

| TravelMate P648-MG (Win10 HOL) Specifications (v5-0-4) |         |  |           |
|--|---------|--|-----------|
| Category   |         | Description  | Footnotes |
| <b>Operating system</b>                                | 1       | Windows 10 Pro 64-bit<br>Windows 10 Home 64-bit  | 2<br>2    |
| <b>CPU and chipset</b>                                 | 1       | <p><b>Intel® Core™ i7-6600U vPro™</b> processor (4 MB L3 cache, 2.6 GHz with Turbo Boost up to 3.4 GHz, DDR4 2133 MHz or DDR3L 1600 MHz, 15 W), supporting Intel® 64 architecture, Intel® Smart Cache</p> <p><b>Intel® Core™ i7-6500U</b> processor (4 MB L3 cache, 2.5 GHz with Turbo Boost up to 3.1 GHz, DDR3L 1600 MHz, 15 W), supporting Intel® 64 architecture, Intel® Smart Cache</p> <p><b>Intel® Core™ i5-6300U vPro™</b> processor (3 MB L3 cache, 2.4 GHz with Turbo Boost up to 3.0 GHz, DDR3 1600 MHz, 15 W), supporting Intel® 64 architecture, Intel® Smart Cache</p> <p><b>Intel® Core™ i5-6200U</b> processor (3 MB L3 cache, 2.3 GHz with Turbo Boost up to 2.8 GHz, DDR3L 1600 MHz, 15 W), supporting Intel® 64 architecture, Intel® Smart Cache</p> <p><b>Intel® Core™ i3-6100U</b> processor (3 MB L3 cache, 2.3 GHz, DDR3L 1600 MHz, 15W), supporting Intel® 64 architecture, Intel® Smart Cache</p> |           |
| <b>Memory</b>  | 1, 3, 4 | <p>Dual-channel DDR4 SDRAM support</p> <ul style="list-style-type: none"> <li>• 4 GB of onboard DDR4 system memory</li> <li>• Up to 20 GB of DDR4 system memory</li> </ul>   | 4         |
| <b>Display</b>   |         | <p>14.0" display with IPS (In-Plane Switching) technology, Full HD 1920 x 1080, high-brightness Acer ComfyView™ LED-backlit TFT LCD<br/>16:9 aspect ratio<br/>Wide viewing angle up to 170 degrees<br/>Mercury free, environment friendly</p> <p>14" HD 1366 x 768 resolution Acer ComfyView™ LED-backlit TFT LCD<br/>16:9 aspect ratio<br/>Ultra-slim design<br/>Mercury free, environment friendly</p>   | 5         |
| <b>Graphics</b>  |         | <p><b>NVIDIA® GeForce® 940M</b> with 2 GB of dedicated DDR3 VRAM, supporting NVIDIA® CUDA™, PhysX™, PureVideo® HD technology, HDMI® and Blu-Ray 3D™ support, Hardware Video Decode Acceleration, Microsoft® DirectX® 11.2/12, OpenGL® 4.4, OpenCL™ 1.1</p>   | 6         |
| <b>Audio</b>   |         | <ul style="list-style-type: none"> <li>• Acer TrueHarmony technology for lower distortion, wider frequency range, headphone-like audio and powerful sound</li> </ul>   |           |

