

## TECRA R10-S4411 Detailed Product Specification<sup>1</sup>

Model Name	Description	Part Number	UPC
R10-S4411	Genuine Windows Vista <sup>®</sup> Business, SP1, Intel <sup>®</sup> Core™ 2 Duo Processor SP9300, 2GB DDR2, 160GB 5400rpm SATA, DVD-SuperMulti, 14.1" widescreen WXGA+, Mobile Intel <sup>®</sup> Graphics Media Accelerator 4500MHD, Intel <sup>®</sup> WiFi <sup>®</sup> Link 5100AGN, Webcam, Bluetooth v2.1 + EDR, 3 year standard limited warranty (1 year standard limited warranty on battery)	<b>PTRB1U-01000Y</b>	<b>883974208616</b>

### Operating System <sup>c1 2</sup>

- Genuine Windows Vista<sup>®</sup> Business (32/64-bit version), SP1
  - Downgrade media for Genuine Windows<sup>®</sup> XP Professional

### Processor and Chipset <sup>3</sup>

#### Intel<sup>®</sup> Centrino<sup>®</sup> 2 with vPro™ technology featuring:

- Processor
  - Intel<sup>®</sup> Core™ 2 Duo Processor SP9300
    - 2.26GHz, 6MB L2, 1066MHz FSB
- Chipset
  - Mobile Intel<sup>®</sup> GS45 Express Chipset
- Integrated Wi-Fi<sup>®</sup> compliant wireless LAN
  - Intel<sup>®</sup> WiFi Link 5100AGN (802.11a/g/n)<sup>4</sup>
- Wired LAN
  - Intel<sup>®</sup> 82567LM Gigabit Network Connection (with AMT 4.0)

### Memory <sup>5</sup>

- Configured with 2GB (2GBx1) PC2-6400 DDR2 SDRAM
- Two memory slots
- 2GB (Min)/4GB (Max), with 1GB or 2GB PC2-6400 DDR2 memory modules

### Storage Drive <sup>6</sup>

- 160GB (5400 RPM) Serial ATA hard disk drive; 9.5mm height

### Fixed Optical Disk Drive <sup>7</sup>

- DVD SuperMulti (+/-R double layer) drive supporting 11 formats
  - Maximum speed and compatibility: CD-ROM (24x), CD-R (24x), CD-RW (10x), DVD-ROM (8x), DVD-R (Single Layer, (8x)), DVD-R (Double Layer, (6x)), DVD-RW (6x), DVD+R (Single Layer, (8x)), DVD+R (Double Layer, (6x)), DVD+RW (8x), DVD-RAM (5x)

### Display <sup>8</sup>

- 14.1" diagonal widescreen TFT LED backlit display at 1440 x 900 native resolution (WXGA+)

### Graphics <sup>9</sup>

- Intel Graphics Media Accelerator 4500MHD with 128MB-820MB dynamically allocated shared graphics memory

### Sound

- Built-in stereo speakers
- Sound volume control dial
- Built-in microphone

### Input Devices

- 85 key US keyboard
- TouchPad™ pointing device
- TouchPad™ Enable/Disable
- Control Buttons:
  - Toshiba Assist button to launch Toshiba Assist control panel
  - Windows Mobility Center button

### Communications

- Integrated Webcam
- 10/100/1000 Ethernet
- Intel<sup>®</sup> 82567LM Gigabit Network Connection (10/100/1000 Ethernet)
- Integrated Wi-Fi<sup>®</sup> compliant wireless:
  - Intel<sup>®</sup> WiFi Link 5100AGN<sup>10</sup>
- Bluetooth<sup>®</sup> version 2.1 plus Enhanced Data Rate (EDR)

### Expandability

- ExpressCard
- SD Card slot
  - Secure Digital (SD) supports SDIO
  - SDHC

### Ports

- Video
  - RGB (monitor) output port
- Audio
  - Microphone input port
  - Headphone output port
- Data
  - Ethernet-RJ45
  - USB v2.0 – 3 ports
    - 2 x USB v2.0
    - 1 x eSATA/USB combo port with Sleep and Charge<sup>11</sup>
  - Docking connector
- Supported on Toshiba Express Port Replicator
  - DVI-D output port
  - USB v2.0 – 4 ports
  - 10/100/1000 Ethernet port
  - AC adapter and security lock supported
- Security
  - Fingerprint reader
  - Reinforced Security Cable Lock Slot

