Statement of Volatility – Dell Chromebook 3110 2-in-1

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

The Dell Chromebook 3110 2-in-1 contains both volatile and non-volatile components. Volatile components lose 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 Chromebook 3110 2-in-1 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 prevent loss of data)
Storage	eMMC (Flash module): U14	Non-Volatile magnetic media, various sizes in GB. eMMC (Embedded Multimedia Card).	No	Low level format
System BIOS/EC	U11 (16 MB) U12 (2K)	Non-Volatile memory, Video BIOS for basic boot operation	No	NA
USB-Type C TCPC	U9	Non-Volatile memory	No	NA
LCD Panel EEDID EEPROM	Part of panel assembly	Non-Volatile memory, Stores panel manufacturing information, display configuration data	No	NA
System Memory – LPDDR4x memory	On board LPDDR4x memory: U4301, U4401, U4601, U4701	Volatile memory in OFF state (see state definitions later in text)	Yes	Power off system
Video memory – frame buffer	For UMA platform: Using system memory	Volatile memory in off state. UMA uses main system memory size allocated out of main memory.	No	Power off system
Intel ME Firmware	Combine on BIOS ROM	Non-Volatile memory, Intel ME firmware for system configuration, security, and protection	No	N/A
Touch screen Embedded Flash	N/A	Non-Volatile memory	No	N/A
Digital IMVP9 controller	U10	Non-Volatile memory	No	N/A

⚠ CAUTION: All other components on the system board lose 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 (LPDDR4x, 2933 MHz). 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, S0ix, S4 and S5):

S0 state is the working state where the dynamic RAM is maintained and is read/write by the processor.

S0ix 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 OS 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 OS and the peripherals support S4 state. Win 7 and Win 8 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, i.e., 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 Chromebook 3110 2-in-1:

Model Number	S0	S0ix	S4	S5
Dell Chromebook 3110 2-in-1	v	v		v