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|   |   | <ul style="list-style-type: none"> <li>• Acer Purified.Voice technology with two built-in microphones. Features include far-field pickup, keystroke suppression, voice tracking, adaptive beam forming, voice recognition enhancement</li> <li>• Compatible with Cortana with Voice</li> <li>• Certified for Skype for Business</li> <li>• Four built-in stereo speakers</li> </ul>  |
| <b>Storage</b>  |   | <p><b>Card reader</b></p> <ul style="list-style-type: none"> <li>• SD™ / SDXC™ card reader (accepts cards up to 128 GB capacity)</li> </ul> <p><b>Hard disk drive</b></p> <ul style="list-style-type: none"> <li>• 500 GB 2.5-inch 5400 RPM self-pinning solid state hybrid hard drive with 8 GB Flash memory</li> <li>• 500 GB / 1 TB 2.5-inch 5400 RPM</li> </ul> <p><b>Solid state drive</b></p> <ul style="list-style-type: none"> <li>• 128 / 256 GB, SATA 6 Gb/s, RAID 0</li> </ul>  |
| <b>Webcam</b>   | 1 | <p><b>Video conferencing</b></p> <p>HD camera with:</p> <ul style="list-style-type: none"> <li>• 1280 x 720 resolution</li> <li>• 720p HD audio/video recording</li> <li>• High dynamic range imaging (HDR)</li> <li>• 88 degree wide view angle</li> </ul>  |
| <b>Wireless and networking</b>                                | 1 | <p><b>WLAN</b></p> <ul style="list-style-type: none"> <li>• Intel® Dual Band Wireless-AC 8260, 802.11ac/a/b/g/n wireless LAN with Acer Nplify™, featuring MIMO technology</li> <li>• Bluetooth 4.2</li> <li>• Intel vPro™ technology</li> <li>• Acer InviLink™ Nplify™ 802.11a/b/g/n wireless LAN</li> <li>• Operates at 2.4 GHz and 5 GHz</li> <li>• 2x2 MIMO technology</li> <li>• 802.11ad WiGig</li> <li>• Operates at 57 to 66 GHz</li> <li>• 802.11a/b/g/n/ac wireless LAN</li> <li>• Operates at 2.4 GHz and 5 GHz</li> <li>• Dual-band 2x2 MIMO technology</li> <li>• Supports Bluetooth® 4.1</li> </ul> <p><b>WWAN</b></p> <ul style="list-style-type: none"> <li>• LTE: B1/B2/B3/B5/B7/B8/B13/B17/B20</li> <li>• WCDMA / HSDPA / HSUPA / HSPA+: 850 / 900 / 1700 / 1900 / 2100 MHz</li> <li>• GPRS / EDGE: 850 / 900 / 1800 / 1900 MHz</li> <li>• GPS/GLONASS: L1</li> <li>• LTE FDD: upload 50 Mbps, download 150 Mbps, @20 M BW CAT4</li> <li>• GPRS: upload 85.6 kbps, download 107 kbps</li> <li>• EDGE: upload 236.8 kbps, download 296 kbps</li> <li>• WCDMA CS: upload 64 kbps, download 64 kbps</li> </ul> |

