
Dell™ Latitude™ 7000 Series Technical Guidebook

December 2014



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

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Latitude 7000 Series Technical Guide Book

This presentation provides a technical overview of the Dell Latitude™ 7000 series with Intel Broadwell Processors.



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

Dell Latitude 7000 Series Product Views and Technical Specifications

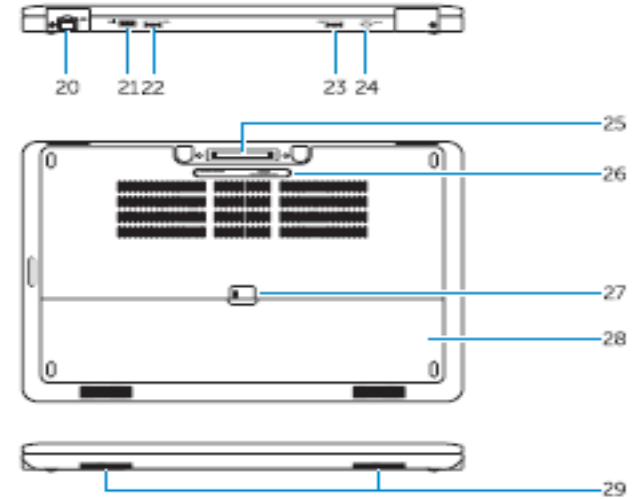
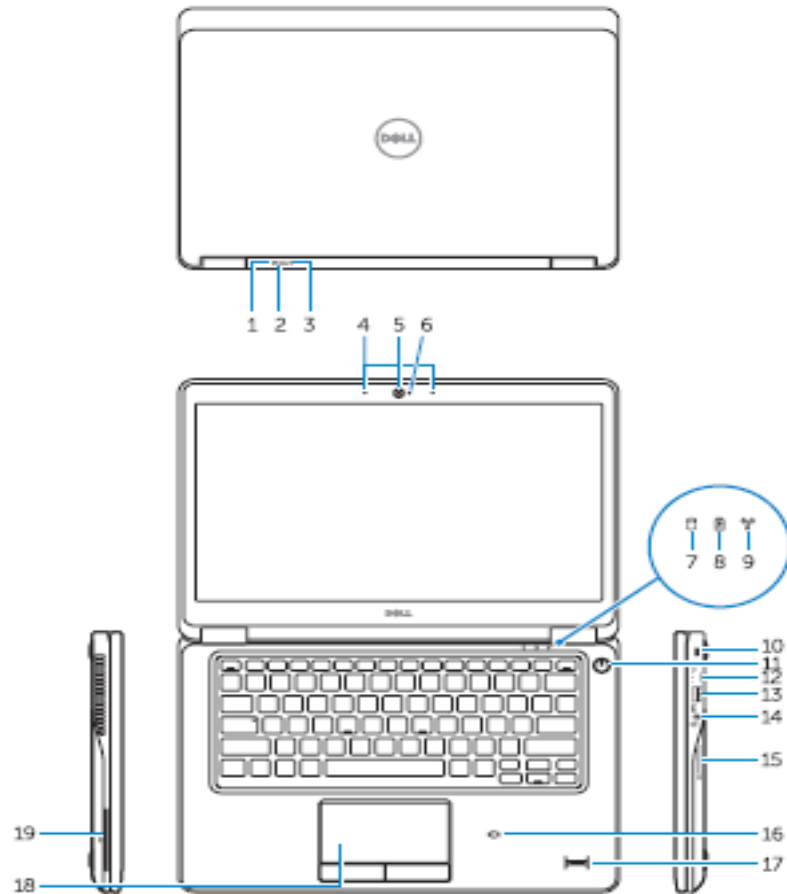
Specific features/models/configs/options discussed in this document may not be available WW



Latitude 12 7000 Features

Features

Features | Features | Features | Features



- | | |
|--------------------------------|--|
| 1. Battery-status light | 16. Contactless smart-card reader / Near Field Communication (NFC) reader (optional) |
| 2. Hard-drive activity light | 17. Fingerprint reader (optional) |
| 3. Power-status light | 18. Touchpad |
| 4. Microphones | 19. Smart card reader (optional) |
| 5. Camera | 20. Network connector |
| 6. Camera-status light | 21. HDMI connector |
| 7. Hard-drive activity light | 22. USB 3.0 connector |
| 8. Battery-status light | 23. USB 3.0 connector with PowerShare |
| 9. Wireless-status light | 24. Power connector |
| 10. Security-cable slot | 25. Dock connector (optional) |
| 11. Power button | 26. Service-tag label |
| 12. Mini-DisplayPort connector | 27. Battery release latch |
| 13. USB 3.0 connector | 28. Battery |
| 14. Headset connector | 29. Speakers |
| 15. Memory card reader | |

