

# Statement of Volatility – Dell OptiPlex 5400/7400 All-in-One

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

The Dell OptiPlex 5400/7400 All-in-One 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 OptiPlex 5400/7400 All-in-One 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)
System BIOS	U20	Non-Volatile memory, 128 MB (16 MB), System BIOS and Video BIOS for basic boot operation, PSA (on board diagnosis)	No	N/A
System BIOS	U21	Non-Volatile memory, 256 MB (32 MB), System BIOS and Video BIOS for basic boot operation, PSA (on board diagnosis)	No	N/A
System Memory – DDR4 DIMM memory	Connectors: DIMM1 DIMM2	Volatile memory in OFF state (see state definitions later in text)  One or two modules will be populated. System memory size depends on DIMM modules and will be between 4 GB to 32 GB.	No	Power off system
Hard drive/SDD	User replaceable	Non-Volatile magnetic media, various sizes in GB	Yes	Low level format
Scalar IC Firmware Flash	U101	4 MB in non-volatile memory, which stores Firmware information for scalar IC	No	N/A
EDID EEPROM	U102	8 KB in non-volatile memory, which stores EDID information	No	N/A

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 (DDR4, 2666 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, S3, S4, S5 and Modern Standby):

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 chipset) 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 operating system and the peripherals used in the system supports S3 state. Ubuntu support S3 state.

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 comes 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 operating system and the peripherals support S4 state. Windows 11/10/8.1/7 support 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 will remain 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.

Modern Standby is S0 low power idle mode. Modern Standby enables an instant on / instant off user experience, like smartphone power models. Just like the phone, Modern Standby enables the system to stay up to date whenever a suitable network is available. On any Modern Standby system, the system remains in S0 while in standby, allowing the following scenarios to work, "Background activity" and "Faster resume from a low power state". On systems that can stay connected while in standby, wakes based on specific network patterns may also be set by the operating system to enable apps to receive the latest content such as incoming email, VoIP calls, or news articles.

The following table shows all the states supported by Dell OptiPlex 5400/7400 All-In-One.

Model Number	S0	S1	S3	S4	S5	MS
Dell OptiPlex 5400/7400 All-In-One	X		X (Ubuntu)	X	X	X