Statement of Volatility – Dell Pro 14 Premium PA14250

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

The Dell Pro 14 Premium PA14250 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 Dell Pro 14 Premium PA14250 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 erase data)
SSD drives	JNGFF1	2230 M.2 type SSD (PCIe interface)	Yes	Low level format
System BIOS/EC	UC2	Non-Volatile memory, 64 MB x1 System BIOS and Video BIOS for basic boot operation, PSA (onboard diagnosis), PXE diagnosis.	No	NA
Thunderbolt EEPROM	UT4/UTS2	Non-volatile memory, 8 Mbit (1 MB) (Thunderbolt FW)	No	NA
USB Type-C Power Delivery	UPD1	I2C interface of embedded Flash 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 – LPDDR5x memory	UC1 (LPDDR5x are included to processor)	Volatile memory in off state (see state definitions later in text)	No	Power off system
Video memory – frame buffer	UC1 (for UMA platform: using system memory)	Volatile memory in off state. UMA uses main system memory size allocated out of main memory	No	Power off system
Intel ME Firmware	UC2 (Combine on BIOS ROM)	Non-volatile memory, Intel ME firmware for system configuration, security, and protection	No	NA
TPM controller	UK101	Non-volatile memory	No	NA
ISH	UC2 (Combine on BIOS ROM)	Non-volatile memory	No	NA
Camera Sensor	Module	I2C interface of embedded Flash memory	No	NA
Embedded Flash in embedded controller MEC5407	UE1	448 KB Code/Data SRAM 384 KB code/64 KB Data optimized for performance	No	NA
Touch screen embedded Flash	Part of panel assembly	Non-volatile memory	No	NA
Fingerprint Sensor	Module	USB interface of embedded Flash memory	No	NA

⚠ CAUTION: All other components on the system board erase data if power is removed from the computer. Primary power loss (unplugging the power cord and removing the battery) destroys all user data on the memory (LPDDR5x, 8533 MT/s). 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 computer 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 operating system does not save any context to wake up the system. No data will remain in any component on the system board, that is 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 Pro 14 Premium PA14250:

Model Number	S0	Modern Standby	S4	S5
Dell Pro 14 Premium PA14250	v	v	v	v

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