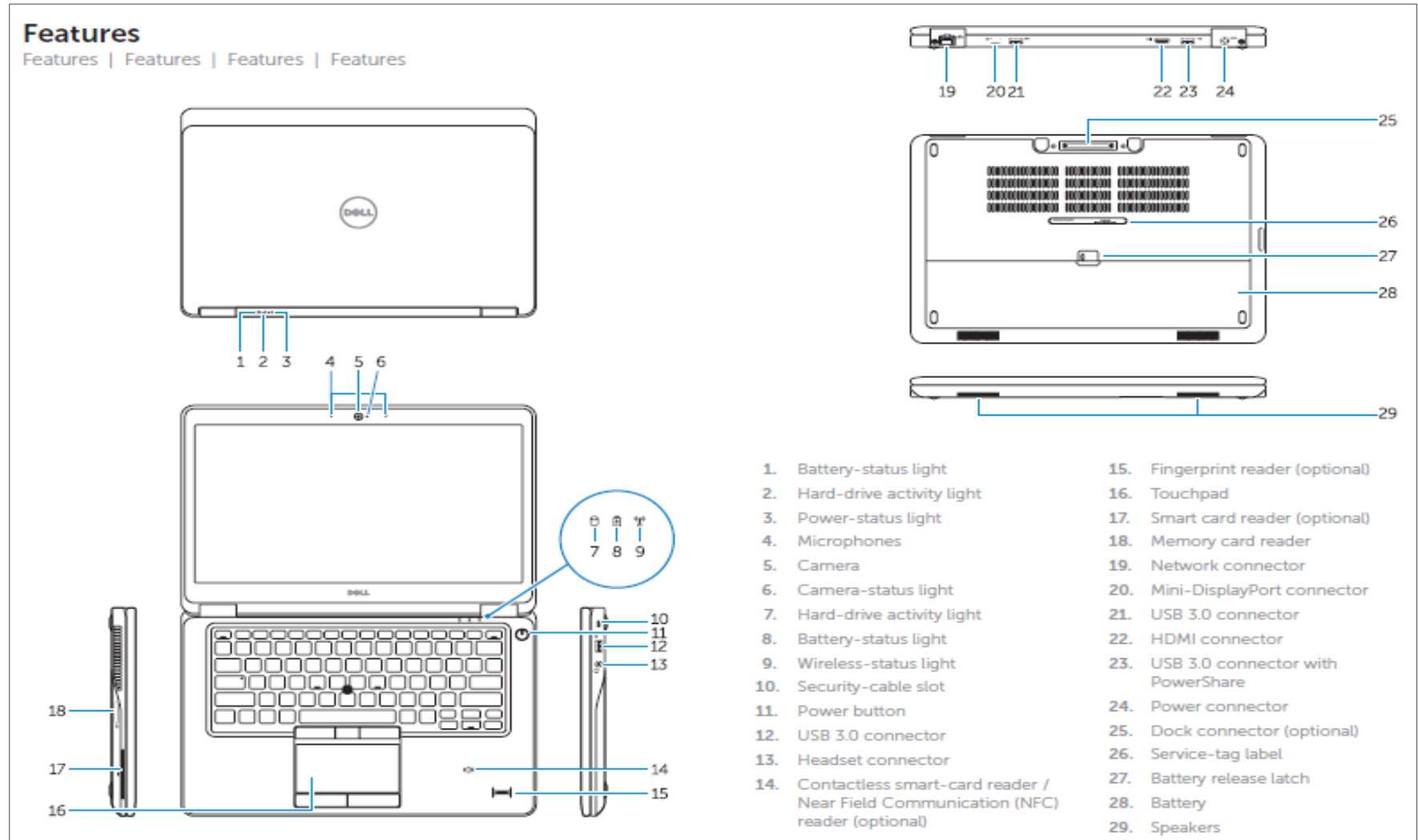
Latitude 12 7000 Weight and Dimensions

Latitude 12 7000 Series

	lbs.	kg.
Starting Weight	2.76	1.25
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	8.3	211.0
Height front	0.70	17.8
Height back (non touch Mag LCD cover)	0.76	19.4
Height back (touch Woven Carbon Fiber LCD cover)	0.83	21

Latitude 14 7000 Features



Latitude 14 7000 Weight and Dimensions

Latitude 14 7000 Series

	lbs.	kg.
Starting Weight	3.43	1.55
Non Touch FHD panel with camera, WLAN only, NBL KB, docking, mSATA, 4GB RAM, 3 cell battery, UMA, non FPR		

Dimensions	inches	mm
Width	13.3	337
Depth	9.11	231.5
Height front	0.74	18.8
Height back (non touch Mag cover)	0.80	20.4
Height back (touch Mag cover)	0.88	22.6

Dell Latitude 12 7000 Series Technical Specifications

Feature	Technical Specification
Model Number	Latitude 12 7000 Series (E7250/7250)
Processor Options ¹	5th Generation Intel® Core™ up to i7 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; 1 slot supporting up to 8GB DDR3L SDRAM 1600MHz; 2 slots supporting up to 16GB
Chipset ¹	Integrated with the processor (Wildcat Point LP), 5th Generation Intel®
Intel Responsiveness Technologies ¹	Optional Intel® Smart Connect Technology ⁸
Graphics ^{1,13}	Intel® Integrated HD Graphics 5500
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, Woven Carbon Fiber LCD Back
Storage Options ^{1, 5}	Up to 512GB Mobility Solid State Drive Up to 512GB SED SSD (512GB SED SSD available in March 2015)

Dell Latitude 12 7000 Series Technical Specifications

Feature	Technical Specification
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 Optional Dell Control Vault™ Optional Computrace6 DDP Security Tools DDP Protected Workspace (1 year subscription included) Optional DDP E Encryption Software
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	3-cell 39 Whr Lithium Polymer battery with ExpressCharge™ 4-cell 52 Whr Lithium Polymer battery with ExpressCharge™ 4-cell 52 Whr Lithium Polymer battery with Long Life Cycle
Power Options ¹	65 Watt Adapter 90 Watt AC Adapter

