

Xerox® FreeFlow® Print Server

Statement of Volatility

Supports Xerox® Brenva® HD Production Inkjet Press

October 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 to front-end and support the Xerox® Brenva HD Production Inkjet Press (Product Code OAD). We base the Xerox® FreeFlow® Printer Server platform 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:

- Xerox Print Engine
- Xerox Print Station Interface Platform (PSIP)

This document does not support the above subsystems, which have their own Statement of Volatility specification. The number and types of feeders and finishers installed with the Xerox® Brenva® HD Production Inkjet Press depends on customer requirements.

This document describes the amount and types of memory and internal/external storage devices contained in the Xerox® FreeFlow® Printer Server device in an easy-to-read tabular format. To address security issues as needed, specific commentary is included about job data locations that can store Personally Identifiable Information (PII) data.

We verify the information contained in this document at the time of product release 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.
- You cannot access any of the non-volatile memory in the system by accidental keystrokes.

FreeFlow® Print Server Descriptions

The data tables below detail the information regarding the volatile and non-volatile memory contained in the Xerox® FreeFlow® Print Server used to front-end and support the Xerox® Brenva® HD Production Inkjet 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. Does not hold customer data.	Reboot or power down system
DRAM	1 GB	N	Video Display memory. Does not hold customer data.	Reboot or power down system
Planar System CPLD RAM	1 KB	N	Not utilized. Does not hold customer data.	Not accessible
Planar_iDRAC DDR	256 MB	N	iDRAC local memory. Does not hold customer data.	Power down system
Planar_iDRAC	64 KB + registers	N	Processor cache + registers. Does not hold customer data.	Power down system
H730 PERC_SDRAM	512 MB / 1 GB	N	Cache for HDD I/O. Does not hold customer data.	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 (Motherboard)				
PCH Internal Battery backed CMOS RAM	256 Bytes	N	Real-time clock and BIOS configuration settings. Does not hold customer data.	Through Motherboard jumper settings, OR Remove power; remove battery for 30 seconds
BIOS Password Battery backed CMOS RAM	16 Bytes	Y	Password to change BIOS settings. Does not hold customer data.	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. Does not hold customer data.	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 Does not hold customer data.	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. Does not hold customer data.	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 Bytes	N	Operational parameters; Does not hold customer data.	Not user clearable
Vmem Regulators	512 Bytes	N	Operational parameters; Does not hold customer data.	Not user clearable
Internal USB Key	Varies	Y	General purpose USB key drive; Does not hold customer data.	Can be cleared in system OS
TPM Chip	128 Bytes	N	Storage of encryption keys; Does not hold customer data.	F2 Setup option
LOM EEPROM	8 MB	Y	Onboard LOM FW; Does not hold customer data.	Not user clearable
LOM FLASH	512 KB	Y	Onboard LOM FW; Does not hold customer data.	Not user clearable
8 x 3.5 " Backplane				
SEP Internal Flash	Flash: 32 KB + 4 KB EEPROM: 1 KB	N	Firmware + FRU. Does not hold customer data.	Not user clearable

Non-Volatile Memory Description				
Type (Flash, EEPROM, etc.)	Size	User Modifiable (Y/N)	Function or Use	Process to Clear
H730 PERC (Raid Controller)				
NVSRAM	128 KB	N	Configuration data. Does not hold customer data.	Cannot be cleared with existing tools available to the customer
FRU	256 Bytes	Y	Card manufacturing information. Does not hold customer data.	Cannot be cleared with existing tools available to the customer
1-Wire EEPROM	128 Bytes	N	Holds default controller properties / settings. Does not hold customer data.	Cannot be cleared with existing tools available to the customer
SPD	256 Bytes	N	Memory configuration data; Does not hold customer data.	Cannot be cleared with existing tools available to the customer
SBR	8 KB	N	Bootloader; Does not hold customer data.	Cannot be cleared with existing tools available to the customer
Flash	16 MB	N	Card firmware; Does not hold customer data.	Cannot be cleared with existing tools available to the customer
ONFI Backup Flash	4 GB	N	Holds cache data during power loss. Does not hold customer data.	Clear flash by powering up the card and allowing the controller to flush the contents to VD's. If the VD's 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. Does not hold customer data.	Not user clearable
MCU	512 KB	FW can be updated via iDRAC which runs on Linux	Firmware; Does not hold customer data.	Not user clearable
Front Panel				
SPI Flash	32 MB	N	For field maintenance. Have License, Service Tag, system information. Does not hold customer data.	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. Does not hold customer data.	Not user clearable