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|---|--|---|
|   | <ul style="list-style-type: none"> <li>• WCDMA PS: upload 384 kbps, download 384 kbps</li> <li>• HSPA+: upload 5.76 Mbps, download 21.6 Mbps</li> </ul> <p><b>WPAN</b></p> <ul style="list-style-type: none"> <li>• Bluetooth® 4.0</li> </ul> <p><b>LAN</b></p> <ul style="list-style-type: none"> <li>• Supports Intel® Ethernet Connection I219-LM Gigabit Ethernet</li> </ul>   | 1   |
| <b>Security</b>   | <p>Acer ProShield Security Manager including:</p> <ul style="list-style-type: none"> <li>• BIOS Settings: BIOS Password, Boot Order, and Import/Export BIOS Settings</li> <li>• Credential Manager: Fingerprint Registration</li> <li>• Pre-Boot Authentication: Fingerprint Management</li> <li>• Data Protection: File Encryption &amp; Decryption, Personal Secure Drive</li> <li>• Data Removal: File Shredder</li> </ul> <p>Trusted Platform Module (TPM) solution<br/>Enhanced Acer DASP (Disk Anti-Shock Protection)<br/>Acer Bio-Protection fingerprint solution, featuring Pre-Boot Authentication (PBA), computer protection<br/>BIOS user, supervisor, HDD passwords<br/>Kensington lock slot</p> | 1   |
| <b>Dimensions and weight</b>                                  | <p><b>Dimensions</b></p> <ul style="list-style-type: none"> <li>• 328.7 (W) x 235.5 (D) x 21.2 (H) mm (12.94 x 9.27 x 0.83 inches)</li> </ul> <p><b>Weight</b></p> <p>1.7 kg (3.75 lbs.) with 3-cell battery pack, one hard drive</p>  | 1, 11   |
| <b>Power adapter and battery</b>                              | <p><b>Power adapter</b></p> <p>3-pin 65 W HSF type AC adapter:</p> <ul style="list-style-type: none"> <li>• 95 (W) x 50 (D) x 25.4 (H) mm (3.74 x 1.96 x 1 inches)</li> <li>• 216 g (0.47 lbs.) with 180 cm DC cable</li> </ul> <p><b>Battery</b></p> <ul style="list-style-type: none"> <li>• 54 Wh 4850 mAh 11.1 V 3-cell Li-polymer battery pack (for models with HD Panel + HDD)</li> </ul> <p>Battery life:<br/>Up to 8 hours (based on MobileMark® 2014 test results)</p> <p>ACPI 5.0 CPU power management standard: supports Standby and Hibernation power-saving modes</p>   | 1<br><br><br><br><br><br><br><br><br><br><br>11<br><br><br><br><br><br><br><br><br><br><br>12, 13 |
| <b>Input and control</b>                                      | <p><b>Keyboard</b></p> <p>86-/87-/91-key Acer FineTip backlit keyboard with international language support</p> <p><b>TouchPad</b></p> <p>Multi-gesture touchpad, supporting two-finger scroll, pinch and rotate.</p> <p><b>Control Keys</b></p> <p>Communication key<br/>Microphone mute key<br/>Programmable key</p>  |   |

| <b>TravelMate P648-MG (Win10 HOL) Specifications (v5-0-4)</b> |   |    |
|---|---|----|
| <b>Input and output</b>                                       | SD™ Card reader<br>HDMI® port with HDCP support<br>Ethernet (RJ-45) port<br>External display (VGA) port<br>NFC (Near Field Communication)<br>DC-in jack for AC adapter<br>Three USB 3.0 ports with one featuring power-off USB charging<br>3.5 mm headphone/speaker jack, supporting headsets with built-in microphone<br>USB Type-C™ (Thunderbolt™ 3) port: USB 3.1 Gen 2 (up to 10 Gbps) and Thunderbolt devices, as well as any display<br>Acer ProDock II connector   |    |
| <b>Sensors</b>  | <ul style="list-style-type: none"> <li>• Accelerometer (G-sensor)</li> </ul>  |    |
| <b>Windows Store Apps</b> 14                                  | <b>In-House</b> <ul style="list-style-type: none"> <li>• Acer Explorer</li> <li>• Acer SMS Manager</li> </ul>   |    |
| <b>Windows Desktop Apps</b> 14                                | <b>In-House</b> <ul style="list-style-type: none"> <li>• Acer Control Center</li> <li>• Acer Portal</li> <li>• abFiles</li> <li>• Accessory Store</li> <li>• Power Management</li> <li>• Quick Access</li> </ul> <b>Lifestyle</b> <ul style="list-style-type: none"> <li>• Agoda</li> <li>• Booking.com</li> <li>• Yandex web link</li> </ul> <b>Productivity</b> <ul style="list-style-type: none"> <li>• Avast SecureLine</li> <li>• Contact Pickup</li> <li>• Office 2013 Trial</li> <li>• PhantomPDF</li> </ul> <b>Search</b> <ul style="list-style-type: none"> <li>• Firefox</li> <li>• Yahoo search</li> </ul> <b>Security</b> <ul style="list-style-type: none"> <li>• Acer ProShield</li> <li>• McAfee® Internet Security</li> </ul> <b>Tools</b> <ul style="list-style-type: none"> <li>• App Explorer</li> <li>• Dashlane</li> </ul> | 15 |
| <b>Options and accessories</b>                                | 3-pin 65 W HSF AC adapter<br>Acer ProDock   | 16 |

