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.

Contents

Chassis overview

Topics:

- Front
- Left
- Right
- Palmrest
- Bottom

Front
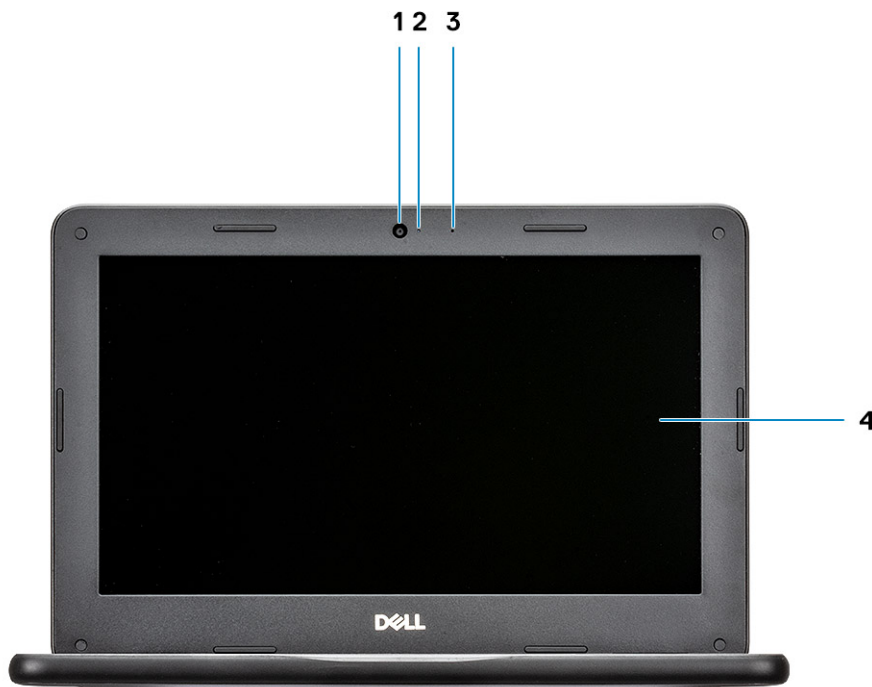
1	Camera	2	Camera status light
3	Microphone	4	Display panel

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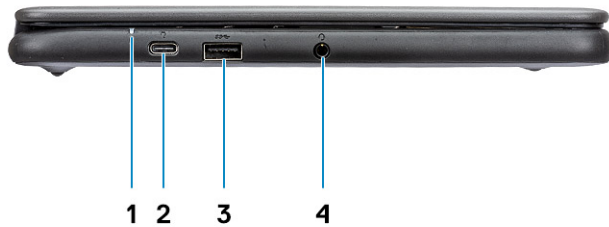
1	Power/Battery status indicator	2	USB Type-C port with Power delivery
3	USB 3.1 Gen 1 port	4	Headset port

Right

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

Palmrest

| 1 | Power button | 2 | Keyboard |
| 3 | Touchpad | | |

Bottom
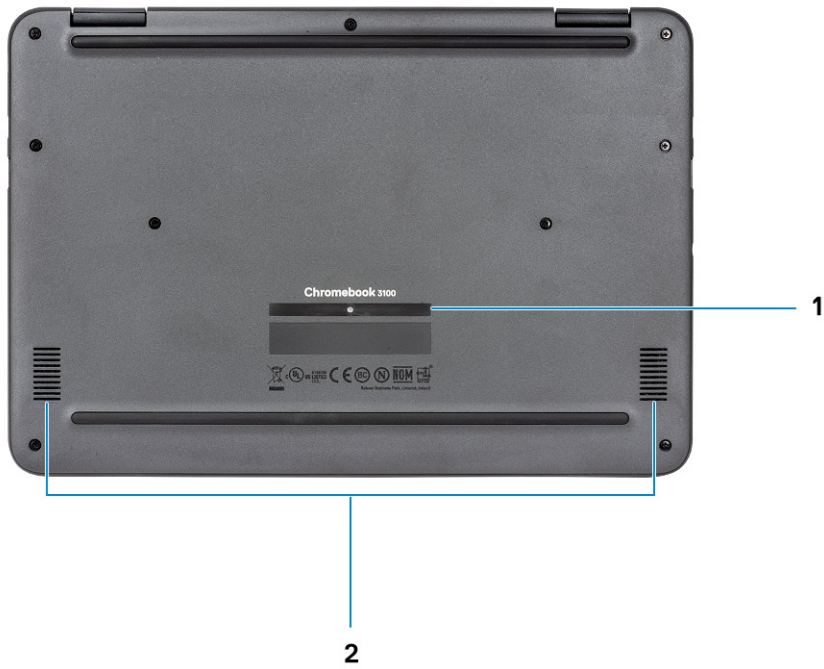
1	Service Tag label		2	Speaker

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 N4000 Dual core processor (6 W TDP, 2 core count/ 2 threads, 4 MB cache, 2.6 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 (On-board memory)
Speed	2400 MHz