### Physical Description

- Dimensions (WxDxH Front/H Rear): 13.3" x 9.9" x 1.13" / 1.2" with feet
- Weight: Starting at 4.45 lbs depending upon configuration<sup>12</sup>
- LCD Cover Color: Aluminium Silver

### Power

- 75W (15V x 5A) Auto sensing 100-240V/50-60Hz AC Adapter.
- Dimensions (WxDxH): 5.00" x 2.01" x 1.20"
- Weight: starting at 0.78 lbs

### Battery <sup>13</sup>

- 5100mAh (6-cell) Lithium Ion battery pack
- Dimensions (WxDxH): 8.15" x 1.77" x 0.79"
- Weight: starting at 0.75 lbs
- Battery Life (measured by MobileMark™)<sup>14</sup>
  - Included 6-cell battery: 5 hours, 29 minutes

### Toshiba EasyGuard<sup>®</sup> <sup>15</sup>

- Protect & Fix
  - TOSHIBA PC Health Monitor
  - Shock Absorbing Design<sup>16</sup>
    - HDD Shock Absorber
    - LCD Shock Absorber
  - Hard Disk Drive Protection
    - HDD Dome Shock Protector
    - HDD Shock Absorber
  - Spill-Resistant Keyboard<sup>17</sup>
  - TOSHIBA PC Diagnostic Tool
  - Key Component Access
- Secure
  - Multiple-Level Password Utilities
  - Fingerprint Reader (includes software for password and identity management)
  - AuthenTec EntréPad<sup>®</sup> TrueSuite<sup>®</sup>
  - Infineon TPM Software Professional Package
  - Trusted Platform Module v1.2

- o TOSHIBA Secure Digital Token Utility
- o Reinforced Security Cable Lock Slot
- o Execute Disable Bit
- Connect
  - o Diversity Antenna
  - o TOSHIBA ConfigFree®
  - o Voice-over-IP Ready Design
  - o TOSHIBA Bluetooth® Stack
- Optimize
  - o Windows Mobility Center Button
  - o TOSHIBA Zooming Utility
  - o LCD Rotation Utility
  - o One-touch Resolution Change
  - o Wireless On/Off Switch
  - o FN Shortcut Keys

## BIOS

- APM, ACPI, PNP, VESA, DPMS, DDC, SM BIOS, PCI BIOS support
- Computrace® (BIOS enabled)

## Software [C1](#) <sup>18</sup>

- Toshiba Software and Utilities
  - o TOSHIBA Value Added Package
  - o Toshiba DVD Player
  - o Electronic User's Guide
  - o TOSHIBA ConfigFree®
  - o TOSHIBA Speech System
- Third-party Software
  - o Sun® Java™ Runtime Environment
  - o Adobe® Acrobat® Reader
  - o Google™ Desktop
  - o Google™ Toolbar
  - o Google™ Picasa™
- Trial Software
  - o Microsoft Office Ready with Microsoft Office Professional 2007 60-day Trial Edition
  - o Norton Internet Security™ 2008

## Environmental Specifications

	Operating	Non-operating
Temperature <sup>19</sup>	5° to 35° C (41° to 95° F)	-20° to 65° C (-4° to 149° F)
Thermal Gradient	15° C per hour (max)	20° C per hour (max)
Relative Humidity (non-condensing)	20% to 80%	10% to 90%
Altitude (relative to sea level)	-60 to 3,000 meters	-60 to 10,000 meters
Shock	10G	60G
Vibration	0.5G	1.0G

- Energy Star 4.0 Compliant
- This product is RoHS<sup>20</sup> compliant
- EPEAT™ Gold

## TECRA / PORTEGE / LIBRETTO – 3 YEAR STANDARD LIMITED WARRANTY<sup>21</sup>

### Service Upgrades and Extensions

Toshiba offers many different enhanced services such as SystemGuard®, On-Site Repair, and ServiceExpress to provide additional support to your notebook PC. For a full description and complete list of programs and program terms and conditions, please visit [www.pcsupport.toshiba.com](http://www.pcsupport.toshiba.com).

## Recommended Services

### Extended Service Plan

Provides an extended service plan for up to 4 total years from the original notebook purchase date. Must be purchased within the first 6 months of notebook purchase.

