



Statement of Volatility – Dell PowerEdge R830

Dell PowerEdge R830 contains both volatile and non-volatile (NV) components. Volatile components lose their data immediately upon removal of power from the component. Non-volatile components continue to retain their data even after the power has been removed from the component. Components chosen as user-definable configuration options (those not soldered to the motherboard) are not included in the Statement of Volatility. Configuration option information (pertinent to options such as microprocessors, remote access controllers, and storage controllers) is available by component separately. The following NV components are present in the PowerEdge R830 server.

Item	Non-Volatile or Volatile	Quantity	Reference Designator	Size
Planer				
PCH Internal CMOS RAM	Volatile	1	U_104	256 Bytes
BIOS SPI Flash	Non-Volatile	1	U_9	16 MB
iDRAC SPI Flash	Non-Volatile	1	U_125	4 MB
BMC EMMC	Non-Volatile	1	U_114	4 GB
BMC Memory	Volatile	1	U_112	2 Gb
CPU Vcore and Memory regulator	Non-Volatile	6	(Planar) U148, U157, U152, U164,	
System CPLD	Non-Volatile	1	U_191	2210 logic elements 1700 macrocells 272 IOs
System Memory	Volatile	Up to 12 per CPU	CPU1: DIMMA1~DIMMA12, CPU2: DIMMB1~DIMMB12,	Up to 32GB per DIMM (Up to 64GB per DIMM on post RTS)
PEM board				
FRU EEPROM	Non-Volatile	1	U45	EEPROM: 512B
CPU Vcore and Memory regulator	Non-Volatile	1	(PEM) U11, U23, U18, U30	
System Memory	Volatile	Up to 12 per CPU	CPU3: DIMMC1~DIMMC12, CPU4: DIMMD1~DIMMD12,	Up to 32GB per DIMM (Up to 64GB per DIMM on post RTS)

Item	Non-Volatile or Volatile	Quantity	Reference Designator	Size
R830 8x2.5" Backplane				
SEP internal flash	Non-Volatile	1	U_SEP	Flash: 32KB EEPROM: 16KB


R830 16x2.5" SAS Exp / Backplane				
FRU EEPROM	Non-Volatile	1	U_BP_EEPROM	EEPROM: 16KB
NVSRAM memory	Non-Volatile	1	U_NVSRAM	1Mb
Flash memory	Non-Volatile	1	U_FLASH	128Mb
Expander FRU image	Non-Volatile	1	U_EXP_EEPROM 512 Bytes	512 Bytes
IDSDM Card				
IDSDM SPI flash	Non-Volatile	1	U2	8Mb
MCU	Non-Volatile	1	U6	512KB
H730, H730P, H830 PERC				
NVSRAM	Non-Volatile	1	U1033	128KB
FRU	Non-Volatile	1	U1019	256B
1-Wire EEPROM	Non-Volatile	1	U1004	128B
SPD	Non-Volatile	1	U22	256B
SBR	Non-Volatile	1	U1020	8KB
Flash	Non-Volatile	1	U1031	16MB
ONFI Backup Flash	Non-Volatile	1	U1059	4GB
SDRAM	Volatile	5	U1043-U1047	512MB/1GB
H330 PERC				
NVSRAM	Non-Volatile	1	U1033	128KB

FRU	Non-Volatile	1	U1019	256B
1-Wire EEPROM	Non-Volatile	1	U1004	128B
SBR	Non-Volatile	1	U1020	8KB
Flash	Non-Volatile	1	U3	16MB
TPM				
Trusted Platform Module (TPM)	Non-Volatile	1	U_TPM	128 Bytes

Item	Type (e.g. Flash PROM, EEPROM)	Can user programs or operating system write data to it during normal operation?	Purpose? (e.g. boot code)
Planer			
PCH Internal CMOS RAM	Battery-backed CMOS RAM	No	Real-time clock and BIOS configuration settings
BIOS SPI Flash	SPI Flash	No	Boot code, system configuration information, UEFI environment, Flash Disceptor, ME
iDRAC SPI Flash	SPI Flash	No	iDRAC Uboot (bootloader), server management persistent store (i.e. iDRAC MAC Address, iDRAC boot variables), lifecycle log cache, virtual planar FRU and EPPID, rac log, System Event Log,
BMC EMMC	eMMC NAND Flash	No	Operational iDRAC FW, Lifecycle Controller (LC)

Item	Type (e.g. Flash PROM, EEPROM)	Can user programs or operating system write data to it during normal operation?	Purpose? (e.g. boot code)
			USC partition, LC service diags, LC OS drivers, USC firmware
BMC Memory	RAM	No	iDRAC RAM.
CPU Vcore and Memory regulator	NVRAM	No	CPU Vcore and Memory controller
System CPLD	Flash	No	Power sequence controller and detection.
System Memory	RAM	Yes	System OS RAM
PEM Board			
FRU	I2C EEPROM	No	FRU
CPU Vcore and Memory regulator	NVRAM	No	CPU Vcore and Memory controller
System Memory	RAM	Yes	System OS RAM
R830 8x2.5" Backplane			
SEP internal flash	Integrated Flash+EEPROM	No	Backplane controller
R830 16x2.5" EXP/ Backplane			
FRU EEPROM	I2C EEPROM	No	FRU
NVSRAM memory	Flash	No	FW config data
Flash memory	Flash	No	Firmware
Expander FRU image	I2C EEPROM	No	FRU
IDSDM Card			
IDSDM SPI flash	SPI Flash	No	Source code for IDS DM controller
MCU	Embedded Flash	Yes	Firmware

Item	Type (e.g. Flash PROM, EEPROM)	Can user programs or operating system write data to it during normal operation?	Purpose? (e.g. boot code)
H730, H730P, H830 PERC			
NVSRAM	NVSRAM	No	Configuration data
FRU	FRU	No	Card manufacturing information
1-Wire EEPROM	1-Wire EEPROM	No	Holds default controller properties/settings
SPD	SPD	No	Memory configuration data
SBR	SBR	No	Bootloader
Flash	Flash	No	Card firmware
ONFI Backup Flash	ONFI Backup Flash	No	Holds cache data during power loss
SDRAM	SDRAM	No	Holds cache data during power loss
H330 PERC			
NVSRAM	NVSRAM	No	Configuration data
FRU	FRU	No	Card manufacturing information
1-Wire EEPROM	1-Wire EEPROM	No	Holds default controller properties/settings
SBR	SBR	No	Bootloader
Flash	Flash	No	Card firmware
TPM			
Trusted Platform Module (TPM)	EEPROM	Yes	Storage of encryption keys

 **NOTE:** For any information that you may need, direct your questions to your Dell Marketing contact.

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