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
External Speaker Amp	MAX98357A
External volume controls	Supported
Speaker output:	• 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
USB	• Two USB 3.1 Gen 1 ports • Two USB Type-C Gen1 ports with power delivery
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

Feature	Specifications
Diagonal	293.83 mm (11.6 inch)
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	• 74 (U.S. and Canada) • 75 (UK) • 76 (Brazil) • 78 (Japan)
Size	Full sized • 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	• 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)	
Dimension	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)	
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 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)

Feature	Specifications
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)	0% to 95% (noncondensing)
	NOTE: Maximum dew point temperature = 26°C	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

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

Services and support

Feature	Specifications
1-Year Mail-In Service	Standard
Onsite NBD	Yes
NOTE: Service many 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.	
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

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

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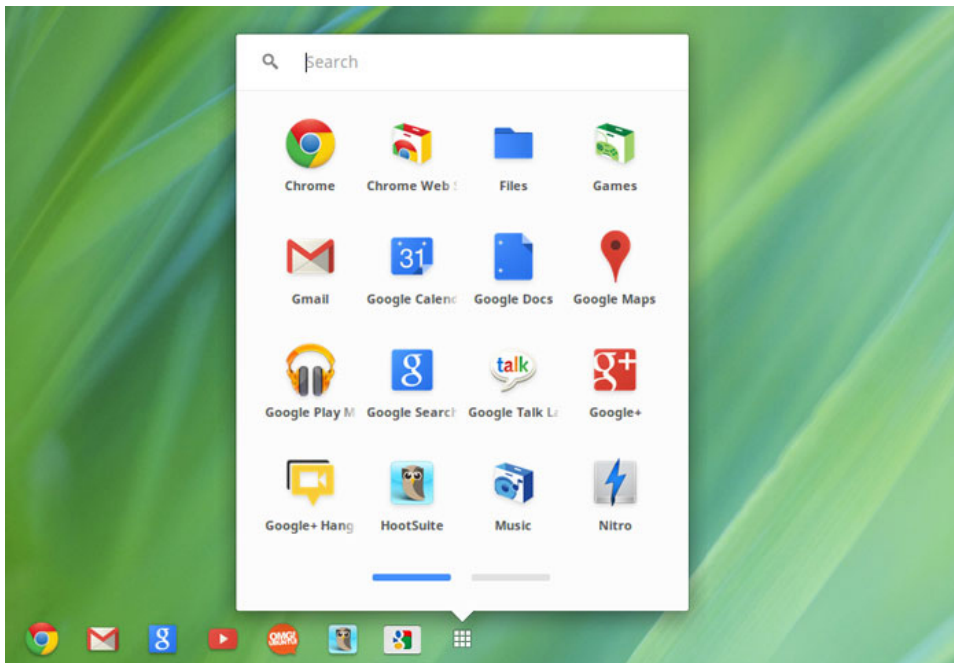
Chromebooks are powered by the Google Chrome operating system, based on Google's popular Chrome browser. It has been developed to provide a fast, simple, and more secure computing experience for users who spend most of their time online.