Part Number	Description
WSN-PTQQ4V	4th Year Extended Service Plan

### SystemGuard Accidental Damage Service w/ ServiceExpress<sup>22</sup>

Provides advanced protection from damage caused from handling. Select your express repair service with either Depot Express or Carry-In Express and go to the front of the line. Extended Service Plan included with 4 Year plan. Must be purchased within the first 30 days of notebook purchase.

Part Number	Description
WSN-PQGP3V	1st/2nd/3rd Year
WSN-PTGP4V	1st/2nd/3rd/4th Year + Extended Service Plan

### SystemGuard Accidental Damage Service + On-Site Repair<sup>23</sup>

Combines SystemGuard and On-Site Repair coverage. Extended Service Plan included with 4 Year plan. Must be purchased within the first 30 days of notebook purchase.

Part Number	Description
WSN-PQGN3V	1st/2nd/3rd Year
WSN-PTGN4V	1st/2nd/3rd/4th Year + Extended Service Plan

### ServiceExpress

Select your express repair service with either Depot Express or Carry-In Express. Depot Express: Your notebook will be repaired and returned via overnight shipment (excluding weekends and holidays). Carry-In Express: Take your notebook into a Premier ASP and go to the front of the line for expedited repair service. Extended Service Plan included with 4 Year plan. Must be purchased within the first 30 days of notebook purchase.

Part Number	Description
WSN-PQQP3V	1st/2nd/3rd Year
WSN-PTQP4V	1st/2nd/3rd/4th Year + Extended Service Plan

### On-Site Repair Service

On-site service will be provided at the customer's home or business location (excluding weekends and holidays) to perform the necessary hardware repairs. Extended Service Plan included with 4 Year plan. Must be purchased within the first 6 months of notebook purchase.

Part Number	Description
WSN-PQQN3V	1st/2nd/3rd Year
WSN-PTQN4V	1st/2nd/3rd/4th Year + Extended Service Plan

## Accessories

For additional and most updated accessories, please visit

[www.accessories.toshiba.com](http://www.accessories.toshiba.com)

## Memory Upgrade

Part Number	Description
PA3669U-1M2G	Toshiba 2GB DDR2-800 Memory Module

## Power

Part Number	Description
PA3283U-5ACA	Toshiba 75W Global AC Adapter
PA3692U-1BRS	Toshiba Primary Li Ion Battery Pack (6 cell)
PA3510U-1BRL	Toshiba Slice Expansion Li Ion Battery Pack (6 cell)
PA3091U-2CHG	Toshiba Battery Charger w/Integrated AC Adapter
PA3528U-1ETC	Toshiba Battery Charger Adapter for Slice Expansion Battery Pack

## Expansion

Part Number	Description
PA3508U-1PRP	Toshiba Express Port Replicator w/90W AC Adapter
PA3579U-1ETC	Toshiba Universal Notebook/Projector Stand
PA3555U-1ETC	Toshiba USB Data Transfer Cable

## Security & Protection

Part Number	Description
PA3567U-1ETC	Toshiba Keyboard Protector
PA3698U-1ETC	Toshiba 14.1" Privacy Filter for TECRA R10

## Storage

Part Number	Description
PA3556U-1M2G	Toshiba 2GB USB Hi-Speed Flash Drive, ReadyBoost

PA3556U-1M4G	Toshiba 4GB USB Hi-Speed Flash Drive, ReadyBoost
PA3556U-1M8G	Toshiba 8GB USB Hi-Speed Flash Drive, ReadyBoost
HDDR160E03X	Toshiba External USB Hard Drive, 160GB
HDDR250E03X	Toshiba External USB Hard Drive, 250GB
HDDR320E03X	Toshiba External USB Hard Drive, 320GB

## Wireless/Bluetooth

Part Number	Description
PA3573U-1ETA	Toshiba Bluetooth Optical Mouse, Black/Silver
PA3573U-1ETB	Toshiba Bluetooth Optical Mouse, Black/Red

## Subject to Change

While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice. For the most up-to-date product information about your computer, or to stay current with the various computer software or hardware options, visit Toshiba's Web site at <http://www.pcsupport.toshiba.com>

## Return Policy

Notwithstanding anything to the contrary in any third party License Agreement or product documentation supplied with your PC, Toshiba America Information Systems, Inc. ("TAIS") does not accept the return of component parts, or bundled software, that have been removed from the PC system. Pro-rata refunds on individual PC components or bundled software, including the operating system, will not be granted. If you wish to return a complete PC system, contact the TAIS dealer where you purchased the product, and comply with the dealer's standard return policies and procedures.

