated for neither HCA nor WWAN
14	10	No	UMA	i5V	Not populated for neither HCA nor WWAN
15	15	No	UMA	i3	Not populated for neither HCA nor WWAN



Dell Latitude 5000 Series Keyboard

Keyboard Specs			
	12"(ISU/ISUB)	14"(ISF/ISFB)	15"(IXFP/IXFBP)
Number of keys	82 (U.S)	85 (U.S)	106 (U.S)
	83 (UK)	86 (UK)	107 (UK)
	84 (BZ)	87 (BZ)	109 (BZ)
	86 (JP)	89 (JP)	110 (JP)
Layout	US/UK/BZ/JP	US/UK/BZ/JP	US/UK/BZ/JP
Size	full sized (18.05mm key pitch)	full sized (19.05mm key pitch)	full sized (19.05mm key pitch)
Backlit keyboard option	Y	Y	Y



Dell Latitude 5000 Series Keyboard

Keyboard

	12"	14"	15"
Base no fingerprint reader, no contacted smartcard, no contactless smartcard, no Control Vault	Single Pointing Backlit/non-backlit	Single Pointing Non-backlit	Dual Pointing Backlit/non-backlit
Smart card only Contacted smartcard, Control Vault	Single Pointing Backlit/non-backlit	Single Pointing Non-backlit OR Dual Pointing Backlit	Dual Pointing Backlit/non-backlit
Standard fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault. <i>(NFC + Win 8.1 @ launch. NFC + Win 7 in early 2015)</i>	Single Pointing Backlit/non-backlit	Dual Pointing Backlit	Dual Pointing Backlit/non-backlit
FIPs FIPs fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault. <i>(NFC + Win 8.1 @ launch. NFC + Win 7 in early 2015)</i>	NA	NA	Dual Pointing Backlit/non-backlit



Detailed Engineering Specifications

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



500GB HDD 7200 RPM

500 GB HDD 7200 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.

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%

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



256GB SSD 2.5"

128 GB SSD 2.5"	
Capacity (GB)	256GB 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	500,118,192
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%

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

128GB mSATA

128 GB SSD 2.5"	
Capacity (GB)	128 GB mSATA
Dimensions inches (W x D x H)	Approximately (30.00 x 50.95 x 4.75 mm)
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%

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



Memory

- Your computer supports a maximum of 16GB¹ 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	
DIMM Slots <i>(some PWAs can support only 1 DIMM)</i>	2
Minimum Memory Configuration	4GB
Maximum Memory Configuration* <i>Max at 4th generation Intel launch is 8GB</i>	16GB
DIMM Configurations:	
16G 1600MHz DDR3L (2x8G)	PRTS Jan
8G 1600MHz DDR3L (1x8G)	x
4G 1600MHz DDR3L (1x4G)	x



These Two Motherboards Have One DIMM slot

Two non EDock motherboards have one DIMM slot (wired or physical)

Form Factor	Mother Board	Edock	Graphics	CPU	Comment
12	3	No	UMA	i3	One DIMM on the mother board
14	9	No	UMA	i3	One DIMM on the mother board



Ports and Connectors-Latitude 5000 Series

	12"	14"	15"
USB	(3) USB 3.0- one PowerShare capable	(3) USB 3.0- one PowerShare capable	(3) USB 3.0- one PowerShare capable
Video	mDP, HDMI	VGA, HDMI	VGA, HDMI
Network Adapter	RJ-45 network adapter	RJ-45 network adapter	RJ-45 network adapter
Modem	NA	NA	NA
Audio	<p>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</p>	<p>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</p>	<p>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</p>
Expansion	SD 4.0 Memory card reader 1 3042, 1 3030 M.2 slots	SD 4.0 Memory card reader 1 3042, 1 3030 M.2 slots	SD 4.0 Memory card reader 1 3042, 1 3030 M.2 slots
Express Card	NA	NA	NA



