

Dell Chromebook 3100

Setup and specifications guide

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

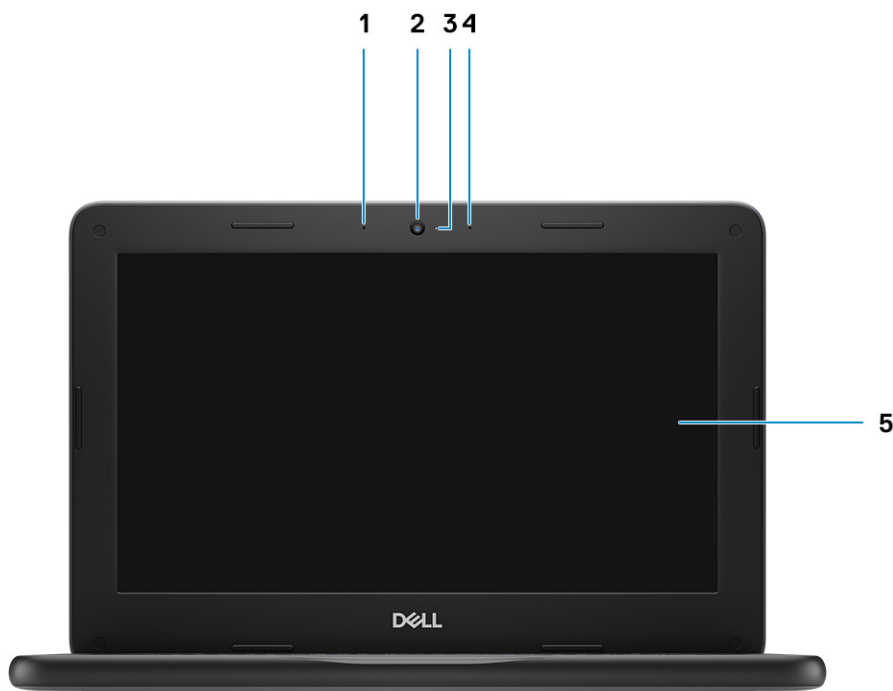
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Chassis overview

Topics:

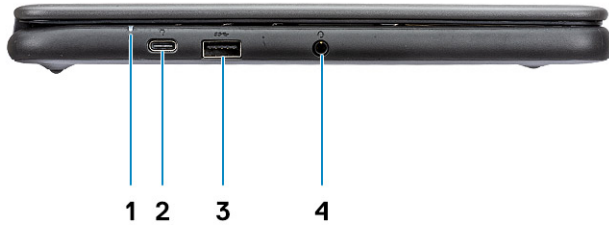
- Front
- Left
- Right
- Palmrest
- Bottom

Front



1. Microphone
2. Camera
3. Camera status light
4. Microphone
5. Display panel

Left



1. Power/Battery status indicator
2. USB Type-C port with Power delivery
3. USB 3.1 Gen 1 port
4. Headset port

Right



1. USB 3.1 Gen1 (optional)
2. USB Type-C port with Power delivery (optional)
3. Wedge-type lock slot

For 4G LTE enabled systems



1. USB Type-C port with Power delivery
2. Wedge-type lock slot

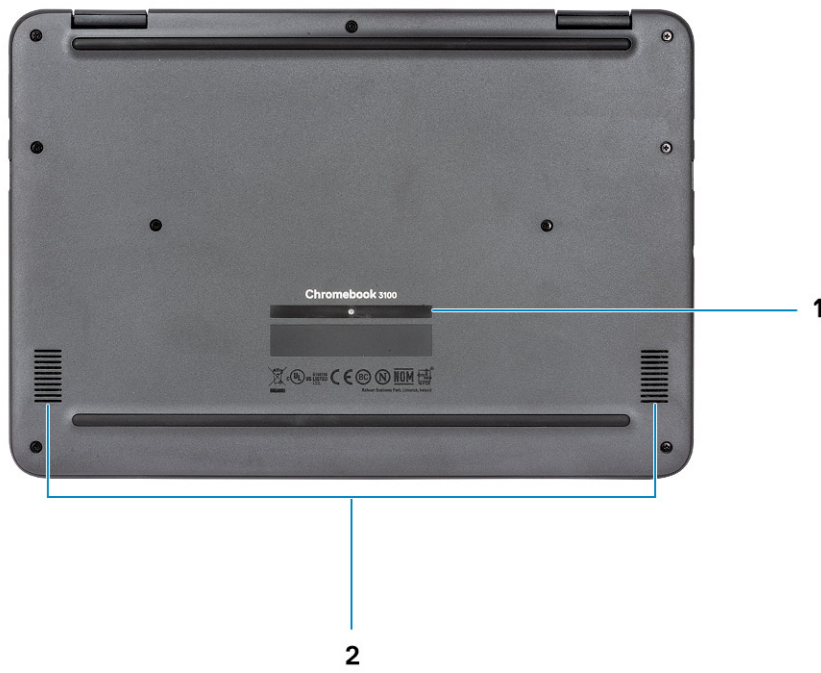
Palmrest



1. Power button

- 2. Keyboard
- 3. Touchpad

Bottom



- 1. Service Tag label
- 2. Speaker

System specifications

Topics:

- System information
- Processor
- Memory
- Storage
- Audio
- Video card
- Camera
- Wireless
- Ports and connectors
- Display
- Keyboard
- Touchpad
- Operating system
- Battery
- Power adapter
- Dimensions and weight
- Computer environment
- Security
- Services and support

System information

Table 1. System information

Feature	Specifications
Chipset	Integrated in the processor (6 W/4.5 W SDP Gemini Lake – Celeron)
DRAM bus width	64-bit
FLASH EPROM	16 MB
PCIe bus	Internal PCIe

Processor


 **NOTE:** Processor numbers are not a measure of performance. Processor availability is subject to change and may vary by region/country.