Video Interface Card

Non-Volatile Memory Description				
Type (Flash, EEPROM, etc.)	Size	User Modifiable (Y/N)	Function or Use	Process to Clear
Flash EEPROM	-	N	Programmable logic configuration information. Does not hold customer data. 4 color configuration 8 MB 5 color configuration 12 MB	Not possible, system not functional if corrupted/removed.
Additional Information: The FreeFlow Printer Server platform uses this Network Interface Card to transmit print data to the Brenva® HD Production Inkjet Press.				

Storage Device Information

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, print service application, configuration file and print data (temporary) storage.	Diagnostics Procedure
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics Procedure
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics Procedure
Image Disk	1 TB	Y	N with normal operation	Job Images	Diagnostics Procedure
Additional Information: The System Disk (C drive) contains the Windows Operating System, executable, fonts, and configuration files. During normal operation, job files remain stored on the data partition (D drive) in the “inQ”, removed when job printing is completed or removed by the operator. Under typical system operation, job images may also be stored temporarily on the data partition. The total size of the HDD is 5 TB and the approximate disk usage by the Operating System and application software is 791 GB. The approximate size capacity for “data” is 1,117 GB and for “outQ” is 2,606 TB, The approximate recovery partition size is 139 GB. However, the size capacity for “data” and “outQ” partition can increase while running the Free Flow® Software. Images are stored in a Xerox proprietary encoded format in the “outQ” and fragments of the job data are stored at random locations in the data partition. The Free Flow® Print Server product has a data overwrite tool. The Data Overwrite service sanitizes only customer Job images and data. The Data Overwrite service uses an algorithm that is “DoD 5220.22-M” compliant. There FreeFlow Print Server product does not include “DoD 5220.22-M” compliant to sanitize the Operating System, but can be removed using the standard Windows format tool.					

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	Yes File Storage	Backup Device, Patch Install, or transfer print data and/or configuration files.	Destroy media. Overwrite RW media 4.7 – Single-Layer Disc 8.5 – Double-Layer Disc
<p>Additional Information: Customer's use DVD/CD media to store print jobs, configuration files, print resources, etc. for backup purposes, or for transfer to other storage devices. The FreeFlow Web-UI supports license install, Security Patch Update install, Print From File, Configuration Backup/Restore, System Backup/Restore, etc. using DVD/CD media.</p> <p>Once information has been written to DVD/CD media, it is the responsibility of the customer to manage the integrity of the information, prevent data loss, and ensure files are not infected with viruses and malware. Alternative options are available for transferring configuration or data files to and from the system such as a secure transfer (SFTP) over the network.</p>					

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. Customer's use USB media to transfer resources (E.g., patches, print resources, configuration files, etc.) to and from the hard disk. Physical security of this information is the responsibility of the operator or administrator.
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. Customer's use USB media to transfer resources (E.g., patches, print resources, configuration files, etc.) to and from the hard disk. Physical security of this information is the responsibility of the operator or administrator.
<p>Additional Information: You can connect a number of devices to USB ports on the FreeFlow® Print Server system. Customer's use USB media to store print jobs, configuration files, print resources, etc. for backup purposes, or for transfer to other storage devices. The FreeFlow Web-UI supports license install, Security Patch Update install, Print From File, Configuration Backup/Restore, System Backup/Restore, etc. using USB media.</p> <p>Once information has been written to USB media, it is the responsibility of the customer to manage the integrity of the information, prevent data loss, and ensure files are not infected with viruses and malware. Alternative options are available for transferring configuration or data files to and from the system such as a secure transfer (SFTP) over the network.</p>	

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