

# Dell Chromebook 3400

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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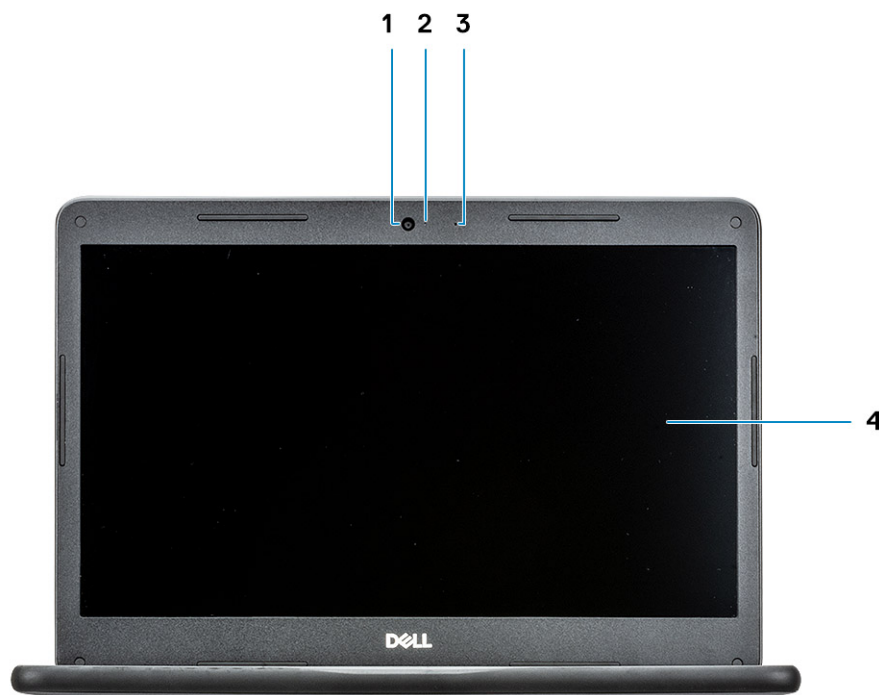
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# Chassis overview

Topics:

- Front
- Left
- Right
- Palmrest
- Bottom

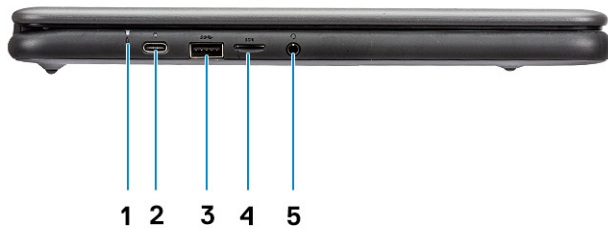
## Front



- 1 Camera
- 3 Microphone

- 2 Camera status light
- 4 Display panel

# Left



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

# Right



- 1 USB 3.1 Gen 1 port
- 2 USB Type-C port with Power delivery
- 3 Wedge-Shaped lock slot

# Palmrest



1 Power button

2 Keyboard

3 Touchpad

# Bottom



1 Service Tag label

2 Speakers

# System specifications

## 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 N4100 Quad core Processor (6 W TDP, 4 core count/ 4 threads, 4 MB cache, 2.40 GHz)	Intel UHD Graphics 600	No
Intel Celeron N4000 Dual core Processor (6 W TDP, 2core count/ 2 threads, 4 MB cache, 2.60 GHz)	Intel UHD Graphics 600	No

## Memory

**Table 3. Memory specifications**

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	8 GB
Type	LPDDR4 (On-board memory)
Speed	2400 MHz



# Storage

**Table 4. eMMC Storage specifications**

Type	Capacity	MMC Interface	Voltage
eMMC	32 GB	eMMC V5.1	3.3 V
eMMC	64 GB	eMMC V5.1	3.3 V

# Media card-reader

**Table 5. Media-card reader specifications**

Feature	Specifications
Type	One microSD card slot
Supported cards	<ul style="list-style-type: none"><li>SD-card (SD 3.0) push-push via transfer card (Optional)</li><li>microSD</li></ul>

