DELLTechnologies

Statement of Volatility – Dell Precision 3470

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

The Dell Precision 3470 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 Precision 3470 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)
SSD drives	M.2 – 2280/2230	Non-Volatile magnetic media, various sizes in GB.	Yes	Low-level format
System BIOS/EC	UC2 (32 MB) UC6 (16 MB)	Non-Volatile memory, Video BIOS for basic boot operation, PSA (onboard diagnosis), PXE diagnosis.	No	NA
Thunderbolt EEPROM	UT7 (1 MB)	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 – DDR5 memory	Two DIMM on board DDR5 memory: JDIMM1/JDIMM2	Volatile memory in OFF state (see state definitions later in text)	Yes	Power off system
RTC CMOS	PCH-UC1	Non-Volatile memory 256 bytes Stores CMOS information	No	NA
Video memory – frame buffer	For UMA platform: Using system memory For DSC platform: UV34, UV35	Volatile memory in off state. UMA uses main system memory size that is 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
Security Controller Serial Flash Memory	Combine on BIOS ROM	Non-Volatile memory	No	N/A
TPM Controller	UZ4	Non-Volatile memory, 192 Kbits (24K bytes) ROM	No	N/A
ISH	Combine on BIOS ROM		No	N/A
Touch screen Embedded Flash	N/A	Non-Volatile memory	No	N/A

In addition, to clarify memory volatility and data retention in situations where the system is 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, with no power. In this state, the dynamic RAM is not maintained. If the system has been commanded to enter S4, the operating system writes 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 can go to S4 if the operating system and the peripherals support S4 state. Windows 7 and Windows 8 supports S4 state.

S5 is the soft off state, with no power. The operating system does not save any context to wake up the system. No data remains in any component on the system board, that is cache or memory. The system requires 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 that are supported by Dell Precision 3470:

Model Number	S0	Modern standby	S4	S5
Dell Precision 3470	v	v	v	v

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