Dell Latitude 12 7000 Series Technical Specifications

Feature	Technical Specification
Connectivity options ^{1,14,15}	10/100/1000 Gigabit Ethernet
	Wireless LAN Options:
	Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE Wireless Card (2x2)
	Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE 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 (2x2) (Indonesia)
	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 (2x2) (No BT)
	Optional Mobile Broadband Options:¹⁰
	Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5808E for AT&T, Verizon, Sprint, US. Canada, generic)
Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5809E (EMEA/APJ/ROW)	
Optional WiGig Option:	
Intel® Tri-Band Wireless-AC 17265 WiGig + WLAN + BT4.0LE Wireless Card	
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
	Non-dock: 1 M.2 expansion slot: 1 WLAN/BT/WiGig
	E-Dock: 2 M.2 expansion slot: 1 WWAN/SD and 1 WLAN/BT/WiGig
	Optional SmartCard Reader and optional Fingerprint Reader
Lock slot	
Dimensions & Weight ^{1,16}	Width: 12.2" / 310.5mm
	Height: .76" / 19.4mm (non-Touch)
	Depth: 8.3" / 211.0mm
	Starting weight: 2.76lbs /1.25kg (with 3cell battery)



Dell Latitude 12 7000 Series Technical Specifications

Feature	Technical Specification
Regulatory and Environmental Compliance ¹	<p>Regulatory Model: P22S</p> <p>Regulatory Type: P22S002</p> <p>ENERGY STAR 6.0</p> <p>EPEAT Registered. For specific country participation and rating, please see www.epeat.net</p> <p>BFR/PVC free⁹</p>
Input ¹	<p>Single Pointing non-backlit Keyboard</p> <p>Single Pointing backlit Keyboard</p> <p>Multi-touch Touchpad</p>
Systems Management ¹	<p>Intel® vPro™ Technology's advanced management features (optional, requires Intel WiFi® Link WLAN and a vPro compatible processor)</p>
Warranty and Service ¹	<p>Limited Hardware Warranty⁴; Standard 3 year On-Site Service after Remote Diagnosis¹¹; optional 4 year and 5 year hardware warranty extensions and 3-5 year Dell ProSupport contracts available.¹²</p>
Peripheral Ecosystem ¹	<p>Dell E-Port Replicator, Dell UltraSharp 24 Monitor, Dell Wireless Keyboard & Mouse, Dell Mini DisplayPort to VGA Adapter, Dell Premier Briefcase, Dell Portable Power Companion</p>



Dell Latitude 12 7000 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 7000 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 14 7000 Series Technical Specifications

Feature	Technical Specification
Model Number	Latitude 14 7000 Series (E7450/7450)
Processor Options ¹	5th Generation Intel® Celeron, Core™ up to i7 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; 1 slot supporting up to 8GB DDR3L SDRAM 1600MHz; 2 slots supporting up to 16GB
Chipset ¹	Integrated with the processor (Wildcat Point LP), 5th Generation Intel®
Intel Responsiveness Technologies ¹	Optional Intel® Smart Connect Technology ⁸
Graphics ^{1,13}	Intel® Integrated HD Graphics 5500 Nvidia® GeForce® 840M
Display ¹	14.0" HD (1366 x 768) Anti Glare (16:9) WLED, 200 nits, Magnesium Alloy LCD back 14.0" FHD (1920 x 1080) Anti Glare (16:9) WLED, 300 nits, Magnesium Alloy LCD back 14.0" FHD Touch with Corning® Gorilla® Glass NBT (1920 x 1080) (16:9) WLED, 270 nits, Woven Carbon Fiber LCD back
Storage Options 1, 5	500GB 5400rpm HDD 500GB Solid State Hybrid drives (8GB Cache) Up to 512GB Mobility Solid State Drive Up to 512GB SED SSD Dell Fast Response Free Fall Sensor and HDD Isolation (standard feature)



Dell Latitude 14 7000 Series Technical Specifications

Feature	Technical Specification
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 Optional Dell Control Vault™ Optional Computrace6 DDP Security Tools DDP Protected Workspace (1 year subscription included) Optional DDP E Encryption Software
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	3-cell 40 Whr Lithium Polymer battery with ExpressCharge™ 4-cell 54 Whr Lithium Polymer battery with ExpressCharge™ 4-cell 54 Whr Lithium Polymer battery with Long Life Cycle
Power Options ¹	65 Watt Adapter 90 Watt AC Adapter



Dell Latitude 14 7000 Series Technical Specifications

Feature	Technical Specification
Connectivity options ^{1,14,15}	10/100/1000 Gigabit Ethernet
	Wireless LAN Options:
	Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE Wireless Card (2x2)
	Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE Wireless Card (1x1)
	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 (Indonesia)
	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)
	Optional Mobile Broadband Options:
	Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5808E for AT&T, Verizon, Sprint, US. Canada, generic)
Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5809E (EMEA/APJ/ROW))	
Optional WiGig Option:	Intel® Tri-Band Wireless-AC 17265 WiGig + WLAN + BT4.0LE Wireless Card
Ports, Slots & Chassis ¹	Universal Jack
	SD 4.0 Memory card reader
	Optional Edocking connector, 3 USB 3.0, HDMI, VGA
	Network connector (RJ-45), SIM card slot
	2 M.2 expansion slots: 1 WWAN/SSD and 1 WLAN/BT/WiGig
	Optional SmartCard Reader and optional Fingerprint Reader
	Lock slot
Dimensions & Weight ^{1,16}	Width: 13.3" / 337.0mm
	Height: .88" / 22.4mm
	Depth: 9.12" / 231.5mm
	Starting weight: 3.43lbs / 1.56kg (with 3-cell battery)