# Audio

**Table 6. Audio specifications**

Feature	Specifications
Controller	Dialog DA7219
Stereo conversion	Supported
Type	High Definition Audio
Speakers	Supported
Internal interface	I2S
External interface	Digital microphone input on camera module Headset combo jack (stereo headphones/microphone-in)
Internal speaker amplifier	Supported
External volume controls	Supported
Speaker output:	<ul style="list-style-type: none"><li>Average: <math>\_2\_ W</math></li><li>Peak: <math>\_2.5\_ W</math></li></ul>
Microphone	Supported
Subwoofer output	Not supported

# Video card

Table 7. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 600	UMA	<ul style="list-style-type: none"><li>Intel Celeron N4100 Quad core CPU</li><li>Intel Celeron N4000 Dual core CPU</li></ul>	Integrated	Shared system memory	Supported via USB Type C	4096x2304 @ 60Hz

# Camera

Table 8. Camera specifications

Feature	Specifications
Camera type	HD fixed focus
Resolution	Still image: HD resolution Up to 1280 X 720 (1 MP) Video: HD resolution Up to 1280 X 720 (1 MP)
Diagonal viewing angle	74.9 degree
Sensor type	CMOS sensor technology

# Wireless

Table 9. Wireless specifications

Specifications
Intel Dual Band Wireless-AC 9560 802.11ac 160MHz (2x2) Wi-Fi + Bluetooth 5 M.2 1216 solder down

# Ports and connectors

Table 10. Ports and connectors

Feature	Specifications
Memory card reader	One microSD card reader
USB	<ul style="list-style-type: none"><li>Two USB 3.1 Gen 1 ports</li><li>Two USB Type-C port with Power delivery</li></ul>
Security	Wedge-Shaped lock slot

Feature	Specifications
Audio	One Universal Jack (Global Headset Jack + microphone + line in support) port
Video	Supported via USB Type C
Lock slot	Wedge-Shaped lock slot

## Display

**Table 11. Display specifications**

Feature	Specifications
Type	<ul style="list-style-type: none"> <li>HD: 14.0 inch, HD TN (1366x768) 220 nits typ and 187 nits min, Anti-Glare; (16:9)</li> <li>FHD: 14.0 inch, FHD IPS (1920x1080), 220 nits typ and 187 nits min, Anti-Glare; (16:9)</li> </ul>
Height (Active area)	<ul style="list-style-type: none"> <li>HD: 173.95 mm</li> <li>FHD: 173.95 mm</li> </ul>
Width (Active area)	<ul style="list-style-type: none"> <li>HD: 309.4 mm</li> <li>FHD: 309.4 mm</li> </ul>
Diagonal	355.6 mm (14.0 inch)
Megapixels	<ul style="list-style-type: none"> <li>HD: 1.05</li> <li>FHD: 2.07</li> </ul>
Pixels Per Inch (PPI)	<ul style="list-style-type: none"> <li>HD: 112</li> <li>FHD: 157</li> </ul>
Contrast ratio	<ul style="list-style-type: none"> <li>HD: 400:1</li> <li>FHD: 700:1</li> </ul>
Luminance/Brightness (typical)	220 nits
Refresh rate	60 Hz
Horizontal viewing angle (min)	HD +40/- 40 degrees
Vertical viewing angle (min)	HD +10/-30 degrees
Power consumption (max)	<ul style="list-style-type: none"> <li>HD: 3.0 W</li> <li>FHD: 3.7 W</li> </ul>

# Keyboard

Table 12. Keyboard specifications

Feature	Specifications
Number of keys	<ul style="list-style-type: none"><li>• 74 (U.S. and Canada)</li><li>• 75 (UK)</li><li>• 76 (Brazil)</li><li>• 78 (Japan)</li></ul>
Size	Full sized <ul style="list-style-type: none"><li>• X= 19.05 mm (0.75 inches) key pitch</li><li>• Y= 18.05 mm (0.71 inches) key pitch</li></ul>
Backlit keyboard	No
Layout	QWERTY

# Touchpad

Table 13. Touchpad specifications

Feature	Specifications
Resolution	1229 x 749
Dimensions	<ul style="list-style-type: none"><li>• Weight: 102.40 mm (4.03 inches)</li><li>• Height: Y-axis: 62.40 mm (2.45 inches)</li></ul>
Multi-touch	Supports five fingers