Toshiba America Information Systems, Incorporated ("TAIS")  
9740 Irvine Boulevard  
Irvine CA 92618  
ToshibaDirect website: <http://www.toshibadirect.com>  
TAIS website for resellers: <http://sell.toshiba.com>  
TAIS PC Support website: <http://pcsupport.toshiba.com>

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### <sup>C1</sup> 64-bit computing:

64-bit computing requires that the following hardware and software requirements are met:

- 64-bit Operating System
- 64-bit CPU, Chipset and BIOS (Basic Input/Output System)
- 64-bit Device drivers
- 64-bit applications

Certain device drivers and/or applications may not be compatible with a 64-bit CPU and therefore may not function properly. A 32-bit version of the operating system is preinstalled on your computer unless explicitly stated that the operating system is 64-bit. See "Detailed Specs" for more information.

<sup>1</sup> Product Series Legal Footnote. The product specifications and configuration information are designed for a product Series. Your particular model may not have all the features and specifications listed or illustrated. For more detailed information about the features and specifications on your particular model, please visit Toshiba's Web site at [pcsupport.toshiba.com](http://pcsupport.toshiba.com).

Product Offering Legal Footnote. Toshiba America Information Systems, Inc. reserves the right to modify or withdraw this offer at anytime without notice.

### <sup>2</sup> Operating System.

Also see **64-Bit Computing** Legal Footnote, if applicable.

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

Offers. Offer terms, duration and product availability all subject to change without notice

### <sup>3</sup> Processor (Central Processing Unit).

Also see **64-Bit Computing** Legal Footnote, if applicable

CPU performance in your computer product may vary from specifications under the following conditions:

1. use of certain external peripheral products
2. use of battery power instead of AC power
3. use of certain multimedia, computer generated graphics or video applications
4. use of standard telephone lines or low speed network connections
5. use of complex modeling software, such as high end computer aided design applications
6. use of several applications or functionalities simultaneously
7. use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)
8. use of computer at temperatures outside the range of 5°C to 30°C (41°F to 86°F) or >25°C (77°F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model – please visit the Toshiba website at [www.pcsupport.toshiba.com](http://www.pcsupport.toshiba.com) for details).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. Use your computer product only under recommended conditions. Read additional restrictions under "Environmental Conditions" in your product "Detailed Specs." Contact Toshiba Technical Service and Support for more information.

<sup>4</sup> **Wireless-N.** The wireless adapter is based on a draft release version of the IEEE 802.11n specification, and may not be compatible with, or support all features (e.g., security) of, certain Wi-Fi® equipment.

<sup>5</sup> **Memory (Main System).** Part of the main system memory may be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors. For PC's configured with 4 GB of system memory, the full system memory space for computing activities will be considerably less and will vary by model and system configuration.

#### <sup>6</sup> **Storage Drive**

##### **Hard Disk Drive (HDD) Capacity.**

1 Gigabyte (GB) means  $10^9 = 1,000,000,000$  bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB =  $2^{30} = 1,073,741,824$  bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the product includes one or more pre-installed operating systems, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

<sup>7</sup> **Optical Drive.** Due to manufacturing and quality variations in third party optical media (e.g., CD or DVD) or optical media players/recorders, in certain cases, your Toshiba optical drive may not record on certain optical media that bear the applicable logo, or playback optical media recorded by other PCs or optical media recorders. Additionally, certain optical media recorded on your optical drive may not playback or operate properly on other PCs or optical media players. These problems are not due to any defect in your Toshiba PC or optical drive. Please refer to your PC's product specification for listing of specific format compatibilities.

Recording or viewing of certain optical media may be limited or prevented in accordance with applicable copy protection standards.

<sup>8</sup> **Display.** Small bright dots may appear on your screen display when you turn on your PC. Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. Any small bright dots that may appear on your display are an intrinsic characteristic of the TFT manufacturing technology. Over a period of time, and depending on the usage of the computer, the brightness of the screen will deteriorate. This is also an intrinsic characteristic of the screen technology. When the computer is operated on battery power, the screen will dim and you may not be able to increase the brightness of the screen while on battery power.

