

Statement of Volatility – Dell Pro Max 16 MC16250

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

The Dell Pro Max 16 MC16250 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 Max 16 MC16250 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)
LCD Panel EEDID EEPROM	Part of panel assembly	Non-Volatile memory, Stores panel manufacturing information, display configuration data	No	NA
EC MEC5401	U2401	Two banks: 384 KB + 64 KB SRAM – volatile memory 128K of ROM – non-volatile memory	No	N/A
System BIOS	U2501	64M Bytes	No	N/A
System Memory – DDR5	Integrated Memory Controller	Volatile memory in OFF state	No	N/A
System memory SPD EEPROM	N/A	Non-Volatile memory	No	N/A
RTC CMOS	CPU1	Non-Volatile memory, 256 Bytes. Stores CMOS information.	No	NA
Security Controller CV3+ Flash Memory	U401 (upsell USH board)	128 Mb (16 MB) Flash memory	No	N/A
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
TPM Controller	U9101	Non-Volatile memory, 328K bits ROM	No	N/A
Thunderbolt EEPROM	U7103	Non-Volatile memory, 8M bits (1M bytes) flash memory Thunderbolt FW	No	N/A
USB Type-C and Power Delivery	U7201	176 KB per bank x2	No	N/A
Touch screen Embedded Flash	N/A	Non-Volatile memory	No	N/A
Intel ME Firmware	Combine on BIOS ROM	Non-Volatile memory, Intel ME firmware for system configuration, security and protection	No	N/A
ISH	Combine on BIOS ROM	Non-Volatile memory	No	N/A

⚠ CAUTION: All other components on the system board erase data if power is removed from the system. Primary power loss (unplugging the power cable and removing the battery) destroys all user data on the memory (DDR5, 6400 MT/s). Secondary power loss (removing the 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 computers will be able to go to S3 if the operating system and the peripherals used with the computer supports S3 state. Windows 10 supports 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 computer 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 computer is coming back to the working state, a restore file from the non-volatile storage can occur. The restore file has to be valid. Dell computers can go to S4 if the operating system and the peripherals support S4 state. Windows 10 supports S4 state.

S5 is the “soft” off state. There is no power. The operating system does not save any context to wake up the computer. No data will remain in any component on the system board, that is, cache or memory. The computer 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 Max 16 MC16250:

Table 2. List of states supported by Dell Pro Max 16 MC16250

Model Number	S0	S1	S3/Modern Standby	S4	S5
Dell Pro Max 16 MC16250	Supported	Not supported	Supported	Supported	Supported