# Operating system

Table 14. Operating system

Feature	Specifications
Operating systems supported	Google Chrome Operating system

# Battery

Table 15. Battery

Feature	Specifications
Type	3-cell lithium-ion (42 WHr)
Dimension	Width 97.15 mm (3.82 inches) 184.15 mm (7.25 inches)

Feature	Specifications
	Depth 5.90 mm (0.23 inches)
	Height
Typical Amp-hour capacity	42 WHr
Weight (maximum)	0.2 kg (0.44 lb)
Voltage	11.40 VDC
Life span	300 discharge / charge cycles
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions
Temperature range: Operating	0°C to 35°C (32°F to 95°F)
Temperature range: Storage	-20°C to 60°C (-40°F to 149°F)

## Power adapter

**Table 16. Power adapter specifications**

Feature	Specifications (Pecos 65 W USB-C)
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	20V/3.25A (Continuous) 15V/3A (Continuous) 9.0V/3A (Continuous) 5.0V/3A (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 17. Dimensions and weight

Feature	Specifications
Height	Front: 22.8 mm (0.898 inches) Rear: 22.8 mm (0.898 inches)
Width	339.6 mm (13.370 inches)
Depth	236.9 mm (9.327 inches)
Weight	1.563 kg (3.45 lbs)

# Computer environment

This topics lists the operating conditions of Chromebook 3400 system.

Table 18. 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% (non-condensing) <b>i</b>   <b>NOTE: Maximum dew point temperature = 26°C</b>	0% to 95% (non-condensing) <b>i</b>   <b>NOTE: Maximum dew point temperature = 33°C</b>
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 19. Security

Feature	Specifications
Firmware TPM	Optional
Cable lock	Noble lock

# Services and support

Table 20. Services and support specifications

Feature	Specifications
1-Year Mail-In Service	Standard
Onsite NBD	Yes
 <b>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.</b>	
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.

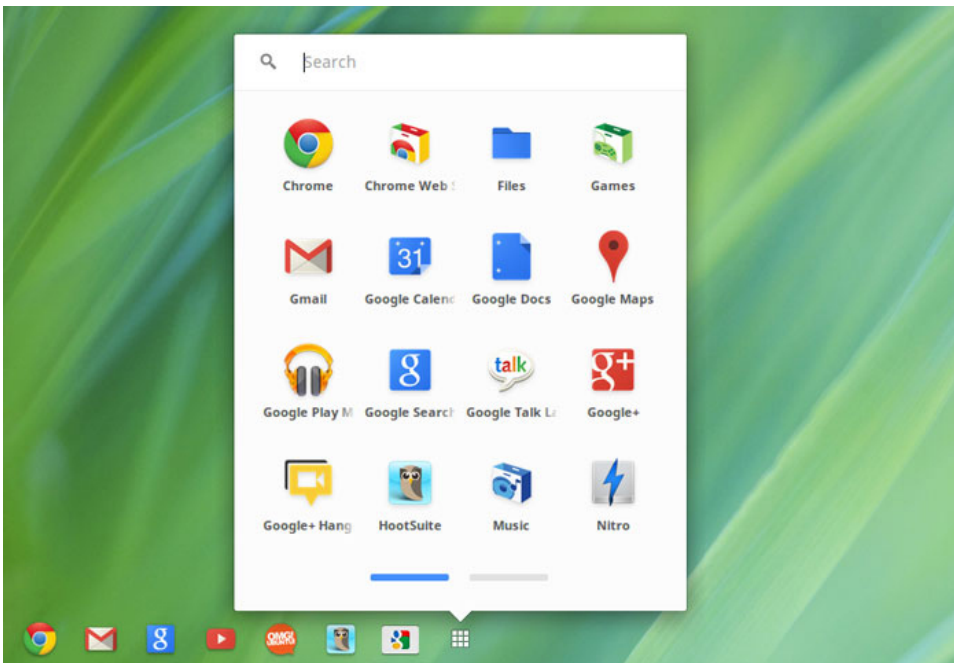
Topics:

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

## Operating system

This page contains information about the operating system used by the Dell Chromebook 3400.