Dell Latitude 14 7000 Series Technical Specifications

Feature	Technical Specification
Regulatory and Environmental Compliance ¹	Regulatory Model: P40G Regulatory Type: P40G002 ENERGY STAR 6.0 EPEAT 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 UltraSharp 24 Monitor, Dell Wireless Keyboard & Mouse, Dell Mini DisplayPort to VGA Adapter, Dell Premier Briefcase, Dell Portable Power Companion



Dell Latitude 14 7000 Series Technical Specifications

Footnotes

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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.

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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 7000 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 7000 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



Latitude 7000 Series is built with Intel 5th Generation Core processor Technology

- 5th generation Dual Core Processor
- Intel 14nm Process Technology
- Intel® Integrated HD Graphics and Intel® Integrated HD Graphics 5500
- Optional Intel® Smart Connect Technology*
- Intel® Rapid Storage Technology*
- Optional Intel® vPro™ technology (on i5) with Active Management Technology 10.0
- Intel® Wireless Display 5.0 driver included in Intel WLAN options

Processor Support List	UMA Graphics	GSP
Intel® Core i3-5010U (Dual Core, 2.1GHz, 3M cache, 15W)	Intel® HD Graphics	NO
Intel® Core i5-5200U (Dual Core, 2.2GHz, 3M cache, 15W)	Intel® HD Graphics 5500	NO
Intel® Core i5-5300U (Dual Core, 2.3GHz, 3M cache, 15W)	Intel® HD Graphics 5500	YES
Intel® Core i7-5600U (Dual Core, 2.6Hz, 4M cache, 15W)	Intel® HD Graphics 5500	YES

*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	
DIMM Slots <i>(some PWAs can support only 1 DIMM)</i>	2
Minimum Memory Configuration	4GB
Maximum Memory Configuration* <i>Max at 5th generation Intel launch is 8GB</i>	16GB
DIMM Configurations:	
16G 1600MHz DDR3L (2x8G)	X
8G 1600MHz DDR3L (1x8G)	x
4G 1600MHz DDR3L (1x4G)	x



Storage-Latitude 7000 Series

Primary Storage	12"	14"
500GB Solid State Hybrid Drive (8GB Cache)		X
80GB SSD	X	X
128GB SSD	X	X
180GB SSD	X	X
256GB SSD	X	X
256GB SED SSD	X	X
512GB SED SSD	X	X
512 mSATA SSD	X	X

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

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

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



Connectivity Options

Connectivity Option	Dell Latitude 7000 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, China, Indonesia EMEA: generic (no SIM) APJ: generic (no SIM)
	Qualcomm Gobi™ 4G LTE Wireless Card (Dell Wireless™ DW5808E for AT&T, Verizon & Sprint, US. Canada: generic)	X	US/Canada US: AT&T, Verizon, Sprint Canada: generic (no SIM)
WIGIG M.2	Intel® Tri-Band Wireless-AC 17265 WiGig + WLAN + BT4.0LE Wireless Card (Post RTS)	X	38 Country CSTL NA
WLAN M.2	Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE Wireless Card (2x2)	X	All NA
	Dell Wireless™ 1707 802.11N Single Band Wi-Fi + BT 4.0LE 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, 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**



Security

Security Hardware	7000 Series
FIPS certified Trusted Platform Module (TPM 1.2)	X
Optional Swipe Fingerprint Reader	X
Optional FIPs Fingerprint Reader	X
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	7000 Series
HID	Transparent (HID ICAO type B card)	Yes
HID	HID PIV-II CHVID card	Yes
HID	HID iClass DL with HID production key	Yes
HID	HID iClass EL with HID production key	Yes
HID	HID iClass 16K CL with HID production key	Yes
HID	HID DESFire card (14443a)	Yes
HID	HID jCOP readertest3 A card (14443a)	Yes
HID	HID jTOP B card (14443b)	Yes
HID	Infineon 32k dual interface T=0	Yes
HID	Infineon 32k dual interface T=1	Yes
HID	Mifare DESFire 8K White PVC Cards	Yes
HID	Mifare Classic 1K White PVC Cards	Yes
HID	NXP Mifare Classic S50 ISO Card	Yes
HID	NXP Mifare Mifare Ultralight	Yes
HID	CD21 QQI 12909 ISO-B	Yes
Oberthur	CS PIV End Point v1.08	Yes
Oberthur	Oberthur ID-One Cosmo 64 RSA D V5.4 T=0 card	Yes
G&D	SCE3.2 testchip P5CD144	No
HID	HID 2022B GGMMN	Yes
HID	HID 2080PMSMV	Yes
HID	HID 2002PGGMN	Yes
HID	HID 2004PGGMN	Yes
HID	HID 2080 PGSMV	Yes
HID	HID iclass 2K DL (2000 PGGMN)	Yes
HID	HID iclass 16K CL (2001 PGGMN)	Yes
HID	HID 1430 1L	Yes
HID	HID DESFire D8H	Yes
Gemalto	PIV Card 2.0	Yes
Gemalto	PIV Card 1.5.5 DLv2	Yes
Oberthur	OSC 5.2 80K	Yes
G&D	SCE 3.2 144K	No



Dell Latitude 7000 Series Keyboard

Keyboard Specs

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



Dell Latitude 7000 Series Keyboard

Keyboard

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



Detailed Engineering Specifications

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



500GB Solid State Hybrid Drive (8GB Cache)

500 SOLID STATE HYBRID DRIVE (8GB CACHE)	
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 1.0W , 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.