Webcam Specifications-Latitude 5000 Series



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	12" HD <i>Tied to HD panel</i>	12" FHD <i>Tied to FHD panel</i>	14" HD	15" HD
Camera Type	HD fixed focus	FHD fixed focus	HD fixed focus	HD fixed focus
Sensor Type	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology
Resolution: Motion Video	Up to 1280 x 720 (0.92 MP)	Up to 1920 x 1080 (2.07MP)	Up to 1280 x 720 (0.92 MP)	Up to 1280 x 720 (0.92 MP)
Resolution: Still Image	Up to 1280 x 720 (0.92MP)	Up to 1920 x 1080 (2.07MP)	Up to 1280 x 720 (0.92MP)	Up to 1280 x 720 (0.92MP)
Imaging Rate	Up to 30 frames per second	Up to 30 frames per second	Up to 30 frames per second	Up to 30 frames per second

Wireless Communications: Wi-Fi (WLAN)

Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE Wireless Card (1x1)

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 Single Band Wi-Fi + BT 4.0LE Wireless Card (1x1)

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® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2)

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 300 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 10.0 on Broadwell Y and Broadwell U.
Government Compliance	FIPS (Windows® 7 only), FISMA
Client Utility	Intel® PRO/Set Wireless Software v17.X and later.
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® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2)

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

For Windows 7, 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

Support for MS Inbox BT profiles in Windows 8, 8.1 and future OS versions.

Bluetooth Data Encryption

128-bit encryption

Bluetooth Output Power

Power class 2

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)



Wireless Communications: Wi-Fi (WLAN)

Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND (2x2)

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 (5.725~5.850GHz)
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 300 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 10.0 on Broadwell Y and Broadwell U.
Government Compliance	FIPS (Windows® 7 only), FISMA
Client Utility	Intel® PRO/Set Wireless Software v17.X and later.
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
This card can only be shipped to 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® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND (2x2)

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

For Windows 7, 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

Support for MS Inbox BT profiles in Windows 8, 8.1 and future OS versions.

Bluetooth Data Encryption

128-bit encryption

Bluetooth Output Power

Power class 2

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)



Wireless Communications: Wi-Fi (WLAN)

Intel® Dual Band Wireless-N 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card (2x2)

Host interface	M.2 2230 form factor (WiFi – PCIe, Bluetooth – USB)
Network standard	IEEE 802.11a/b/g/n/ac
Wi-Fi Alliance Certifications	802.11n, 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 300 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 10.0 on Broadwell Y and Broadwell U.
Government Compliance	FIPS (Windows® 7 only), FISMA
Client Utility	Intel® PRO/Set Wireless Software v17.X and later.
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

*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® Dual Band Wireless-N 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card (2x2)

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

For Windows 7, 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

Support for MS Inbox BT profiles in Windows 8, 8.1 and future OS versions.

Bluetooth Data Encryption

128-bit encryption

Bluetooth Output Power

Power class 2

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)



Wireless Communications: Wi-Fi (WLAN)

Intel® Dual Band Wireless-N 7265 802.11AGN Wi-Fi Wireless Card (No BT) (2x2)

Host interface	M.2 2230 form factor (WiFi – PCIe, Bluetooth – USB)
Network standard	IEEE 802.11a/b/g/n/ac
Wi-Fi Alliance Certifications	802.11n, 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 300 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 10.0 on Broadwell Y and Broadwell U.
Government Compliance	FIPS (Windows® 7 only), FISMA
Client Utility	Intel® PRO/Set Wireless Software v17.X and later.
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

*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® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) (2x2)

Wireless PAN Standard	NA
------------------------------	----

Bluetooth Data rates	NA
-----------------------------	----

Bluetooth Operating Frequency Bands	NA
--	----

Bluetooth Profiles Supported	NA
------------------------------	----

Bluetooth Data Encryption	NA
----------------------------------	----

Bluetooth Output Power	NA
-------------------------------	----

Temperature	NA
--------------------	----

Humidity	NA
-----------------	----

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)	WOL Disabled: 10mW (Disabled using driver) No Link (w/ WOL): 17mW (cable Disconnect) 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 10 / DASH 1.1

