Statement of Volatility – Dell Latitude 5430 Rugged

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

The Dell Latitude 5430 Rugged 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 5430 Rugged 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)
Panel EEDID EEPROM	Part of panel assembly	Non-Volatile memory, 128 Bytes.	No	Part of panel assembly
System BIOS	U2800	Non-Volatile memory, 32 MB, System BIOS, embedded controller and Video BIOS for basic boot operation, PSA (on board diags), PXE diags.	No	N/A
System Memory – DDR4 memory	Two SODIMM connectors: DIMM1,2 present	Volatile memory in OFF state **NOTE:** See state definitions later in text. One to Two modules must be populated. System memory size will depend on SODIMM modules	Yes	Power off system
System memory SPD EEPROM	On System memory SODIMM(s) DIMM1,2 present	Non-Volatile memory 512 Bytes. Stores memory manufacturer data and timing information for correct operation of system memory.	No	N/A
RTC CMOS – BBRAM (battery backed up)	UCPU1	Non-Volatile memory, 256 Bytes. Stores CMOS information.	No	coin cell
Video memory – frame buffer	For UMA platform: using system DDR4 For DSC platform: D5U1, D5U2	Volatile memory in off state. UMA uses main system memory size allocated out of main memory. Discrete graphics system uses 4 GB GDDR6.	No	
Security Controller Serial Flash Memory	U201 (up-sell USH security board)	Non-Volatile memory, 128 Mbit (16Mbyte)	No	N/A
Hard drive(s)	User replaceable	SSD (Solid State flash drive), various sizes in GB	Yes	Low level format
TPM Controller	U4501	Non-Volatile memory, 242 K bytes flash memory	No	N/A
Thunderbolt retimer FW	U501 (Type-C board)	Non-Volatile memory, 8 M bits (1 M bytes) flash memory	No	N/A
Discrete GFX Video BIOS	U100	Non-Volatile memory, 8 Mbit Stores Discrete GFX application code and video BIOS	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 (DDR4, 2400/2666 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, S1, S3, S4 and S5):

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

S1 state is a low wake-up latency sleeping state. In this state, no system context is lost (CPU or chip set) and hardware maintains all system contexts.

S3 is called "suspend to RAM" state or stand-by mode. In this state the dynamic RAM is maintained. Dell systems will be able to go to S3 if the OS and the peripherals used in the system supports S3 state. Win10 support S3 state.

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. Win10 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 5430:

Model Number	S0	S1	S3/Modern Standby	S4	S5
Dell Latitude™ 5430	X		X	X	X