Table 2. Processor specifications

Type	UMA Graphics	Discrete Graphics
Intel Celeron N4000 Dual core processor (6 W TDP, 2 core, 2 threads, 4 MB cache, 2.6 GHz)	Intel UHD Graphics 600	No

Table 2. Processor specifications (continued)

Type	UMA Graphics	Discrete Graphics
Intel Celeron N4020 Dual core processor (6 W TDP, 2 core, 2 threads, 4MB cache, up to 2.8 GHz)	Intel UHD Graphics 600	No
Intel Celeron Processor N4120 (6 W TDP, 4 core, 4 threads, 4 MB cache, up to 2.60 GHz)	Intel UHD Graphics 600	No

Memory

Table 3. Memory specifications

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	4 GB
Type	LPDDR4 (onboard memory)
Speed	2400 MT/s

Storage

Table 4. Storage specifications

Type	Capacity	MMC Interface	Voltage
eMMC	16 GB	eMMC V5.1	3.3 V
eMMC	32 GB	eMMC V5.1	3.3 V

Audio

Table 5. Audio specifications

Feature	Specifications
Controller	Dialog DA7219
Stereo conversion	Supported
Type	High Definition Audio
Speakers	2
Internal Interface	I2S
External Interface	Digital microphone input on camera module Headset combo jack (stereo headphones/microphone-in)
Internal speaker amplifier	Supported

Table 5. Audio specifications (continued)

Feature	Specifications
External Speaker Amp	MAX98357A
External volume controls	Supported
Speaker output:	<ul style="list-style-type: none"> • Average - 2 W • Peak - 2.5 W
Subwoofer output	Not supported
Microphone	Supported

Video card

Table 6. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 600	UMA	Intel Celeron N4000 Dual core CPU	Integrated	Shared system memory	Supported via USB Type-C port	3840 x 2160 @60 Hz

Camera

Table 7. Camera specifications

Feature	Specifications
Camera type	HD fixed focus
Resolution	Still image: HD resolution 1280 x 720 (1 MP) Video: HD resolution 1280 x 720 (1 MP)
Imaging rate	Up to 30 frames per second
Sensor type	CMOS sensor technology

Wireless

Table 8. Wireless specifications

Specifications
Intel dual band wireless-AC 9560 802.11ac 160 MHz (2x2) Wi-Fi + Bluetooth 5 M.2 1216 solder down

Ports and connectors

Table 9. Ports and connectors

Feature	Specifications
Memory card reader	NA

Table 9. Ports and connectors (continued)

Feature	Specifications
USB	<ul style="list-style-type: none"> • 1 x USB 3.1 Gen 1 ports (left-side) • 1 x USB 3.1 Gen 1 ports—optional (right-side) • 1 x USB Type-C port with Power delivery (left-side) • 1 x USB Type-C port with Power delivery—optional (right-side)
Security	Noble wedge lock slot
Audio	One Universal Jack (Global Headset Jack + microphone + line in support) port

Display

Table 10. Display specifications

Feature	Specifications
Type	11.6 inch, HD TN Non-Touchscreen, and 187 Nits. 11.6 inch, HD TN Touchscreen, and 187 Nits (optional).
Height (Active area)	144.00 mm
Width (Active area)	256.125 mm
Diagonal	293.83 mm (11.6 inches)
Megapixels	1.04
Pixels Per Inch (PPI)	135
Contrast ratio (Typical)	500:1
Luminance/Brightness (typical)	220 Nits
Refresh rate	60 Hz
Horizontal viewing angle (min)	+40/-40 degrees
Vertical viewing angle (min)	+10/-30 degrees
Power consumption (max)	3.0 W

Keyboard

Table 11. Keyboard specifications

Feature	Specifications
Number of keys	<ul style="list-style-type: none"> • 74 (U.S. and Canada) • 75 (UK) • 76 (Brazil) • 78 (Japan)
Size	Full sized

Table 11. Keyboard specifications (continued)

Feature	Specifications
	<ul style="list-style-type: none"> • X = 19.05 mm key pitch • Y = 18.05 mm key pitch
Backlit keyboard	No
Layout	QWERTY

Touchpad

Table 12. Touchpad specifications

Feature	Specifications
Resolution	1229 x 749
Dimensions	<ul style="list-style-type: none"> • X-axis: 99.4 mm (3.91 inches) • Y-axis: 54.4 mm (2.14 inches)
Multi-touch	Supports five fingers