### 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

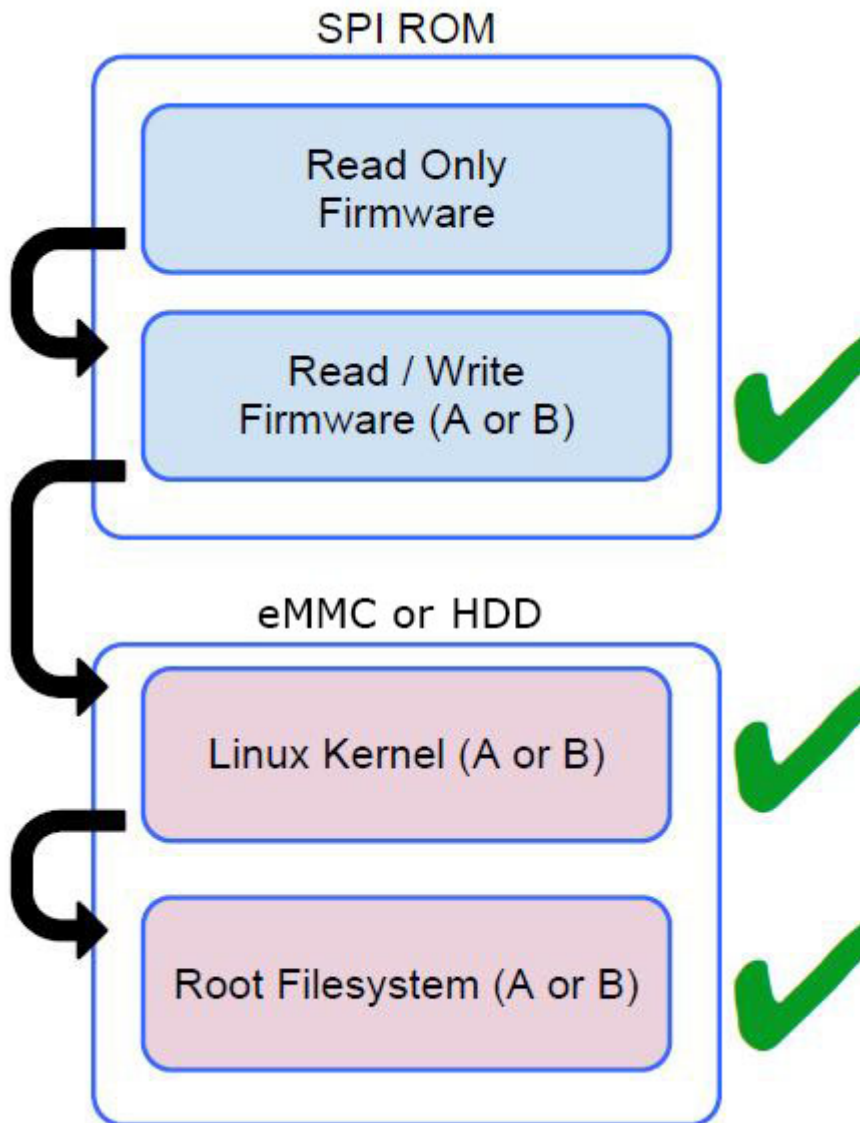
- Speed
- Simplicity
- Security
- Updatability
- Synchronisability
- High power at low cost
- Easy to learn and use