## TravelMate P648-MG (Win10 HOL) Specifications (v5-0-4)

|                                      |   |  |
|--------------------------------------|---|--|
| <b>System compliance</b>             | ENERGY STAR®<br>Wi-Fi®<br>GS<br>EPEAT® Gold<br>HSF<br>Mobile PC 2002<br>ACPI 3.0  |  |
| <b>Warranty</b>                      | One-year International Travelers Warranty (ITW)   |  |
| <b>Quality and reliability tests</b> | Temperature and humidity<br>Hinge life<br>Weight and pressure<br>Acoustics<br>Spillage<br>Free drop<br>Shock and vibration<br>Electrostatic discharge immunity<br>Keyboard-switch life<br>MTBF (mean time between failures) |  |

1. Specifications vary depending on model.
2. 64-bit software is required to enjoy the advantages of 64-bit processing.
3. Shared system memory may be allocated to support graphics, depending on system memory size and other factors. Actual system memory available to the operating system will be reduced by any memory used by the graphics solution and resources required by the operating environment.
4. Memory speed may vary, depending on the CPU, chipset or memory fitted.
5. All brands and product names mentioned herein include trademarks of their respective companies and are used solely to describe or identify the products.
6. Resolution/refresh rates depend on display capability and color/depth settings.
7. 1 GB is 1 billion bytes, 1 TB is 1000 GB. Actual formatted capacity is less and may vary depending on preloaded materials and operating environment. Acer Recovery Management uses a portion of the stated hard disk capacity as dedicated backup space.
8. 1 GB is 1 billion bytes. Actual formatted capacity is less and may vary depending on preloaded materials and operating environment. Acer Recovery Management uses a portion of the stated hard disk capacity as dedicated backup space.
9. Actual throughput may vary depending on network conditions and environmental factors such as network traffic or overhead, building construction and access point settings.
10. Subject to availability.
11. Weight may vary depending on product configuration, vendor components, manufacturing variability, and selected options.
12. The battery will hold up to 80% of its original capacity after as many as 1000 recharges. A full recharge comprises a complete charge-and-discharge cycle, and does not always occur each time the notebook is plugged in to a power source, as several partial charges can add up to a full recharge.
13. The listed battery life is based on MobileMark 2007® productivity mode testing with wireless on. Details of MobileMark 2007® testing are available at [www.bapco.com](http://www.bapco.com). Battery life rating is for comparison purposes

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- only. Actual battery life varies by model, configuration, applications, power management settings, operating conditions, and utilized features. A battery's maximum capacity decreases with time and use.
14. Bundled software may vary depending on hardware configuration, OS and regional availability.
  15. Some models/configurations may activate to a 1 year subscription for Office 365 Personal, depending on the operating system installed.
  16. HSF: Hazardous Substance Free

In a continuing effort to improve the quality of our products, information in this document is subject to change without notice. Images shown are only representations of some of the configurations available for this model. Availability may vary depending on region.

As a phenomenon known to thin-film transistors (TFTs), liquid crystal displays (LCDs) commonly exhibit a small number of discoloration dots, as so-called "non-conforming pixels." This phenomenon is a limitation of TFT LCD technology, not a product defect, and as such is not covered by Acer's warranty.