Operating system

Table 13. Operating system

Feature	Specifications
Operating systems supported	Google Chrome operating system

Battery

Table 14. Battery

Feature	Specifications	
Type	3-cell lithium-ion (42 WHr)	3-cell Polymer (42 WHr)
Dimension	Width 97.15 mm (3.82 inches) Depth 184.15 mm (7.25 inches) Height 5.90 mm (0.23 inches)	Width 97.15 mm (3.82 inches) Depth 184.15 mm (7.25 inches) Height 5.90 mm (0.23 inches)
Weight (maximum)	0.2 kg (0.44 lb)	0.195 kg
Voltage	11.40 VDC	11.40 VDC
Life span	300 discharge/charge cycles	300 discharge/charge cycles
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions
Temperature range: Operating	<ul style="list-style-type: none"> • 0°C to 35°C (32°F to 95°F) • Charge : 0 °C to 50 °C (32 °F to 122 °F) 	<ul style="list-style-type: none"> • 0°C to 35°C (32°F to 95°F) • Charge : 0 °C to 50 °C (32 °F to 122 °F)

Table 14. Battery (continued)

Feature	Specifications	
	<ul style="list-style-type: none"> Discharge: 0 °C to 70 °C (32 °F to 158 °F) 	<ul style="list-style-type: none"> Discharge: 0 °C to 70 °C (32 °F to 158 °F)
Temperature range: Storage	- 20 °C to 65 °C (- 4 °F to 149 °F)	- 20 °C to 65 °C (- 4 °F to 149 °F)

Power adapter

Table 15. Power adapter specifications

Feature	Specifications
Type	Pecos 65 W USB-C
Input Voltage	100 VAC - 240 VAC
Input current (maximum)	1.7 A
Adapter size	Dimensions In Inches: 1.1 x 2.01 x 4.41 In mm: 28 x 51 x 112
Weight	0.201 kg (0.443 lbs)
Input frequency	50 Hz to 60 Hz
Output current	20 V/3.25 A (continuous) 15 V/3 A (continuous) 9 V/3 A (continuous) 5 V/3 A (continuous)
Rated output voltage	20 VDC / 15 VDC / 9 VDC / 5 VDC
Temperature range (Operating)	0°C to 40° C (32°F to 104°F)
Temperature range (Non-Operating)	-40°C to 70°C (-40°F to 158°F)

Dimensions and weight

Table 16. Dimensions and weight

Feature	Specifications
Height	Front: 20.75 mm (0.817 inches) Rear: 20.75 mm (0.817 inches)
Width	303.9 mm (11.96 inches)
Depth	207.9 mm (8.19 inches)
Weight	1.29 kg (2.85 lbs)

Computer environment

Table 17. Computer environment

	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (noncondensing) <i>i</i> NOTE: Maximum dew point temperature = 26°C	0% to 95% (noncondensing) <i>i</i> NOTE: Maximum dew point temperature = 33°C
Vibration (maximum)	2 to 600 Hz at 0.66 Grms	2 to 600 Hz at 1.33 Grms
Shock (maximum)	160 G with pulse duration of 2 ms (equivalent to 80 in/sec)	160 G with pulse duration of 2 ms (equivalent to 80 in/sec)
Altitude (maximum)	0 m to 3048 m (0 ft to 10,000 ft)	0 m to 10,668 m (0 ft to 35,000 ft)

Security

Table 18. Security

Feature	Specifications
Trusted Platform Module (TPM) 2.0	No
Firmware TPM	NA
Cable lock	Wedge-type lock slot

Services and support

Table 19. Services and support specifications

Feature	Specifications
1-Year Mail-In Service	Standard
Onsite NBD <i>i</i> NOTE: Service may be provided by third party. Technician will be dispatched if necessary following phone-based troubleshooting, subject to parts availability, and other terms of service contract.	Yes
Warranty Extensions	Up to 4 years
ProSupport	Optional

Software

This chapter details the supported operating systems along with instructions on how to install the drivers.

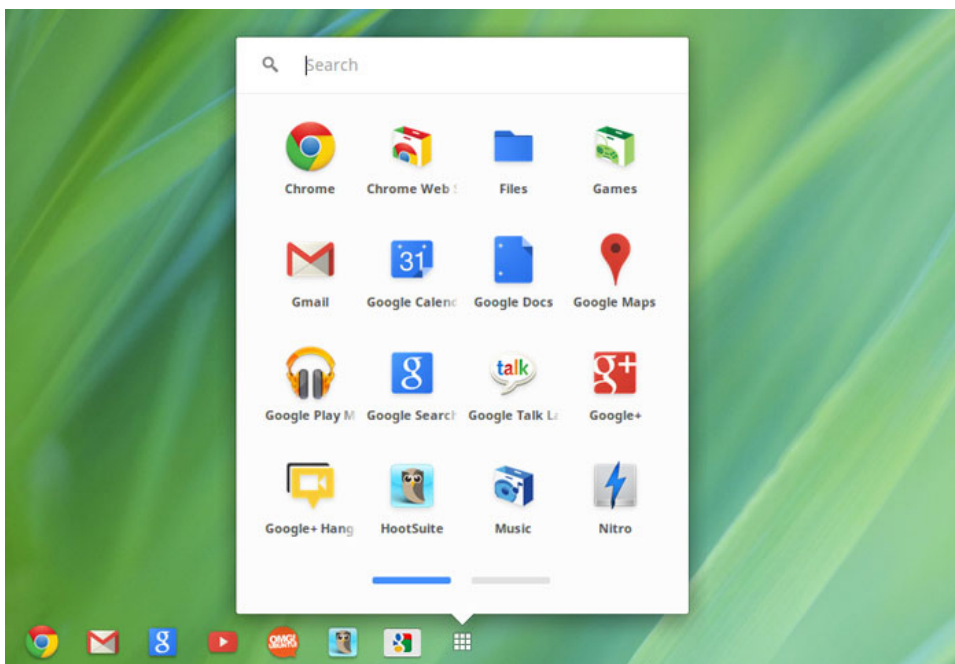
Topics:

- [Operating system](#)
- [View system information](#)

Operating system

This page contains information about the operating system used by the Dell Chromebook 3100.

Chrome OS



Chromebooks are powered by the Google Chrome operating system, based on Google's popular Chrome browser. It has been developed to provide a fast, simple, and more secure computing experience for users who spend most of their time online.

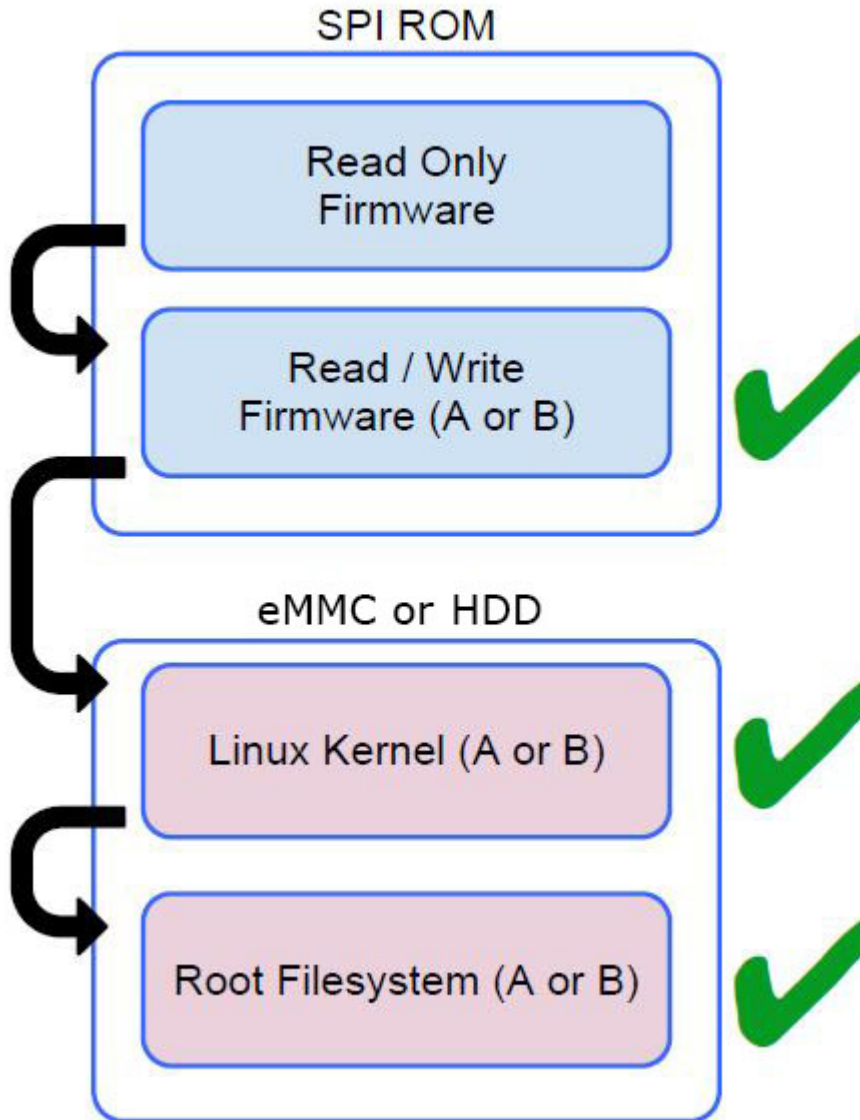
Key Benefits

- Speed
- Simplicity
- Security
- Updatability
- Synchronisability
- High power at low cost
- Easy to learn and use
- Documents, calendar, e-mail, contacts, and tasks available online and offline, and all securely backed-up and synchronised in the cloud.
- Access to the Chrome web app store
- Killer web apps

- The latest Intel Core processors
- Fun games
- Built-in support for popular file types and external devices

For more information about the Chrome OS, please visit the [Chrome OS training page](#).