- 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

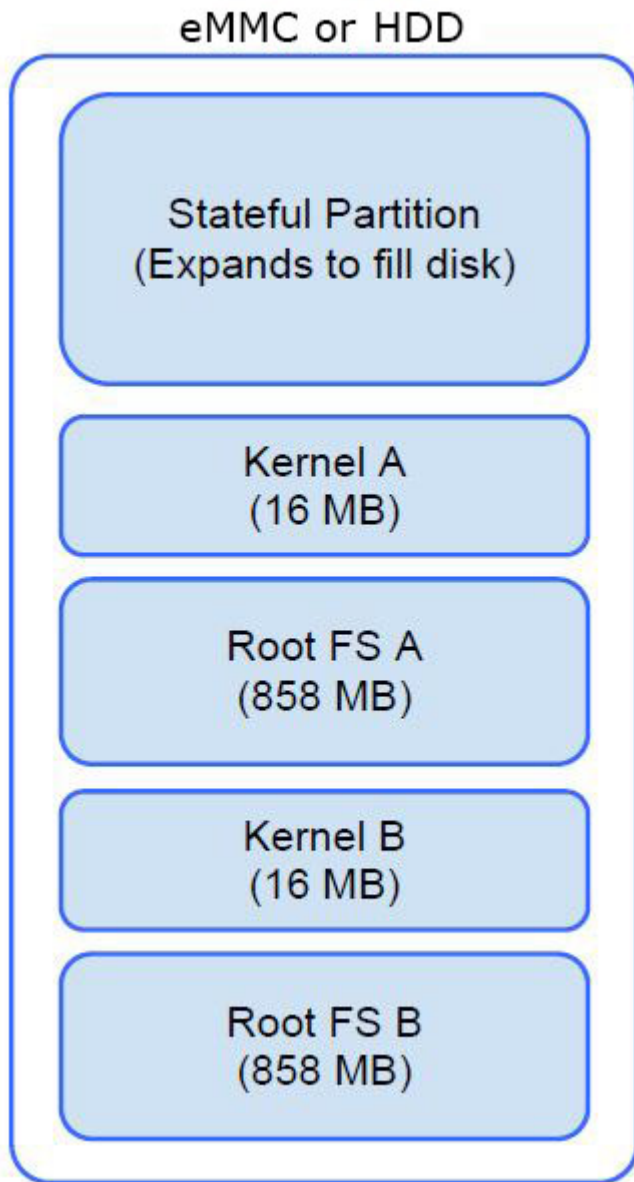


Read Only firmware verifies the integrity of Read/Write (R/W) firmware. R/W firmware verifies the active Linux kernel. During run time, the kernel verifies each block read from disk.

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



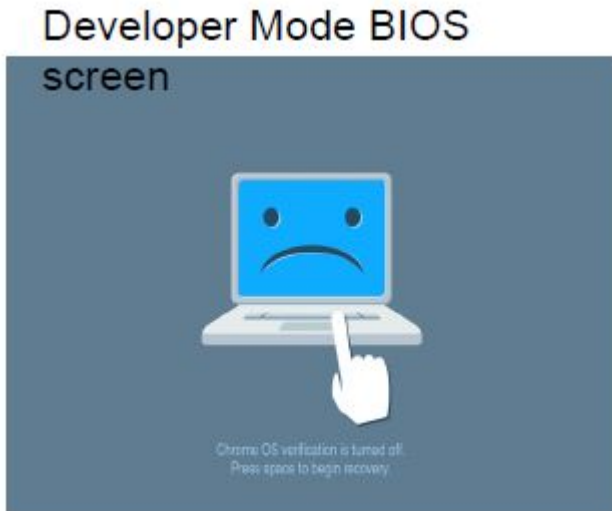
There are two copies of Chrome OS on disk: an active copy and a backup copy. Each copy consists of a kernel partition and a root file system. The backup copy is updated automatically in the background. Users only need to reboot. The partition contains encrypted user data and is also used in the factory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

# Developer and Recovery mode

Table 21. Developer and Recovery mode

## Developer Mode

## Recovery Mode



- 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.

- 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 22. Difference between Chromium and Chrome OS**

