

HP Designjet Z6 Pro & Z9+ Pro Series - Certificate of Volatility

Introduction

The following is a statement regarding the volatility of customer data stored in memory devices and hard disk drives of the HP Designjet Z6 Pro Printer Series and the HP Designjet Z9+ Pro Printer Series.

The printer uses volatile memory to store customer data during the printing process. When the printer is turned off, this volatile memory is erased. The printer uses non-volatile memory to store device configuration information. This non-volatile information is used to initialize the volatile memory when the printer is turned on and at the beginning of a print job. The printer also contains a hard disk drive that retains data after the printer is powered off.

Volatile memory

Volatile memory in HP Designjet Z6 Pro Printer Series and HP Designjet Z9+ Pro Printer Series include:

- Main RAM memory. 4 GBytes by default. Used as system memory. All information is erased when the printer is powered off.
- Other volatile memory used as the main memory for some ASICs or as microprocessor cache.

Nonvolatile memory

Nonvolatile memory components in HP Designjet Z6 Pro Printer Series and HP Designjet Z9+ Pro Printer Series include:

- NVRAM – BIOS. 16 MBytes. It does not contain user data. Its purpose is to act as the bootloader for the BIOS.
- NVRAM – BIOS. 8 KBytes store parameters for front panel video configuration.
- NVM 256 Kbits. Mounted on a chip contains a copy of the printer identification values.
- NVM Flash 16Mbytes. It does not contain user data. Its purpose is to store a default bitstream for the mainboard FPGA.
- NVM at line sensor 16Kbits. It contains calibration tables for the sensor.
- Z9+ Pro: NVM at spectrophotometer to store calibration parameters.
- NVM at Print Mechatronics PCA. 256 KBits. It contains printer settings and calibrations; it also contains usage counters. It can be reset to factory defaults by a service engineer.
- NVM: 64 Kbit. Mounted on the RFID Tag contains a copy of the printer identification values. It's not possible to clear the memory.
- NVM 8 Kbits. It contains information with the control parameters for the Lan Interface.
- NVM Flash 2 MBytes. Main memory for internal Lan Interface.
- Embedded flash: 128Kbytes. Containing software & configuration parameters needed for mainboard power management. It does not contain user data.

- Embedded flashes: 384Kbytes & 32Kbytes. Containing software & configuration parameters needed for the operation of Ink delivery subsystems: 384Kbytes & 32Kbytes. They do not contain user data.
- Embedded flash: 128Kbytes. Containing software needed for the operation of printing carriage subsystem. It does not contain user data.
- NVM flash chip: 16Mbit. Containing bitstream needed for the operation of printing carriage subsystem. It does not contain user data.
- Embedded flashes: (2x32Kbytes). Containing software & configuration parameters needed for the operation of vacuum subsystem. They do not contain user data.

Hard Disk drives

The printer in HP Designjet Z6 Pro Printer Series and HP Designjet Z9+ Pro Printer Series contains a 500GBytes hard disk drive which has different purposes. It is not possible to operate the printer without the hard disk drive.

User information can be stored in 5 different partitions of the hard disk drive and can include:

- Calibration data and printer settings.
- User plots (in rasterizer format, i.e. already processed).
- User plots in native format (plots submitted to the Job Queue of the printer).
- Accounting information.
- Usage information.

There are different options to erase part of the user information in the hard drive:

- User plots in rasterized format (in the printer's queue) can be erased from the queue by users with administrative access to the printer's Embedded Web Server or with access to the printer's front panel.
- Calibration data, printer settings, usage information and accounting information can be erased by service engineers.

HP Designjet Z6 Pro Printer Series and HP Designjet Z9+ Pro Printer Series support Secure Disk Erase and Secure File Erase according to the U.S. Department of Defense 5220-22.M specification.

Secure Disk Erase and Secure File Erase allow erasing the information from the Hard Disk drive in a secure mode which makes it impossible to have this information recovered. It's also possible to trigger a Secure Disk Wipe which will use the U.S. Department of Defense 5220-22.M specification to erase all data from hard disk partitions that contain user data.

For more information about this feature, please check the "Secure Disk Erase for HP Designjet printers" whitepaper.