Xerox® Brenva® HD Production Inkjet Press
Xerox® FreeFlow® Print Server
Statement of Volatility

September 2017

Notice

This document describes the locations, capacities, and contents of volatile and non-volatile memory devices within the Xerox® FreeFlow® Print Server.

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Introduction

This report presents information about the volatile and non-volatile memory contained in the Xerox® FreeFlow® Print Server used on the Xerox® Brenva® HD Production Inkjet Press (Product Code 0AD). The Xerox® FreeFlow® Printer Server is based on Dell PowerEdge T630 with customization on processor, memory, graphic card and interface card(s).

The Xerox® Brenva® HD Production Inkjet Press with the Xerox® FreeFlow® Print Server performs high-speed production color printing. The Print Server connects to the:

- Print Engine
- Print Station Interface Platform (PC-UI)

These modules provide the basic configuration. Depending on what is purchased, the number and types of feeders and finishers contained in the completed system can change.

This document describes the amount and types of memory contained in the device in an easy-to-read tabular format. To address security issues as needed, specific commentary is included about job data and where Personally Identifiable Information (PII) can be found in the system.

The information contained in this document is verified at the time the product is released for sale. Manufacturing process changes may require that memory amounts increase but the purpose or contents of the memory should not change.

General Memory Information

Volatile Memory

- All volatile memory listed is cleared after power is removed (decay occurs generally within 20 seconds at room temperature).
- All volatile memory listed is required for normal system operation and during service and diagnostic procedures.
- Removal of any volatile memory will void the warranty.

Non-Volatile Memory

- All non-volatile memory listed is required for normal system operation and during service and diagnostic procedures.
- Removal of any non-volatile memory will void the warranty.
- None of the non-volatile memory in the system can be accessed by accidental keystrokes.

System Descriptions

The data tables below detail the information regarding the volatile and non-volatile memory contained in the Xerox® FreeFlow® Print Server used on the Brenva Press based on Dell PowerEdge T630.

The Xerox® FreeFlow® Print Server Digital Front End is a PC-type motherboard and an interface card. It is equipped with a BIOS, main RAM and Video memory.

Volatile Memory Description				
Type (SRAM, DRAM, etc.)	Size	User Modifiable (Y/N)	Function or Use	Process to Clear
DDR4 DRAM	64 GB	N	System OS RAM to contain executable code. No job data stored here persistently	Reboot or power down system
DRAM	40 MB	N	CPU cache, 20 MB per processor	Reboot or power down system
DRAM	512 MB	N	Video Display memory. No job data stored here persistently	Reboot or power down system
Planar_System CPLD RAM	1 KB	N	Not utilized	Not accessible
Planar_iDRAC DDR	256 MB	N	iDRAC local memory	Power down system
Planar_iDRAC	64 KB + registers	N	Processor cache + registers	Power down system
H730 PERC_SDRAM	512 MB /1 GB	N	Cache for HDD I/O	Cache can be cleared by powering off the card

Non-Volatile Memory Description				
Type (Flash, EEPROM, etc.)	Size	User Modifiable (Y/N)	Function or Use	Process to Clear
Planar				
PCH Internal Battery backed CMOS RAM	256 B	N	Real-time clock and BIOS configuration settings. No job data stored here	Through Motherboard jumper settings, OR Remove power; remove battery for 30 seconds
BIOS Password Battery backed CMOS RAM	16 B	Y	Password to change BIOS settings	Place shunt on J_PSWD_NVRAM jumper pins 2 and 4
BIOS SPI Flash	8 MB	N	Boot code, system configuration information, UEFI environment, Flash descriptor, ME	Not possible with any utilities or applications and system is not functional if corrupted/removed
iDRAC SPI Flash	4 MB	N	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, JobStore, iDRAC Secure boot code	Not completely user clearable; however, user data, lifecycle log and archive, SEL, fw image repository can be cleared via Delete Configuration and Retire System, accessible in Lifecycle Controller interface
BMC EMMC NAND Flash	4 GB	N	Operational iDRAC FW, Lifecycle Controller (LC) USC partition, LC service diags, LC OS drivers, USC firmware	Not completely user clearable; however, user data, lifecycle log and archive, SEL, fw image repository can be cleared via Delete Configuration and Retire System, accessible in Lifecycle Controller interface
CPU Vcore Regulators	512 B	N	Operational parameters	Not user clearable
Vmem Regulators	512 B	N	Operational parameters	Not user clearable
Internal USB Key	Varies	Y	General purpose USB key drive	Can be cleared in system OS
TPM Chip	128 B	N	Storage of encryption keys; no job data stored	F2 Setup option
LOM EEPROM	8 MB	Y	Onboard LOM FW	Not user clearable
LOM FLASH	512 KB	Y	Onboard LOM FW	Not user clearable
8 x 3.5 " Backplane				
SEP Internal Flash	Flash:32KB+4KB EEPROM: 1KB	N	Firmware + FRU	Not user clearable