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

## View system information

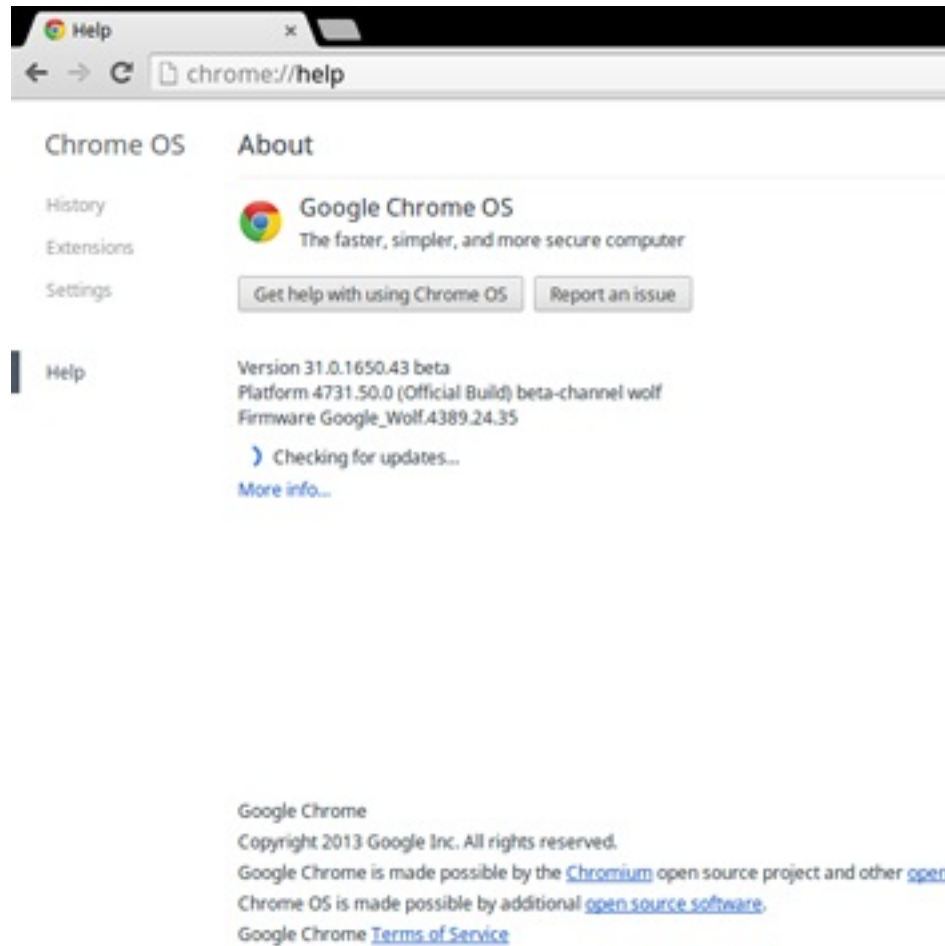
This page contains all the information about viewing system information for the Dell Chromebook.

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.

