Statement of Volatility – Dell Latitude 5x90 2in1

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

The Dell 5x90 2in1 contains both volatile and non-volatile (NV) components. Volatile components lose their data immediately after power is removed from the component. Non-volatile (NV) components continue to retain their data even after power is removed from the component. The following NV components are present on the 5x90 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 MEC5105	UE1	320KBof SRAM & 64KB ROM for keyboard controller BIOS code, asset tag and BIOS passwords	No	N/A
Panel EEDID EEPROM	Part of panel assembly	Non-Volatile memory, 128 bytes.	No	Part of panel assembly
System BIOS	UC5	Non-Volatile memory, 128 M bits (16 MB), System BIOS and Video BIOS for basic boot operation, PSA (on board diags), PXE diags.	No	N/A
System EC ROM	UE9	Non-Volatile memory 8M bits, for EC operation	No	N/A
System Memory – DDR4 memory	One SODIMM connectors: JDIMM1, JDIMM2	Volatile memory in OFF state **NOTE:** See state definitions later in text. Two modules will be populated. System memory size will depend on Sodimm modules and will be between 4GB and 16GB inclusive	Yes	Power off system
System memory SPD EEPROM	On System memory SODIMM(s) JDIMM1,2 present	Non-Volatile memory 2K bits (256 bytes). One device present on each SoDIMM. Stores memory manufacturer data and timing information for correct operation of system memory.	No	N/A
RTC CMOS – BBRAM (battery backed up)	UE1	Non-Volatile memory, 256 Bytes. Stores CMOS information in PCH.	No	Remove the onboard coin cell battery
Hard drive(s)	User replaceable -	Non-Volatile magnetic media, various sizes in GB. May also be SSD (solid state flash drive).	Yes	Low level format
Video memory –	For UMA platform:	Volatile memory in off state.	No	No Enter S3-S5

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (Action necessary to prevent loss of data)
frame buffer	Using system memory For DSC platform: UV27,UV28,	UMA uses main system memory size allocated out of main memory. DSC: Volatile memory in OFF state(Discrete graphics system uses 2 GB GDDR5.)		State below.
Security Controller Serial Flash Memory	U1 (up-sell USH daughter board)	Non Volatile memory, 32 M bits (4Mbyte)	No	N/A
TYPE C PD controller FW	UT6	Non Volatile memory, 8M bits (1M bytes) flash memory	No	N/A
TPM Controller	UZ12	Non Volatile memory, 24K bits (384K bytes) ROM	No	N/A
E-fuse of Giga-LAN	UL3	Non Volatile memory 16 M bits/32M bits	No	NA

⚠ **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 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. Win8 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 nonvolatile 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. Win8 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 5x90:

Model Number	S0	S1	S3	S4	S5
Dell Latitude™ 5x90	X		X	X	X