Verified Boot

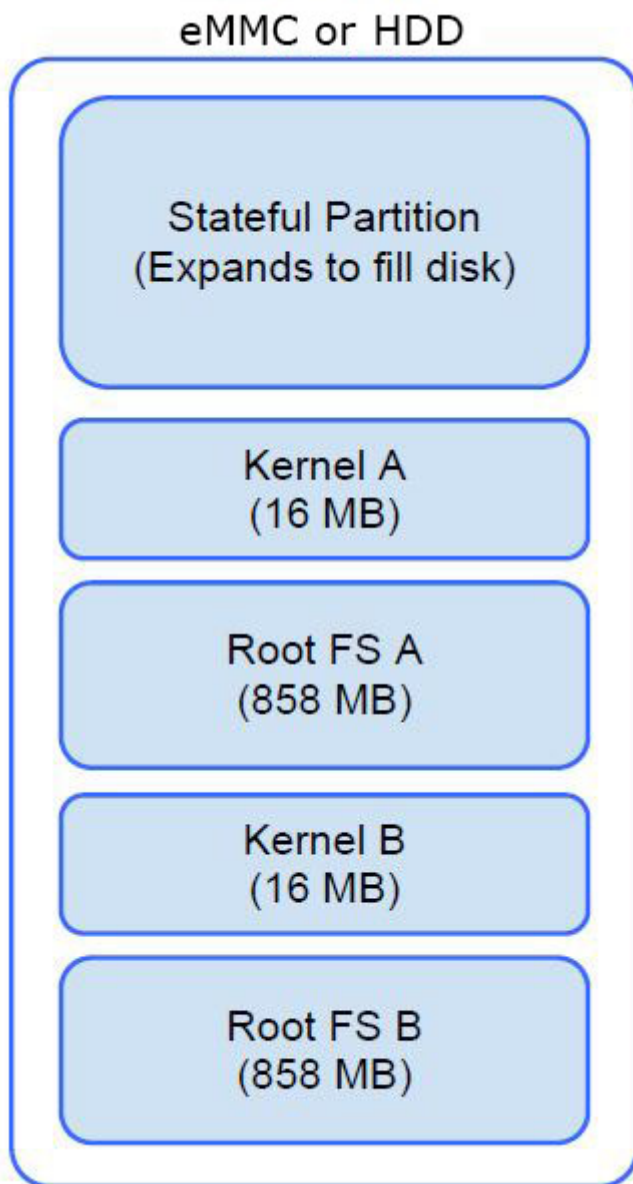


Read Only firmware verifies the integrity of Read/Write (R/W) firmware. R/W firmware verifies the active Linux kernel. During run time, the kernel verifies each block read from disk.

If a verification step fails and there is no backup option, the machine enters recovery mode.

The Developer Mode switch turns off verified boot (at the Kernel stage) to enable users to run Chromium OS (or other OS). The BIOS is always verified.



Disk Partition Map



There are two copies of Chrome OS on disk: an active copy and a backup copy. Each copy consists of a kernel partition and a root file system. The backup copy is updated automatically in the background. Users only need to reboot. The partition contains encrypted user data and is also used in the factory for storing test software.

Developer and Recovery mode

Table 20. Developer and Recovery mode

Developer Mode	Recovery Mode
<p>Developer Mode BIOS screen</p> 	<p>Recovery Mode BIOS screen</p> 
<ul style="list-style-type: none"> • Used to boot without verification. • Can be turned on via key combination during boot. • Stateful partition is wiped during transitions. • Used in the factory to boot test image. 	<ul style="list-style-type: none"> • Allows a user to reinstall the Chrome OS from a USB key or SD card. • Recovery mode is entered if verified boot fails. • A user can force recovery mode via a key combination during boot.

Coreboot and U-boot Custom Firmware

Coreboot (x86 only)

- Memory and chipset initialization
- Open-source, except for MRC binary from Intel.

U-Boot

- Performs verified boot
- Handles recovery and Developer Mode
- Open source code

Normal boot is very fast, as it takes less than 1 second to start loading kernel. Chromebook does not boot other operating systems such as Windows or OS X.

Chrome vs Chromium OS

Table 21. Difference between Chromium and Chrome OS

Difference between Chromium and Chrome OS	
Chromium OS	Chrome OS
<ul style="list-style-type: none"> • Is an open source project: http://www.chromium.org/chromium-os • Runs on regular PCs and Chrome devices 	<ul style="list-style-type: none"> • Is based on Chromium OS • Only runs on the Chrome devices with required hardware features (TPM, RO firmware, recovery button, developer switch). • Includes additional licensed features such as the Netflix plugin, video codecs, and fonts

View system information

This page contains all the information about viewing system information for the Dell Chromebook.

Dell Chromebook does not support Dell BIOS. Hence, there are several ways to check system specifications depending on the information you are searching for. The table below lists some of the most commonly used methods to view system information and specifications.