Non-Volatile Memory Description				
Type (Flash, EEPROM, etc.)	Size	User Modifiable (Y/N)	Function or Use	Process to Clear
H730 PERC				
NVSRAM	128 KB	N	Configuration data	Cannot be cleared with existing tools available to the customer
FRU	256 B	Y	Card manufacturing information	Cannot be cleared with existing tools available to the customer
1-Wire EEPROM	128 B	N	Holds default controller properties/ settings	Cannot be cleared with existing tools available to the customer
SPD	256 B	N	Memory configuration data	Cannot be cleared with existing tools available to the customer
SBR	8 KB	N	Bootloader	Cannot be cleared with existing tools available to the customer
Flash	16 MB	N	Card firmware	Cannot be cleared with existing tools available to the customer
ONFI Backup Flash	4 GB	N	Holds cache data during power loss	Flash can be cleared by powering up the card and allowing the controller to flush the contents to VDs. If the VDs are no longer available, cache can be cleared by going into controller bios and selecting Discard Preserved Cache
IDSDM				
SPI Flash	8 MB	N	Exclusively used by the controller	Not user clearable
MCU	512 KB	FW can be updated via iDRAC (runs on Linux)	Firmware	Not user clearable
Front Panel				
SPI Flash	32 MB	N	For field maintenance. Have License, Service Tag, system information	Not user clearable
Power Supplies				
PSU FW Embedded micro-controller Flash	Up to 2 MB	N	Power Supply operation, power management data and fault behaviors	Not user clearable

Interface Card

Non-Volatile Memory Description				
Type (Flash, EEPROM, etc.)	**Size**	**User Modifiable (Y/N)**	**Function or Use**	**Process to Clear**
Flash EEPROM	-	N	The Network adapter have been designed with at least one non-volatile EEPROM /NVM per device and one non-volatile Flash for storage of the firmware required to run the Ethernet chips on the board	No design to store user data to these memories was considered and no typical user would have the capability to enable data to be stored on those memories

Complete this table if the device has media storage capability:

Hard Disk Description					
Drive / Partition (System, Image.)	**Size**	**Removable (Y / N)**	**User Modifiable Y / N**	**Function or Use**	**Process to Clear**
System Disk	1 TB	Y	N with normal operation	Operating System, Fonts, configuration file storage	Diagnostics
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics

Additional Information:

The System Disk (C drive) contains the Windows Operating System and store Executable, Fonts, and Settings files. During normal operation, job files remain stored on the data partition (D drive) until completed or removed. Under typical system usage, job images may also be stored temporarily on the data partition. The total size of the HDD is 5TB and the approximate usage of the disk by Operating System and application software is 791GB. The approximate usage size for "data" is 1117GB and for "outQ" is 2606 GB, The approximate recovery partition size is 139 GB. However, the usage size for "data" and "outQ" partition can increase while running the Free Flow® Software.

Images are stored in a proprietary encoded format and fragments of the job data are stored at random locations in the data partition. Free Flow® has a data overwrite tool and not a disk overwrite tool. The data overwrite tool wipes out only customer Job image and data. It is based on "DoD 5220.22-M" algorithm and it will not wipe out the entire disk, merely area that contains job images

Media and Storage Description					
Type (disk drives, tape drives, CF/SD/XD memory cards, etc.)	Size	Removable (Y/N)	User Modifiable (Y/N)	Function or Use	Process to Clear
DVD/CD Drive	4.7/8.5 GB	Y	Y File Storage	Backup Device	Destroy media. Overwrite RW media 4.7 – Single-Layer Disc 8.5 – Double-Layer Disc
Additional Information: Print Jobs can be stored on removable media, which can be used to back up or store desired jobs. Once copied to media, that information must be physically secured by the user to prevent data loss.					

Complete an entry for each USB port.

USB Port(s)	
USB port and locations	Purpose
Front of FreeFlow® Print Server: 1 USB 2.0 and 1 USB 3.0 ports	User stores scanned files of job files on Flash Media. Physical security of this information is the responsibility of the user or operator.
Back of FreeFlow® Print Server: 4 USB 2.0 and 2 USB 3.0 ports	User stores scanned files of job files on Flash Media. Physical security of this information is the responsibility of the user or operator.
Additional Information: A number of devices can be connected to USB ports on the FreeFlow® Print Server system. Once information has been copied (either as a back-up data set or as a transfer medium), physical security of this information is the responsibility of the user or operator.	