Letter of Volatility – Intel® NUC Products

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

Intel® NUC products contain 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.

Contents

Cautions and Power State Information

⚠ **CAUTION: All other components on the motherboard will lose data once power is removed from the system. Primary power loss, unplugging the power cord and removing the battery, will destroy all user data on the memory (DDR3L or DDR4). Secondary power loss, by removing the on board coin-cell battery, will erase any counter values that are written to CMOS in addition to destroying system date and time-of-day information. AMT passwords can be reset using BIOS and jumpers on the motherboard**

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):

Supported power states:
- <u>S0</u> state is the working state where the dynamic RAM is maintained and is read/write by the processor.
- <u>S3</u> is called "suspend to RAM" state or stand-by mode. In this state the dynamic RAM is maintained. Intel NUC systems can go to S3 if the OS and the peripherals used in the system supports S3 state. Linux* and Windows* support S3 state.
- <u>S4</u> 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. Intel NUC systems can go to S4 if the OS and the peripherals support the S4 state. Windows supports the S4 state.
- <u>S5</u> is the "soft" off state. There is no power. The OS doesn't 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.

Unsupported power states:
- <u>S1</u> 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.

Intel® NUC Mini PCs with Intel® Core® Processors

Intel® NUC 13 Pro Desk Edition Mini PC (NUC13VYKi[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the onboard Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 13 Pro Mini PC (NUC13AN[x]i[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the onboard Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 12 Enthusiast Mini PC - NUC12SNKi72VA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A

SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the onboard Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 12 Pro Mini PC - NUC12WS[x]i[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the onboard Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 11 Performance Mini PC - NUC11PA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information in Chipset	Yes	Removing the onboard Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 11 Pro Mini PC NUC11TNKv7, Mini PC NUC11TNKv5

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information in Chipset	Yes	Removing the onboard Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 11 Enthusiast Mini PCs NUC11PHKi7CAA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 10 Performance Mini PCs NUC10i7FNHJA, NUC10i5FNHJA, NUC10i3FNHJA, NUC10i3FNHFA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board

SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
Optane	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC 10 Performance Mini PCs NUC10i7FNKPA, NUC10i5FNKPA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC 10 Performance Mini PCs NUC10i7FNHHA, NUC10i5FNHCA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC 8 Mainstream- G Mini PC NUC8i7INHJA, NUC8i5INHJA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.

SOC CPU	Cache	Volatile memory		Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory		Yes	Remove power to board
RAM	LPDDR3	Volatile memory		Yes	Remove power to board
Optane	M.2 2280	Non-Volatile memory		Yes	Physically remove module or delete data via software
HDD	SATA	Non-Volatile memory		Yes	Physically remove HDD or use software to erase data

Intel® NUC 8 Mainstream- G Mini PC NUC8i7INHPA, NUC8i5INHPA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	LPDDR3	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non–Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PCs NUC8i7BEHGA, NUC8i5BEHFA, NUC8i3BEHFA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
Optane	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software
HDD	SATA	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PCs NUC8i7BEKQA, NUC8i5BEKPA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PCs NUC8i3CYHJA, NUC8i3CYHFA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	LPDDR4	Volatile memory	Yes	Remove power to board
Optane	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC Mini PCs NUC8i3CYSM, NUC8i3CYSN

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PCs NUC8i7HVKVA, NUC8i7HNKQC

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PC NUC7i5DNKPC

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PC NUC7i3DNKTC

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PC NUC7i3DNHNC

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
MBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
HDD	SATA	Non-Volatile memory	Yes	Physically remove drive or delete data via software

Intel® NUC Mini PCs NUC7i7BNKQ, NUC7i5BNKP

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software

Intel® NUC Mini PCs NUC7i7BNHXG, NUC7i5BNHXF, NUC7i3BNHXF

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
Optane	M.2 2280	Non-Volatile memory	Yes	Physically remove module or uninstall module via software
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC Mini PCs with Intel® Pentium® or Intel® Celeron® Processors

Intel® NUC 8 Rugged Kit NUC8CCHKR

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	LPDDR3	Volatile memory	Yes	Remove power to board
eMMC	iNAND	Non-Volatile memory	Yes	Delete data via software

Intel® NUC Mini PC NUC6CAYS

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC Mini PC NUC5PGYH

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	SODIMM	Volatile memory	Yes	Remove power to board
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC Kits with Intel® Core® Processors

Intel® NUC 13 Pro Desk Edition Kit (NUC13VYKi[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 13 Pro Kit (NUC13AN[x]v[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 13 Pro Kit (NUC13AN[x]i[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Enthusiast Kit – NUC12SNKi72

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)

System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Pro X Kit - NUC12DCMv[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Extreme Kit - NUC12DCMi[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Pro Kit – NUC12WS[x]v[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A

CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Pro Kit – NUC12WS[x]i[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Extreme Kits - NUC11BTMi9, NUC11BTMi7, NUC11BTMi5

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Performance Kit - NUC11PA

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Pro Kit NUC11TNHv70L, NUC11TNHv7, NUC11TNKv7, NUC11TNHv50L, NUC11TNHv5, NUC11TNKv5, NUC11TNKv50Z

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Pro Kit NUC11TNKi7, NUC11TNKi5, NUC11TNKi3, NUC11TNHi70Q, NUC11TNHi70L, NUC11TNHi7, NUC11TNHi50W, NUC11TNHi50L, NUC11TNHi5, NUC11TNHi30P, NUC11TNHi30L, NUC11TNHi3, NUC11TNBi30Z, NUC11TNKi30Z, NUC11TNHi30Z, NUC11TNBi50Z, NUC11TNKi50Z, NUC11TNHi50Z, NUC11TNBi70Z, NUC11TNKi70Z, NUC11TNHi70Z.