80GB mSATA SSD

80 GB MSATA SSD	
Capacity (GB) ¹	80GB
Dimensions inches (W x L 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	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 mSATA SSD

128 GB MSATA SSD	
Capacity (GB) ¹	128GB
Dimensions inches (W x L 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 0.5W, 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.



180GB mSATA SSD

180 GB MSATA SSD	
Capacity (GB) ¹	180GB
Dimensions inches (W x L x H)	3.94 x 2.75 x 0.374
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	1.5M hours
Logical Blocks	351,651,888
Power Source	
Power Consumption (reference only)	Idle 0.5W, Active 2.5W

Environmental Operating Conditions (Non-Condensing):	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing

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



256GB mSATA SSD

256 GB MSATA SSD	
Capacity (GB) ¹	256GB
Dimensions inches (W x L 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	500,118,192
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.



256GB mSATA SED SSD

256 GB MSATA SED SSD	
Capacity (GB) ¹	256GB
Dimensions inches (W x L 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	500,118,192
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.



512GB mSATA SED SSD

512 GB MSATA SED SSD	
Capacity (GB) ¹	512GB
Dimensions inches (W x L x H)	3.94 x 2.75 x 0.374
Interface type and Maximum speed	Up to 6Gb/s (SATA 3.0)
MTBF	800,000 hours
Logical Blocks	1,000,215,216
Power Source	
Power Consumption (reference only)	Idle 0.5W, Active 2.5W

Environmental Operating Conditions (Non-Condensing):	
Temperature Range	5°C to 60°C
Relative Humidity Range	10% to 90% non-condensing
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% non-condensing

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



512GB mSATA SSD

512 GB MSATA SSD	
Capacity (GB) ¹	512 GB
Dimensions inches (W x L 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	1,000,215,216
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.



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)	X
8G 1600MHz DDR3L (1x8G)	x
4G 1600MHz DDR3L (1x4G)	x



Ports and Connectors-Latitude 7000 Series

	12"	14"
USB	(3) USB 3.0- one PowerShare capable	(3) USB 3.0- one PowerShare capable
Video	mDP, HDMI	mDP, HDMI
Network Adapter	RJ-45 network adapter	RJ-45 network adapter
Modem	NA	NA
Audio	<p>Two channel high definition audio Realtek ALC3234/3235-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 ALC3234/3235--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
Express Card	NA	NA



Webcam Specifications-Latitude 7000 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" Non Touch	12" Touch	14" Non Touch	14" Touch
Camera Type	HD fixed focus	FHD fixed focus	HD fixed focus	FHD 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 1920 x 1080 (2.07MP)
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 1920 x 1080 (2.07MP)
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) + Bluetooth

Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE M.2 Card:

Host interface	M.2 2230 form factor (WiFi – PCIe, Bluetooth – USB)
Network standard	802.11a, 802.11b, 802.11g, 802.11n and 802.11ac
Wi-Fi Alliance Certifications	802.11a, 802.11b, 802.11g, WPA, WPA2, WMM
Operating Frequency Bands	2.4 GHz (802.11b/g/n) and 5 GHz (802.11a/n/ac)
Dual Diversity Antenna Switching	Dual diversity antenna switching for systems designed with main and auxiliary antennas 2x2 MIMO operation when in 802.11n mode with 2x2 or greater Access Point
Data Rate	802.11ac – Up to 867Mbps; 802.11n - Up to 300 Mbps*; 802.11a/g - Up to 54 Mbps 802.11b - Up to 11 Mbps
Security Authentication EAP Methods	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK EAP-FAST, EAP-TLS, EAP-TTLS (MSCHAPv2), PEAPv0(EAP-MS-CHAPv2), PEAPv1(EAP-GTC)
Encryption Cisco Compatible Extensions	CCX V5
Client Utility	Wireless profile and security management, site monitor, link status, adapter configuration and diagnostics
Software Support	Microsoft® WHQL certified for Windows® 7 and Windows® 8.1; Linux
Radio On/Off	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
LED output	Wireless enable.
Roaming	Seamless roaming between 802.11a, 802.11b, 802.11b/g, 802.11n and 802.11ac access points
Wake On Wireless	Supported when using Magic Packet over the Air
Miracast (WiFi Display)	Supports WFA Miracast (WiFi Display) on Win8.1
Country Restrictions	802.11AC WLAN cards cannot be sold into Ukraine, Russia and Egypt



Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE M.2 Card (continued)

Wireless PAN Standard	V4.0 LE
Bluetooth Data rates	Up to 3Mbps
Bluetooth Operating Frequency Bands	2.4GHz
Bluetooth Range	Up to 7m
Bluetooth Profiles Supported	Includes Streaming Stereo Quality Audio (A2DP), File Transfer (FTP/OBEX), Dial-up Networking (DUN), Mice/Keyboards (HID), Headset (HSP), AVRCP 1.4, OBEX 1.4 and OBEX enhancements, Wideband Audio Headset support
Bluetooth Data Encryption	128-bit encryption
Bluetooth Output Power	Power class 2
Bluetooth Receive Sensitivity	< 0.1% BER at -78 dBm
Temperature	operating temperature 0° to +75° C storage temperature of -40° to +80° C
Humidity	Up to 90%



Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Dell Wireless™ 1707 802.11n Single Band Wi-Fi + BT 4.0LE M.2 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 EAP Methods Single Sign On Encryption Cisco Compatible Extensions	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK, CCKM MD5, LEAP, EAP-FAST, EAP-TLS, PEAP(TLS, MS-CHAPv2, GTC) Open, Shared, MD5, LEAP, EAP-FAST, EAP-TLS, PEAP(TLS, MS-CHAPv2, GTC), Smart Cards WEP (64 bit/128 bit), CKIP (XP), TKIP, AES-CCMP Version 5 (Windows 7)
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 95%
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) + Bluetooth

Dell Wireless™ 1707 802.11n Single Band Wi-Fi + BT 4.0LE M.2 Card (continued):

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
Transmission	FHSS (Frequency Hopping Spread Spectrum)
Bluetooth Data Encryption	128-bit encryption
Bluetooth Output Power	0~4dBm
Receiver Sensitivity	-70dBm
Temperature	Operational 0 to 70C; Storage -20 to 70C
Humidity	Up to 95%



Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Dual Band Wireless-AC 7265 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 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/ac)
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 and Egypt There is a unique Intel 7265 AC card designed for use in Indonesia



Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card continued

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) + Bluetooth

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

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 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 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/ac)
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 and Egypt There is a unique Intel 7265 AC card designed for use in Indonesia

Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card continued (Indonesia)

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) + Bluetooth

Intel® Dual Band Wireless-N 7265 802.11AGN 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
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
Country Restrictions	This particular WW 802.11A WLAN card cannot be sold into Indonesia due to regulatory restrictions

Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Dual Band Wireless-N 7265 802.11AGN Wi-Fi + BT 4.0 LE Wireless Card continued

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) + Bluetooth

Intel® Dual Band Wireless-N 7265 802.11AC Wi-Fi (no BT) Wireless Card

Host interface	M.2 2230 form factor (WiFi – PCIe)
Network standard	IEEE 802.11a/b/g/n
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
Country Restrictions	This particular WW 802.11A WLAN card cannot be sold into Indonesia due to regulatory restrictions



Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Dual Band Wireless-N 7265 802.11AC Wi-Fi (no BT) Wireless Card continued

Wireless PAN Standard	N/A
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Bluetooth Data rates	N/A
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Bluetooth Operating Frequency Bands	N/A
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Bluetooth Profiles Supported	N/A
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Bluetooth Data Encryption	N/A
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Bluetooth Output Power	N/A
------------------------	-----

Temperature	N/A
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Humidity	N/A
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Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Tri Band Wireless-AC 17265 (Maple Peak) WiGig + 802.11AC Wi-Fi + BT 4.0 LE M.2 Card (Post RTS)

Host interface	M.2 Type 3030-S3-A; 30mm x 30mm x 2.6mm; Single Sided; Key A with 1-DP pinout (WiFi –PCIe 1.0; BT –USB2.0; WiGig IO –PCIe2.0; WiGig Audio/Video –DP v1.2)
Network standard	IEEE 802.11a/b/g/n/ac WiGig MAC and Baseband PHY functionality, and processes A/V (WDE) and USB (WSE) protocols
Wi-Fi Alliance Certifications	802.11ac, 802.11n, 802.11w, WPA, WPS, WMM, WFD, Wi-Fi Direct
Operating Frequency Bands	2.4 GHz, 5 GHz and 60GHz
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 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. Intel® WiGig Software v1.0 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/ac)
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 and Egypt



Wireless Communications: Wi-Fi (WLAN) + Bluetooth

Intel® Tri Band Wireless-AC 17265 (Maple Peak) WiGig + 802.11AC Wi-Fi + BT 4.0 LE M.2 Card continued (Post RTS)

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)

WLAN: Miracast/WiDi Support Matrix

WLAN Card	OS	Miracast (WiFi Display) Support	WiDi Display
Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE Wireless Card (2x2)	Win 7 32/64 bit	No support	No support
Dell Wireless™ 1560 802.11AC Dual Band High Speed Wi-Fi + BT 4.0LE Wireless Card (2x2)	Win 8.1 64 bit	Native support	No support
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



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

Wireless Communications: Mobile Broadband (LTE/WWAN)

Dell Wireless™ 5808E Gobi™ LTE Mobile Broadband Card for AT&T, Verizon, Spring Wireless (US, Canada, Generic)

