

Statement of Volatility – DELL PRO 16 PLUS PB16250

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

The Dell Pro 16 Plus PB16250 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 16 Plus PB16250 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 drive(s)	M.2 – 2230 or 2280 support	Non-Volatile magnetic media, various sizes in GB. SSD (solid state flash drive).	Yes	Low level format
System BIOS/EC	U2401 (ECMEC5407)	Non-volatile memory, video BIOS for basic boot operation, PSA (on board diags), PXE diags.	No	Not applicable
Thunderbolt EEPROM	U7103	Non-volatile memory, 8 Mbit (1M bytes) flash memory (Thunderbolt FW)	No	Not applicable
Thunderbolt PD EEPROM	U7201	Non-volatile memory, 22 KB	No	Not applicable
LCD Panel EEDID EEPROM	Part of panel assembly	Non-volatile memory, stores panel manufacturing information, display configuration data	No	Not applicable
MIPI Camera FW	U504 (Up-sell Middle board)	Non-Volatile memory, 128 Mbits (16Mbytes)	No	Not applicable
RTC CMOS	CPU1	Non-volatile memory 256 bytes stores CMOS information	No	Not applicable
Security controller Serial Flash Memory	Combined on BIOS ROM	Non-Volatile memory	No	Not applicable
Intel ME Firmware	Combine on BIOS ROM	Non-volatile memory, Intel ME firmware for system configuration, security, and protection	No	Not applicable
Security controller Serial Flash Memory	U401 (up-sell USH daughter board)	Non-volatile memory, 128 Mbit (16 Mbyte)	No	Not applicable
TPM controller	U9101	Non-volatile memory, 328K bits ROM	No	Not applicable
ISH	Combine on BIOS ROM	Non-volatile component	No	Not applicable
Touch screen embedded Flash	N/A	Non-volatile memory	No	Not applicable
Digital PMIC VR controller	PU4601	Non-volatile memory	No	Not applicable

⚠ CAUTION: All other components on the system board erase 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 (LPDDR5x, 8533 MT/s). Secondary power loss (removing the system 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 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. 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 Pro 16 Plus PB16250 :

Model Number	S0	S1	S3/Modern Standby	S4	S5
Dell Pro 16 Plus PB16250	X	-	X	X	X