

Dell™ Latitude™ E6500, E6400, E6400 ATG Technical Guide



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LATITUDE E6500, E6400, E6400 ATG

freedom from business as usual

At last business class notebooks that pull their own weight and work like they're supposed to, free from hassles and constant overhauls. Sleek and stylish, the E6500 and E6400 deliver mobile computing that works as hard as you do, anytime, anywhere. It's freedom from business as usual.

IT Customer Viewpoint

I'm caught in a difficult place. It's hard to balance the desires and demands of our workforce with the concerns of managing our systems smoothly and securely. I should be able to manage our notebooks anywhere in the world without leaving my desk. My company data should be just as safe on the other side of the world as in the home office. I'm tired of notebooks that let my end-users down, forcing me to scramble and quickly find replacements.

End User Customer Viewpoint

I'm sick of big, heavy notebooks that sometimes connect to wireless networks and other times leave me stranded. And I'm tired of having my workflow interrupted because my battery lets me down. I need a notebook that looks good and doesn't slow me down with a difficult-to-use keyboard or trackpad. If I have trouble using it, it's worthless to me.

Latitude E-Family Answer

Dell is inspired by you. You're tired of compromise, so we designed a family of notebooks where sacrifice was no longer necessary. No detail went overlooked, inside or out. We didn't stop until we created a notebook that is both rugged and beautiful. That can keep you working anywhere, anytime. With a battery that might even outlast you. No need for frantic calls to IT because Latitude's established leadership is designed to deliver superior manageability to help provide IT control. Dell ProSupport* services offer a globally consistent customer-driven support portfolio and our new Dell ProSupport Mobility Services offer the broadest solution focused on protecting your notebooks and data. So now you can get more done and your business moves forward. With Latitude E6500 and E6400, you're finally free from business as usual.



Latitude E6400, E6500 and E6400 ATG notebooks deliver powerful enterprise-ready features. The best of everything you need in a notebook for ultimate user and IT productivity empowered by leading-edge IT simplification technologies. Latitude is designed for ultimate productivity and low total cost of ownership.

Key Features:

- Redesigned for optimum performance at every level. Thin and light with robust hinges and latches for improved durability. Plus a new keyboard designed for accuracy, durability and comfort and also available with a backlit option.
- All-day battery life that works as hard as you do— the E6400 can get up to 19 hours* with a 9-cell battery, optional 12-cell battery slice and solid state drive.
- Anytime, Anywhere wireless connectivity¹ supports all current wireless technology like Wi-Fi, mobile broadband, Bluetooth® 2.1, and is built for emerging technologies such as WiMAX™, High Performance Wireless-N.
- Seamless transitions from on-the-move to desktop with new Latitude family docking solutions.
- Featuring Intel® vPro™ technology for enhanced manageability and performance.
- Dell ControlPoint creates an awesome user experience by simplifying your Wi-Fi connections. Make adjustments to management profiles without taxing your system memory.
- Flexible and tough, the Latitude E6400 ATG delivers computing horsepower, connectivity, in a semi-rugged package.



Target Market

CIO, IT Managers, IT Generalists and Specialists, Small Business owners and End Users.

Primary Usage

Desktop Replacement
Mobile/Remote Office

¹Subject to wireless provider's coverage area. Mobile broadband subscription required, additional charges apply.



ALL DAY COMPUTING*



***I can stay connected and productive
virtually anywhere and everywhere.¹***



¹Subject to wireless provider's coverage area. Mobile broadband subscription required, additional charges apply.

Downloaded from LpManual.com Manuals

All Day Battery Life

Dell introduces a dramatic step forward in battery life: batteries designed to enable all-day computing.*

The 9-cell battery with an SSD frees you to work up to a full 8-hour* work day—or go up to 19 hours* with the addition of our new 12-cell battery slice and an SSD.

Battery slice adds up to 8+ hours* of battery life and can be used in conjunction with the 6-cell or 9-cell battery.

Introducing new technology like LED backlit displays and customized battery settings to achieve a full day charge through new Dell ControlPoint software

Extend your battery service with optional battery replacement service during your 3-year Limited Hardware Warranty*.

Take advantage of short charge time opportunities with **ExpressCharge** -- charges the primary battery to 80% in about an hour.*



12-cell battery slice can also be charged stand-alone



LED battery life and health gauge



Connectivity

Free yourself from cables with our excellent antenna design supporting Mobile Broadband*, Wireless-N in addition to wireless technologies like Bluetooth 2.1 and WiMAX.

Integrated Dell Mobile Broadband*

(cellular data) mini-cards provide wide area data connectivity via national cellular networks. With average download speeds of up to 7.2 Mbps*, you can remain productive wherever you go. Both EV-DO Rev A and HSPA solutions available; tri-band HSPA solutions support international roaming capability.



Dual 5-band mobile broadband antennas

provide support for all major worldwide frequency bands. International travelers who roam between the U.S. and Europe can get full 3G speeds wherever they go. Furthermore, you get investment protection for after point of sale card purchases or even next generation card upgrades – the antennas to support are already there.

Mobile broadband cards have built-in GPS functionality that can be used with location-based applications like Garmin™ and Microsoft® Streets & Trips.

Wi-Fi Catcher™

Wireless on/off switch and sniffer button allows user to easily find out if a connection is available, even when the system is off. Use the switch to turn off antennas when not in use to save battery life. Easy to check for available networks without opening or turning on the notebook.



Connectivity

Wi-Fi

Intel Centrino Mobile Technology

Latitude E6500/E6400 offer Intel® Centrino® Mobile technology featuring the Intel WiFi Link 5100 or 5300 Draft 802.11n Wi-Fi cards, Intel Core™ Processor and Intel 965PM or GM chipsets. Intel Centrino Mobile Technology delivers excellent wireless performance while enabling great notebook battery life.



Dell Wireless LAN

Latitude E6500/E6400 feature a choice of Dell Wireless Wi-Fi solutions with the option of either the Dell Wireless 1397 802.11g or the Dell Wireless 1510 Draft 802.11n Wi-Fi cards.



Personal Area Networks enable connection to devices and peripherals such as keyboards, mice, printers, scanners and wireless docking stations within a PAN.

Dell Wireless 370 Bluetooth Wireless

The Dell 370 card features the latest Bluetooth version 2.1 + EDR (Windows® XP OS) technology with a throughput of 3Mbps*.

The Dell 370 offers firmware upgradeability to the forthcoming Bluetooth 2.1 update for Windows Vista® OS.

Compared to the previous Dell 360/Bluetooth 2.0 combination, the new Dell Bluetooth 2.1 offerings can provide longer battery life and easier pairing for Bluetooth 2.1-capable devices.

Allows cable-free computing with Bluetooth enabled devices such as keyboards, mice, PDAs, headsets & mobile phones.



Dell's Wi-Fi and Bluetooth solutions are designed to work together with minimal interference. The optional Dell Wireless 370 Bluetooth module incorporates its own dedicated antenna and radio to help achieve optimal performance.



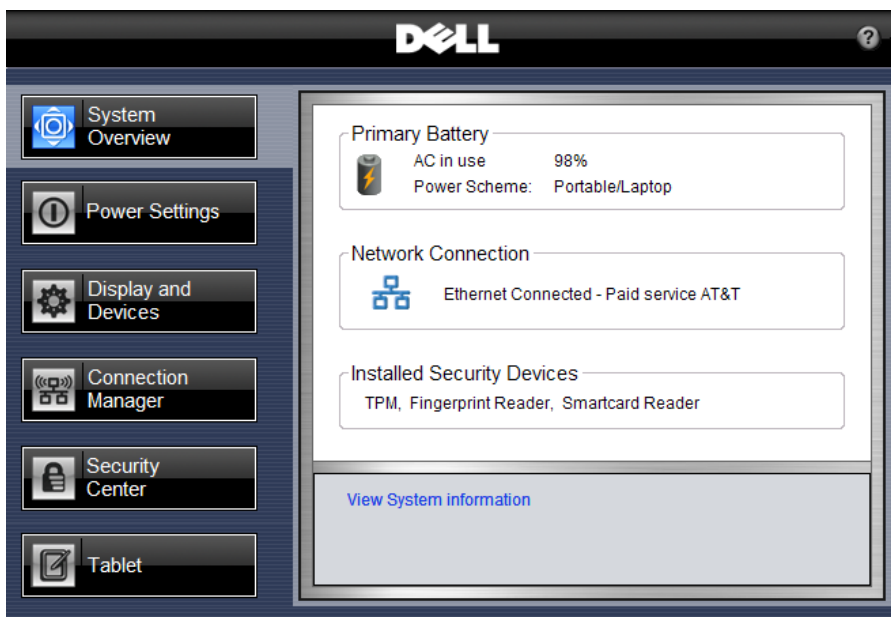
The Tools You Need

New Dell ControlPoint software puts you in complete control. It provides a single access point with intuitive navigation to easily configure your notebook the way you need it.

With a single hot key combination, you have access to the settings you need: power management, displays and devices, connections, security and system information. Consistent visual user interface throughout all these applications means easy, natural interaction for end users.

User Selectable Modules with Tight Administrative Controls

IT managers have the option to install all of the modules or pick and choose specific modules for their custom system images. IT managers can also control user configurable options, create company specific branding, and enable company help files and automated links to additional web content.



Dell ControlPoint

Power Settings

The ControlPoint Power Settings module provides a wide-ranging set of power management configuration, alerting capabilities and sleep modes.

Battery Status

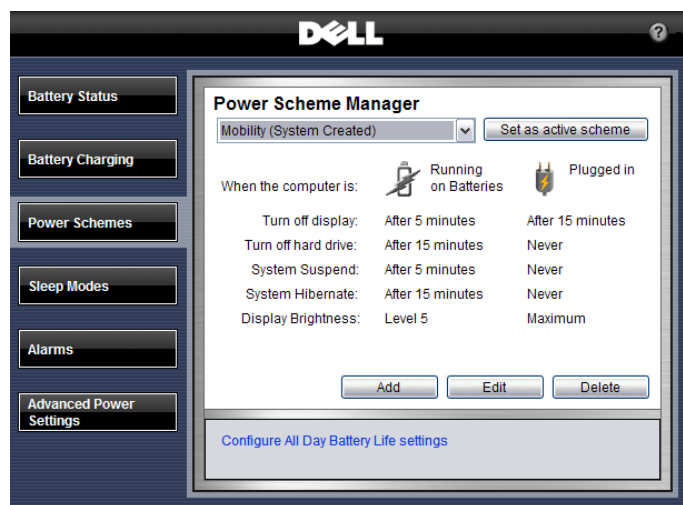
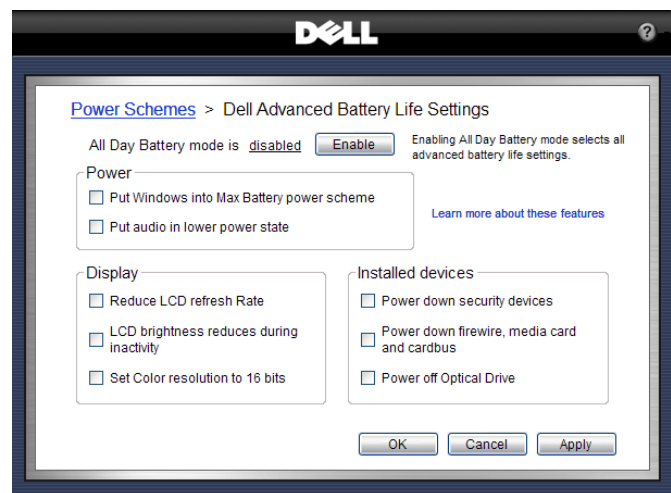
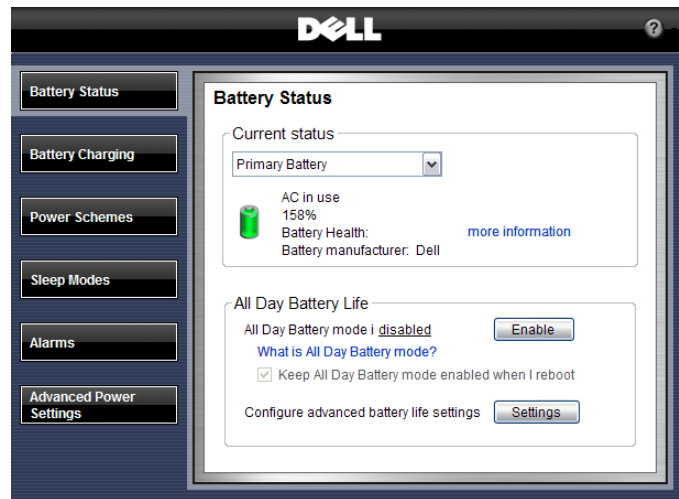
Quickly view battery status, available charge and health. Users can also easily configure advanced power settings to maximize battery life.

Power Scheme and Sleep Mode

Choose the preset All Day Battery Mode to maximize your battery life

Custom-configure power schemes to work the way you want to work

Sleep modes can be quickly configured along with standby and hibernate settings



Display and Devices

The Dell ControlPoint Display & Devices module provides a variety of configurable settings for your display as well as other devices attached or installed with your system. Some key configurable features include the presentation mode with projectors, ambient light sensor and keyboard backlighting capabilities.

Keyboard Hotkeys

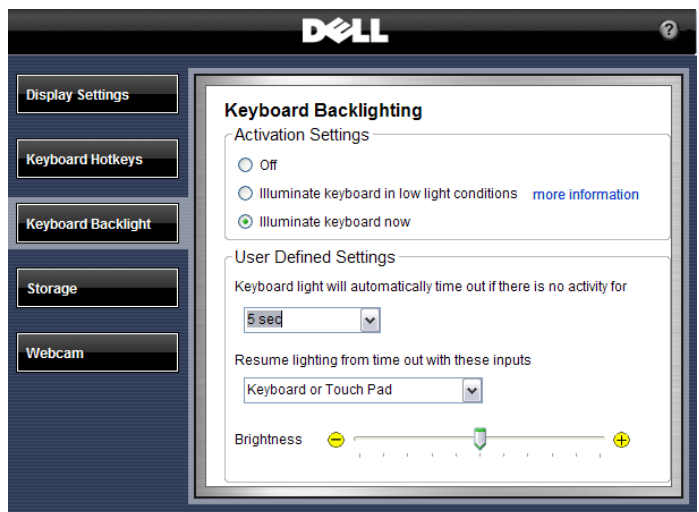
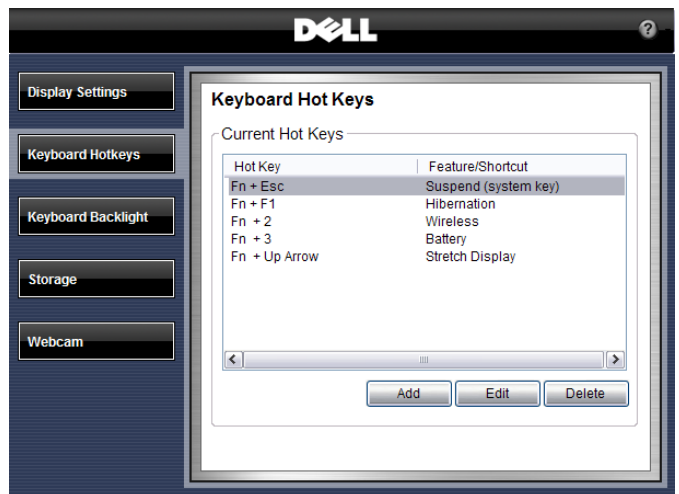
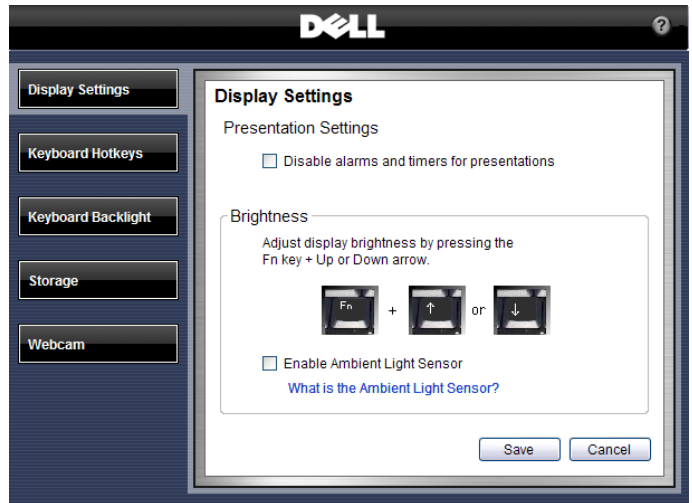
Customers can easily set up a series of custom hot keys to meet their individual work environment requirements



See your work in a whole new light.

