TravelMate B312RN-31-TCO (Win11) Specifications (v4-0-4)

Category		Description	Footnotes
Operating system	1	Windows 11 Pro (Acer recommends Windows 11 Pro for business.) Windows 11 Home	
CPU and chipset	1	**Intel® Processor N250** (6 MB Smart Cache, 1.3 GHz with Intel® Turbo Boost Technology 2.0 up to 3.8 GHz) **Intel® Processor N150** (6 MB Smart Cache, 0.8 GHz with Intel® Turbo Boost Technology 2.0 up to 3.6 GHz)	
Memory	1, 2, 3	Dual-channel LPDDR5 SDRAM support • 8 GB of onboard LPDDR5 system memory Dual-channel LPDDR5 SDRAM support • 4 GB of onboard LPDDR5 system memory Memory Frequency : Up to 6400 MT/s	
Display		12.2" display with IPS (In-Plane Switching) technology, WUXGA 1920 x 1200 resolution, LED-backlit TFT LCD with integrated multi-touch Wide viewing angle 16:10 aspect ratio Mercury free, environment friendly Antimicrobial Corning® Gorilla® Glass	4
Graphics		**Intel® Graphics** **Graphics Special Technology#** • VP9, AV1, HEVC, JPEG Decode • VP9,HEVC, JPEG Encode • OpenGL 4.6 • OpenCL 3.0 • DirectX 12.1 • Vulkan 1.3	5
Audio		• Acer Purified.Voice technology with two built-in microphones. Features include far-field pickup, keystroke suppression, voice tracking, adaptive beam forming, voice recognition enhancement, three pre-defined modes: voice recognition, personal call, conference call • Built-in digital microphone on world facing camera (Optional) • Acer TrueHarmony technology for lower distortion, wider frequency range, headphone-like audio and powerful sound • Two built-in stereo speakers • Certified for Microsoft Teams	
Storage		• 128 GB UFS • 128 GB eMMC • 64 GB eMMC	 6 6

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		Solid state drive • 128 GB / 256 GB, PCIe Gen4 16 Gb/s up to 4 lanes, NVMe	1, 6
Webcam	1	**Video conferencing** UFC with • USB 6 mm FHD camera • Compatible with Windows only • 1920 x 1080 resolution • 1080p HD video at 60 fps with Temporal Noise Reduction • Dual Mic (33 mm + 33 mm) • 76 x 6.1 x 3 mm • Blue glass lens UFC with • USB 6 mm HD camera • Compatible with Windows only • 1280 x 720 resolution • 720p HD video at 30 fps with Temporal Noise Reduction • Blue Glass lens • Dual Mic (33 mm + 33 mm) • 78 x 6.1 x 3 mm WFC with • USB 5M AF camera • 2592 x 1944 resolution • 5M video at 30 fps • 40 (L) x 8.5 (W) x 4.2 (H) mm	
Wireless and networking	1	**WLAN** • Intel® Wireless Wi-Fi 6E AX211 • 802.11 a/b/g/n/ac/ax wireless LAN • Band: 2.4 GHz, 5 GHz, and 6 GHz • 2x2 MU-MIMO technology • Intel® Wi-Fi 7 Wireless LAN • 802.11 a/b/g/n/ac/ax/be • Band: 2.4 GHz, 5 GHz, and 6 GHz • 2x2 MIMO technology **LAN** • Gigabit Ethernet **WPAN** Supports Bluetooth® 5.3 or above for Wi-Fi 6E wireless card. Supports Bluetooth® 5.4 or above for Wi-Fi 7 wireless card. Supports Bluetooth LE Audio (LC3).	
Security		Acer ProShield Plus security manager includes: • Data Protection: File & Folder Encryption and Decryption, Personal Security Drive • Data Removal: File Shredding	