Key Benefits

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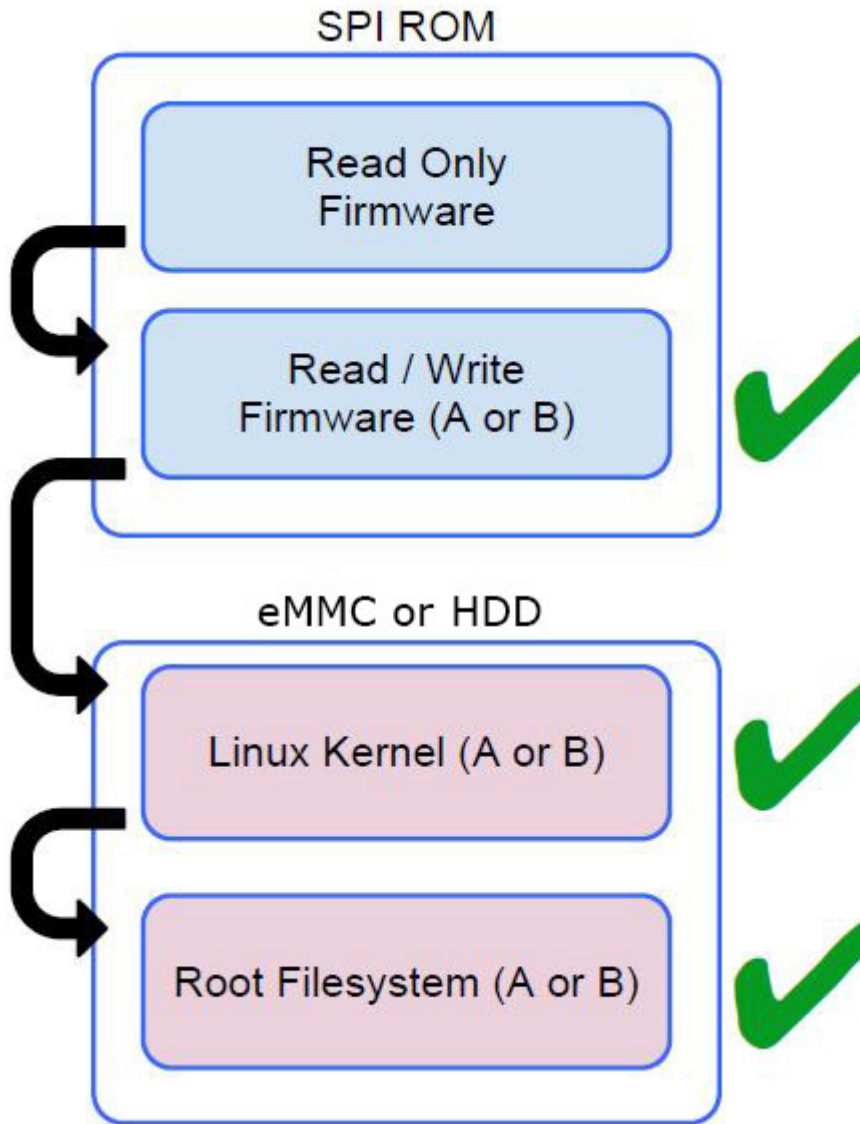
Read Only firmware verifies the integrity of Read/Write (R/W) firmware. R/W firmware verifies the active Linux kernel. During run time, the kernel verifies each block read from disk.

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

eMMC or HDD

Stateful Partition
(Expands to fill disk)

Kernel A
(16 MB)

Root FS A
(858 MB)

Kernel B
(16 MB)

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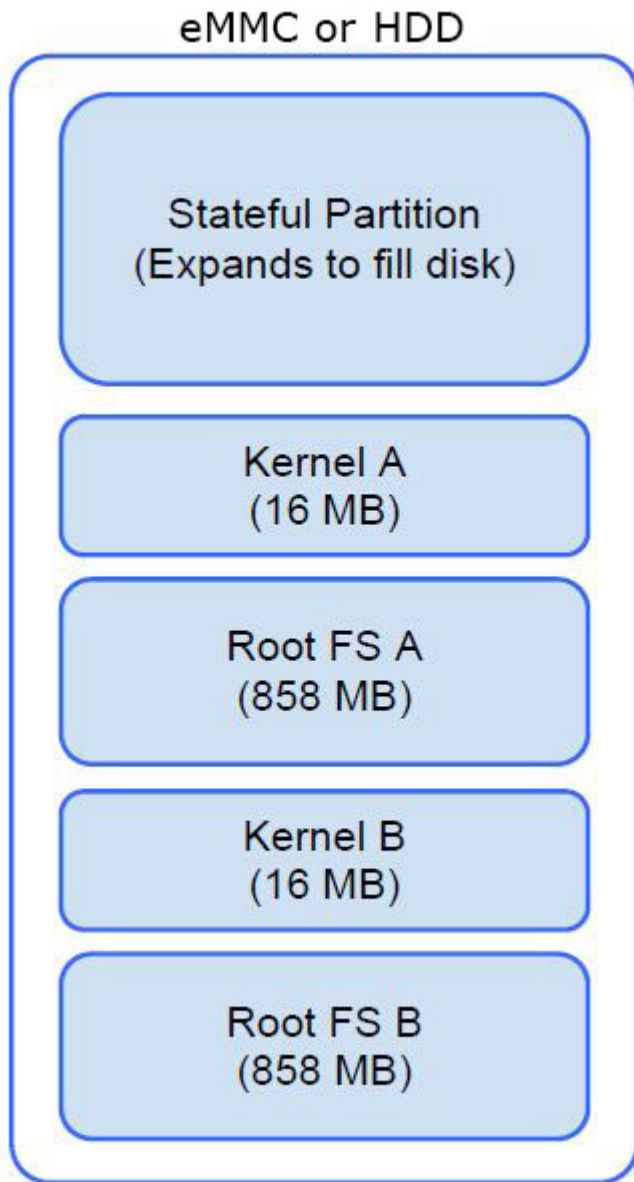
There are two copies of Chrome OS on disk: an active copy and a backup copy. Each copy consists of a kernel partition and a root file system. The backup copy is updated automatically in the background. Users only need to reboot. The partition contains encrypted user data and is also used in the factory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