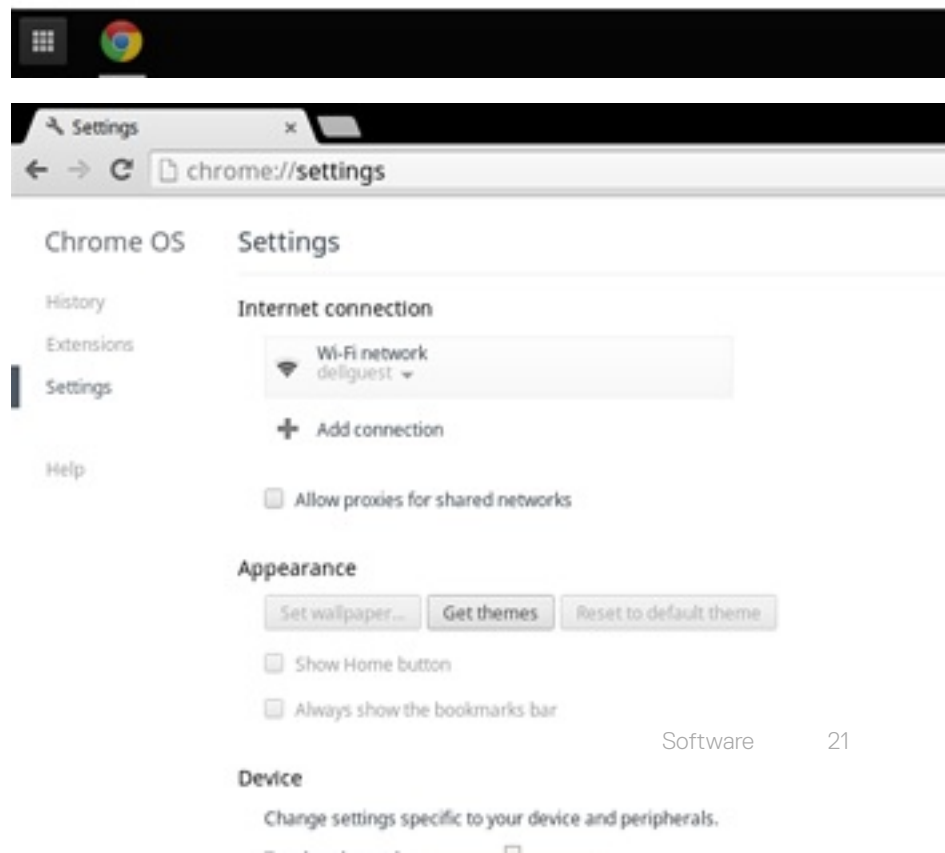
Table 23. View system information

Commands	Action and Purpose
Chrome:help	View basic OS information.

Screenshot



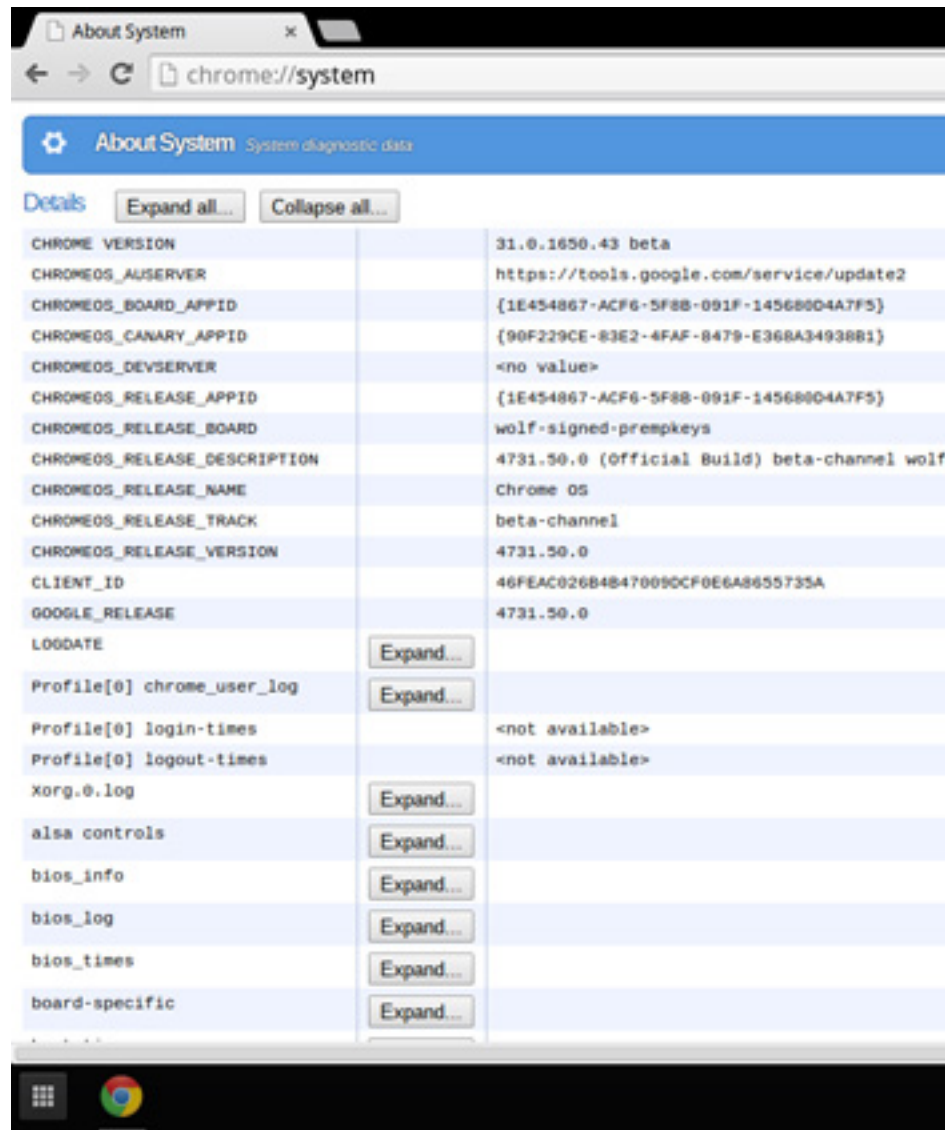
Chrome:settings	View information such as screen resolution options (Device>Display settings), touchpad, and other basic hardware information.
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**Commands****Action and Purpose****Screenshot**

Chrome:system

View advanced system information such as the Google Chrome version, BIOS information, CPU information, memory information, network status, power supply information, etc.