Carrier	Verizon	AT&T	Sprint	Rogers	Telus	Generic
Network	LTE CAT3	LTE CAT3	LTE CAT3	LTE CAT3	LTE CAT3	LTE CAT3
Speed (Downlink)	< 100 Mbps	< 100 Mbps	< 100 Mbps	< 100 Mbps	< 100 Mbps	< 100 Mbps
Speed (Uplink)	< 50 Mbps	< 50 Mbps	< 50 Mbps	< 50 Mbps	< 50 Mbps	< 50 Mbps
Fallback Network	EV-DO Rev A CDMA 1xRTT	HSPA+ EDGE/GPRS	EV-DO Rev A CDMA 1xRTT	HSPA+ EDGE/GPRS	HSPA+ EDGE/GPRS	HSPA+ EDGE/GPRS
Fallback Speed (Downlink)	EV-DO Rev A < 3.1 Mbps CDMA 1XRTT < 153 Kbps	HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps	EV-DO Rev A < 3.1 Mbps CDMA 1XRTT < 153 Kbps	HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps	HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps	HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps
Frequency Bands	Band 13 LTE 850/1900 CDMA/EV-DO	Band 4/17 LTE 850/1900 HSPA/WCDMA 850/1900 EDGE/GPRS	Band 25 LTE 850/1900 CDMA/EV-DO	Band 4 LTE 850/1900 HSPA/WCDMA 850/1900 EDGE/GPRS	Band 4 LTE 850/1900 SPA/WCDMA 850/1900 EDGE/GPRS	Band 2, 4, 5, 13, 17, 25 LTE 850/1900 SPA/WCDMA 850/1900 EDGE/GPRS
SIM	Yes	Yes	Yes	Yes	Yes	Yes
GNSS (GPS + GLONASS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)
LTE/WWAN Antenna	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)
Operating System Support	Windows 8.1, 32/64 bits Windows 7, 32/64 bits	Windows 8.1, 32/64 bits Windows 7, 32/64 bits	Windows 8.1, 32/64 bits Windows 7, 32/64 bits	Windows 8.1, 32/64 bits Windows 7, 32/64 bits	Windows 8.1, 32/64 bits Windows 7, 32/64 bits	Windows 8.1, 32/64 bits Windows 7, 32/64 bits
Host Interface	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0



Wireless Communications: Mobile Broadband (LTE/WWAN)

Gobi™ 4G LTE Wireless Card

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

Carrier	Telefonica, Vodafone	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	HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps	HSPA+ 42 Mbps EDGE 247.4 Kbps GPRS 85.6 Kbps
Frequency Bands	Band 3, 7, 20 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	Yes
GNSS (GPS + GLONASS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)	Supports both autonomous GNSS and assisted GNSS (A-GNSS)
LTE/WWAN Antenna	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)
Operating System Support	Windows 8.1, 32/64 bits Windows 7, 32/64 bits	Windows 8.1, 32/64 bits Windows 7, 32/64 bits
Host Interface	USB 2.0	USB 2.0

~~• **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**



Security

Security Hardware	7000 Series
FIPS certified Trusted Platform Module (TPM 1.2)	X
Optional Swipe Fingerprint Reader	X
Optional FIPs Fingerprint Reader	X
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	7000 Series
HID	Transparent (HID ICAO type B card)	Yes
HID	HID PIV-II CHVID card	Yes
HID	HID iClass DL with HID production key	Yes
HID	HID iClass EL with HID production key	Yes
HID	HID iClass 16K CL with HID production key	Yes
HID	HID DESFire card (14443a)	Yes
HID	HID jCOP readertest3 A card (14443a)	Yes
HID	HID jTOP B card (14443b)	Yes
HID	Infineon 32k dual interface T=0	Yes
HID	Infineon 32k dual interface T=1	Yes
HID	Mifare DESFire 8K White PVC Cards	Yes
HID	Mifare Classic 1K White PVC Cards	Yes
HID	NXP Mifare Classic S50 ISO Card	Yes
HID	NXP Mifare Mifare Ultralight	Yes
HID	CD21 QQI 12909 ISO-B	Yes
Oberthur	CS PIV End Point v1.08	Yes
Oberthur	Oberthur ID-One Cosmo 64 RSA D V5.4 T=0 card	Yes
G&D	SCE3.2 testchip P5CD144	No
HID	HID 2022B GGMMN	Yes
HID	HID 2080PMSMV	Yes
HID	HID 2002PGGMN	Yes
HID	HID 2004PGGMN	Yes
HID	HID 2080 PGSMV	Yes
HID	HID iclass 2K DL (2000 PGGMN)	Yes
HID	HID iclass 16K CL (2001 PGGMN)	Yes
HID	HID 1430 1L	Yes
HID	HID DESFire D8H	Yes
Gemalto	PIV Card 2.0	Yes
Gemalto	PIV Card 1.5.5 DLv2	Yes
Oberthur	OSC 5.2 80K	Yes
G&D	SCE 3.2 144K	No



Integrated Graphics Controller

Integrated Graphics Controller	Intel HD Graphics 5500 (Intel BDW I3-5010U, I5-5200U, I5-5300U, I7-5600U)
Model	Dell Latitude 7000 series
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Clock Speeds	Intel® Core i3-5010U (Dual Core, 2.1GHz, 3M cache,15W) Intel® Core i5-5200U (Dual Core, 2.2GHz, 3M cache, 15W) Intel® Core i5-5300U (Dual Core, 2.3GHz, 3M cache, 15W) Intel® Core i7-5600U (Dual Core, 2.6Hz, 4M cache, 15W)
Max Graphics dynamic frequency	Intel® Core i3-5010U : 300/900 MHz Intel® Core i5-5200U : 300/900 MHz Intel® Core i5-5300U : 300/900 MHz Intel® Core i7-5600U : 300/950 MHz
Graphics Level	Intel® Core i3-5010U : GT2 Intel® Core i5-5200U : GT2 Intel® Core i5-5300U : GT2 Intel® Core i7-5600U : GT2
Estimated Maximum Power Consumption (TDP)	15W
Display Support	On System: eDP (internal), HDMI, mDP 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 4.4
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max Digital: (HDMI) 2560x1200@60Hz / 3840x2160@30Hz Max Digital: (DisplayPort/mDP): 3840x2160@60Hz Analog: (VGA – docking only): 1920x1200/32bpp @ 60Hz
Numbers of Displays Supported	Un-Docked - 3 displays max (LCD, HDMI, mDP) Docked – 3 displays max (combo of LCD, VGA, two DP/DVI, mDP) for E7250 Docked – 3 displays max (combo of LCD, VGA, two DP/DVI) for E7450 Note: docked requires optional E Port or E Port Plus



