Statement of volatility

DELL Technologies

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

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

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Statement of volatility

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The Dell VEP1400 contains both volatile and Nonvolatile (NV) components. Volatile components lose their data immediately upon removal of power from the component. Nonvolatile components continue to retain their data, even after power has been removed from the component. The following Nonvolatile components are present on the VEP1400 board:

- The following component is Nonvolatile and could not lose data when the power has been removed from the component:

  Flash Memory

  - The 16 Mb * 8 Flash memory (U72 and U73) is soldered directly on the board. This memory region is used to store the CPU BIOS.
  - Two Winbond Nor Flash memory W25Q128JVSIQ (16 MBytes) modules are used in the system. One Flash Memory is for the main BIOS and the other is for backup:
    - Serial Flash Memory
    - Packaging: 8-pin SOIC 208 mil
    - Operating voltage range Vcc:3.0-3.6V
  - One EMMC KLMAG1JETD-B041 (16GB HS-400 mode) that consists of NAND flash and an MMC controller:
    - Supports features corresponding to eMMC5. These features are the ones that are defined in the JEDEC Standard.
    - Packaging: 153 Ball Pin BGA type (153FBGA)
    - Operating voltage range Vcc:

      Interface power : VDD(VCCQ) 1.7V~1.95V

      Memory power: VDDF(VCC) 2.7V~3.6V

    - Stores the following images in flash for systems using:

      Loader

      Diagnostic

  - **CPLD**
    - CPLD Lattice LCMXO2-1200HC-4TG100C (U17) is programmed to control RESET, Memory CS and Address decode Power sequence, SFP state detect, and Board type or HW version select functions.
  - **PIC**
    - PIC Microchip PIC16F18345T-I/SS (U70) is programmed to control the power on sequence, thermal shutdown, and display system LED status.
    - 14 Kbytes program Flash memory
    - 1 Kbytes Data SRAM memory
    - 256 B of EEPROM
- The following component is volatile and loses data when the power is removed from the component:

  DDR SDRAM

  Nine 32 Mb x 8 I/Os x 16 bank DDR SDRAMs (U7~U15) are used on Denverton CPU C3308 Side. The total size is 4 GBYTE for VEP1400.

  SAMSUNG ELECTRONICS, 512 M * 8 are die E of 4Gb SDRAM devices based using DDR interface.

  - Volatile Memory
  - Package: 78 Ball BGA
  - Maximum operating frequency : CAS Latency 17 (2400MHz)
  - CAS Latency: 17 (DI)
  - Auto precharge option for each burst access.
  - Auto refresh and self-refresh modes.