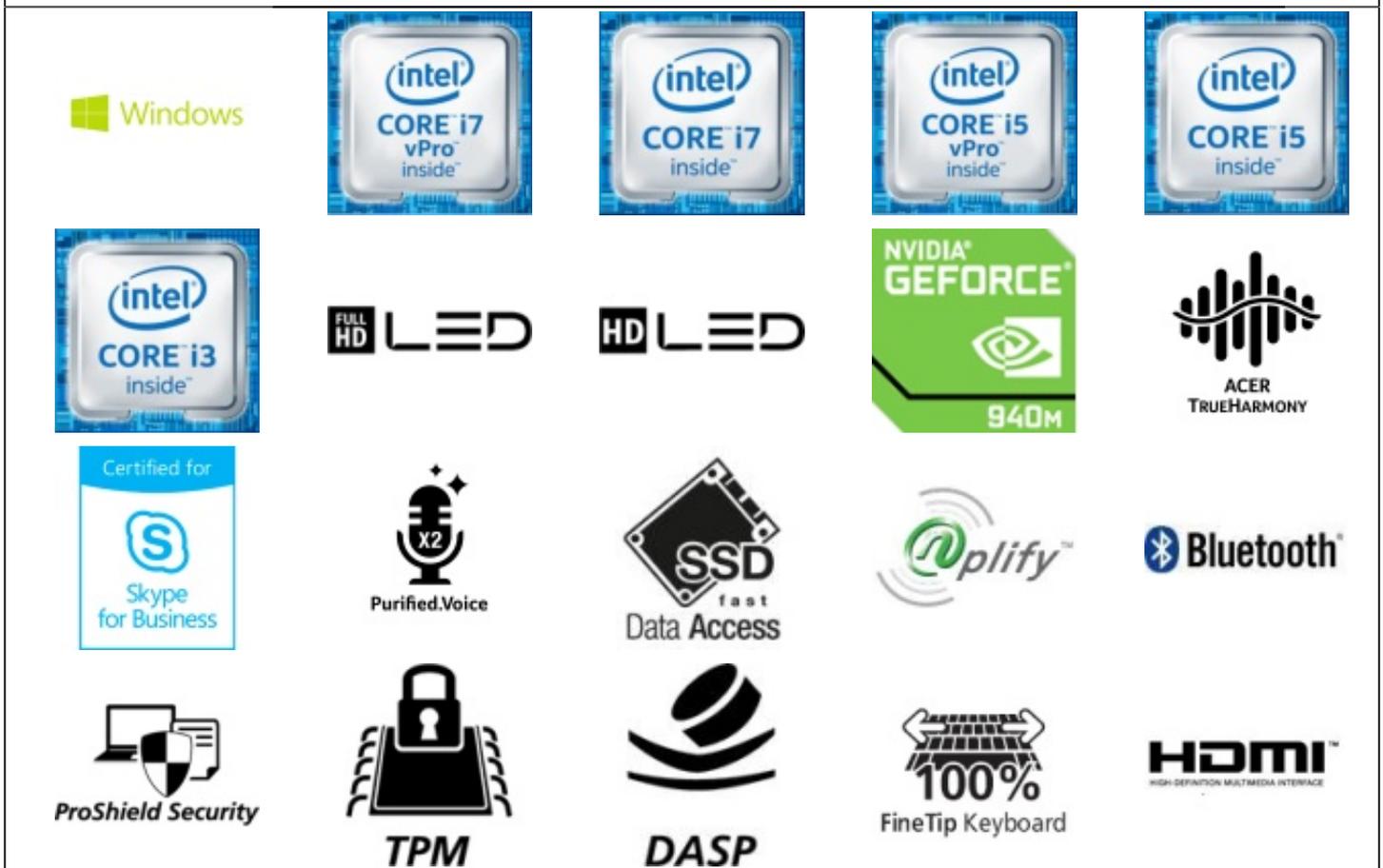
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### About Acer

Established in 1976, Acer is a *hardware + software + services* company dedicated to the research, design, marketing, sale, and support of innovative products that enhance people's lives. Acer's product offerings include PCs, displays, projectors, servers, tablets, smartphones, and wearables. The company is also developing cloud solutions to bring together the Internet of Things. Acer employs 7,000 people and ranks No. 4 for total PCs globally (IDC 2014). Revenues for 2014 reached US\$10.39 billion. Please visit [www.acer.com](http://www.acer.com) for more information.



## TravelMate P648-MG (Win10 HOL) Specifications (v5-0-4)



# Appendix

## **v4-0-4 (Ver. 2)**

Input and output

## **v5-0-4 (Ver. 3)**

Input and output