WLAN: Miracast/WiDi Support Matrix

WLAN Card	OS	Miracast (WiFi Display) Support	WiDi Display
Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE Wireless Card	Win 7 32/64 bit	No support	No support
Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE Wireless Card	Win 8.1 64 bit	Native support	No support
Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE Wireless Card	Ubuntu 14.04	No support	No support
<ul style="list-style-type: none"> Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) 	Win 7 32 bit	Support on Core i CPU. No support on Celeron/Pentium	Support on Core i CPU. No support on Celeron/Pentium
<ul style="list-style-type: none"> Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) 	Win 7 64 bit	Support on Core i CPU. No support on Celeron/Pentium	Support on Core i CPU. No support on Celeron/Pentium
<ul style="list-style-type: none"> Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) 	Win 8.1 64 bit	Native support	Native support
<ul style="list-style-type: none"> Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card IND Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card Intel® Dual Band Wireless-AN 7265 802.11AGN Wi-Fi Wireless Card (No BT) 	Ubuntu 14.04	No support	No support



Wireless Communications: Mobile Broadband

Gobi™ 4G LTE Wireless Card

Dell Wireless™ DW5809E LTE (EMEA, APJ, ROW). (HSPA+, not LTE for China/Indonesia)

Carrier	Telefonica	Generic
Network	LTE	LTE
Min/Max Speed (Downlink)	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
Fallback Network	HSPA+ EDGE/GPRS	HSPA+ EDGE/GPRS
Fallback Speed	EDGE 247.4 Kbps GPRS 85.6 Kbps	EDGE 247.4 Kbps GPRS 85.6 Kbps
Frequency Bands	Band 3 LTE 850/900/1900/2100 HSPA/WCDMA 800/900/1800/1900 EDGE/GPRS	Band 1, 3, 7, 8, 20 LTE 850/900/1900/2100 HSPA/WCDMA 800/900/1800/1900 EDGE/GPRS
SIM	Yes	No
GPS	Autonomous, A-GPS	Autonomous, A-GPS

- **WWAN and HCA (Hardware Crypto Accelerator) cannot coexist**
- **Certain PWAs don't support WWAN**
- **LTE not supported in China and Indonesia. WWAN PRTS in these countries**
- **Bottom door removal required for SIM slot access**



These Motherboards are Do Not Support WWAN

Form Factor	MotherBoard	Edock	Graphics	CPU	Comment
12	3	No	UMA	i3	No WWAN slot, no SIM slot
14	6	Yes	UMA	i3	No WWAN slot, no SIM slot
14	9	No	UMA	i3	No WWAN slot, no SIM slot
14	10	No	UMA	i5V	No WWAN slot, no SIM slot
15	15	No	UMA	i3	No WWAN slot, no SIM slot



Security

Security Hardware	5000 Series
FIPS certified Trusted Platform Module (TPM 1.2)	X
Optional Swipe Fingerprint Reader	X
Optional FIPs Fingerprint Reader	15" only
Optional Smartcard Reader	X
Optional Contactless Smartcard Reader/NFC <i>With Win 8.1 at launch. With Win 7 in early 2015</i>	X
Optional FIPS Certified Hardware Crypto Accelerator (HCA) <i>HCA can only be supported on systems with UMA and edock connector</i>	X
Optional Dell Control Vault	X
Optional Computrace	X
DDP Security Tools	X
DDP Protected Workspace (1 year subscription) <i>Win 7 + Downgrade at RTS, Win 8.1 in early 2015</i>	X
Optional DDP E Encryption Software	X