Developer and Recovery mode

Table 20. Developer and Recovery mode
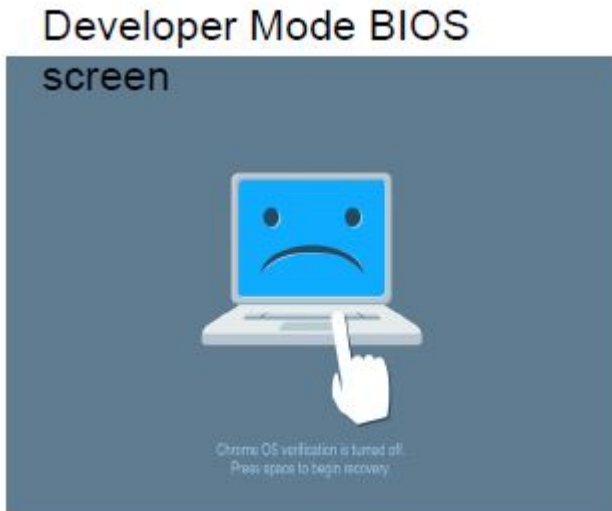
Developer Mode	Recovery Mode
• Used to boot without verification. • Can be turned on via key combination during boot. • Stateful partition is wiped during transitions. • Used in the factory to boot test image.	• Allows a user to reinstall the Chrome OS from a USB key or SD card. • Recovery mode is entered if verified boot fails. • A user can force recovery mode via a key combination during boot.
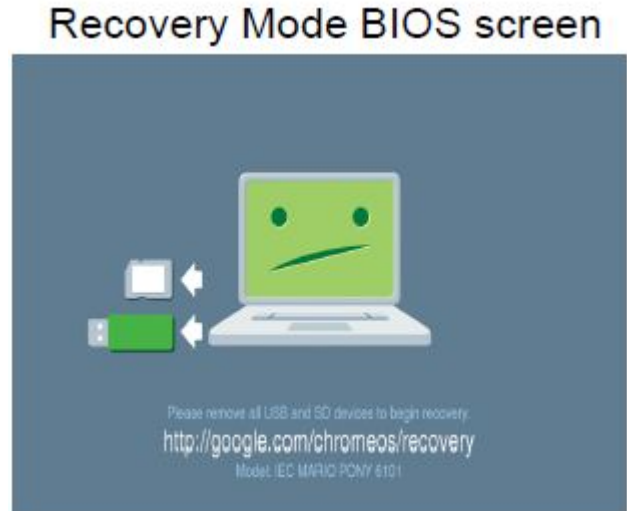
Coreboot and U-boot Custom Firmware