Table 22. View system information

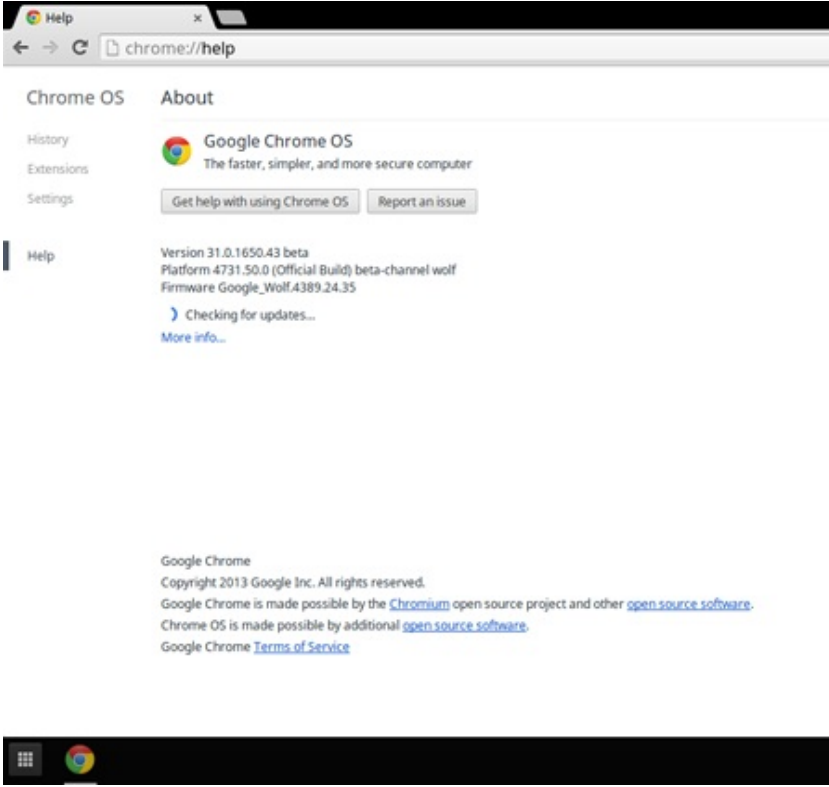
Commands	Action and Purpose	Screenshot
<pre>Chrome:help</pre>	View basic OS information.	 <p>The screenshot shows a web browser window with the address bar displaying 'chrome://help'. The page title is 'Chrome OS About'. On the left, there is a navigation menu with 'Help' selected. The main content area displays the Google Chrome OS logo and the text 'The faster, simpler, and more secure computer'. Below this, there are two buttons: 'Get help with using Chrome OS' and 'Report an issue'. The system information section lists: 'Version 31.0.1650.43 beta', 'Platform 4731.50.0 (Official Build) beta-channel wolf', and 'Firmware Google_Wolf.4389.24.35'. There is also a 'Checking for updates...' indicator and a 'More info...' link. At the bottom, there is copyright information for Google Inc. 2013 and links to 'Chromium', 'open source software', and 'Terms of Service'.</p>

Table 22. View system information (continued)

