

Statement of Volatility – Latitude 5440

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

Latitude 5440 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 Latitude 5440 system board.

Table 1. List of non-volatile components on the system board

Description	Reference designator	Volatility description	User accessible for external data	Remedial action (action necessary to erase data)
LCD Panel EEDID EEPROM	Part of panel assembly	Non-Volatile memory; Stores panel manufacturing information and display configuration data.	No	N/A
EC	UE1 (EC MEC5200M)	384 KB Code/Data SRAM	No	N/A
System BIOS	UC2/UC6	Non-Volatile memory, Video BIOS for basic boot operation, PSA (onboard diagnostics), and PXE diagnostics.	No	N/A
System Memory – DDR5 memory	Two SODIMM connectors: JDIMM1,2 present	Volatile memory in OFF state NOTE: See state definitions later in text. One to two modules must be populated.	Yes	Power off system
System memory SPD EEPROM	On System memory SODIMM(s) JDIMM1,2 present	Non-Volatile memory 512 bytes. Stores memory manufacturer data and timing information for correct operation of system memory.	No	N/A
RTC CMOS	UC1	Non-Volatile memory, 256 bytes. Stores CMOS information.	No	Remove the onboard coin-cell battery
Video memory – frame buffer	For UMA platform: using system DDR5 For DSC platform: UV34, UV35	Volatile memory in off state. UMA uses main system memory size allocated out of main memory. Discrete graphics system uses 2 GB GDDR6.	No	Power off system
Security Controller serial flash memory	U1 (up-sell USH daughter board)	Non-Volatile memory, 128 Mbit (16 MB)	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
TPM Controller	UZ4	Non-Volatile memory	No	N/A

Description	Reference designator	Volatility description	User accessible for external data	Remedial action (action necessary to erase data)
Thunderbolt EEPROM	UT7	Non-Volatile memory	Thunderbolt EEPROM	N/A
Touchscreen Embedded Flash	N/A	Non-Volatile memory	No	N/A
Digital IMVP9.1 controller	PU601	Non-Volatile memory, 13344 bits (full configuration size) Digital IMVP9.1 controller. (OTP space supports up to four full configurations).	No	N/A
Intel ME Firmware	Combine on BIOS ROM	Non-Volatile memory, Intel ME firmware for system configuration, security, and protection.	No	N/A
Camera ISP Flash ROM	On Camera module	Non-Volatile memory, 4M-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. 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 must be valid. Dell systems will be able to go to S4 if the OS 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, for example, 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.

Table 2. Power states supported by Latitude 5440

Model number	S0	Modern Standby	S4	S5
Latitude 5440	Yes	Yes	Yes	Yes

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