LED Backlit keyboards allow for easier work in darker settings.

Use ControlPoint to easily configure your backlit keyboard to automatically adjust to ambient light.



Dell ControlPoint Connections Manager

For fast and easy connections to any device or network, the Connections Manager module provides a comprehensive communications management environment: Ethernet, Dial-Up, Wi-Fi, Mobile Broadband* and GPS.

Users can also enable & disable any of the radios on their notebook – Wi-Fi, Bluetooth, GPS and Mobile Broadband*.

Location Profiles and Administrative Controls

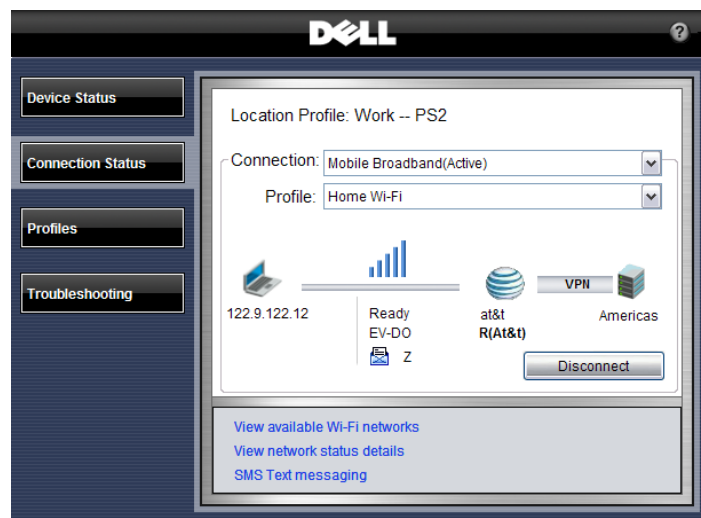
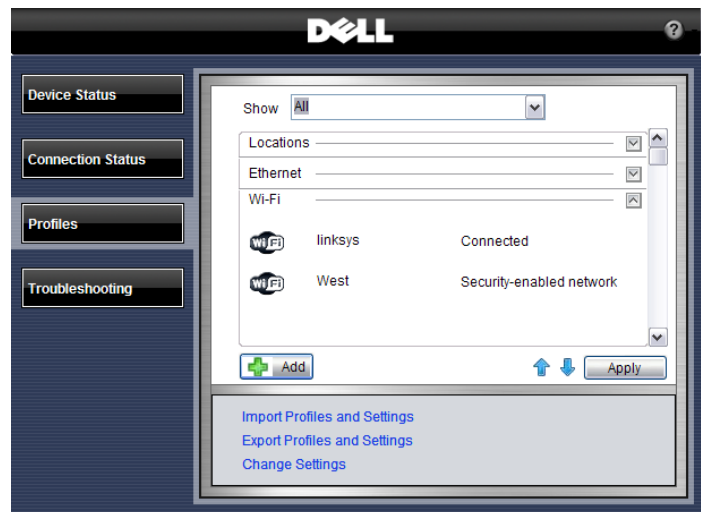
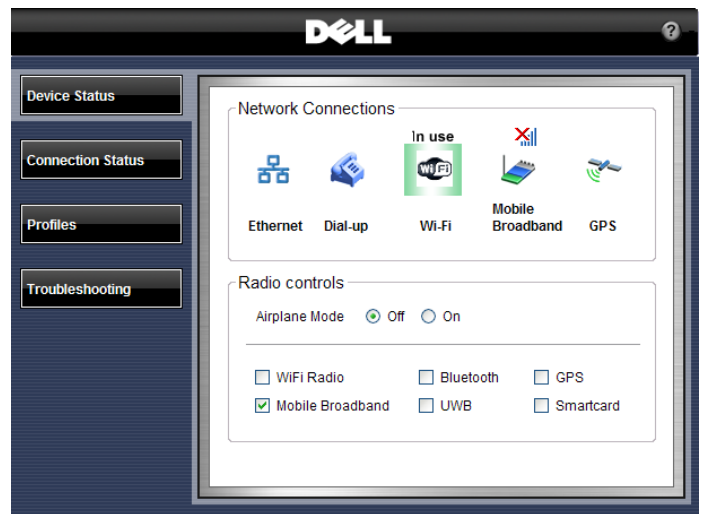
Create multiple mobile Profile Settings such as printer, browser, VPN and network, as well as mobility settings for adapter and profile switching.

Define, export, and import usage profiles. Customize printer setup, application launch, drive mapping, and more.

Administrative controls with the ability to limit user configurable options.

Enhanced Diagnostics and Administrative Tools

- Simple and advanced configuration and status dashboard
- Enhanced multi-network connection diagnostics and event logging
- Hardware diagnostics for all devices
- Error and Connection Status log
- Profile import/export and locking



Dell ControlPoint Security Center

As more critical data becomes mobile the need for enhanced security is vital. The Dell ControlPoint Security Center module provides access to use authentication, encryption, fingerprint readers and smartcard technologies.

Security Status

Quickly view system security status

Manage Logins and Passwords

Require fingerprint for login

Set a pre-boot password

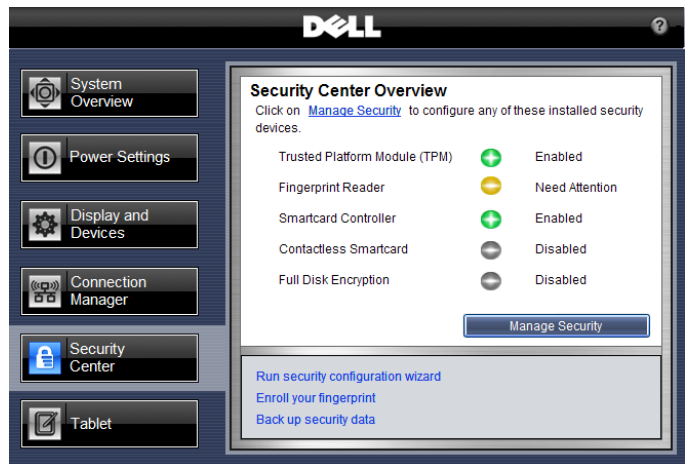
Manage Windows® password settings

Manage Data Protection

Set hard drive password

Manage document vault

Manage encryption



INSPIRED DESIGN.



My notebook should work as hard as I do.



Stunning, Durable Design

No detail went overlooked. Latitude E6500 and E6400 delivers sleek and smart notebooks designed to stand up to tough conditions.

Premium materials and finishes create a notebook you can be proud to carry.

New paint process helps provide long-lasting premium paint finish.

Exceptional durability with redesigned robust hinges & latches.

Strike Zone™ helps improve hard drive protection in the event of a fall by dissipating shock.

Our 7200rpm hard drives now come standard with Free Fall Sensors.

Keyboard durability focus means E-Family is designed for improved keycap retention and screen printing.

Notebooks designed to run cooler. Our new inverted motherboard helps improve thermal design and accessibility for easier service.



E6500 with new hinge design and paint finish

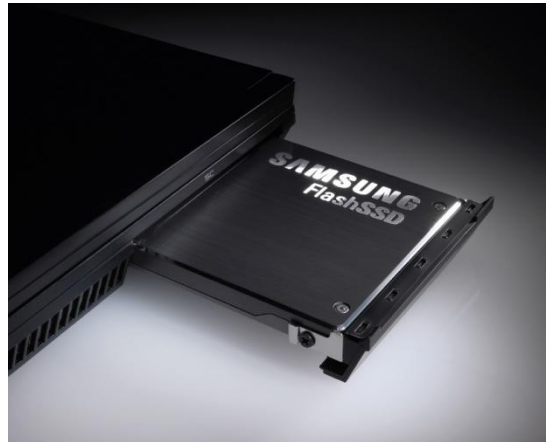


Dell Flash Ultra Performance Solid State Hard Drive

Durability, reliability and exceptional performance. With overall system performance that exceeds a 10K RPM desktop HDD²,

Dell Flash Ultra Performance SSD takes notebook productivity to a new level.

- Overall system performance gain is triple what you get when moving from a 5400 RPM to a 7200 RPM notebook HDD.
 - 10% system performance improvement from 5400 RPM to 7200 RPM notebook HDD²
 - 35% system performance improvement from a 5400 RPM notebook HDD to Ultra Performance SSD²
- 22% improved system performance over a 7200 RPM performance notebook HDD²



E6400 with SSD

With no moving parts, SSD is designed to provide a quantum leap forward in durability and reliability.

- Predicted reliability more than 3x better than a standard hard drive³
- Shock tolerance is 8.5 times better than standard notebook hard drives in operating mode⁴

² Based on SysMark 2007 Benchmark tests performed by Dell Labs in January 2008. Actual performance will vary based on configuration, usage and manufacturing variability.

³ Based on Mean Time Between Failure (MTBF) of 2M for Ultra Performance SSD vs. 550K for standard Dell 2.5" HDD, per Dell HDD spec.

⁴ Based on Operating Shock tolerance of 1500G for 0.5ms for Ultra Performance SSD vs. 175G for 0.5ms for standard Dell 2.5" HDD, per Dell HDD spec.



Outstanding Usability

Excellent usability with precision-tuned backlit keyboards designed to deliver accuracy, comfort, and outstanding feel.

You're never out of touch. Experience real-time collaboration through optional integrated webcam, microphone, Mobile Broadband* and innovative Wireless-N antenna design.

Latitude notebooks are designed for the ultimate user experience with one click access to all user settings with new Dell ControlPoint software.

DisplayPort is a next generation digital display interface designed for the latest PC graphics and flat panels.

DisplayPort enables digital picture quality on all flat panels and supports larger screens with smarter cable management. With DisplayPort, users can connect to any display from legacy CRT monitors to the latest digital displays.

The first version of DisplayPort provides over twice the capacity of single-channel DVI over the same number of wires through a smaller connector, and it enables the use of up to two 30" external displays.



E6400 with webcam and digital microphone



Expanding Mobile Experience

Redesigned sleeker, smaller docks and peripherals deliver a seamless experience between your desktop and mobility – including the new E-Port and notebook stand – designed for the smallest footprint.

E-Port Plus offers Dual Digital Monitor capabilities along with legacy ports - The non-compromise station designed for enhanced usability at desk supports hot & warm docking.



E-Port Plus side and back views



E-Port is a space-saving port replicator for graphics as well as latest ports. Suitable for home and office environment enables to conveniently connect to your desk peripherals.



E-Port side and back views



E-Legacy Extender is a lightweight (0.45lb, 0.2kg) adapter that can be attached to the bottom of the notebooks adding parallel, serial, PS/2 and 2 USB connectors.



E-Legacy Extender back view



E-Flat Panel Stand

The Integrated Flat Panel Stand is an adjustable stand designed for the new Latitude E-Port and E-Port Plus. It accepts Dell Flat Panels via the Dell Quick Connect connector (default) as well as standard VESA mount (requires screws).



E-Flat Panel Stand with dual flat panel monitor desktop configuration



E-Flat Panel Stand front and side views with E-Port Plus



E-View Laptop Stand

This stand provides an innovative way to use the notebook LCD versus an external monitor at the end users desk. E-Family notebook stand is adjustable and enables the user to elevate the LCD panel to a comfortable position. It also requires significantly less desk space than a dock and external monitor.



E-View with dual monitor desktop configuration



E-View side view

E-Monitor Stand

The Basic Monitor Stand is an accessory of the E-Port and E-Port Plus that enable use of any LCD flat panel monitors and CRT monitors.



E-Monitor Stand back view



More Innovative Mobile Solutions

The Latitude E6500 and E6400 LCD bezels have been designed specifically to hold new custom-designed 3M privacy filters seamlessly. No more sticky, messy tabs.



E6400 with custom-designed 3M privacy filter

Attach a CoolSlice designed to fit the bottom surface of your E6400/E6500 to make it more comfortable to use the notebook on your lap or soft surfaces like a couch.



E6400 with CoolSlice

E-Media Bay offers the flexibility of a second hard drive or connect an optical drive via the eSATA port on your E6400 or E6500.

Leave your cell phone charger at home. USB PowerShare is a new Dell feature that allows you to charge or power peripherals from the USB port of the notebook when the notebook is not in use.



E-Media Bay

New Dell M109S Projector has a tiny form factor at 0.8lbs and uses the same AC adapter as E-Family notebooks – no extra power cord to carry.



USB PowerShare denoted with a lighting bolt icon



Dell M109S pocket-sized projector



Cases

New Latitude cases are designed to optimize mobility with a sleek new look, soft grip handles, seatbelt grade straps, EVA compression molded foam protection, custom hardware and useful inside pockets.

New Sleeves are designed with top grade neoprene.



Executive Leather



Deluxe Nylon



Slim Nylon



Laptop Sleeves



PEACE OF MIND IS PART OF THE PACKAGE.



My data should be mine and mine alone.



Dell ProSupport Mobility Services*

The broadest solution for protecting your notebooks and data. Committed to enabling your mobile workforce, minimizing downtime and protecting your investment.

Asset Protection Options enable your mobile workforce while protecting your investment with Extended Battery Service during your 3-year Limited Hardware Warranty*, CompleteCare Accidental Damage Service* and Laptop Tracking and Recovery.

Data Protection Options featuring Remote Data Delete, Hard Drive Data Recovery and Certified Data Destruction. Helps you feel more secure knowing Dell can track it and remotely delete your sensitive data to help prevent potential loss of valuable data or recover data when you have a failed hard drive and did not back up your system.