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 21. Difference between Chromium and Chrome OS
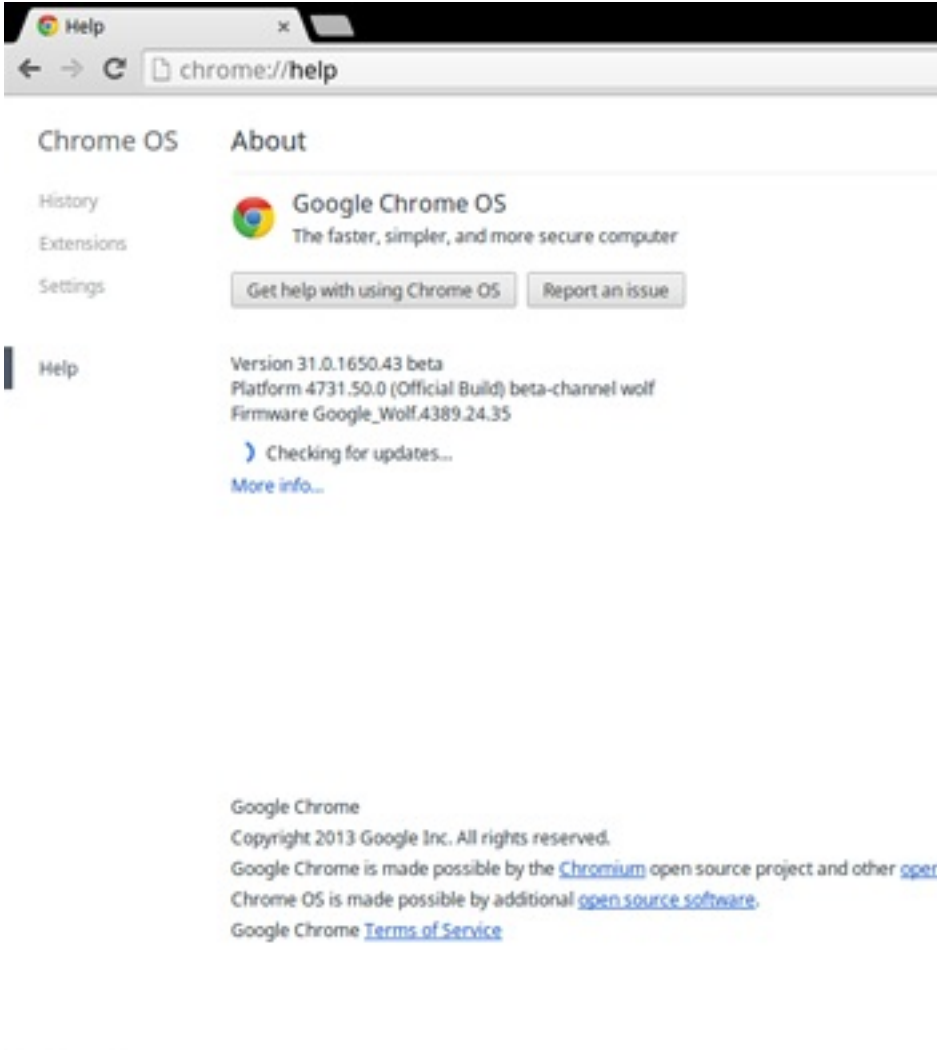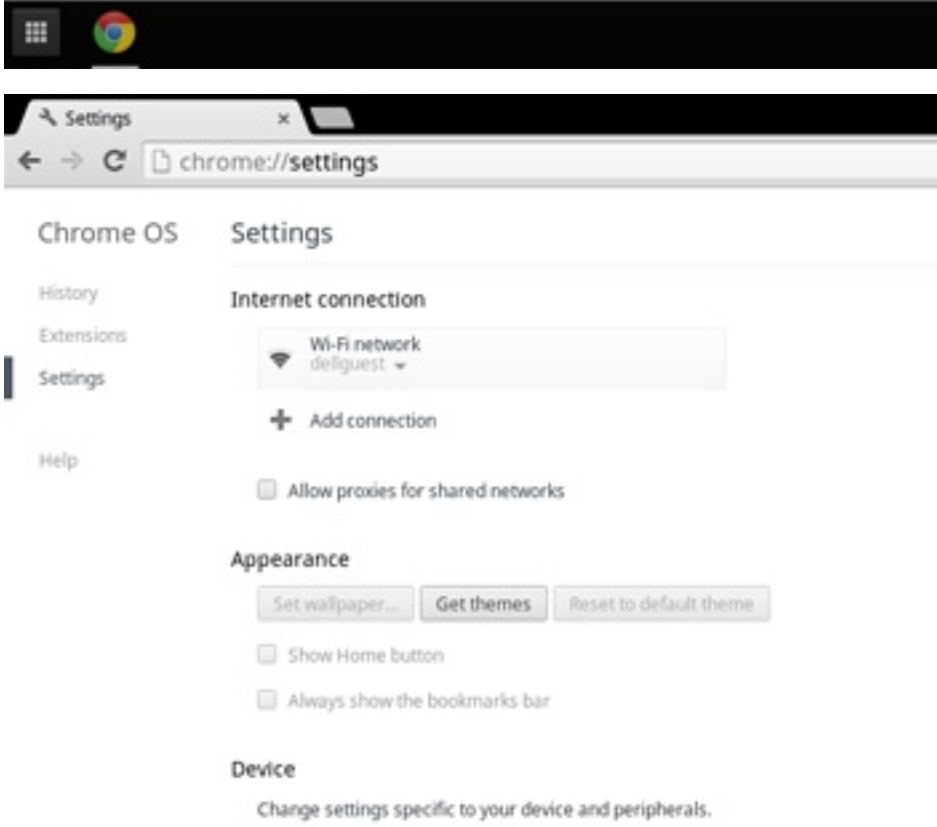
Difference between Chromium and Chrome OS	
Chromium OS	Chrome OS
• Is an open source project: http://www.chromium.org/chromium-os • Runs on regular PCs and Chrome devices	• Is based on Chromium OS • Only runs on the Chrome devices with required hardware features (TPM, RO firmware, recovery button, developer 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
Chrome:help	View basic OS information.	
Chrome:settings	View information such as screen resolution options (Device>Display settings), touchpad, and other basic hardware information.	