Nvidia Discrete Graphics Controller

Graphics Controller	Nvidia GeForce 840M
Models	E7440
Graphics Memory	2GB – DDR3 Graphics Memory
Bus Type	Internal PCIe
Memory Interface	64-Bit
Clock Speeds	1059MHz graphics/900 MHz processor
Estimated Maximum Power Consumption	20W
Display Support	None. E7440 uses Hybrid Graphics, Intel graphics drives all physical outputs
Maximum Color Depth	N/A
Maximum Vertical Refresh Rate	N/A
Operating Systems Graphics/ Video API Support	DirectX 11.2, OpenGL 4.4
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	N/A

Numbers of Displays Supported*

Please refer to the “Display Options” Section

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



Latitude 7000 Series LCD Back Detail

Display

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

Display

E7250/7250

12.5" HD Anti-Glare LCD display with LED backlight

Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions	
Height	181.4mm(maximum)
Width	300.4mm(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

E7250/7250

12.5" 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

E7450/7450

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

Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions	
Height	328.8 mm(maximum)
Width	215mm(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

E7450/7450

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

E7450/7450

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

Dell Latitude 7250 Battery Specification

Battery is a **CRU** Item

	3-cell (39 WHr)	4-cell (52 WHr)
Battery Type	Li-ion	Li-ion
Dimension		
Length	282.00 mm (11.1")	282.00 mm (11.1")
Width	80.75 mm (3.18")	80.75 mm (3.18")
Height	7.2 mm (0.28")	7.2 mm (0.28")
Weight	245.00 g (0.54 lb)	290.00g (0.64lb)
Voltage	11.1VDC	7.4VDC
Typical Amp-hour capacity	3.51Ahr	7.02Ahr
Typical Watt-hour capacity	39Whr	52Whr
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, 32 °F to 158 °F Discharge: 0 °C to 70 °C, 32 °F to 122 °F	
Temperature range: Non-Operating	-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	
ExpressCharge Capable	Yes	Yes
BATTMAN Capable	Yes	Yes
Life span (approximate)	No	Standard pack : 1 year warranty for 300 cycles LCL pack : 3 year warranty for 1000 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 7450 Battery Specification

Battery is a [CRU](#) Item

	3-cell (40 WHr)	4-cell (54 WHr)
Battery Type	Li-ion	Li-ion
Dimension		
Length	308.50 mm (12.15")	308.50 mm (12.15")
Width	74.75 mm (2.94")	74.75 mm (2.94")
Height	8.0 mm (0.31")	8.0 mm (0.31")
Weight	250.00 g (0.55 lb)	305.00g (0.67lb)
Voltage	11.1VDC	7.4VDC
Typical Amp-hour capacity	3.60Ahr	7.29Ahr
Typical Watt-hour capacity	40Whr	54Whr
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, 32 °F to 158 °F Discharge: 0 °C to 70 °C, 32 °F to 122 °F	
Temperature range: Non-Operating	-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	
ExpressCharge Capable	Yes	Yes
BATTMAN Capable	Yes	Yes
Life span (approximate)	No	Standard pack : 1 year warranty for 300 cycles LCL pack : 3 year warranty for 1000 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 7000 Series Power Adapters

Adapter Specifications	E5 65W	E5 90W
Input voltage	100 to 240 VAC	100 to 240 VAC
Input current (max)	1.7 A	1.6 A
Input frequency	50 to 60 Hz	50 to 60 Hz
Output current	3.34 A (continuous)	4.62 A (continuous)
Rated output voltage	19.5 VDC	19.5 VDC
Weight (lbs)	0.51	0.77
Weight (kg)	0.23	0.32
Dimensions (inches)	0.87 x 2.60 x 4.17	0.87 x 2.60 x 5.12
Dimensions (mm)	22 x 66 x 106	22 x 66 x 130
Temperature range:	0° to 40°C	0o to 40oC
Operating	32° to 104°F	32o to 104oF
Storage	-40° to 70°C	-40o to 70oC
	-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 7000 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"

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 7000 Series Keyboard

Keyboard Specs

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



Dell Latitude 7000 Series Keyboard

Keyboard

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



Dell Latitude 7000 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 7000 Series Touch Pad Specifications

Touch Pad

X/Y position resolution	X: 1048cpi; Y:984cpi
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	Not supported	Not supported
Drag Lock	Supported	Supported
Edge Swipe	Not supported	Supported
Horizontal / Vertical Scroll Zones	Not supported	Not supported
Zoom Zones	Not supported	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 7000 Series

Operating conditions and MIL-STD 810G Testing Performed

Models	Dell Latitude 7000 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

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