Solve asset issues while keeping end users productive on the road.

CompleteCare Accidental Damage Service* provides coverage for notebooks that have encountered liquid spills, electrical surges, drops, falls or extreme temperatures.

Laptop Tracking and Recovery can assist in finding a lost or stolen laptop, via tracking software loaded on the system.

Remote Data Delete allows remote initiation of a disk drive data wipe in the event the system is lost or stolen.

Extended Battery Service aligns battery coverage with your laptop usage, and provides one additional replacement battery during years 2 or 3 of coverage.



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



*See important information at end of document

Deployment Services - Helps customers more effectively execute Windows Vista® migrations and E-Family deployments

Dell ImageDirect is cross-platform to help ensure a streamlined transition to the new Latitude E-Family from legacy Dell products. With ImageDirect, your image is only a few mouse clicks from being ready to deploy as opposed to the few weeks inherent with traditional image make-ready.

Dell Client Migration and Deployment Services deliver the upfront planning and automated implementation that can reduce cost, helps minimize disruption to ongoing productivity by reducing 88% of the desk-side technician time and by eliminating an estimated 70% of the network traffic associated with deployment⁵.

Dell Automated Deployment (DAD) patent pending tools and processes that minimize technician intervention thereby allowing the technician to spend just minutes at a PC instead of hours.

- **Dell Data Direct™ (DDD)** captures and migrates complete end-user accounts, including OS and application settings, printers, data files, and more.

Dell Desktop Management Service enables IT organizations to manage mobile, distributed workforces via the web anytime from virtually anywhere in the world. This powerful, scalable and cost effective Software-as-a-Service (SaaS) platform model is activated with a simple Internet connection. Our comprehensive set of software services are delivered via a single, integrated Web-based management console.

- **Asset Management** – automated tracking of software, hardware, and software licenses for all desktops and laptops, regardless of location.
- **Patch Management** – Helps protect corporate and remote users through a fully automated or targeted patch management approach.
- **Anti-Malware & Virus Management** – Provides management of advanced antivirus, antispware, anti-malware and firewall solutions from world class vendors including Symantec™, McAfee® and Microsoft®.
- **Data Encryption** – Encrypts and protects data on an online or offline PC to help prevent its compromise or misuse allowing organizational control of that data even when the user has lost control of the device.
- **Online Backup** – Designed to deliver safe, secure, and automated backup over the Internet powered by Iron Mountain® software and storage at fully redundant offsite facilities.
- **Software Distribution** – Drives adherence of corporate standards by automating the distribution of new applications and upgrades as well as helping to maintain uniform configurations throughout the organization including support for Faronics' Deep Freeze.



⁵Based on an internal assessment of select Dell customers compiled from October 2006 to October 2007.

Simply Secure

Information technology has become a backbone for our customers. It is a daily tool for real time collaboration as well as crucial business data storage. At the same time, our world has become extremely mobile: valuable files are sent over the networks or carried around the planet on notebooks. As a result, there is a growing threat for data loss or leakage.

Whether you need enhanced physical protection or easy to manage protection for your critical data, Dell's security offering can help. We are committed to simplifying security deployment, usage and maintenance, in order to allow smaller businesses to acquire relevant security and larger organizations to implement at low total cost of ownership impact.

Deploy Faster

The complexity of IT can slow down even the most tightly run organization. By speeding up deployment and configuration, you can reclaim wasted time and redirect it toward growing your business.

Dell can deliver a fully secured system directly from the factory that covers all four key aspects of security: System Protection, Access Control, Data protection and Malicious Threats prevention.

With Dell's Custom Factory Integration (CFI), we can deliver pre-configured systems including non-Dell standard hardware and proprietary software right out of the factory.

CFI offers security features such as custom asset tags, and StopTrack or TLS labels.



Protect Better

Dell wants to give you total control by building simplicity into everything we do. Our products and services are fully manageable, making it easy for you to proactively maintain and support.

The Latitude E-Family systems offer several options to protect your data and hardware better. Hardware Encrypted Data protection is available, can be activated within a few seconds centrally and can be much safer than software based encryption.

The Latitude E6500 and E6400 include a new feature called Dell ControlVault, which is an innovative security chip.

Dell ControlVault key features are:

- Single location for end users credentials such as passwords and biometric templates.
- Credentials are securely located in firmware, outside of the attack vector of malicious applications.
- Provides capability to perform security processing/matching in firmware outside the scope of malicious applications.



Prevent Smarter

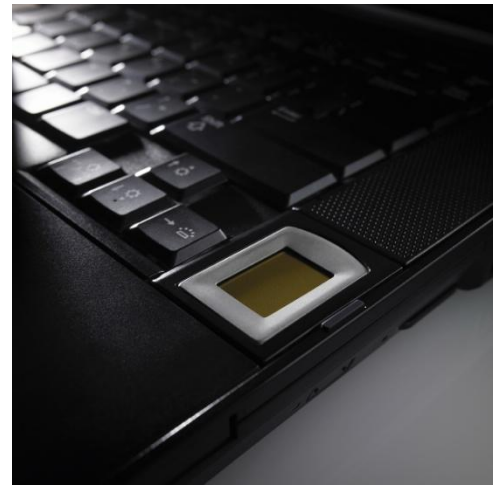
You want to prevent security breaches into your business. But security is complex and there are many aspects to it. Choices are difficult to make, stable technologies cannot be identified, and you could suffer from skyrocketing costs and complexity.

Based on long-lasting technologies, Dell end-point security solutions enable you to protect business assets by including relevant and long term technologies in our notebooks.

The Latitude E6500 and E6400 are designed with these multi-factor authentication technologies:

- Standard smartcard reader
- New integrated contactless card reader supports leading edge technology from HID and is designed to enable the convergence of physical and logical access.
- Integrated fingerprint reader option
- New integrated FIPS 201 Certified fingerprint reader option on the E6500, which as an area sensor, can provide one of the highest possible quality finger print scans.

Furthermore, we make security easy for the user as well by providing easy to use software that supports multiple technologies through a single console in Dell ControlPoint Security Manager (see page 13 of this guide for more.)



Integrated FIPS 201 Certified fingerprint reader option on E6500



Integrated fingerprint reader option on E6400



TOTAL CONTROL OF OWNERSHIP



***I should be able to manage my notebooks
anywhere in the world without leaving my desk.***



Latitude works like it's supposed to, with freedom from hassles and constant overhauls. It's the ultimate team player, letting you manage notebooks virtually anywhere in the world without leaving your desk. Finally, an IT investment that doesn't cost a fortune coupled with business-class service that is truly first class. Freedom from hassles with technology that gives you Total Control of Ownership.

Unplanned change costs your business time, money and people. Dell minimizes change to help you reclaim and refocus your resources.

Long product lifecycles and proactively managed product transitions help minimize costs and headaches. Long lifecycle and long overlap means customers have time to evaluate the new product, create a new image and plan the transition as fits their business needs.

Consistent configurations worldwide simplify global deployment and management.

Image stability is key. Carefully managed change means fewer image impacts. When change is unavoidable, Dell gives you the tools for early notification months before they happen.

Dell ImageWatch™ is a flexible and easy to use tool that enables proactive transition management for Dell customers.

Compatible peripherals, adapters, and docking

Share accessories among users and among systems within the E-Family.



Latitude E6400 with E-Port Plus on
E-View Laptop Stand



The Dell Client Manager console used in conjunction with Intel® Centrino® 2 with vPro™ technology can reduce the need for desktide visits for both troubleshooting, and system maintenance and migration.

Dell Client Manager can enable DASH, which is the new industry standard for secure out-of-band and remote management of desktop and mobile systems

Benefit from the Dell Client Manager's predictive hardware monitoring, streamline after-hour updates and help improve data security .



Built-in Management and Advanced Security

The Latitude E6400 and E6500 notebooks can be configured with Intel® Centrino 2 with vPro™ technology. With Intel AMT 4.0, customers can scale Intel® AMT deployments with remote configuration and benefit from support for next generation management standards: WS-MAN and DASH 1.0.

Remote configuration

More convenient option for over-the-wire set-up

Allows transfer of Intel® AMT keys over the network during set-up

New out of band management capabilities

Client Initiated Remote Access (CIRA) allows client initiated, secure Out of Band (OOB) communication to the management console⁷

Wireless manageability during sleep states

Wireless management of notebooks even when asleep, hibernating or powered off⁶

Supports next-generation management standards (WS-MAN & DASH 1.0)

More capable, extensible, and secure than ASF
Standardizes management interface between console and PC

⁶ Requires AC Power

⁷ Requires user to 'accept' any terms of service gateway and that the gateway remain open over a period of time.



The Green Side of Latitude

Dell's environmental stewardship program strives to conserve product energy consumption, reduce or eliminate materials for disposal, prolong product life span and provide effective and convenient equipment recovery solutions. By streamlining business steps and processes, Dell minimizes stress on the environment while achieving speed, responsiveness and cost savings that can be passed along to customers.

Product Concept and Design – with Environment in Mind

Dell's focus on improving environmental performance starts with our Design for the Environment (DfE) approach. When designing new systems, engineers consider environmental factors such as material composition of components, amount of materials used, energy efficiency as well as design attributes that aid in recycling.

The Latitude brand has a history of leadership in delivering green notebooks:

- 1st Notebook to achieve EPEAT Gold (Latitude D630)
- 1st Notebook to implement Energy Star 4.0 Standard (Latitude portfolio May 2007)

Minimize Energy Consumption

- 1st Energy Star 4.0 Compliant Notebooks
- Energy Smart Power Management Settings on all Latitude Notebooks
- Energy Efficient Technologies (25W CPUs, LED Backlight etc.)
- 87% Averaged Efficiency for E-Family External Adapters

Environmentally-Preferable Materials

- WW RoHS (Lead-Free) Compliant since July 2006
- China RoHS Compliant
- Mercury Free LCD Panels (Latitude XT, E6400, E6500, E4300, E4200)
- Dell Latitude E4200 will be the first Halogen-Reduced Dell notebook that offers a motherboard containing “halogen-free” laminates (per JPCA ES-01-1999), as well as “halogen-free” chassis plastics and fan housing/impeller.

Minimize Waste

- Recycled Packaging with 25% Post Consumer Cardboard
- Asset Recovery and Recycling Services



CORE TECHNOLOGIES



New Performance Architecture

Intel® Core™ 2 Duo Processor

Dell Latitude E6500 and E6400 are equipped with Intel® Core™ 2 Duo mobile technology, featuring the Intel PM45 Express chipset. You get powerful mobile dual-core processors with 3MB or 6MB Level 2 cache and up to 8GB* of 800MHz dual-channel DDR2 system memory*.

Intel® Centrino® 2 processor technology provides a forward leap in wireless connectivity, battery life and performance. What's more, thanks to halogen-free and lead-free manufacturing and a breakthrough 45nm design, users enjoy true energy efficiency. Intel® Centrino® 2 processor technology helps meet Energy Star requirements without sacrificing performance.

Chipset and Memory

Intel® PM45 Express Chipset features:

- Support for up to 8GB* system memory and for dual memory channels and DDR2 800MHz memory*
- 1066MHz front side bus
- Intel Active Management Technology 4.0
- Serial ATA hard drive support
- Up to 6 PCI express ports
- Small footprint (size)

Dual Channel DDR2 Memory*

DDR2 offers dual-channel capability for additional bandwidth and performance, reduced power consumption and scalability to help increase performance with processor and chipset bus architecture.

PCI-Express (PCI-E) Technology

Serial I/O and Graphics Interconnect provide high performance (up to 8GB/sec bandwidth) backwards compatibility with PCI implementation. PCI-Express is expected to keep pace with processor and I/O advances for the next 10 years or more, so it is designed to address your technology for the foreseeable future.



Graphics

The Latitude E6500 and E6400 provide a choice of Intel integrated graphics* and a discrete NVIDIA solution.

Mobile Intel® Graphics Media Accelerator 4500MHD brings the next generation benefits of dialed up performance, power management and support for new technologies.



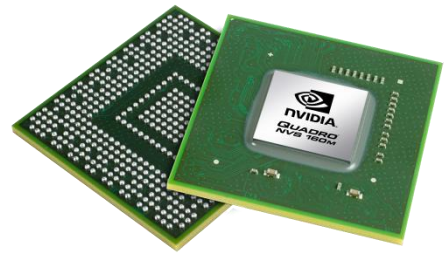
Intel GMA 4500MHD helps deliver a next generation video and 3D experience:

- Clear and accurate video playback with crisp details.
- Support for advanced features like Picture-in-Picture,
- Use new video display connectors HDMI and DisplayPort
- Full hardware decode enables smooth playback of next generation HD AVC, VCI, MPEG2 content.
- View weave and jitter-free playback of static and fast-moving objects with SD and HD de-interlacing which applies multiple fields to construct progressive frames.
- Experience rich 3D graphics applications with Microsoft® DirectX® 10 and DXVA 2.0 – new industry graphics feature and acceleration technologies
- More accurately scale images to fit different display resolutions with Panel Fitter 2
- Efficient and intelligent balancing of shared system memory usage between graphics and other applications with DVMT 5.0

Users can experience the latest power conservation features of Intel GMA 4500MHD. Intel® Graphics Power Modulation Technology helps extend battery life through dynamic switching of render core voltage and frequency. Graphics Render Standby puts render engine into standby during periods of inactivity and dynamically lowers render core voltage.



The Latitude E6500 and E6400 are available with the NVIDIA® Quadro® NVS 160M* for a great combination of reliability, manageability and performance.



NVIDIA® Quadro® NVS 160M* delivers some of the latest visual computing technology for business applications:

- Accelerates 2D and 3D functionality in business applications like Microsoft® Office 2007 and Adobe® Acrobat®
- Accelerated graphics performance helps enhance productivity when running graphics-intensive applications
- NVIDIA unified architecture dynamically allocates processing power thereby delivering higher performance than prior Quadro NVS generations
- PureVideo® HD technology delivers a great combination of high-definition video decode acceleration and advanced post-processing that delivers smooth video, accurate color, and great image scaling for DVD playback.
- Multiple-display architecture allows users to spread their work across multiple displays and maximize productivity through advanced desktop and application management features
- GPU zoom helps crisply display the page, including text, shapes, images, at any magnification level
- Full Microsoft® DirectX® 10 support with full Shader Model 4.0 support delivers premium levels of graphics realism
- NVIDIA® PowerMizer® 8.0 Technology balances user's need for longer battery life and performance. Intelligent and dynamic power management helps to save battery life by reducing power consumption of unused circuitry.

NVIDIA® Quadro® NVS 160M* is essential for the ultimate Microsoft® Windows Vista® experience by delivering an exceptional experience with Windows® Aero™ features such as Flip 3D, Windows Sidebar, and transparent windows. Quadro NVS helps increase productivity with fast Windows Vista desktop response time and efficient multi-tasking.



