DELLTechnologies

Statement of Volatility – Dell Pro Max Tower T2 FCT2250

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

The Dell Pro Max Tower T2 FCT2250 contains both volatile and non-volatile components. Volatile components lose 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 Tower T2 FCT2250 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 drive(s)	User replaceable	Non-Volatile magnetic media, various sizes in GB. SSD (solid state flash drive).	No	Low level format
System BIOS/EC	U2501 (32 MB), U2504 (32 MB)	Non-Volatile memory, System/Video BIOS for basic boot operation, LOM for LAN operation, PSA (on board diagnostics), PXE diagnostics and EC function.	No	NA
Video BIOS	On Graphics cards (SLOT2, SLOT4)	Non-Volatile memory, 64 MB, Graphics system BIOS.	No	NA
USB-Type C Power Delivery	U7501	Non-Volatile memory, 1408 kbit (176 KB) for USB type-C Power Delivery firmware.	No	NA
System Memory SPD EEPROM	On System memory DIMMs.	Non-Volatile memory 1024 Bytes. Stores memory manufacture data and timing information for the correct operation of system memory.	No	NA
System Memory – DDR5 memory	Four DIMM on board DDR5 memory: DIMM1, DIMM2, DIMM3. DIMM4	Volatile memory in OFF state (see state definitions later in text)	Yes	Power off system
RTC CMOS - BBRAM (Battery-Backed)	PCH1 (PCH)	Non-Volatile memory. Stores CMOS information	No	NA
Video memory – frame buffer	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	Combine on BIOS ROM	Non-Volatile memory, Intel ME firmware for system configuration, security and protection	No	N/A
Hard drive(s)	User replaceable – one Hard drives or four SSD.	Non-Volatile magnetic media, various sizes in GB. May also be SSD (solid state flash drive).	Yes	Low level format
TPM Controller	U9101	Non-Volatile memory, 192 Kbits (24 Kbytes) ROM	No	N/A

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (Action necessary to prevent loss of data)
CD-ROM/RW/ DVD/DVD+RW /Diskette Drives	User replaceable	Non-Volatile optical media.	Yes	Low level format/Erase
TBT	U7704	Non-Volatile memory, 8 Mbit (1 MB) for Hayden bridge firmware.	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 (DDR5, 5600 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, MODS, 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.

MODS 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 MODS if the OS and the peripherals used in the system supports MODS state. Linux and Windows11 support MODS state.

S3 (Suspend to RAM): The S3 sleeping state is a low wake latency sleeping state. This state is similar to the S1 sleeping state except that the CPU and system cache context is lost (the OS is responsible for maintaining the caches and CPU context). Control starts from the processor's reset vector after the wake event. In NCR systems, during S3, power is only provided to the USB 3.0 ports.

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. Windows 11 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 Max Tower T2 FCT2250

Model Number	S0	S1	MODS	S4	S5
Dell Pro Max Tower T2 FCT2250	X		X	X	X