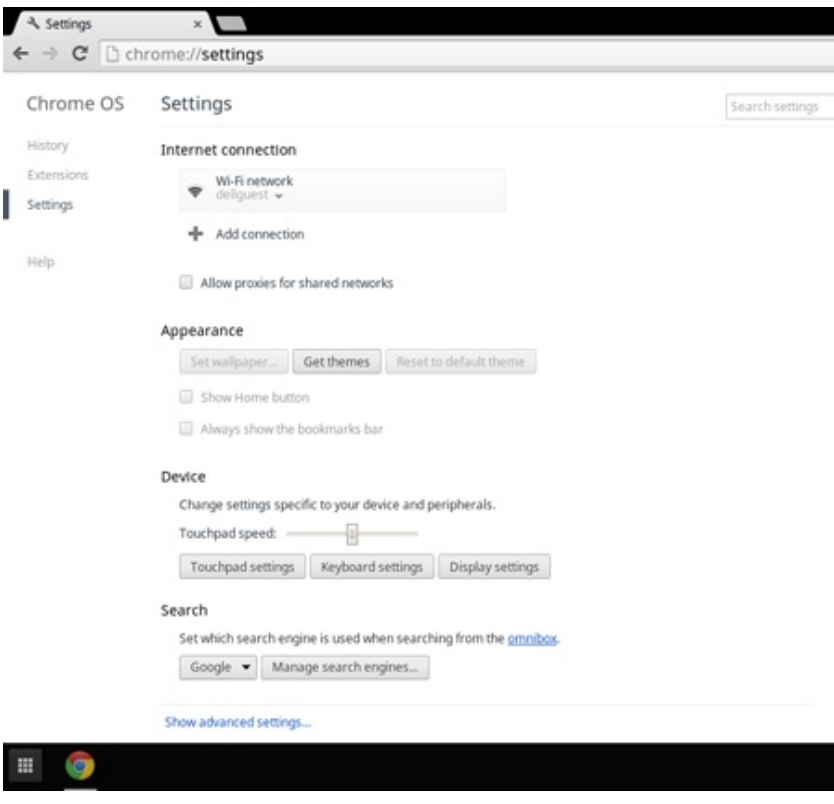
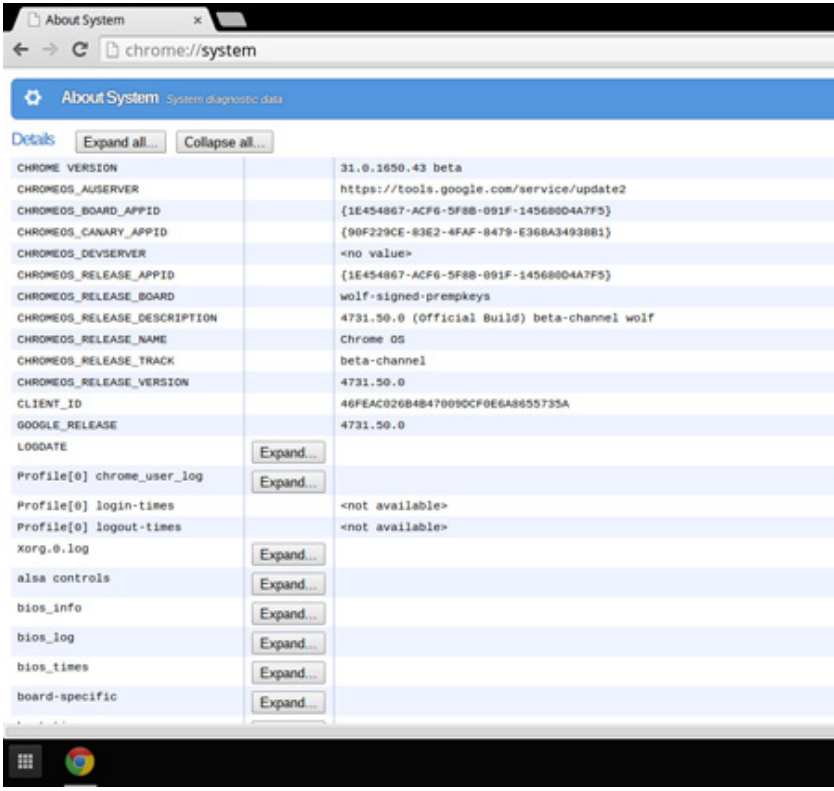
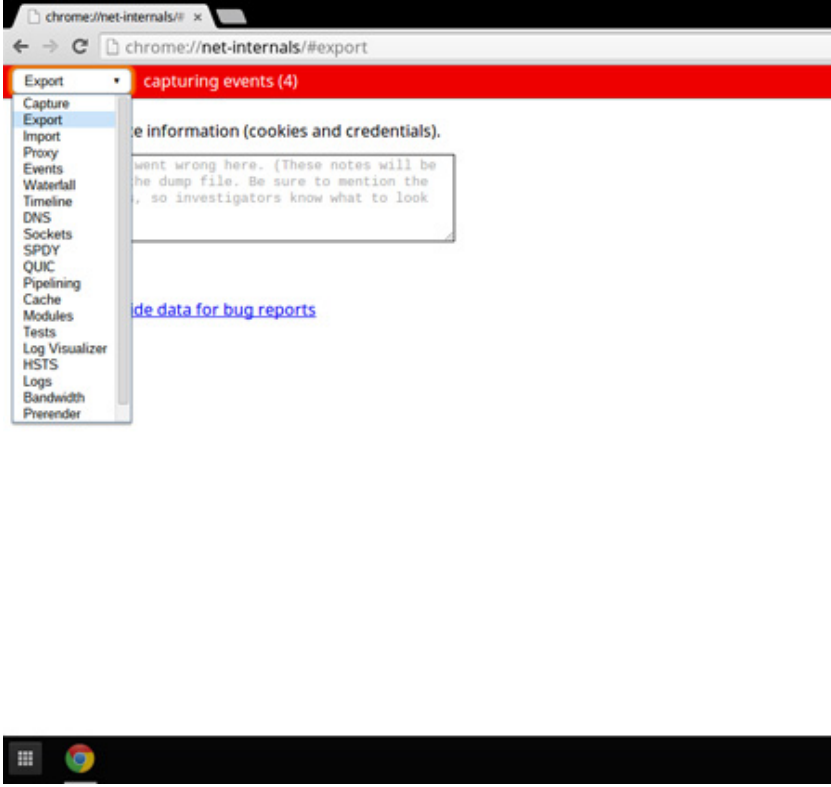
Commands	Action and Purpose	Screenshot																																																
<p>Chrome:settings</p>	<p>View information such as screen resolution options (Device>Display settings), touchpad, and other basic hardware information.</p>	 <p>The screenshot shows the Chrome OS Settings application. The left sidebar contains 'History', 'Extensions', 'Settings', and 'Help'. The main content area is titled 'Settings' and includes sections for 'Internet connection' (with a Wi-Fi network dropdown and 'Add connection' button), 'Appearance' (with buttons for 'Set wallpaper...', 'Get themes', and 'Reset to default theme', and checkboxes for 'Show Home button' and 'Always show the bookmarks bar'), 'Device' (with a 'Touchpad speed' slider and buttons for 'Touchpad settings', 'Keyboard settings', and 'Display settings'), and 'Search' (with a dropdown for 'Google' and a 'Manage search engines...' button). A 'Show advanced settings...' link is at the bottom.</p>																																																
<p>Chrome:system</p>	<p>View advanced system information such as the Google Chrome version, BIOS information, CPU information, memory information, network status, power supply information, etc.</p>	 <p>The screenshot shows the 'About System' page in Chrome OS. It features a 'Details' section with 'Expand all...' and 'Collapse all...' buttons. Below is a table of system diagnostic data:</p> <table border="1" data-bbox="655 1232 1492 1792"> <thead> <tr> <th>Key</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>CHROME_VERSION</td> <td>31.0.1650.43 beta</td> </tr> <tr> <td>CHROMEOS_AUERVER</td> <td>https://tools.google.com/service/update2</td> </tr> <tr> <td>CHROMEOS_BOARD_APPID</td> <td>{1E454867-ACF6-5F88-091F-145680D4A7F5}</td> </tr> <tr> <td>CHROMEOS_CANARY_APPID</td> <td>{90F229CE-83E2-4FAF-8479-E368A3493881}</td> </tr> <tr> <td>CHROMEOS_DEVSERVER</td> <td><no value></td> </tr> <tr> <td>CHROMEOS_RELEASE_APPID</td> <td>{1E454867-ACF6-5F88-091F-145680D4A7F5}</td> </tr> <tr> <td>CHROMEOS_RELEASE_BOARD</td> <td>wolf-signed-premkeys</td> </tr> <tr> <td>CHROMEOS_RELEASE_DESCRIPTION</td> <td>4731.50.0 (Official Build) beta-channel wolf</td> </tr> <tr> <td>CHROMEOS_RELEASE_NAME</td> <td>Chrome OS</td> </tr> <tr> <td>CHROMEOS_RELEASE_TRACK</td> <td>beta-channel</td> </tr> <tr> <td>CHROMEOS_RELEASE_VERSION</td> <td>4731.50.0</td> </tr> <tr> <td>CLIENT_ID</td> <td>46FEAC026B4B470090CF0E6A8655735A</td> </tr> <tr> <td>GOOGLE_RELEASE</td> <td>4731.50.0</td> </tr> <tr> <td>LOGDATE</td> <td></td> </tr> <tr> <td>Profile[0] chrome_user_log</td> <td></td> </tr> <tr> <td>Profile[0] login-times</td> <td><not