Latitude E6500 Product Views and Technical Specifications



E6500 Weight, Dimensions and Top View Detail

Starting weight is 5.17lbs/2.34kg* with a 4-cell battery

Preliminary Dimensions:

Width: 14.1"/358mm

Depth: 10.1"/257mm

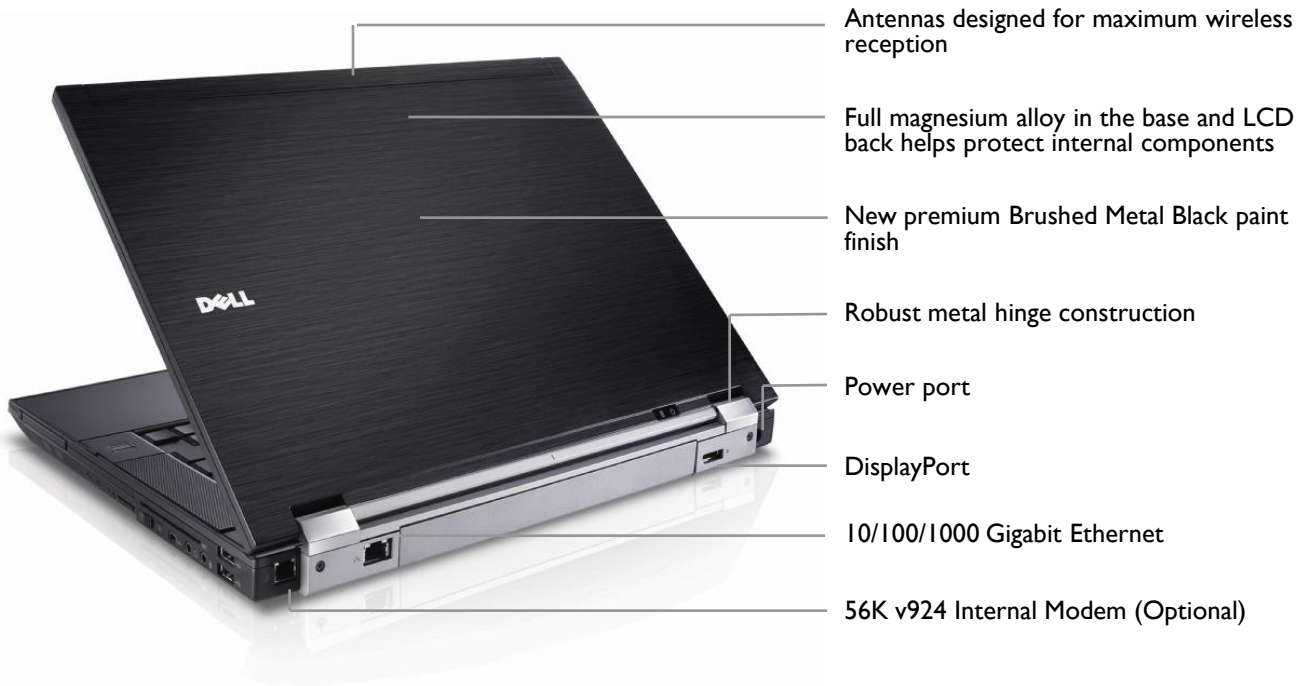
Height: 1.08-1.3"/27.4-33.3mm



Optional fingerprint reader is located at the bottom of the right speaker grill



E6500 Front and Back View Detail



E6500 Left View



5-in-1 card reader

Expresscard/54



VGA port

USB port with USB PowerShare¹

eSATA port (compatible with USB)

Steel reinforced lock slot

¹ Supported devices

*See important information at end of document

E6500 Right View



E-Media Bay

PCMCIA slot



2 USB ports

Smart card reader

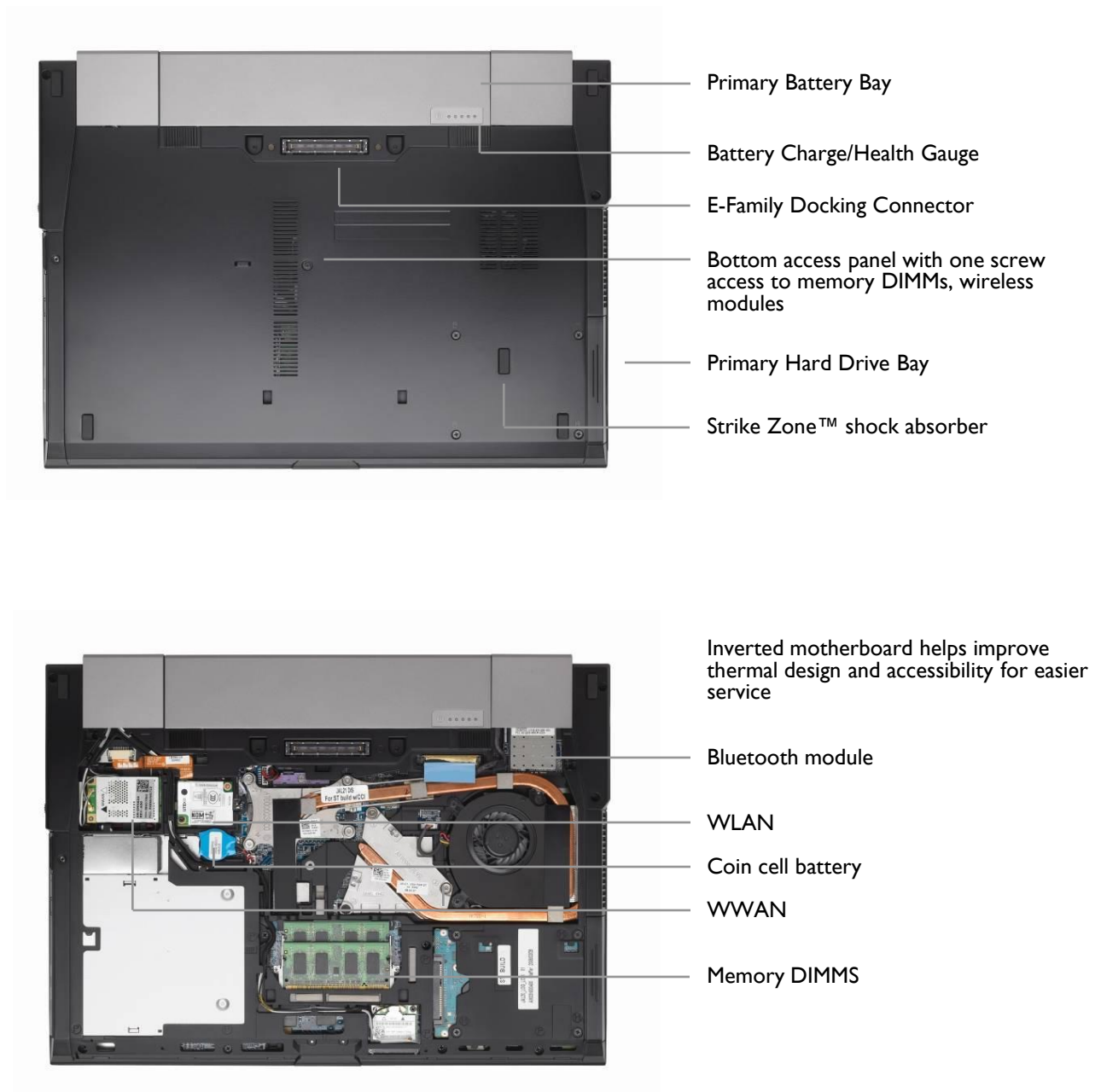
Headphone/speaker out ports

1394 port

Wi-Fi Catcher On/Off switch with
network locator button



E6500 Bottom View



Processors

Intel® Core™ 2 Duo Processor
Up to T9600 (2.8GHz, 6MB L2 Cache)

Operating System

Genuine Windows Vista® Ultimate
Genuine Windows Vista® Business
Genuine Windows Vista® Business 64-Bit
Genuine Windows Vista® Home Basic
Genuine Windows Vista Ultimate or Business
Downgrade, Genuine Windows® XP Professional installed*

Chipset

Intel® 45 Express Chipset

Displays

15.4" UltraSharp™ Widescreen WUXGA (1920x1200)
Display with Wide Viewing Angle
15.4" Widescreen WXGA+ (1440x900) LED Display
with Wide Viewing Angle
15.4" Widescreen WXGA (1280x800) Display

Memory

Dual Channel DDR2 Memory*
Two Memory slots offering up to 8GB*
Memory Bandwidth: 800MHz

Primary Storage

Solid State Drive up to 128GB*
7200RPM Free Fall Sensor Hard Drive up to 250GB*
7200RPM Encrypted Hard Drive 160GB*
5400RPM Encrypted Hard Drive 120GB*
5400RPM up to 250GB*

Media Bay

E-Family modular media bay: 8X DVD-ROM, 24X CDRW/DVD, 8X DVD+/-RW, second Hard Drive or Travelite Module

Graphics Cards

NVIDIA® Quadro® NVS 160M 128MB DDR3*
Mobile Intel® Graphics Media Accelerator X4500MHD*

Hardware-Enabled Systems Management

Intel vPro™ Technology's advanced management features (optional, requires Intel WiFi Link WLAN)

Power

90 Watt AC adapter with cord wrapping
65 Watt Auto/Air/AC Travel Adapter
4-cell, 6-cell or 9-cell extended life primary batteries
12-cell high capacity battery slice (optional)

Chassis

Starting weight is: 5.17lbs/2.34kg* with 4-cell battery
Dimensions:
Width: 14.1"/358mm
Depth: 10.1"/257mm
Height: 1.08-1.3"/27.4-33.3mm

Connectivity

Dell ControlPoint Connection Manager

Wired:

10/100/1000 Gigabit Ethernet
56K v924 Internal Modem (Optional)

Wireless:

Wireless LAN: Dell Wireless 1397 (802.11g), Dell Wireless 1510 (802.11 a/g/n 2x2), Intel® WiFi Link 5100 [802.11 a/g/n (1x2)], Intel WiFi Link 5300 [802.11 a/g/n (3x3)]

Mobile Broadband* & GPS: Dell Wireless 5720 (EvDO & GPS) Mobile Broadband mini card, Dell Wireless 5530 (Tri-band HSDPA 7.2/HSUPA 2.0 & GPS) Mini-Card

Bluetooth : Dell Wireless 370 Bluetooth® 2.1

Security**Physical Security:**

Cable Lock Slots, Media Module and Hard Drive Locks.

User & System Security:

Smart Card Reader and Contactless Smart Card Reader
Fingerprint Reader OR FIPS Fingerprint Reader (optional)
TPM 1.2*
Optional Encrypted Hard Drive provides full disk encryption
Dell ControlPoint Security Manager
Dell ControlVault™

Network Security:

802.11 Wi-Fi Protected Access (WPA), 802.11i (WPA2), Virtual Private Networks (VPN) 802.1x with EAP modes and compatible with CCX 4.0

Collaboration

2 speakers, digital microphone
Integrated VGA webcam (optional)

Expandability**Slots:**

5-in-1 card reader; 1 Type I/II PCMCIA & Expresscard/54

Docking:

E-Port, E-Port Plus, E-Legacy Extender, E-Flat Panel Stand, E-Monitor Stand, E-View Laptop Stand, E-Media Bay

Modular Options:

E-Modular Hard Drive, E-Modular Optical Drive (DVD-ROM, CDRW/DVD, DVD+/-RW4) or Travelite Module

Ports

1394, USB 2.0 (x3; x1 with USB PowerShare), eSATA, VGA, Display Port, RJ-11 (optional), RJ-45, Audio, Power, headphone/speaker out

Input

Dual-pointing, Backlit keyboard option



Latitude E6400 Product Views and Technical Specifications



E6400 Weight, Dimensions and Top View Detail

Starting weight is 4.3lbs/1.95kg* with 4-cell battery

Dimensions

Width: 13.2"/335mm

Depth: 9.38"/238.3mm

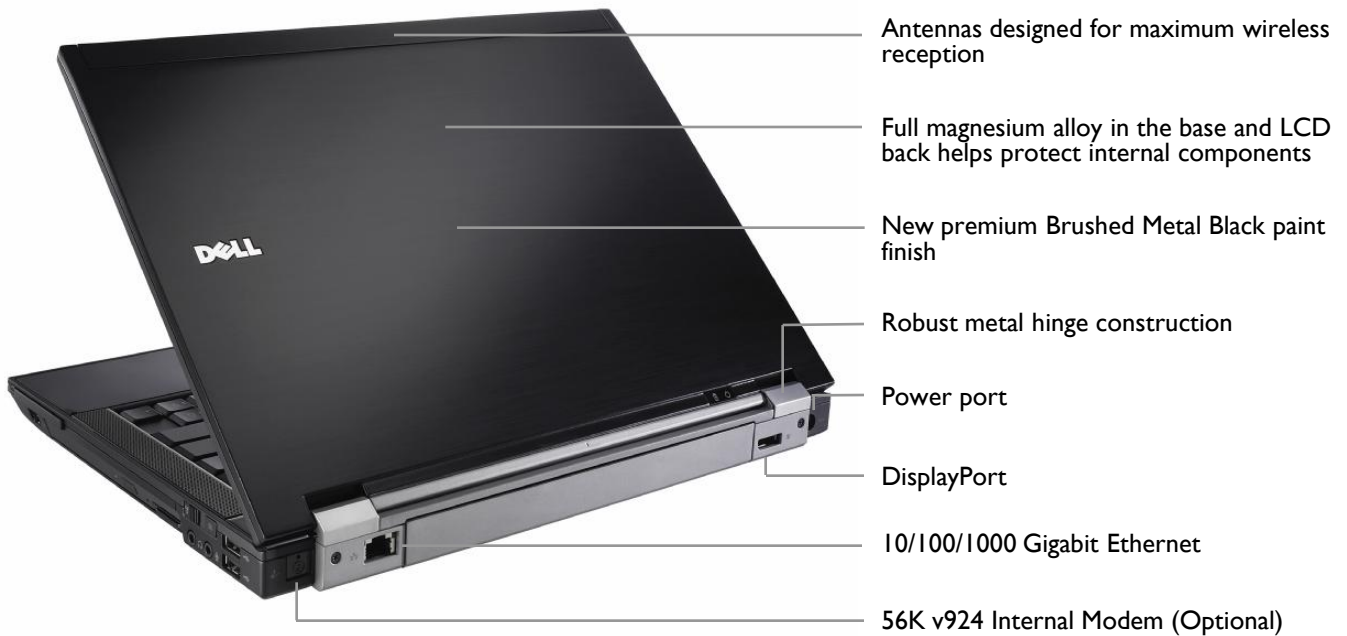
Height: 1-1.2"/25.4-31mm



Optional fingerprint reader is located at the bottom of the right speaker grill



E6400 Back View Detail



E6400 Left View



¹ Supported devices

*See important information at end of document

E6400 Right View



E-Media Bay

PCMCIA (also available with
Expresscard/54)