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.	
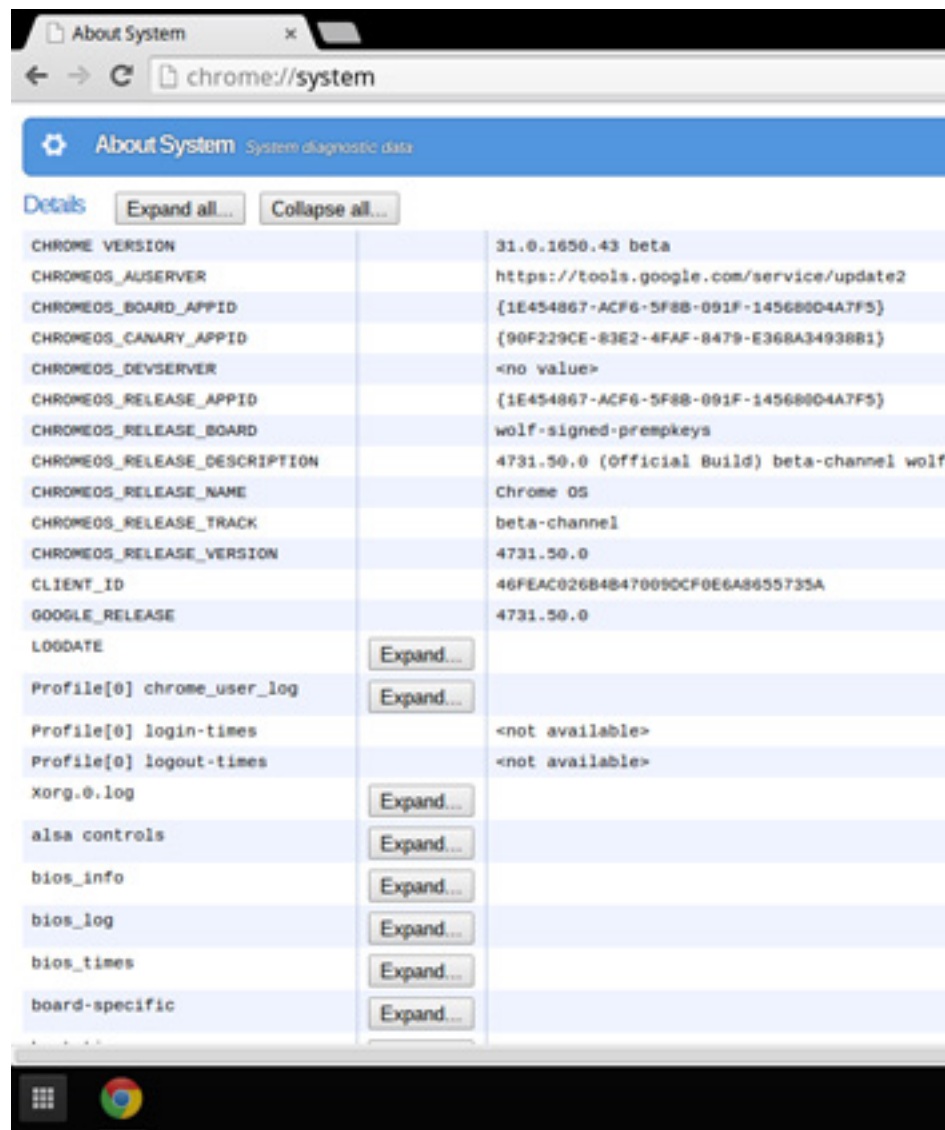
Commands	Action and Purpose	Screenshot
Chrome:net-internals	View advanced networking information.	

Getting help

Contacting Dell

ⓘ **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.