available></td> </tr> <tr> <td>Profile[0] logout-times</td> <td><not available></td> </tr> <tr> <td>xorg.0.log</td> <td></td> </tr> <tr> <td>alsa controls</td> <td></td> </tr> <tr> <td>bios_info</td> <td></td> </tr> <tr> <td>bios_log</td> <td></td> </tr> <tr> <td>bios_times</td> <td></td> </tr> <tr> <td>board-specific</td> <td></td> </tr> </tbody> </table> <p>Each row in the table has an 'Expand...' button to the right. The bottom of the page shows the Chrome OS taskbar with the system tray icons.</p>	Key	Value	CHROME_VERSION	31.0.1650.43 beta	CHROMEOS_AUERVER	https://tools.google.com/service/update2	CHROMEOS_BOARD_APPID	{1E454867-ACF6-5F88-091F-145680D4A7F5}	CHROMEOS_CANARY_APPID	{90F229CE-83E2-4FAF-8479-E368A3493881}	CHROMEOS_DEVSERVER	<no value>	CHROMEOS_RELEASE_APPID	{1E454867-ACF6-5F88-091F-145680D4A7F5}	CHROMEOS_RELEASE_BOARD	wolf-signed-premkeys	CHROMEOS_RELEASE_DESCRIPTION	4731.50.0 (Official Build) beta-channel wolf	CHROMEOS_RELEASE_NAME	Chrome OS	CHROMEOS_RELEASE_TRACK	beta-channel	CHROMEOS_RELEASE_VERSION	4731.50.0	CLIENT_ID	46FEAC026B4B470090CF0E6A8655735A	GOOGLE_RELEASE	4731.50.0	LOGDATE		Profile[0] chrome_user_log		Profile[0] login-times	<not available>	Profile[0] logout-times	<not available>	xorg.0.log		alsa controls		bios_info		bios_log		bios_times		board-specific	
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bios_times																																																		
board-specific																																																		

Table 22. View system information (continued)


Commands	Action and Purpose	Screenshot
<p>Chrome:net-internals</p>	<p>View advanced networking information.</p>	 <p>The screenshot shows the Chrome browser interface at the URL chrome://net-internals/#export. The 'Export' menu is open, listing options: Capture, Export, Import, Proxy, Events, Waterfall, Timeline, DNS, Sockets, SPDY, QUIC, Pipelining, Cache, Modules, Tests, Log Visualizer, HSTS, Logs, Bandwidth, and Prerender. The 'Export' option is highlighted. The main content area shows a red header 'capturing events (4)' and a text box with the message: '...e information (cookies and credentials). ... went wrong here. (These notes will be ... he dump file. Be sure to mention the ... , so investigators know what to look ...'. Below this is a blue link that says '...de data for bug reports'. The Chrome OS taskbar is visible at the bottom.</p>

Getting help

Topics:

- [Contacting Dell](#)

Contacting Dell

 **NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Go to **Dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.