I394 port



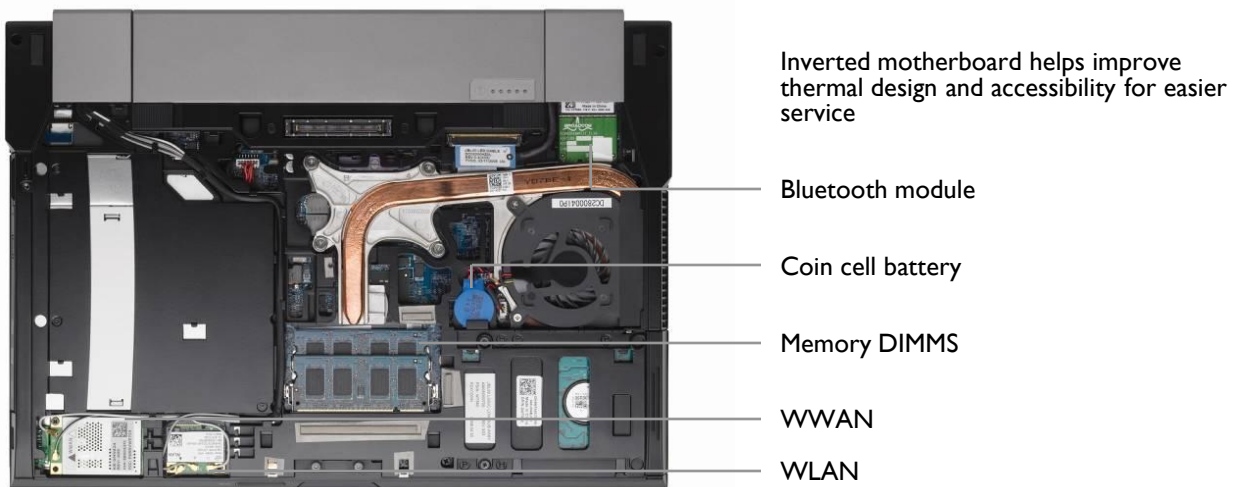
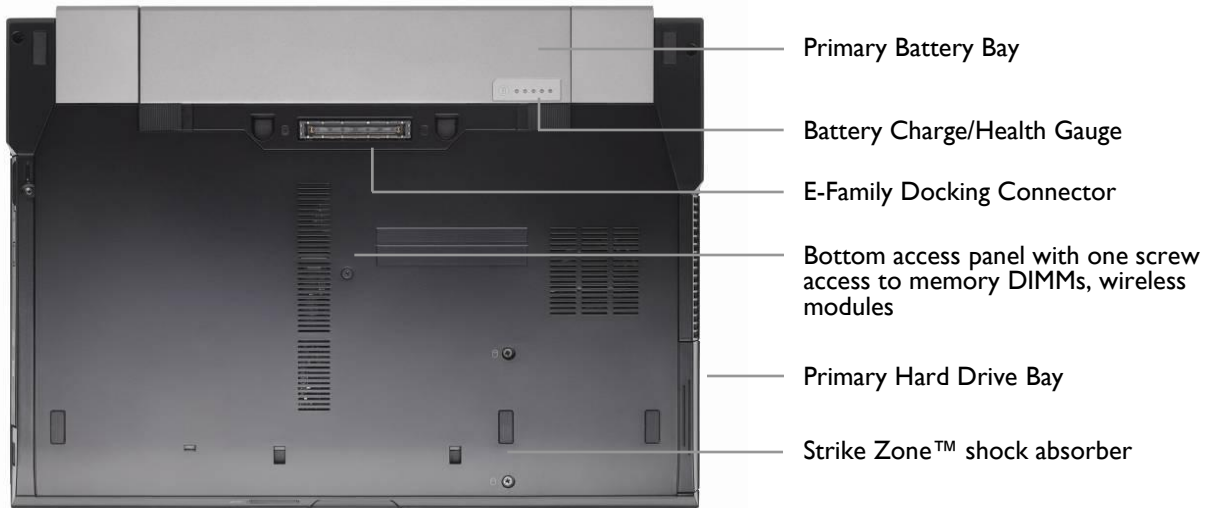
2 USB ports

Wi-Fi Catcher On/Off switch with
network locator button

Headphone/speaker out ports



E6400 Bottom View



Processors

Intel® Core™ 2 Duo Processor
Up to T9600 (2.8GHz, 6MB L2 Cache)

Operating System

Genuine Windows Vista® Ultimate
Genuine Windows Vista® Business
Genuine Windows Vista® Business 64-Bit
Genuine Windows Vista® Home Basic
Genuine Windows Vista Ultimate or Business
Downgrade, Genuine Windows® XP Professional
installed*

Chipset

Intel® 45 Express Chipset

Displays

14.1" UltraSharp™ Widescreen WXGA+ (1440x900)
LED Display
14.1" Widescreen WXGA (1280x800) Display

Memory

Dual Channel DDR2 Memory*
Two Memory slots offering up to 8GB*
Memory Bandwidth: 800MHz

Primary Storage

Solid State Drive up to 128GB*
7200RPM Free Fall Sensor Hard Drive up to 250GB*
7200RPM Encrypted Hard Drive 160GB*
5400RPM Encrypted Hard Drive 120GB*
5400RPM up to 250GB*

Media Bay

E-Family modular media bay: 8X DVD-ROM, 24X
CDRW/DVD, 8X DVD+/-RW, second Hard Drive or
TravelLite Module

Graphics Cards

NVIDIA® Quadro® NVS 160M 256MB DDR2*
Mobile Intel® Graphics Media Accelerator X4500MHD*

Hardware-Enabled Systems Management

Intel vPro™ Technology's advanced management
features (optional, requires Intel Wifi® Link WLAN)

Power

90 Watt AC adapter with cord wrapping
65 Watt Auto/Air/AC Travel Adapter
4-cell, 6-cell or 9-cell extended life primary batteries
12-cell high capacity battery slice (optional)

Chassis

Starting weight is: 4.3lbs/1.95kg* with 4-cell battery

Dimensions

Width: 13.2"/335mm
Depth: 9.38"/238.3mm
Height: 1-1.2"/25.4-31mm

Connectivity

Dell ControlPoint Connection Manager

Wired

10/100/1000 Gigabit Ethernet
56K v924 Internal Modem (Optional)

Wireless

Wireless LAN: Dell Wireless 1397 (802.11g), Dell Wireless
1510 (802.11 a/g/n 2x2), Intel® WiFi Link 5100 [802.11a/g/n
(1x2)], Intel WiFi Link 5300 [802.11a/g/n (3x3)]

Mobile Broadband* & GPS: Dell Wireless 5720 (EvDO &
GPS) Mobile Broadband mini card, Dell Wireless 5530 (Tri-
band HSDPA 7.2/HSUPA 2.0 & GPS) Mini-Card

Bluetooth: Dell Wireless 370 Bluetooth® 2.1

Security

Physical Security:

Cable Lock Slots, Media Module and Hard Drive Locks.

User & System Security:

Smart Card Reader and Contactless Smart Card Reader
Fingerprint Reader (optional)
TPM 1.2*
Optional Encrypted Hard Drive provides full disk encryption
Dell ControlPoint Security Manager
Dell ControlVault™

Network Security:

802.11 Wi-Fi Protected Access (WPA), 802.11i (WPA2),
Virtual Private Networks (VPN) 802.1x with EAP modes and
compatible with CCX 4.0

Collaboration

2 speakers, digital microphone
Integrated VGA webcam (optional)

Expandability

Slots:

5-in-1 card reader; 1 Type I/II PCMCIA OR Expresscard/54

Docking:

E-Port, E-Port Plus, E-Legacy Extender, E-Flat Panel Stand, E-
Monitor Stand, E-View Laptop Stand, E-Media Bay

Modular Options:

E-Modular Hard Drive, E-Modular Optical Drive (DVD-
ROM, CDRW/DVD, DVD+/-RW4) or Travel Lite Module

Ports

1394, USB 2.0 (x3, x1 with USB PowerShare), eSATA, VGA,
Display Port, RJ-11 (optional), RJ-45, Audio, Power,
headphone/speaker out

Input

Dual-pointing, Backlit keyboard option



Latitude E6400 ATG Product Views and Technical Specifications



E6400 ATG Weight, Dimensions and Top View Detail

Starting weight is 5.56 lbs./2.52 kg* with 6-cell battery and no port cover.

Dimensions without port cover:

Width: 13.4"/341mm

Depth: 9.59"/243.7mm

Height: 1.29-1.45"/33.0-36.9mm



Optional fingerprint reader is located at the bottom of the right speaker grill



E6400 ATG Back View Detail



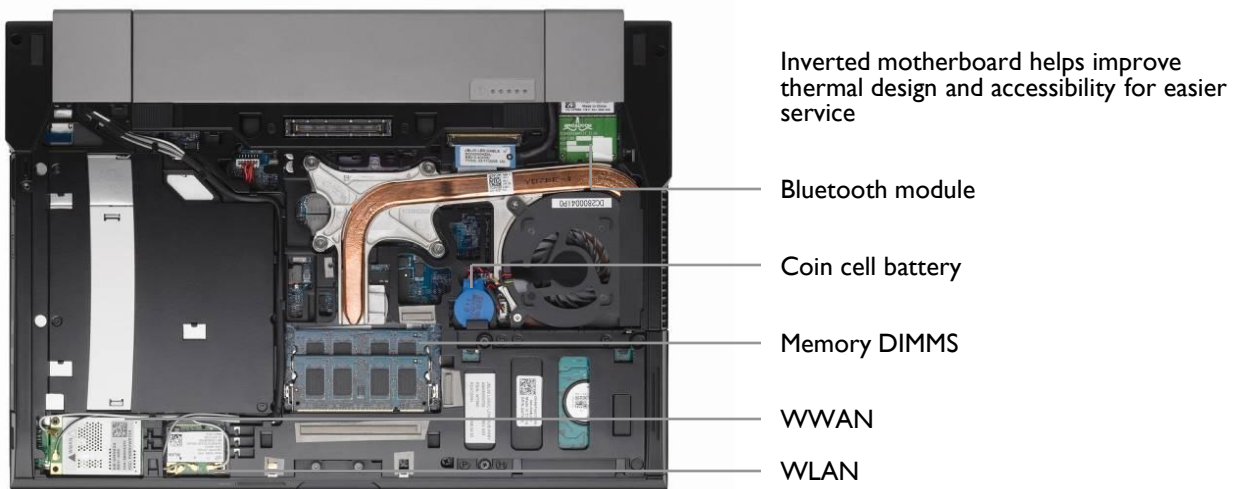
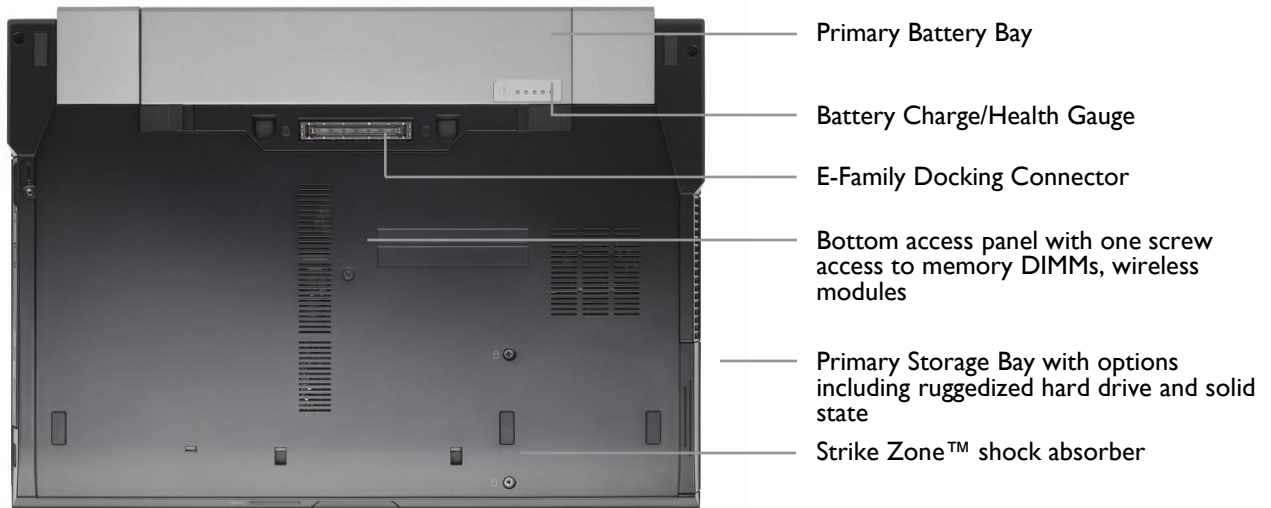
E6400 ATG Left View



E6400 ATG Right View



E6400 ATG Bottom View



Latitude E6400 ATG Technical Specifications

Processors

Intel® Core™ 2 Duo Processor
Up to T9600 (2.8GHz, 6MB L2 Cache)

Operating System

Genuine Windows Vista® Ultimate
Genuine Windows Vista® Business
Genuine Windows Vista® Business 64-Bit
Genuine Windows Vista® Home Basic
Genuine Windows Vista Ultimate or Business
Downgrade, Genuine Windows® XP Professional installed*

Chipset

Intel® 45 Express Chipset

Displays

14.1" Wide WXGA (1280X800) LED (Outdoor Viewable) with Touch Functionality
14.1" Wide WXGA (1280X800) LED (Outdoor Viewable)

Memory

Dual Channel DDR2 Memory*
Two Memory slots offering up to 8GB*
Memory Bandwidth: 800MHz

Primary Storage

Solid State Drive up to 128GB*
Ruggedized Hard Drive, 5400RPM, 120GB*
7200RPM Free Fall Sensor Hard Drive up to 250GB*
7200RPM Encrypted Hard Drive 160GB*
5400RPM Encrypted Hard Drive 120GB*
5400RPM up to 250GB*

Media Bay

E-Family modular media bay: 8X DVD-ROM, 24X CDRW/DVD, 8X DVD+/-RW, second Hard Drive or Travelite Module

Graphics Card

Intel® Graphics Media Accelerator X4500MHD*

Hardware-Enabled Systems Management

Intel vPro™ Technology's advanced management features (optional, requires Intel Wifi® Link WLAN)

Power

90 Watt AC adapter with cord wrapping
65 Watt Auto/Air/AC Travel Adapter
6-cell or 9-cell extended life primary batteries
12-cell high capacity battery slice (optional)

Chassis

Starting weight is 5.56 lbs./2.52 kg* with 6-cell battery and no port cover.

Dimensions without port cover:

Width: 13.4"/341mm
Depth: 9.59"/243.7mm
Height: 1.29-1.45"/33.0-36.9mm

Connectivity

Dell ControlPoint Connection Manager

Wired

10/100/1000 Gigabit Ethernet
56K v924 Internal Modem (Optional)

Wireless

Wireless LAN: Dell Wireless 1397 (802.11g), Dell Wireless 1510 (802.11 a/g/n 2x2), Intel® WiFi Link 5100 [802.11a/g/n (1x2)], Intel WiFi Link 5300 [802.11a/g/n (3x3)]

Mobile Broadband* & GPS: Dell Wireless 5720 (EvDO & GPS) Mobile Broadband mini card, Dell Wireless 5530 (Tri-band HSDPA 7.2/HSUPA 2.0 & GPS) Mini-Card

Bluetooth: Dell Wireless 370 Bluetooth® 2.1

Security

Physical Security:

Cable Lock Slots, Media Module and Hard Drive Locks.