RFID Contactless Smartcard Support List and Schedule

Manufacturer	Card	Houston at RTS	Houston with ST 1.5 in January Block
HID	Transparent (HID ICAO type B card)	No	Yes
HID	HID PIV-II CHVID card	No	Yes
HID	HID iClass DL with HID production key	Yes	Yes
HID	HID iClass EL with HID production key	Yes	Yes
HID	HID iClass 16K CL with HID production key	Yes	Yes
HID	HID DESFire card (14443a)	No	Yes
HID	HID jCOP readertest3 A card (14443a)	No	Yes
HID	HID jTOP B card (14443b)	No	Yes
HID	Infineon 32k dual interface T=0	No	Yes
HID	Infineon 32k dual interface T=1	No	Yes
HID	Mifare DESFire 8K White PVC Cards	No	Yes
HID	Mifare Classic 1K White PVC Cards	Yes	Yes
HID	NXP Mifare Classic S50 ISO Card	Yes	Yes
HID	NXP Mifare Mifare Ultralight	No	Yes
HID	CD21 QQI 12909 ISO-B	No	Yes
Oberthur	CS PIV End Point v1.08	No	Yes
Oberthur	Oberthur ID-One Cosmo 64 RSA D V5.4 T=0 card	No	Yes
G&D	SCE3.2 testchip P5CD144	No	No
HID	HID 2022B GGMNM	Yes	Yes
HID	HID 2080PMSMV	Yes	Yes
HID	HID 2002PGGMN	Yes	Yes
HID	HID 2004PGGMN	Yes	Yes
HID	HID 2080 PGSMV	Yes	Yes
HID	HID iclass 2K DL (2000 PGGMN)	Yes	Yes
HID	HID iclass 16K CL (2001 PGGMN)	Yes	Yes
HID	HID 1430 1L	Yes	Yes
HID	HID DESFire D8H	No	Yes
Gemalto	PIV Card 2.0	No	Yes
Gemalto	PIV Card 1.5.5 DLv2	No	Yes
Oberthur	OSC 5.2 80K	Yes	Yes
G&D	SCE 3.2 144K	No	No

These Motherboards Do Not Support the HCA Card (Hardware Crypto Accelerator)

The HCA slot is not present or the notebooks is not wired for HCA

Form Factor	MotherBoard	Edock	Graphics	CPU	Comment
12	3	No	UMA	i3	Not populated for neither HCA nor WWAN
14	6	Yes	UMA	i3	Not populated for neither HCA nor WWAN
14	9	No	UMA	i3	Not populated for neither HCA nor WWAN
14	10	No	UMA	i5V	Not populated for neither HCA nor WWAN
15	15	No	UMA	i3	Not populated for neither HCA nor WWAN



Integrated Graphics Controller

Integrated Graphics Controller	Intel HD Graphics (Intel Haswell Celeron 2981U)
Model	Dell Latitude 5000 series
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Clock Speeds	Celeron 2981U: 1.6GHz (Single core Turbo: N/A, Dual core Turbo: N/A)
Max Graphics dynamic frequency	200/1000 MHz
Graphics Level	Celeron 2981U: GT1
Estimated Maximum Power Consumption (TDP)	15W
Display Support	On System: eDP (internal), HDMI, VGA Via Optional E-Port or E-Port Plus: VGA, DisplayPort, DVI
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) 3840x2160@60Hz Analog: (VGA) system or docking 1920x1200/32bpp @ 60Hz
Numbers of Displays Supported	Un-Docked - 3 displays max (LCD, HDMI, VGA) Docked - 3 displays max (combo of LCD, VGA, two DP/DVI) Note: docked requires optional E Port or E Port Plus

Integrated Graphics Controller

Integrated Graphics Controller	Intel HD Graphics 4400 (Intel Haswell i5 4310U/ i5 4210U/ i3 4030U)
Model	Dell Latitude 5000 series
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Clock Speeds	Core i5 4310U: 2.0GHz (Single core Turbo: 3.0GHz, Dual core Turno: 2.7GHz) Core i5 4210U: 1.7GHz (Single core Turbo: 2.7GHz, Dual core Turno: 2.4GHz) Core i3 4030U : 1.9GHz (No CPU Turbo)
Max Graphics dynamic frequency	Core i5 4310U: 200/1100 MHz Core i5 4210U: 200/1000 MHz Core i3 4030U: 200/1000 MHz
Graphics Level	Core i5 4310U: GT2 Core i5 4210U: GT2 Core i3 4030U: GT2
Estimated Maximum Power Consumption (TDP)	15W
Display Support	On System: eDP (internal), HDMI, VGA Via Optional E-Port or E-Port Plus: VGA, DisplayPort, DVI
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) 3840x2160@60Hz Analog: (VGA) system or docking 1920x1200/32bpp @ 60Hz
Numbers of Displays Supported	Un-Docked - 3 displays max (LCD, HDMI, VGA) Docked – 3 displays max (combo of LCD, VGA, two DP/DVI) Note: docked requires optional E Port or E Port Plus



