

## Statement of Volatility – Dell Latitude 9330

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

The Dell Latitude 9330 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 Latitude 9330 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)
Embedded Flash in embedded controller MEC5200	UE1	384KB Code/Data SRAM 320KB Code/64KB Data optimized for performance	No	N/A
LCD Panel EEDID EEPROM	Part of panel assembly	Non-Volatile memory, Stores panel manufacturing information, display configuration data.	No	N/A
System BIOS/EC	UC2 (64MB)	Non-Volatile memory, System BIOS, embedded controller and Video BIOS for basic boot operation, PSA (on board diags), PXE diags.	No	N/A
System Memory – LPDDR5 on board memory	2-channel on board memory: UD1, UD2	Volatile memory in OFF state. System memory size will depend on LPDDR5 ,32Gb/64Gb/128Gb (X64) per package.	No	N/A
RTC CMOS – BBRAM (battery backed up)	UC1 (PCH)	Non-Volatile memory, 256 Bytes. Stores CMOS information.	No	N/A
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	N/A
Intel ME Firmware	Embedded in system BIOS UC2	Non-Volatile memory, 64MB*1, Intel ME firmware for system configuration, security, and protection	No	N/A
SSD drive(s)	M.2 - 2230	Non-Volatile magnetic media, various sizes in GB. SSD (solid state flash drive).	YES	Low level format
Thunderbolt EEPROM	UTS1	Non-Volatile memory. 8Mbit (1MB) for Burnside bridge retime F/W.	No	N/A
Touch screen Embedded Flash	Part of panel assembly	Non-Volatile memory	No	N/A
ISH	Combine on BIOS ROM	Non-Volatile memory.	No	N/A
TPM Controller	U712	Non-Volatile memory, 384K bits	No	N/A
MCU ATSAM21E16B	U717	64KB Code 8KB data SRAM	No	N/A
CVF CLOVER_FALLS	UCVF1	8KB Code of ACE 2.5MB data SRAM of ACE 1MB SRAM of PSE	No	N/A

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (Action necessary to prevent loss of data)
PD Controller FW	Embedded in system BIOS UC2	Non-Volatile memory.	No	N/A
Security Controller Serial Flash Memory	U1 (up-sell USH daughter board)	Non-Volatile memory, 128 Mbit (16Mbyte)	No	N/A
Fingerprint Sensor	Module	USB interface of embedded Flash memory	No	N/A
Touch Pad	Module	I2C interface of embedded Flash memory	No	N/A
Camera ISP Flash ROM	On Camera module	Non-Volatile memory, 4k-bit	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 (LPDDR5, 5200 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, Modern standby, 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 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 Latitude™ 9330:

Model Number	S0	Modern Standby	S4	S5
Dell Latitude 9330	v	v	v	v