User & System Security:

Smart Card Reader and Contactless Smart Card Reader
Fingerprint Reader (optional)

TPM 1.2*

Optional Encrypted Hard Drive provides full disk encryption
Dell ControlPoint Security Manager
Dell ControlVault™

Network Security:

802.11 Wi-Fi Protected Access (WPA), 802.11i (WPA2), Virtual Private Networks (VPN) 802.1x with EAP modes and compatible with CCX 4.0

Collaboration

2 speakers, digital microphone
Integrated VGA webcam (optional)

Expandability

Slots:

5-in-1 card reader; 1 Type I/II PCMCIA

Docking:

E-Port, E-Port Plus, E-Legacy Extender, E-Flat Panel Stand, E-Monitor Stand, E-View Laptop Stand, E-Media Bay

Modular Options:

E-Modular Hard Drive, E-Modular Optical Drive (DVD-ROM, CDRW/DVD, DVD+/-RW4) or Travel Lite Module

Ports

1394, USB 2.0 (x3, x1 with USB PowerShare), eSATA, VGA, Display Port, RJ-11 (optional), RJ-45, Audio, Power, headphone/speaker out

Input

Dual-pointing, Backlit keyboard



Detailed Technical Overview and Configuration Specifications



System Configurations

NOTE: Offering may vary by region.

Operating System NOTE: One of the following Operating Systems will be preinstalled.	E6500, E6400, E6400 ATG
Windows Vista® operating system	Genuine Windows Vista® Ultimate Genuine Windows Vista® Business Genuine Windows Vista® Business 64-Bit Genuine Windows Vista® Home Basic SPI
Windows® XP Professional	Genuine Windows Vista Ultimate or Business Downgrade, Genuine Windows® XP Professional installed SP3*
Other	Suse SLED Linux (China only), FreeDOS
OS Media Support	Can order with or without media

Chipset	E6500, E6400	E6400 ATG
Intel® GM45 Express Chipset (Montevina)	x	x
Intel® PM45 Express Chipset (Montevina)	x	
TPM 1.2 Security Device (Trusted Platform Module) (where available)	16KB located at TPMIP2 on chipset	
Intel® 82567 Gigabit Ethernet Controller	x	x

NOTE: Processor numbers are not a measure of performance.

Processor (speed, system bus, wattage, cache)	E6500, E6400, E6400 ATG
Intel Core 2 Duo Processor T9600 (2.8GHz, 1066MHz FSB, 35 watts, 6MB L2 cache)	
Intel Core 2 Duo Processor T9400 (2.53GHz, 1066MHz FSB, 35 watts, 6MB L2 cache)	
Intel Core 2 Duo Processor P9500 (2.53GHz, 1066MHz FSB, 25 watts, 6MB L2 cache)	
Intel Core 2 Duo Processor P8600 (2.4GHz, 1066MHz FSB, 25 watts, 3MB L2 cache)	
Intel Core 2 Duo Processor P8400 (2.26GHz, 1066MHz FSB, 25 watts, 3MB L2 cache)	



Memory*

Your computer supports a maximum of 8GB* of memory when you use two 4GB DIMMs; however, 32-bit operating systems, such as the 32-bit version of Microsoft® Windows® XP, 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.

NOTE: Greater than 4GB memory requires 64-bit operating systems.

Memory modules should be installed in pairs of matched memory size, speed, and technology. If the memory modules are not installed in matched pairs, the computer will continue to operate.

Memory	E6500, E6400, E6400 ATG
DIMM slots	2
DIMM speed	800 MHz
Minimum Memory* Configuration	1 GB
Maximum Memory* Configuration	8GB*
DIMM Configurations	8GB* (2 x 4GB) 4GB *(1 x 4GB) 4GB *(2 x 2GB) 3GB (1 x 2GB, 1 x 1GB) 2GB (1 x 2GB) 2GB (2 x 1GB) 1GB (1 x 1GB) 1GB (2 x 512MB)



Primary Storage

Size, type, speed	E6500,E6400	E6400 ATG
80GB* SATA 5400 RPM	x	x
80GB * SATA 7200 RPM	x	x
160GB * SATA 5400 RPM	x	x
160GB* SATA 7200 RPM	x	x
250GB* SATA 7200 RPM	x	x
120GB* SATA Full Disk Encryption 5400 RPM	x	x
160GB* SATA Full Disk Encryption 7200 RPM	x	x
64GB* Solid State Ultra Performance	x	x
64GB* Solid State Mobility	x	x
128GB* Solid State Mobility	x	x
120GB* Ruggedized SATA 5400RPM		x

Specialty Storage Options

Full Disk Encryption hard drives provide hardware encrypted data protection which can be activated within a few seconds centrally and can be much safer than software based encryption.

Ultra Performance Solid State Drive delivers the best in solid state technology with extreme performance, highest reliability rating¹ and longest lifecycle. These drives outperform even the fastest desktop SATA 10,000 rpm hard drives,.

Mobility Solid State Drives offer highly reliable and durable, storage, while trading extreme performance for high capacities and a low price. The Mobility SSD is better performing than any standard notebook hard drive, but not as high as Ultra Performance SSD.

Intel Rapid Recover Technology (IRRT)

The IRRT feature uses RAID 1 mirroring functionality to copy data from the system primary drive to an external eSATA recovery drive. This gives the user additional security as their hard disk contents can be backed up at any time when connected to an external eSATA drive through the system eSATA port or through the E-Port Docking system. Data recovery is made easy with the IRRT feature.

¹ Based on Mean Time Between Failure (MTBF) of 2M for Ultra Performance SSD vs. 1M for Mobility SSD and 550K for standard Dell 2.5" HDD, per Dell HDD spec.



Removable Storage

Optical Drive in Module Bay	E6500, E6400, E6400 ATG
DVD+/-RW	8x SATA Roxio & Cyberlink PowerDVD software
DVD-ROM	8x SATA Cyberlink Power DVD software
Combo Drive CD-RW	24x SATA Cyberlink Power DVD software

Additional Hard Drive in Module Bay	E6500, E6400, E6400 ATG
120GB* SATA 5400 RPM	
64GB* Solid State Ultra Performance	

Expandability – external slots and ports

Expansion Slots		E6500, E6400, E6400 ATG
Dell 5-in-1 Media Card Reader	Card supported: SD, SDIO, SD HC MMC, MMC+ Mini SD and Mini MMC with adapter	All
Express Card	ICH Controller Supports one 54mm Express Card, 34mm w/adapter 1.5V and 3.3V 28 pin connector size Maximum data width: PCMCIA - 16 bits Card Bus - 32 bits	E6400 as an option E6500 standard
PC Card	Ricoh R5C847 Controller Supports one Type I or Type II card 3.3V and 5V 1.5V Express Card with adapter 80 pin connector size Maximum data width: PCMCIA - 16 bits Card Bus - 32 bits	E6400 as an option ATG standard E6500 standard

Note: For E6400, you make a selection for either PC Card or Express Card when you configure the system. This cannot be changed or upgraded after point of sale.



Ports and Connectors		E6500, E6400, E6400 ATG
USB 2.0	4 Total 4-pin USB 2.0 compliant connectors Total includes one with powered USB and one with eSATA functionality	All
IEEE 1394	IEEE 1394a 4-pin connector	All
Video	VGA DisplayPort	All
Network Adapter	RJ-45 network adapter	All
Modem	RJ-11 modem connector Optional, must be ordered when you configure the system	All
Audio	Two channel high definition audio IDT 92HD71B Controller Stereo conversion: 24-bit (analog-to-digital and digital-to-analog) Interfaces: Internal - high-definition audio codec External - microphone-in connector and stereo headphones/speakers connector Speakers: two 1-watt, 4-ohm speakers Internal speaker amplifier: 1 watt per channel, 4 ohms Internal microphone: single digital microphone Volume control buttons	All
Webcam	Optional 640 x 480 pixels (VGA)	All



Wireless Communications -Wi-Fi (WLAN)

Dell Wireless 1397 (802.11g)

Host interface	PCI Express™ Half Mini-Card
Network standard	IEEE 802.11b and 802.11g
Wi-Fi Alliance Certifications	802.11b, 802.11g, WPA, WPA2, WMM
Operating Frequency Bands	2.4 GHz
Dual Diversity Antenna Switching	Dual diversity antenna switching for systems designed with main and auxiliary antennas
Data Rate	802.11g - Up to 54 Mbps / 802.11b - Up to 11 Mbps
Typical Range Indoor	802.11g: 100 ft (30 m) @ 54 Mbps; 200 ft (60 m) @ 18 Mbps
Typical Range Outdoor	802.11b: 260 ft (80 m) @ 11 Mbps; 410 ft (125 m) @ 1 Mbps 802.11g: 200 ft (60 m) @ 54 Mbps; 490 ft (150 m) @ 18 Mbps 802.11b: 650 ft (200 m) @ 11 Mbps; 1300 ft (400 m) @ 1 Mbps
Receive Sensitivity	802.11g: -73 dBm @ 54 Mbps; -86 dBm @ 18 Mbps 802.11b: -88 dBm @ 11 Mbps; -95 dBm @ 1 Mbps
Power Consumption	TX Average - 759 mW, RX Average - 505 mW
Security Authentication EAP Methods	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK, CCKM MD5, LEAP, EAP-FAST, EAP-TLS, EAP-TTLS (PAP, CHAP, MD5, MS-CHAP, MS-CHAPv2), PEAP (TLS, MS-CHAPv2, GTC)
Single Sign On	Open, Shared, MD5, LEAP, EAP-FAST, EAP-TLS, EAP-TTLS (PAP, CHAP, MD5, MS-CHAP, MS-CHAPv2), PEAP (TLS, MS-CHAPv2, GTC), Smart Cards
Encryption Cisco Compatible Extensions	WEP (64 bit/128 bit), CKIP, TKIP, AES-CCMP Version 4
Client Utility	Wireless profile and security management, site monitor, link status, adapter configuration and diagnostics
Software Support	Microsoft® WHQL certified for Windows® XP and Windows® Vista
Radio On/Off	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
LED output	Wireless enable and wireless activity. Compatible with Dell Wi-Fi Catcher™ to indicate via LED presence of
Humidity	Up to 95%
Temperature	Operational 0 to 75C; Storage -40 to 80C
Roaming	Seamless roaming between 802.11b and 802.11b/g access points



Dell Wireless 1510 (802.11 a/g/Draft n 2x2)

Host interface	PCI Express™ Half Mini-Card
Network standard	IEEE 802.11a, 802.11b, 802.11g, and 802.11 Draft n
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/Draft n)
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	802.11 Draft n - Up to 300 Mbps*; 802.11a/g - Up to 54 Mbps 802.11b - Up to 11 Mbps
Typical Range Indoor	802.11n: 25 ft*(7 m) @ 300 Mbps*; 100 ft*(30 m) @ 108 Mbps* 802.11a: 75 ft*(23 m) @ 54 Mbps*; 160 ft*(50 m) @ 18 Mbps* 802.11g: 100 ft*(30 m) @ 54 Mbps*; 200 ft*(60 m) @ 18 Mbps* 802.11b: 260 ft*(80 m) @ 11 Mbps*; 410 ft*(125 m) @ 1 Mbps*
Typical Range Outdoor	802.11n: 60 ft*(18 m) @ 300 Mbps*; 225 ft*(68 m) @ 108 Mbps* 802.11a: 160 ft*(50 m) @ 54 Mbps*; 460 ft*(140 m) @ 18 Mbps* 802.11g: 200 ft*(60 m) @ 54 Mbps*; 490 ft*(150 m) @ 18 Mbps* 802.11b: 650 ft*(200 m) @ 11 Mbps*; 1300 ft*(400 m) @ 1 Mbps*
Receive Sensitivity	802.11 Draft n: -66 dBm @ 300 Mbps*; -75dBm @ 108 Mbps* 802.11g: -73 dBm @ 54 Mbps*; -86 dBm @ 18 Mbps* 802.11b: -88 dBm @ 11 Mbps*; -95 dBm @ 1 Mbps* 802.11a: -72 dBm @ 54 Mbps*; -86 dBm @ 18 Mbps*
Power Consumption	TX Peak - 2056 mW, RX Peak - 2059 mW
Security Authentication EAP Methods Single Sign On	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK, CCKM MD5, LEAP, EAP-FAST, EAP-TLS, EAP-TTLS (PAP, CHAP, MD5, MS-CHAP, MS-CHAPv2), PEAP (TLS, MS-CHAPv2, GTC) Open, Shared, MD5, LEAP, EAP-FAST, EAP-TLS, EAP-TTLS (PAP, CHAP, MD5, MS-CHAP, MS-CHAPv2), PEAP (TLS, MS-CHAPv2, GTC), Smart Cards WEP (64 bit/128 bit), CKIP, TKIP, AES-CCMP Version 4
Client Utility	Wireless profile and security management, site monitor, link status, adapter configuration and diagnostics
Software Support	Microsoft® WHQL certified for Windows® XP and Windows® Vista
Radio On/Off	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
LED output	Wireless enable and wireless activity. Compatible with Dell Wi-Fi Catcher™ to indicate via LED presence of
Humidity	Up to 95%
Temperature	Operational 0 to 75C; Storage -40 to 80C
Roaming	Seamless roaming between 802.11a, 802.11b, 802.11b/g, and 802.11n access points



Wireless Communications -Wi-Fi (WLAN)

Intel® WiFi Link 5100 [802.11a/g/Draft n (1x2)]

Host interface	Mini Card form factor, based on PCIe electrical interface
Network standard	IEEE 802.11a/b/g/Draft-N
Wi-Fi Alliance Certifications	Wi-Fi Certified for 802.11a, 802.11b, 802.11g, WMM, WPA, and WPA2 (Wi-Fi Alliance Draft-N1 and 802.11n certifications expected when available)
Operating Frequency Bands	2.4 GHz and 5.0 GHz
Dual Diversity Antenna Switching	Support for up to two antennas enable better wireless reception at the same distance when compared to 802.11a/b/g solutions
Data Rate	802.11 Draft n - Up to 300 Mbps* 802.11a/g - Up to 54 Mbps* 802.11b - Up to 11 Mbps*
Power Consumption	Optimized power modes (sleep states) help reduce power consumption during periods of inactivity
Authentication	WPA and WPA2, 802.1X, LEAP, EAP-TLS, PEAP-TLS, and PEAP-MSCHAPv
Protocols Encryption	CKIP, TKIP, 64-bit and 128-bit WEP (for 802.11a/b/g), AES-CCMP (for 802.11a/b/g/Draft-N)
Product Safety	UL, C-UL, CB (IEC 60950)
Client Utility	Intel® PROSet/Wireless Software v12.0
Software Support	Microsoft® WHQL certified for Windows® XP and Windows® Vista; Linux
Radio On/Off	Supported in both hardware and software
LED output	Single WLAN-LED (as per Mini Card specification)
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25° C to 35° C)
Temperature Operating	0 to +80° C
Roaming	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/Draft-N)