Latitude 5000 Series LCD Back Detail

Display

	12"	14"	15"
HD Non Touch	Mag LCD Back	Glass Fiber Reinforced Polymer LCD back	Glass Fiber Reinforced Polymer LCD back
HD Touch	NA	NA	NA
FHD Non Touch	NA	Mag LCD Back	Mag LCD Back
FHD Touch	Mag LCD Back	Mag LCD Back	Mag LCD Back

Display

E5250/5250

12.0" HD Anti-Glare LCD display with LED backlight

Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions	
Height	181.4mm(maximum)
Width	290.5mm(maximum)
Diagonal	12.5"
Native Resolution	1366 x 768
Megapixels	1.05
Pixels per Inch (PPI)	125
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	0.2025 mm
Power Consumption (maximum)	2.9 W

Display

E5250/5250

12.0" FHD Touch Anti-Glare LCD display with LED backlight

Type	FHD Anti-Smudge
Luminance (typical)	360 nits
Dimensions	
Height	171.2mm(maximum)
Width	291.0mm(maximum)
Diagonal	12.5"
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	176
Contrast Ratio (min)	600:1
Response Time (max)	35 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/-80 degrees
Pixel Pitch	0.144 mm
Power Consumption (maximum)	5.3 W

Display

E5450/5450

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)	3.0 W

Display

E5450/5450

14.0" FHD 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	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/- 80 degrees
Pixel Pitch	0.161 mm
Power Consumption (maximum)	5.3 W

Display

E5450/5450

14.0" FHD Touch Anti-Glare LCD display with LED backlight

Type	HD True Life
Luminance (typical)	270 nits
Dimensions	
Height	205.6mm(maximum)
Width	326.43mm(maximum)
Diagonal	14.0"
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/- 80 degrees
Pixel Pitch	0.161 mm
Power Consumption (maximum)	5.5 W

Display

E5550/5550

15.6" HD Anti-Glare LCD display with LED backlight

Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions	
Height	360mm(maximum)
Width	224.3mm(maximum)
Diagonal	15.6"
Native Resolution	1366 x 768
Megapixels	1.05
Pixels per Inch (PPI)	101
Contrast Ratio (min)	400:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 40 degrees
Vertical View Angle	+10/-30 degrees
Pixel Pitch	0.252 mm
Power Consumption (maximum)	4.0 W

Display

E5550/5550

15.6" FHD Anti-Glare LCD display with LED backlight

Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions	
Height	360mm(maximum)
Width	224.3mm(maximum)
Diagonal	15.6"
Native Resolution	1920x1080
Megapixels	2.07
Pixels per Inch (PPI)	141
Contrast Ratio (min)	600:1
Response Time (max)	35 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/-80 degrees
Pixel Pitch	0.179 mm
Power Consumption (maximum)	6.2 W

Display

E5550/5550

15.6" FHD Touch Anti-Glare LCD display with LED backlight

Type	FHD GGNBT
Luminance (typical)	270 nits
Dimensions	
Height	360mm(maximum)
Width	224.3mm(maximum)
Diagonal	15.6"
Native Resolution	1920x1080
Megapixels	2.07
Pixels per Inch (PPI)	141
Contrast Ratio (min)	600300:1
Response Time (max)	35 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/-80 degrees
Pixel Pitch	0.179 mm
Power Consumption (maximum)	6.2 W

