Dell Technologies

Statement of Volatility – Dell Latitude 3445 Chromebook

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

The Dell Latitude 3445 Chromebook contains both volatile and non-volatile components. Volatile components erase their data immediately after power is removed from the component. Non-volatile components continue to retain their data even after power is removed from the component. The following Non-volatile components are present on the Dell Latitude 3445 Chromebook system board.

Table 1. List of Non-Volatile Components on System Board

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to erase data)
SSD drive(s)	J11, M.2-2230	Non-volatile magnetic media, various sizes in GB. SSD (solid-state flash drive).	Yes	Low-level format
eMMC drive(s)	U271	Non-volatile magnetic media, various sizes in GB. eMMC (solid-state flash drive).	Yes	Low-level format
Embedded Flash in embedded controller NPCX993FA0BX	U4	512 KB of embedded Flash memory	No	Not applicable
System BIOS	U68 (16 MB)	Non-volatile memory, Video BIOS for basic boot operation, PSA (onboard diagnostics), PXE diagnostics.	No	Not applicable
CBI-Chrome board information EEPROM	U151	Non-volatile memory	No	Not applicable
eMMC ROM	U273	Non-volatile memory	No	Not applicable
LCD Panel EEDID EEPROM	Part of panel assembly	Non-volatile memory, stores panel manufacturing information, display configuration data	No	Not applicable
System Memory – LPDDR5/x	On-board system memory, U2, U3	Volatile memory in OFF state (see state definitions later in text)	Yes	Power off system
RTC CMOS	U1 (APU)	Non-volatile memory 256 bytes Stores CMOS information	No	Not applicable
Video memory – frame buffer	For UMA platform: Using system memory	Volatile memory in off state. UMA uses main system memory size that is allocated out of main memory.	No	Power off system
TPM Controller (H1 Chip)	U65	128 KB of user accessible SRAM	Yes	Capable of retention during low power states
Touch screen Embedded Flash	On touch screen module	Non-volatile memory	No	Not applicable
Digital VCORE controller	U152	Non-volatile memory	No	Not applicable
Camera ISP Flash ROM	On Camera module	Non-volatile memory, 4 M-bit	No	Not applicable

⚠ **CAUTION: All other components on the system board erase data if power is removed from the system. Primary power loss (unplugging the power cord and removing the battery) destroys all user data on the memory (LPDDR5, 5200 MT/s). Secondary power loss (removing the on-board coin-cell battery) destroys system data on the system configuration and time-of-day information.**

In addition, to clarify memory volatility and data retention in situations where the system is put in different ACPI power states the following is provided (those ACPI power states are S0, S4 and S5):

- S0 state is the working state where the dynamic RAM is maintained and is read/write by the processor.
- Modern standby is a standby mode state that is different from S3 mode. In this state, the dynamic RAM is maintained.

- S4 is called "suspend to disk" state or "hibernate" mode. There is no power. In this state, the dynamic RAM is not maintained. If the system has been commanded to enter S4, the operating system will write the system context to a non-volatile storage file and leave appropriate context markers. When the system is coming back to the working state, a restore file from the non-volatile storage can occur. The restore file has to be valid. Dell systems will be able to go to S4 if the operating system and the peripherals support S4 state.
- S5 is the "soft" off state. There is no power. The OS does not save any context to wake up the system. No data will remain in any component on the system board, that is, cache or memory. The system will require a complete boot when awakened. Since S5 is the shut off state, coming out of S5 requires power on which clears all registers.

The following table shows all the states supported by Dell Latitude 3445 Chromebook:

Model Number	S0	Modern standby	S4	S5
Dell Latitude 3445 Chromebook	v	v	-	v

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