#### <sup>9</sup> **Graphics (Graphics Processing Unit).**

GPU performance may vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

<sup>10</sup> **Wireless-N.** The wireless adapter is based on a draft release version of the IEEE 802.11n specification, and may not be compatible with, or support all features (e.g., security) of, certain Wi-Fi® equipment.

<sup>11</sup> **USB Sleep & Charge.** The "USB Sleep & Charge function" may not work with certain external devices even if they are compliant with the USB specification. In those cases, turn the power of the computer ON to charge the device.

<sup>12</sup> **Weight.** Weight may vary depending on product configuration, vendor components, manufacturing variability and options selected.

<sup>13</sup> **Battery Life.** Battery life may vary considerably from specifications depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. Published battery life numbers are achieved on select models and configurations tested by Toshiba at the time of publication. See "Detailed Specs" for specific battery measurement test. Recharge time varies depending on usage. Battery may not charge while computer is consuming full power. After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries. To purchase a new battery pack, see the accessories information that shipped with your computer or visit the Toshiba web site at [www.accessories.toshiba.com](http://www.accessories.toshiba.com).

Battery life will be less than when using similar applications in the Windows Operating System

<sup>14</sup> **Battery Life - MobileMark™.** Measured by MobileMark. MobileMark is a trademark of the Business Applications Performance Corporation.

<sup>15</sup> **EasyGuard.** Toshiba EasyGuard™ technology comprises a number of features some of which may or may not be available on a particular Toshiba notebook depending on the model selected. See [www.easyguard.toshiba.com](http://www.easyguard.toshiba.com) for detailed information.

<sup>16</sup> **Shock Protection.** Toshiba's shock absorption technology provides higher impact protection for your system as compared to Toshiba systems without similar shock protection features based on Toshiba's drop tests. Toshiba's standard limited warranty terms and limitations apply. Visit [www.warranty.toshiba.com](http://www.warranty.toshiba.com) for details.

<sup>17</sup> **Spill-Resistant Keyboard.** Under Toshiba testing conditions, the spill-resistant keyboard delayed the time for a water spill to reach the PC's main board to allow more time to properly close down the machine. Toshiba's standard limited warranty terms and limitations apply. Visit [www.warranty.toshiba.com](http://www.warranty.toshiba.com) for details.

<sup>18</sup> **Software.** Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

Certain Microsoft® software products (including Microsoft Office Small Business Accounting if applicable) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software products or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

Internet access is required to enable certain functionality of certain Microsoft products (including Microsoft Office Small Business Accounting 2006) which may be included with this computer.

The Microsoft Office 2007 60-Day Trial software (if applicable) is intended for evaluation purposes only. You must activate the software before you can use it. Product activation procedures will be detailed during initial launch of the software; activation requires Internet access. This software has an expiration date of 60 days from date of first use, at which time the software will operate under reduced-functionality mode, limiting end-user options and operations. The Microsoft Office 2007 60-Day Trial software is distributed without charge to the End User Customer but if the End User wants to continue to use such product after the trial period, then the End User Customer will have to pay a fee for the perpetual version of such Office Product.

<sup>19</sup> **Temperature (Environmental) Conditions.** All temperature references are approximate and the performance of your computer may vary from specifications even when operating within the recommended temperature range.

<sup>20</sup> **RoHS.** This notebook is compatible with European Union Directive 2002/95/EC, Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS), which restricts use of lead, cadmium, mercury, hexavalent chromium, PBB, and PBDE. Toshiba requires its notebook component suppliers to meet RoHS requirements and verifies its suppliers' commitment to meeting RoHS requirements by conducting component sampling inspections during the product design approval process.

<sup>21</sup> **Warranty:** The terms and conditions of Toshiba's standard limited warranty are available at [www.warranty.toshiba.com](http://www.warranty.toshiba.com).

<sup>22</sup> **Service Plans:** The terms and conditions of service upgrade and extension plans offered by Toshiba are available at [www.pcsupport.toshiba.com](http://www.pcsupport.toshiba.com).

<sup>23</sup> **Service Plans:** The terms and conditions of service upgrade and extension plans offered by Toshiba are available at [www.pcsupport.toshiba.com](http://www.pcsupport.toshiba.com).