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		• Security Alert: Invalid Access Alert, Security Report Discrete Trusted Platform Module (TPM) solution Camera shutter BIOS user, supervisor, HDD(OPAL) password Kensington lock (Nano-type)	1
Dimensions and weight	1, 7, 8	**Dimensions** • 296 (W) x 215 (D) x 19.9/21.5 (H) mm (11.65 x 8.46 x 0.78/0.85 inches) **Weight** • 1.45 kg (3.2 lbs.) with 3-cell battery pack	
Power adapter and battery	1, 9, 10	**Power adapter** 3-pin 65 W PD PCR 50%, TCO 9.0 AC adapter • 5 V / 3 A or 9 V / 3 A or 12 V / 3 A or 15 V / 3 A or 20 V / 3.25 A as output power • 90.0 (W) x 51.0 (D) x 28.5 (H) mm (3.54 x 2.01 x 1.12 inches) • 192 g ± 10% with 150 cm DC cable • Black color with Acer logo • Brick type AC pins **Battery** • 53 Wh 3-cell Li-ion battery • Supports Fast Charging technology • For models with WUXGA Panel Battery life: Up to 21 hours (based on video playback test results) Up to 11 hours (based on web browsing test results)	9, 10, 11
Input and control		**Keyboard** 81-/82-/86-key Acer FineTip EDU anchored frame Serviceable keyboard 2.0 with international language support **Control Keys** Copilot Key **TouchPad** Multi-gesture touchpad, supporting two-finger scroll; pinch; gestures to open Cortana, Action Center, multitasking; application commands • Microsoft Precision Touchpad certification • Moisture resistant • OceanGlass™ Touchpad	
Input and output		**USB Type-C** USB Type-C™ port supporting: • USB 3.2 Gen 1 (up to 5 Gbps) • DisplayPort over USB-C • USB charging 5/9/12/15/20 V; 3.25 A • DC-in port 5 or 9 or 15 or 20 V; 65 W Two USB Type-C™ ports	

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		USB Standard A Two USB Standard-A ports, supporting: • Two ports for USB 3.2 Gen 1 Headphone/speaker jack Ethernet (RJ-45) port **Service IO Ports** - Fast and cost-effective repairs are enabled by the modular design, which minimizes downtime and lowers Total Cost of Ownership HDMI® 2.1 port with HDCP support	
Sensors		Time-of-Flight (ToF) Laser-Ranging Sensor Accelerometer (G-sensor)	
Windows Desktop Apps	12	**In-House** • TravelMate Sense	
Options and accessories		**Accessory** Acer Active Pen • Length: 125.41 mm (with customized endcap); diameter: 5.3 mm • Weight: 4 g (with customized endcap) • Tip material: Elastomer • Pen force: 4096 levels • Two configurable buttons • Not replaceable Li-ion battery charging • Protocol: AES 2.0, USI 2.0 Support **Acer Vero MST Dock M32** · Dimension: 180 (W) x 82 (D) x 24.8 (H) mm ((7.09 x 3.23 x 0.98 inches) · Weight: 232 g (0.52 lbs) · Built with 65% Post-consumer Recycled (PCR) Plastic · Support for one display via DP 1.4; one display via HDMI 2.0 · Support for up to two 4K-60Hz external multi-displays (HBR3 PC supporting DSC) · One USB-C upstream port to host · One USB-C downstream port for device (data only with USB3.2 Gen1) · Two USB-A 3.2 Gen1 (one support BC1.2) · One USB-A 2.0 · Gigabit Ethernet (RJ45) port (1000/100/10Mbps) · Up to 65W power supply delivering to system · Audio Combo Jack · 1 m USB Type-C cable · Support for VESA mount · 90W Power Adapter Support **Add-on feature**s for M33 · LED behavior aligned with the host power status · Power button mirrors the host's · System MAC address pass-through to Dock · Wake-On-LAN from Sleep/Hibernate/Off mode	