Dell Latitude 5000 Series Battery Specification

Battery is a **CRU** Item

	3-cell (38 WHr)	4-cell (51 WHr)
Battery Type	Li-polymer	Li-polymer
Dimension		
Length	177.5mm (6.988")	233mm (9.17")
Width	94.8mm (3.73")	94.8mm (3.73")
Height	7.05mm (0.28")	7.05mm (0.28")
Weight	265.00 g	340.00 g
Voltage	11.1VDC	7.4VDC
Typical Amp-hour capacity	3.43Ahr	6.86Ahr
Typical Watt-hour capacity	38Whr	51Whr
Operating time	battery operating time varies depending on operating conditions and can be significantly reduced under certain power-intensive conditions.	
Temperature range: Operating	Charge: 0 ° C to 50 ° C Discharge: 0 ° C to 70 ° C	Charge: 0 ° C to 50 ° C Discharge: 0 ° C to 70 ° C
Temperature range: Non-Operating	-20 ° C to 65 ° C (4 ° F to 149 ° F)	-20 ° C to 65 ° C (4 ° F to 149 ° F)
Charging time (ExpressCharge)	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
Life span (approximate)	Standard pack : 1 year warranty for 300 discharge/charge cycles LCL pack : 3 year warranty for 1000 cycle discharge/charge cycles	

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 5000 Series Power Adapters

Adapter Specifications	E5 65W	E4 65W BFR/PVC free	E5 90W
Input voltage	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
Input current (max)	1.7 A	1.7 A	1.6 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	0.77
Weight (kg)	0.23	0.29	0.32
Dimensions (inches)	0.87 x 2.60 x 4.17	1.1 x 1.9 x 4.3	0.87 x 2.60 x 5.12
Dimensions (mm)	22 x 66 x 106	28 x 47 x 108	22 x 66 x 130
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 5000 Series

Power Cord + Adapter: Length and Weight

E4 BFR/PVC free or E5 65W Standard Power Cord+ Adapter

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

E5 90W Standard Power Cord+ Adapter

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

Different regional cords have different weights



Dell Latitude 5000 Series Keyboard

Keyboard Specs			
	12"(ISU/ISUB)	14"(ISF/ISFB)	15"(IXFP/IXFBP)
Number of keys	82 (U.S)	85 (U.S)	106 (U.S)
	83 (UK)	86 (UK)	107 (UK)
	84 (BZ)	87 (BZ)	109 (BZ)
	86 (JP)	89 (JP)	110 (JP)
Layout	US/UK/BZ/JP	US/UK/BZ/JP	US/UK/BZ/JP
Size	full sized (18.05mm key pitch)	full sized (19.05mm key pitch)	full sized (19.05mm key pitch)
Backlit keyboard option	Y	Y	Y



Dell Latitude 5000 Series Keyboard

Keyboard

	12"	14"	15"
Base no fingerprint reader, no contacted smartcard, no contactless smartcard, no Control Vault	Single Pointing Backlit/non-backlit	Single Pointing Non-backlit	Dual Pointing Backlit/non-backlit
Smart card only Contacted smartcard, Control Vault	Single Pointing Backlit/non-backlit	Single Pointing Non-backlit OR Dual Pointing Backlit	Dual Pointing Backlit/non-backlit
Standard fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault. <i>(NFC + Win 8.1 @ launch. NFC + Win 7 in early 2015)</i>	Single Pointing Backlit/non-backlit	Dual Pointing Backlit	Dual Pointing Backlit/non-backlit
FIPs FIPs fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault. <i>(NFC + Win 8.1 @ launch. NFC + Win 7 in early 2015)</i>	NA	NA	Dual Pointing Backlit/non-backlit



Dell Latitude 5000 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 5000 Series Touch Pad Specifications

Touch Pad

X/Y position resolution	X: 1048dpi; Y:984dpi
Size	Sensor-active area: Width: 99.5mm Height: 53.0mm
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 (disabled by default)	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
3-finger Flick Right/Left/Up/Down	Supported (disabled by default)	Supported (disabled by default)

Dell Latitude 5000 Series

Operating conditions and MIL-STD 810G Testing Performed

Models	Dell Latitude 5000 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 0 to 3048 m (0 to 10,000 ft) Storage 0 to 10,668 m (0 to 35,000 ft)
MIL-STD-810G Tests Performed ¹	<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 Procedure II Humidity Aggravated Cycle 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