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Enthusiast Kit NUC11PHKi7C

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board

SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 10 Performance Kits NUC10i7FNH, NUC10i5FNH, NUC10i3FNH, NUC10i7FNK, NUC10i5FNK, NUC10i3FNK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 9 Extreme Kits NUC9i9QNX, NUC9i7QNX, NUC9i5QNX

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 9 Pro Kits NUC9VXQNX, NUC9V7QNX

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 8 Pro Kits NUC8v7PNH, NUC8v7PNK, NUC8v5PNH, NUC8v5PNK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 8 Pro Kits NUC8i3PNH, NUC8i3PNK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 8 Mainstream-G Kit NUC8i7INHZ

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	LPDDR3	Volatile memory	Yes	Remove power to board
SSD	M.2 2280	Non-Volatile memory	Yes	Physically remove module or delete data via software
HDD	SATA	Non-Volatile memory	Yes	Physically remove HDD or use software to erase data

Intel® NUC Kits NUC8i7BEH, NUC8i5BEH, NUC8i5BEK, NUC8i3BEH, NUC8i3BEK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits NUC8i7HVK, NUC8i7HNK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits NUC7i7DNHE, NUC7i7DNKE, NUC7i5DNHE, NUC7i5DNKE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits NUC7i3DNHE, NUC7i3DNKE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits NUC7i7BNHX1, NUC7i5BNHX1, NUC7i3BNHX1 (Optane)

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
Optane	M.2 2280	Non-Volatile memory	Yes	Physically remove module or uninstall data via software

Intel® NUC Kits NUC7i7BNH, NUC7i5BNH, NUC7i5BNK, NUC7i3BNH, NUC7i3BNK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit NUC6i7KYK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits NUC6i5SYH, NUC6i5SYK, NUC6i3SYH, NUC6i3SYK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit NUC5i3RYHSN

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	DDR3L	Volatile memory	Yes	Remove power to board
HDD	SATA	Non-Volatile memory	Yes	Physically remove module or uninstall data via software

Intel® NUC Kits NUC5i7RYH, NUC5i5RYH, NUC5i5RYK, NUC5i3RYH, NUC5i3RYK, NUC5i3RYHS

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit NUC5i5MYHE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit NUC5i3MYHE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit DC53427HYE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery backed CMOS memory 256 bytes. Stores CMOS information in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 1.2	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory Fast SRAM on CPU DIE	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory – Uses System RAM for Frame Buffer	Yes	Remove power to board

Intel® NUC Kits D54250WYKH, D54250WYK, D34010WYKH, D34010WYK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits with Intel® Pentium®, Intel® Celeron®, or Intel® Atom® Processors

Intel® NUC Kits NUC7PJYH, NUC7CJYH

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit NUC6CAYH

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kits NUC5PPYH, NUC5CPYH, NUC5PGYH

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit DN2820FYKH

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Kit DE3815TYKHE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	Removing the on board Coin Cell battery.
CMOS	RTC	Volatile battery backed CMOS memory 256 bytes. Stores CMOS information in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 1.2	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory Fast SRAM on CPU DIE	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory – Uses System RAM for Frame Buffer	Yes	Remove power to board

Intel® NUC Kit DCCP847DYE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Boards

Intel® NUC 13 Pro Board (NUC13ANBi[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 13 Pro Board (NUC13ANBv[x])

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Pro Board – NUC12WSBv[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 12 Pro Board – NUC12WSBi[x]

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Pro Board NUC11TNBv7, NUC11TNBv5

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 11 Pro Board NUC11TNBi7, NUC11TNBi5, NUC11TNBi3, NUC11TNBi30Z, NUC11TNBi50Z, NUC11TNBi70Z

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC 8 Pro Boards NUC8v7PNB, NUC8v5PNB

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 256 Mbits (32 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Board NUC8CCHB

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board
RAM	LPDDR3	Volatile memory	Yes	Remove power to board
eMMC	iNAND	Non-Volatile memory	Yes	Delete data via software

Intel® NUC Boards NUC7i7DNBE, NUC7i5DNBE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
TPM (China)	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board

Intel® NUC Board NUC7i3DNBE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action(action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile – Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Board NUC5i5MYBE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
TPM	TPM 2.0	Non-volatile security information used with vPro AMT implementation	Yes	BIOS option and Jumper to clear
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Board NUC5i3MYBE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Boards D54250WYB, D34010WYB

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Board D53427RKE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 128 Mbits (16 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Board DE3815TYBE

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board

Intel® NUC Boards DCP847SKE, D33217GKE, D33217CK

Description	Reference Designator	Volatility Description	User Accessible for external data	Remedial Action (action necessary to lose data)
System BIOS	SPI	Non-volatile memory, 64 Mbits (8 MB) System BIOS, Video BIOS and Ethernet Controller configuration data for basic boot	No	N/A
SMBIOS	SPI	Non-Volatile - Stored in the SPI in the NVRAM area. User accessible via software tools	Yes	N/A
CMOS	RTC	Volatile battery back-backed CMOS memory 256 bytes. Stores CMOS information.in Chipset	Yes	Removing the on board Coin Cell battery.
SOC CPU	Cache	Volatile memory	Yes	Remove power to board
SOC GPU	Frame Buffer	Volatile memory	Yes	Remove power to board