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	· PXE boot via Dock LAN port	
System compliance	ENERGY STAR® Wi-Fi® TCO Certified EPEAT® Gold	13
Warranty	One-year International Travelers Warranty (ITW)	
Quality and reliability tests	**Military Reliability Test** **MIL total test items as below.** Military Reliability Test: Functional Shock (MIL-STD 810H) Military Reliability Test: Bench Handling (MIL-STD 810H) Military Reliability Test: Sand and Dust (MIL-STD 810H) Military Reliability Test: Mechanical Shock, Transit Drop (Packaged) 122 cm (MIL-STD 810H) Military Reliability Test: Mechanical Shock, Transit Drop (Unpackaged) 122 cm (MIL-STD 810H) Military Reliability Test: Vibration (MIL-STD 810H) Military Reliability Test: Humidity (MIL-STD 810H) Military Reliability Test: Rain (MIL-STD 810H) Military Reliability Test: Low Temperature (MIL-STD 810H) Military Reliability Test: High Temperature (MIL-STD 810H) Temperature and humidity Hinge life Weight and pressure Acoustics Spillage Free drop Shock and vibration Electrostatic discharge immunity Keyboard-switch life MTBF (mean time between failures)	14
Others	• Power LED indicator • Reset hole	

1. Specifications vary depending on model.
2. 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.
3. Memory speed may vary, depending on the CPU, chipset or memory fitted.
4. All brands and product names mentioned herein include trademarks of their respective companies and are used solely to describe or identify the products.
5. Not all features indicated are supported on all SKUs
6. 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.
7. Minor variations in system dimensions are possible due to the manufacturing process.

8. Weight may vary depending on product configuration, vendor components, manufacturing variability, and selected options.
9. Listed battery life is based on testing using video playback. The test clip loops and continues to run, without interruption or any other inputs, until the battery is drained. Stated battery life is for comparison purpose only. Actual battery life varies by model, configuration, applications, video chip format and features used. A battery's maximum capacity decreases with time and use. Battery life test configuration: Intel® Processor N250, WUXGA, eMMC only, 8GB of LPDDR5 memory. Battery life test condition: LCD brightness 150 nits, connected headphones, WLAN off, Bluetooth off and Better Battery Mode on.
10. Listed battery life is based on testing using Web browsing. The test clip loops the loading of 50 selected websites using Microsoft Edge every 30 seconds, until the battery is drained. Stated battery life is for comparison purpose only. Actual battery life varies by model, configuration, applications, video chip format and features used. A battery's maximum capacity decreases with time and use. Battery life test configuration: Intel® Processor N250, WUXGA, eMMC only, 8GB of LPDDR5 memory. Battery life test condition: 100 nits LCD brightness, 50% speaker volume, WLAN on, Bluetooth on, no WW direct Internet connection.
11. *Actual battery life may vary considerably by specifications, depending on product model, configuration, applications, power management settings, operating conditions, and features utilized. Performance variation also arises based on components in use, which includes but is not limited to the processor, RAM capacity, storage, display and resolution, etc.*
12. Bundled software may vary depending on hardware configuration, OS and regional availability.
13. EPEAT® registration varies by country. See http://www.epeat.net/ for registration status for each country.
14. *MIL-STD 810G/H is a testing protocol conducted in controlled settings and does not guarantee future performance in all situations. Do not attempt to simulate these tests, as damage resulting from this will not be covered by Acer's standard warranty.*

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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Founded in 1976, Acer is one of the world's top ICT companies with a presence in more than 160 countries. As Acer evolves with the industry and changing lifestyles, it is focused on enabling a world where hardware, software and services will fuse with one another,

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creating ecosystems and opening up new possibilities for consumers and businesses alike. Acer's 7,500 employees are dedicated to the research, design, marketing, sale, and support of products and solutions that break barriers between people and technology. Please visit www.acer.com for more information.



Appendix

v2-0-2 (Ver. 2)

No changes found!

v3-0-3 (Ver. 3)

Webcam

v4-0-4 (Ver. 4)

Input and output