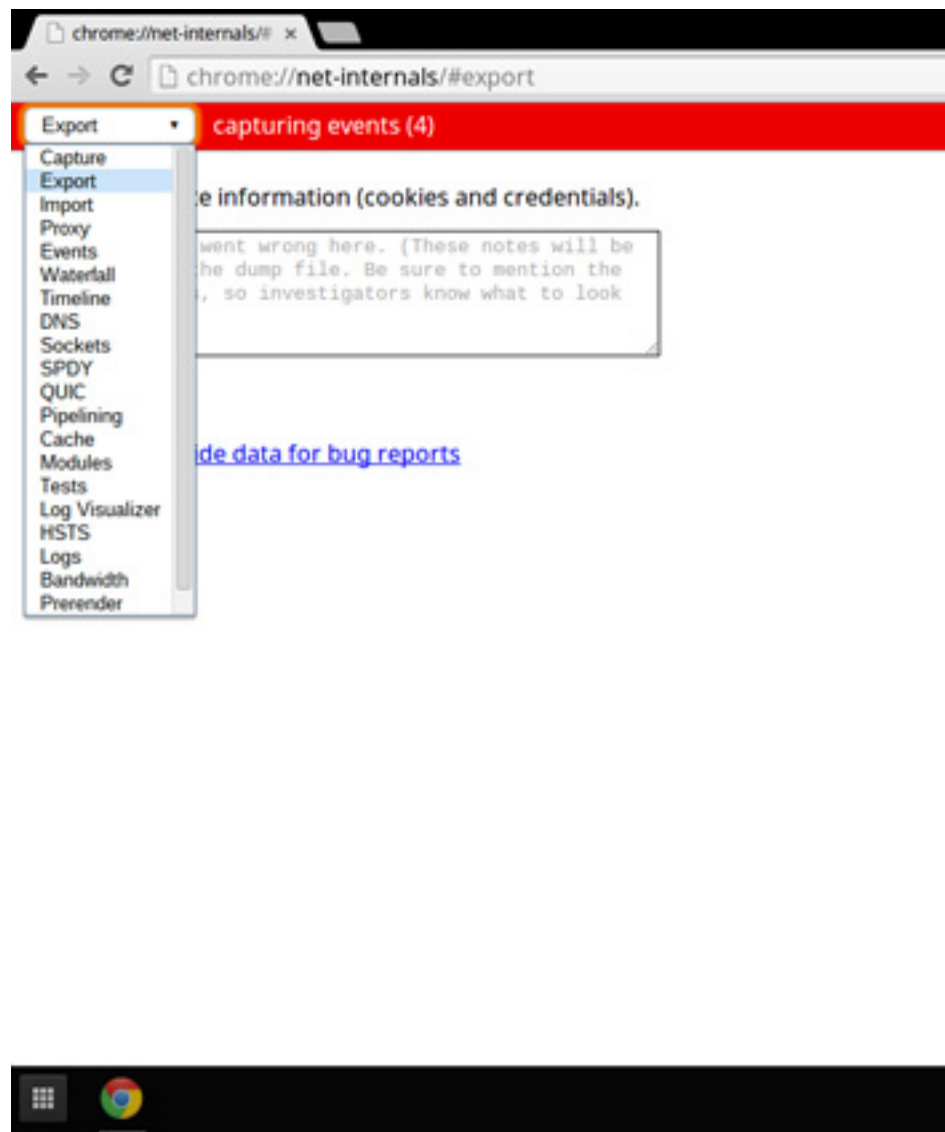
**Commands**

**Action and Purpose**

**Screenshot**

Chrome:net-internals

View advanced networking information.



# Getting help

## Contacting Dell

① **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.