Wireless Communications -Wi-Fi (WLAN)

Intel® WiFi Link 5300 [802.11a/g/Draft n (3x3)]

Host interface	Mini Card form factor, based on PCIe electrical interface
Network standard	IEEE 802.11a/b/g/Draft-N
Wi-Fi Alliance Certifications	Wi-Fi Certified for 802.11a, 802.11b, 802.11g, WMM, WPA, and WPA2 (Wi-Fi Alliance Draft-N1 and 802.11n certifications expected when available)
Operating Frequency Bands	2.4 GHz and 5.0 GHz
Dual Diversity Antenna Switching	Support for up to three antennas enable better wireless reception at the same distance when compared to 802.11a/b/g solutions
Data Rate	Up to 450 Mbps*
Power Consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication	WPA and WPA2, 802.1X, LEAP, EAP-TLS, PEAP-TLS, and PEAP-MSCHAPv
Protocols Encryption	CKIP, TKIP, 64-bit and 128-bit WEP (for 802.11a/b/g), AES-CCMP (for 802.11a/b/g/Draft-N)
Product Safety	UL, C-UL, CB (IEC 60950)
Client Utility	Intel® PROSet/Wireless Software v12.0
Software Support	Microsoft® WHQL certified for Windows® XP and Windows® Vista; Linux
Radio On/Off	Supported in both hardware and software
LED output	Single WLAN-LED (as per Mini Card specification)
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25° C to 35° C)
Temperature Operating	0 to +80° C
Roaming	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/Draft-N)



Wireless Communications - Mobile Broadband (WWAN)

Dell Wireless 5530 (Tri-band HSDPA 7.2/HSUPA 2.0 & GPS)

Carrier	AT&T	Vodafone	TeliaSonera	Telstra
Network	HSPA 3G	HSPA 3G	HSPA 3G	HSPA 3G
Speed (Downlink)	700 Kbps* – 1.7 Mbps*	< 3.6 Mbps*	< 3.6 Mbps*	< 7.2 Mbps*
Speed (Uplink)	500 Kbps* – 1.2 Mbps*	< 300 Kbps*	< 300 Kbps*	< 300 Kbps*
Fallback Network	EDGE	GPRS	GPRS	GPRS
Fallback Speed	70 - 135 Kbps*	UMTS 384 Kbps* GPRS 45 Kbps*	UMTS 384 Kbps* GPRS 45 Kbps*	UMTS 384 Kbps* GPRS 45 Kbps*
Frequency Bands	850/1900/2100 HSPA 850/900/1800/1900 EDGE	850/1900/2100 HSPA 850/900/1800/1900 EDGE	850/1900/2100 HSPA 850/900/1800/1900 EDGE	850/1900/2100 HSPA 850/900/1800/1900 EDGE
SIM	Yes	Yes	Yes	Yes



Wireless Communications - Mobile Broadband (WWAN)

Dell Wireless 5720 (EV-DO Rev A & GPS)

Carrier	Verizon Wireless	Sprint	TELUS
Network	EV-DO Rev A	EV-DO Rev A	EV-DO Rev A
Speed (Downlink)	600 Kbps* - 1.4 Mbps*	600 Kbps* - 1.4 Mbps*	600 Kbps* - 1.4 Mbps*
Speed (Uplink)	500 - 800 Kbps*	350 - 500 Kbps*	350 - 500 Kbps*
Fallback Network	CDMA 1xRTT	CDMA 1xRTT	EV-DO Rev 0 CDMA 1xRTT
Fallback Speed	60 - 80 Kbps*	60 - 80 Kbps*	400 - 700Kbps* (Rev 0) 60 - 70 Kbps* (1xRTT)
Frequency Bands	850/1900	1900	1900 EVDO 800/1900 1xRTT
SIM	No	No	No



Wireless Communications - Bluetooth

Dell Wireless 370 Bluetooth 2.1

Manufacturer	Broadcom
Wireless PAN Standard	BT 2.1
Form Factor	Module
Data Rates	Up to 3Mbps*
Frequency Band	2.4GHz
Range	Up to 7m (23ft)*
Bluetooth Profiles Supported	Includes Streaming Stereo Quality Audio (A2DP), File Transfer (FTP/OBEX), Dial-up Networking (DUN), Mice/Keyboards (HID), Printing (BPP), Digital Image Management (transfer, print, remote camera operation) (BIP), Fax (FAX), Headset (HSP) and more.
Data Encryption	128-bit encryption
Output Power	Power class 2, Max 4 dBm (2.4 mW)
Receive Sensitivity	-88 dBm
Temperature	Operational 0-75C; Storage -40-80C
Humidity	Up to 95%
Software	Microsoft Windows XP and Vista support



Wired Communications

Network Adapter (NIC)

Intel® 82567 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: 680 mW 100 Mbps: 238 mW 10 Mbps: 221 mW
Power consumption (standby operation)	No Link (low power mode): 55mW No Link (w/ WOL): TBD 10 Mbps Idle (w/ WOL): 141 mW 100 Mbps Idle (w/ WOL): 238 mW
IEEE standards compliance	802.3, 802.3ab, 802.3u
Boot ROM Support	PXE, RPL
Network Transfer Rate	Full duplex at 10, 100, or 1000 Mbps and half duplex at 10 or 100 Mbps.
Operating Temperature	-20° C to 70° C (-4° F to 158° F)
Operating Humidity	20% to 80% (non-condensing)
Operating System Driver support	DOS, NT, Win2K, Netware, XP, Vista 32/64bit
Manageability	WOL, PXE
Management Capabilities Alerting	ASF 2.0

Modem

V.92 Data/Fax Controllerless Modem	optional
Bus	PCI
External Connector	RJ-11



Security

Security Hardware		E6500, E6400, E6400 ATG
Fingerprint Reader	UPEK TCS3 TouchStrip™ strip sensor with CMOS active capacitive pixel-sensing technology	Optional on all
FIPS Fingerprint Reader		Optional on E6500 only
Trusted Platform Module (TPM)	TPM 1.2*	All
Smart Card Reader		All
Contactless Smart Card Reader	See chart below	All
Dell ControlVault™		All

Contactless Smart Card Protocols Supported						
Technologies		ISO14443A	ISO14443B	ISO14443C ¹	ISO15693	Functionality (see codes below)
	iCLASS ^{®2}	X			X	A
	MIFARE ^{®3}	X				B
	DESFire [®]	X				C
	SmartMX ^{®4}	X				C
	Felica ^{®5}			X		B
	NFC ⁶	X	X	X		D

A = Card Serial Number (CSN) Read, HID Secure Application Area Read, and Read / Write of All Other Application Areas. iCLASS specific anti-collision to support multiple cards in the field. HID Secure Application can be used for pre-boot authentication

B = Read of Card Serial Number (MIFARE: UID, FeliCA: IDm) for pre-boot authentication and via PC/SC 2.01, raw frame communication allowing implementation of both security protocols at application level, MIFARE anti-collision to support multiple cards in the field.

C = ISO/IEC 14443 Part 4 communication via PC/SC 2.01, raw frame communication, anti-collision to support multiple cards in the field. CHUID from FIPS-201 PIV-II cards can be used for pre-boot authentication. Includes support for MIFARE/DESFire in native, wrapped and ISO communication modes.

D = UID read (can be used for pre-boot authentication), raw frame communication, PC/SC 2.01 synchronous card support for specific chip types, anti-collision to support multiple cards in the field.

E = Ability to act as NFC passive mode initiator at 106 kbits/s and 212 kbits/s



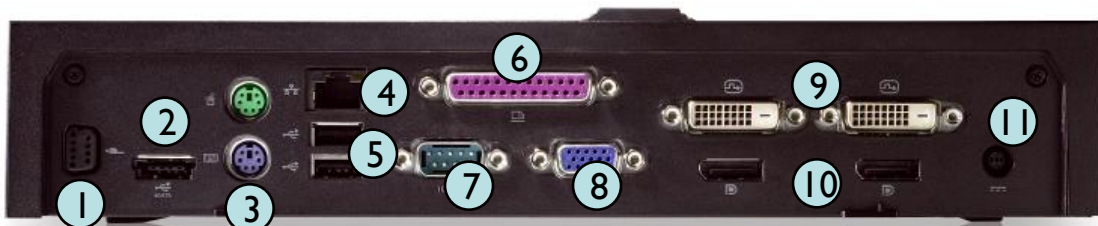
*Sources: HID Global

*See important information at end of document

E Family Docking

E-Port Plus

Key Features	Dual Digital Monitor capabilities along with legacy ports. The non-compromise station designed for enhanced usability at desk. Supports hot docking and undocking.
Dimension (h x d x w)	2.11" x 6.69" x 11.33" (53.7 x 170 x 288 mm)
Weight	2.3 lb (1.05kg)
Power Supply	130W External AC Adapter (Dell Latitude) 210W External AC Adapter (Dell Precision)
Video Ports	VGA, 2 x Display Ports, 2 x DVI-D
Legacy Ports	Serial, Parallel, 2 x PS/2
Ports	6 x USB, Powered eSATA (shared with 1 USB), RJ-45, Audio and Mic, Lock Slot, E-Monitor Stand Connector



E-Port Plus Back View

- | | |
|-------------------------------|---------------------------|
| (1) E-Monitor Stand Connector | (6) Parallel Port |
| (2) eSATA | (7) Serial Port |
| (3) PS/2 | (8) VGA |
| (4) Network Connector (RJ-45) | (9) DVI x 2 |
| (5) USB x 2 | (10) Display Port x 2 |
| | (11) AC Adapter Connector |



E Family Docking

E-Port

Key Features	A space-saving port replicator suitable for home and office environment which enables connection to your desk peripherals. Supports hot docking and undocking .
Dimension (h x d x w)	2.11" x 6.69" x 7.87" (53.7 x 170 x 200 mm)
Weight	1.72 lb (0.78kg)
Power Supply	130W External AC Adapter (Dell Latitude) 210W External AC Adapter (Dell Precision)
Video Ports	VGA, Display Port, DVI-D
Ports	6 x USB, Powered eSATA (shared with 1 USB), RJ-45, Audio and Mic, Lock Slot, E-Monitor Stand Connector



E-Port Back View

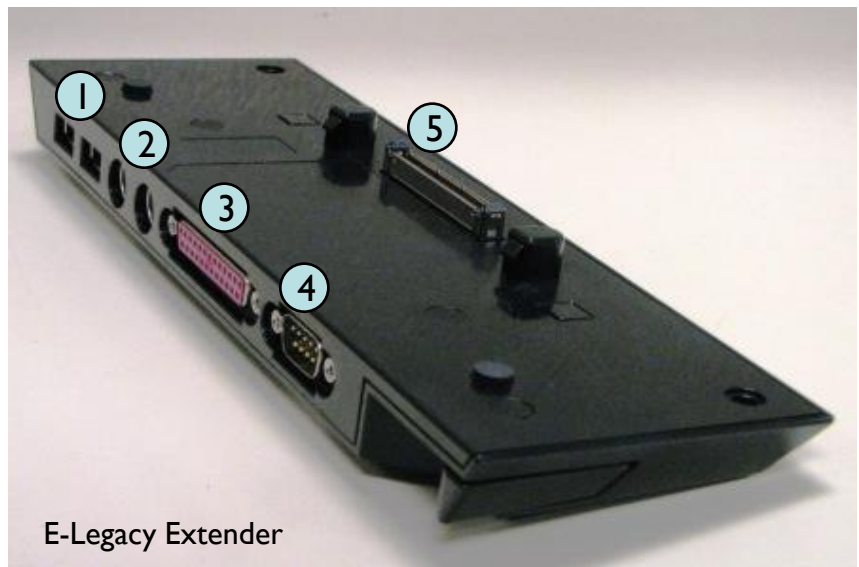
- | | |
|-------------------------------|--------------------------|
| (1) E-Monitor Stand Connector | (5) VGA |
| (2) eSATA | (6) DVI |
| (3) USB x 2 | (7) Display Port |
| (4) Network Connector (RJ-45) | (8) AC Adapter Connector |



E Family Docking

E-Legacy Extender

Key Features	A lightweight (0.45lb,0.2kg) adapter that can be attached to the bottom of the notebooks adding parallel, serial, PS/2 and 2 USB connectors.
Dimension (h x d x w)	0.78" x 3.12" x 9.59" (19.9 x 79.3 x 243.5 mm)
Weight	0.45 lb (0.21 kg)
Power Supply	N/A (attached to the bottom of the system through docking connector)
Ports	Serial, Parallel, 2 x PS/2, 2 x USB



- (1) 2 x USB
- (2) 2 x PS/2
- (3) Parallel Port
- (4) Serial Port
- (5) Docking Connector



Graphics Controller Options

	Intel GMA 4500MHD Integrated Graphics	NVIDIA Quadro NVS 160M	NVIDIA Quadro NVS 160M
Availability by Model	E6500, E6400, E6400 ATG	E6400	E6500
Graphics Memory	Windows XP: up to 1GB shared with 2GB of system memory* Windows Vista: up to 783MB shared with 2GB of system memory*	256MB Dedicated DDR2 Windows XP: up to 512MB shared with 2GB of system memory* Windows Vista: up to 1GB shared with 2GB of system memory*	256MB Dedicated DDR3 Windows XP: up to 512MB shared with 2GB of system memory* Windows Vista: up to 1GB shared with 2GB of system memory*
Bus Type	PCIe X16	PCIe X16	PCIe X16
Memory Interface	N/A	64bit	64bit
Clock Speeds	533MHz graphics core	580MHz core 400MHz memory	580MHz core 700MHz memory
Estimated Maximum Power Consumption	12W	20W	20W
Display Support	VGA + DisplayPort Single-link DVI (requires optional E-Port or E-Port Plus)	VGA + DisplayPort Single-link DVI (requires optional E-Port or E-Port Plus)	VGA + DisplayPort Single-link DVI (requires optional E-Port or E-Port Plus)
Maximum Color Depth	32bit (16.7 million)	32bit (16.7 million)	32bit (16.7 million)
Maximum Vertical Refresh Rate	Up to 85Hz depending on resolution	Up to 85Hz depending on resolution	Up to 85Hz depending on resolution
Operating Systems Graphics/ Video API Support	DirectX 10, OpenGL 1.3	DirectX 10, OpenGL 2.1	DirectX 10, OpenGL 2.1
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max Digital: 2560x1600/32bpp @60Hz Analog: 1600x1200/32bpp @ 85Hz Min: 640x480/8bpp @ 60Hz	Max : 2560x1600/32bpp @ 60Hz Digital Min : 800x600/16bpp @ 60Hz	Max : 2560x1600/32bpp @ 60Hz Digital Min : 800x600/16bpp @ 60Hz



