



Statement of Volatility – Dell OptiPlex 7440 AIO

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

The Dell OptiPlex 7440 AIO contains both volatile and non-volatile (NV) components. Volatile components lose their data immediately after power is removed from the component. Non-volatile (NV) components continue to retain their data even after power is removed from the component. The following NV components are present on the Dell OptiPlex 7440 AIO 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	E56	Non Volatile memory, 128 Mb (16 MB), System BIOS and Video BIOS for basic boot operation, PSA (on board diags.)	No	N/A
Scalar IC Firmware Flash	S1U2	4Mb in non-volatile memory, which stores FW information for scalar IC	No	N/A
EDID EEPROM	MU4 MU1	2Kb in non-volatile memory, which stores EDID information	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 will depend on DIMM modules and will be between 2GB to 16GB.	No	Power off system N/A
RTC CMOS	U39	Volatile Battery back-backed CMOS memory 256 bytes Stores CMOS information	No	Removing the on board Coin Cell battery
TPM 1.2	U22	16KB non-volatile memory, which stores FW information for TPM IC.	No	N/A
Litho GDDR5 Video memory	D5U2, D5U3, D5U4, D5U5	2GB Volatile memory in off state. UMA uses main system memory size allocated out of main memory.	No	Enter S3-S5 state below.
2.5' Hard drive	User replaceable	Non Volatile magnetic media, various sizes in GB	Yes	Low level format

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (Action necessary to prevent loss of data)
M.2 SSD	J220	Non Volatile magnetic media, various sizes in GB	Yes	Low level format
CD-ROM/RW/ DVD/ DVD+RW/ Diskette Drives	User replaceable	Non Volatile optical/magnetic media	Yes	Low level format/erase

△ 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 (LPDDR3). Secondary power loss (removing the on-board coin-cell battery) destroys system data on the system configuration and time-of-day information.

All other components on the motherboard will lose data once power is removed from the system. Primary power loss (Unplug the power cord and remove the battery) will destroy all user data on the memory (DDR4, 2133MHz). Secondary power loss (removing the on board coincell battery) will destroy 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. Windows 10/8.1/7, Ubuntu 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 non-volatile 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. Windows 10/8.1/7, 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 OptiPlex 7440

Model Number	S0	S1	S3	S4	S5
Dell OptiPlex 7440	X		X	X	X

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