Display Options

E6500 Display Options	15.4" Premium WXGA CCFL	15.4" Premium WXGA LED	15.4" Premium WXGA+ LED with Wide Viewing Angle	15.4" Premium UltraSharp™ WUXGA with Wide Viewing Angle
Type	CCFL Anti-Glare	LED Anti-Glare	LED Anti-Glare	2xCCFL Anti-Glare
Luminance/Brightness (typical)	220 nits	220 nits	300 nits	350 nits
Dimensions				
Height	344.5mm (maximum)	344.5mm (maximum)	344.5mm (maximum)	344.5mm (maximum)
Width	222.5mm (maximum)	222.5mm (maximum)	222.5mm (maximum)	225.5mm (maximum)
Diagonal	390.6mm (15.4 in)	390.6mm (15.4 in)	390.6mm (15.4 in)	390.6mm (15.4 in)
Native Resolution	1280 x 800	1280 x 800	1440 x 900	1920 x 1200
Megapixels	1.0	1.0	1.3	2.3
Pixels per Inch (PPI)	98	98	110	147
Contrast Ratio (typical)	400:1	400:1	400:1	400:1
Response Time (typical)	25 msec rise/fall (maximum)	25 msec rise/fall (maximum)	16 msec rise/fall (maximum)	25 msec rise/fall (maximum)
Refresh Rate	60 Hz	60 Hz	60 Hz	60 Hz
Horizontal Viewing Angle	+/- 40 degrees	+/- 40 degrees	+/- 55 degrees	+/- 55 degrees
Vertical Viewing Angle	+15/-30 degrees	+15/-30 degrees	+/- 45 degrees	+/- 45 degrees
Pixel Pitch	0.2588 mm	0.2588 mm	0.2304 mm	0.1725 mm
Power Consumption (typical)	7.0 W (maximum at 12v DC input to inverter, inverter set to 100% duty cycle)	5.5 W (maximum at 12v DC input to inverter, inverter set to 100% duty cycle)	5.8 W (maximum at 12v DC input to inverter, inverter set to 100% duty cycle)	14.0 W (maximum at 12v DC input to inverter, inverter set to 100% duty cycle)



E6400 Display Options	14.1" Premium WXGA CCFL	14.1" Premium WXGA LED	14.1" Premium UltraSharp™ WXGA+ LED	14.1" Premium Privacy WXGA LED*
Type	CCFL Anti-Glare	LED Anti-Glare	LED Anti-Glare	LED Anti-Glare with Electronic Privacy Filter
Luminance/Brightness (typical)	220 nits	220 nits	300 nits	200 nits
Dimensions				
Height	206mm (maximum)	206mm (maximum)	206mm (maximum)	206mm (maximum)
Width	320mm (maximum)	320mm (maximum)	320mm (maximum)	320mm (maximum)
Diagonal	357.1 mm (14.1 in)	357.1 mm (14.1 in)	357.1 mm (14.1 in)	357.1 mm (14.1 in)
Native Resolution	1280 x 800	1280 x 800	1440 x 900	1280 x 800
Megapixels	1.0	1.0	1.3	1.0
Pixels per Inch (PPI)	109	109	120	109
Contrast Ratio (typical)	400:1	400:1	400:1	350:1
Response Time (typical)	25 msec rise/fall (maximum)	25 msec rise/fall (maximum)	16 msec rise/fall (maximum)	25 msec rise/fall (maximum)
Refresh Rate	60 Hz	60 Hz	60 Hz	60 Hz
Horizontal Viewing Angle	+/- 40 degrees	+/- 40 degrees	+/- 40 degrees	+/- 40 degrees
Vertical Viewing Angle	+15/-30 degrees	+15/-30 degrees	+15/-30 degrees	+15/-30 degrees
Pixel Pitch	0.2373 mm	0.2373 mm	0.2109 mm	0.2373 mm
Power Consumption (typical)	6.2 W (maximum at 12v DC input to inverter, inverter set to 100% duty cycle)	5.5 W @ max brightness including LED backlight driver power	6.0 W @ max brightness including LED backlight driver power	6.0 W @ max brightness including LED backlight driver power

*The 14.1" Privacy Widescreen WXGA LED has an electronic privacy filter that can be enabled/disabled through Display Settings in Dell ControlPoint or via Hot Key <Fn+E>.



E6400 ATG Display Options	14.1" Premium WXGA LED (Outdoor Viewable)	14.1" Premium WXGA LED (Outdoor Viewable) with Touch Functionality*
Type	LED Anti-Glare	LED Anti-Glare
Luminance/Brightness (typical)	730 nits	630 nits
Dimensions		
Height	207mm (maximum)	207mm (maximum)
Width	320mm (maximum)	320mm (maximum)
Diagonal	357.1 mm (14.1 in)	357.1 mm (14.1 in)
Native Resolution	1280 x 800	1280 x 800
Megapixels	1.0	1.0
Pixels per Inch (PPI)	109	109
Contrast Ratio (typical)	350:1	250:1
Response Time (typical)	16 msec rise/fall (maximum)	16 msec rise/fall (maximum)
Refresh Rate	60 Hz	60 Hz
Horizontal Viewing Angle	+/- 55 degrees	+/- 55 degrees
Vertical Viewing Angle	+40/50 degrees	+40/50 degrees
Pixel Pitch	0.2370 mm	0.2370 mm
Power Consumption (typical)	10.05 W @ max brightness including LED backlight driver power	10.05 W @ max brightness including LED backlight driver power

*The touch functionality on the 14.1" premium panel is designed for use with touch by finger with or without the use of gloves. As such, the touch points on the screen are calibrated to be activated by a touch the size of a fingertip.



Batteries

	Primary 4-cell	Primary 6-cell	E6400/E6500 Primary 9-cell	E6400/E6500 Slice 12-cell
Availability by Model	E6500, E6400	E6500, E6400, ATG	E6500, E6400, ATG	E6500, E6400, ATG
Battery Capacity	37Whr	56Whr	85Whr	84Whr
Cell Capacity	2.6Ahr	2.6Ahr	2.6Ahr	1.9Ahr
Voltage	14.8 VDC	11.1 VDC	11.1 VDC	14.8 VDC
LED Charge & Health Gauge	Yes	Yes	Yes	Yes
Weight (lbs)*	0.52	0.73	1.07	2.15
Weight (kg)*	0.24	0.33	0.49	0.975
Dimensions (inches)*	8.11 x 1.85 x 0.78	8.11 x 1.85 x 0.78	8.19 x 2.72 x 0.88	12.68 x 8.55 x 0.98
Dimensions (mm)*	206 x 47 x 19.8	206 x 47 x 19.8	208 x 68.98 x 22.3	322.17 x 217.2 x 24.9
ExpressCharge Capable	Yes	Yes	Yes	No
Charge Time (with ExpressCharge & 90W adapter, when the computer is off)	- approximately 1 hour to 80% capacity - approximately 2 hours to 100% capacity	- approximately 1 hour to 80% capacity - approximately 2 hours to 100% capacity	- approximately 1 hour to 80% capacity - approximately 2 hours to 100% capacity	- approximately 3 hours 20 minutes to 100% capacity
Temperature range:				
Operating	0° to 35°C 32° to 95°F	0° to 35°C 32° to 95°F	0° to 35°C 32° to 95°F	0° to 35°C 32° to 95°F
Storage	-40° to 60°C -40° to 140°F	-40° to 60°C -40° to 140°F	-40° to 60°C -40° to 140°F	-40° to 60°C -40° to 140°F



Battery LED Charge and Health Gauge

Latitude batteries have an LED gauge on the bottom of the battery that provides information on charge and health status of the battery at the touch of a button.

The battery charge gauge will display immediately at the touch of the button..

	100% – 80% charge is remaining
	79 – 75% charge is remaining
	74 – 70% charge is remaining
	69 – 65% charge is remaining
	64 – 60% charge is remaining
	59% or less charge is remaining

The battery health status will display after holding the battery check button down for more than 3 seconds. The health gauge display will illuminate after the charge gauge reports the batteries current remaining charge.

	100% – 80% charge performance is remaining
	79 – 75% charge performance is remaining
	74 – 70% charge performance is remaining
	69 – 65% charge performance is remaining
	64 – 60% charge performance is remaining
	59% or less charge performance is remaining

Note: Battery pack shall be operational at charge performance less than 59%.

Five flashing LEDs displayed indicate a permanent failure of the battery.



AC Adapters

Compatibility Matrix		E6500 E6400, E6400 ATG	E5400 E5500	E4300	E4200	E-Port Plus E-Port
D-Family Adapters	45W	Not Supported ¹	Not Supported ¹	Supported ²	Standard	Not Supported ¹
	D65W	Supported ²	Supported ²	Supported	Supported	Not Supported ¹
	D90W	Supported	Standard	Supported	Supported	Not Supported ¹
Auto-Air	Dell Slim 65W Auto/Air/AC	Supported ²	Supported ²	Supported	Supported	Not Supported ¹
E-Family Adapters	E65W	Supported ²	Supported ²	Standard	Supported	Not Supported ¹
	E90W	Standard	Supported	Supported	Supported	Not Supported ¹
	E130W	Supported	Supported	Supported	Supported	Standard

¹ BIOS will notify customer to change adapter or undock.² Battery charging may be slower when system is powered on.

Adapter Specifications	65w Travel	65w	90w	130w
Input voltage	AC: 100 to 240 VAC DC: 11 to 16 VDC	90 to 264 VAC	100-240 VAC	100-240VAC
Input current (max)	AC: DC:	1.7A	1.5A	1.8A
Input frequency	AC: 50 to 60 Hz DC: 8A	47 to 63 Hz	50 to 60 Hz	50 to 60 Hz
Output current	3.34 A (continuous)	4.34 A Max at 4 second pulse 3.34 A (continuous)	5.62 A (max at 4 second pulse) 4.62 A (continuous)	6.7A Continuous (7.7A peak for 4s)
Rated output voltage	19.5 VDC	19.5 VDC	19.5 VDC	19.5 VDC
Weight (lbs) ³	0.72	0.64	.76	1.14
Weight (kg) ³	0.33	0.29	0.35	0.52
Dimensions (inches)	0.63 x 2.6 x 5.0	0.6 x 2.6 x 5.0	0.6 x 2.8 x 5.8	1.0 x 3.0 x 6.1
Dimensions (mm)	16 x 65 x 127	16 x 66 x 127	16 x 70 x 147	25 x 76 x 155
Temperature range: Operating	0° to 35°C 32° to 95°F	0° to 35°C 32° to 95°F	0° to 35°C 32° to 95°F	0° to 35°C 32° to 95°F
Storage	-40° to 65°C -40° to 149°F	-40° to 65°C -40° to 149°F	-40° to 65°C -40° to 149°F	-40° to 65°C -40° to 149°F

³ 3-pin AC Adapter weight

*See important information at end of document

Keyboard and Mouse

Keyboard

Number of keys	83 (U.S. and Canada); 84 (Europe); 87 (Japan)
Layout	QWERTY/AZERTY/Kanji
Size	full sized (19-mm key pitch)
Backlit keyboard option	<p>LED Backlit keyboards allow for easier work in darker settings.</p> <ul style="list-style-type: none"> • Easy enable/disable via hotkey <Fn+right arrow key> or Display Settings in Dell ControlPoint • 10 variable brightness levels • Dell ControlPoint can be used to customized brightness settings • Works in conjunction with ambient light sensor

Touch Pad

X/Y position resolution	240dpi
Size	<p>Width: 73.0-mm (2.9-inch) sensor-active area</p> <p>Height: 42.9-mm (1.7-inch) rectangle</p>



Environmental and operating conditions

Temperature Range	Operating 0° to 35°C (32° to 95°F) Storage –40° to 65°C (–40° to 149°F)
Relative humidity (maximum)	Operating 10% to 90% (noncondensing) Storage 5% to 95% (noncondensing)
Maximum vibration (using a random vibration spectrum that simulates user environment)	Operating 0.66 GRMS Storage 1.3 GRMS
Maximum shock (Measured with hard drive in operating status and a 2-ms half-sine pulse for operating specification. Also measured with hard drive in head-parked position and a 2-ms halfsine pulse for storage specification)	Operating 143 G Storage 163 G
Altitude (maximum)	Operating –15.2 to 3048 m (–50 to 10,000 ft) Storage –15.2 to 3048 m (–50 to 10,000 ft)

E6400 ATG Semi-Rugged Specifications

Temperature Range	Operating 0° to 35°C (32° to 95°F) Storage –40° to 65°C (–40° to 149°F) E6400 ATG Extended Temperature range: At –30°C, a fully charged operating system will function for >30 minutes when powered up in a 25°C environment.
MIL-STF 810F	Vibration – Method 514, Proc I, Cat. 20 & 24
	Humidity – Method 507.4
	Altitude – Method 500.4 Low Pressure, Proc. I
	Dust – Method 510.4, Proc. I
IP 5x	IEC60529 IP5X for Dust

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



Important Information

All Day Computing/Battery Life: Based on Dell lab testing. Varies by configuration, operating conditions and other factors. Maximum battery capacity decreases with time and use.

Battery Charge Times: The 4-cell and 6-cell batteries typically have greater than 80% charge after about an hour of charging, and fully charge in about 2 hours with ExpressCharge, a 90W adapter and the system off.

Graphics & System Memory: Significant system memory may be used to support graphics, depending on system memory size and other factors.

Notebooks with 4GB or Greater System Memory Capability: A 64-bit operating system is required to support 4GB or more of system memory.

Hard Drives: For writeable storage devices, GB = 1 billion bytes and TB = 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

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

Mobile Broadband average download speeds: For comparative purposes only. Actual speed varies and will be less.

TPM 1.2: Not available in all regions

E6500 Weight: Preliminary starting weight with 4-cell, 2.5" thin SSD, 15.4" LED, integrated graphics, and Travel Lite module is 5.17lbs/2.34kg. Weight varies with configuration and manufacturing variability.

E6400 Weight: Preliminary starting weight with 4-cell, 2.5" thin SSD, 14.1" LED, integrated graphics, and Travel Lite module is 4.3lbs/1.95kg. Weight varies with configuration and manufacturing variability.

E6400 ATG Weight: Starting weight with optional SSD, no port cover and no optical drive. Weight varies with configuration and manufacturing variability.

Wireless Range: Range may vary due to number of users, interference and other factors.

Limited Hardware Warranty: For a copy of limited warranty, write Dell USA LP, Attn: Warranties, One Dell Way, Round Rock, TX 78682 or visit www.dell.com/warranty.

CompleteCare Accidental Damage Service: CompleteCare service excludes theft, loss, and damage due to fire, flood or other acts of nature, or intentional damage. Customer may be required to return unit to Dell. For complete details, visit www.dell.com/servicedescriptions.

Genuine Windows Vista® Downgrade rights: The Genuine Windows Vista® Downgrade rights come with Genuine Windows® XP Professional pre-installed along with media and technical support for both Genuine Windows® XP and Genuine Windows Vista® so you may transition to Genuine Windows Vista® when you're ready.

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

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