



# Xerox® FreeFlow® Print Server

## Statement of Volatility

Supports Nuvera™ EA/MX

100/120/144/157 and 200/288/314 IPM

Production Systems Engine

January 2018

### Notice

This document describes the locations, capacities and contents of volatile and non-volatile memory devices within the Nuvera™ EA/MX Production Systems.

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### Introduction

The Nuvera™ EA/MX Production Systems are used to perform the following tasks:

High Speed Production Printing

High Speed Production Copying

High Speed Scanning (Local and network)

The Nuvera™ EA/MX Production Systems consists of:

1 or 2 Print Engines (Marking Module)

Print Station Interface Platform (PSIP) &

Free Flow® Print Server (FFPS)

- Shared hardware physically integrated in system

Feeder Modules

Finishing Modules

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

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

The information contained in this document has been verified at the time the product is released for sale. Manufacturing process changes may require that memory amounts are increased 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.

## FreeFlow® Print Server Descriptions

The data tables below detail the information regarding the volatile and non-volatile memory contained in the Digital Front End/PSIP used on the Nuvera™ EA/MX Production Systems.

The Digital Front End/PSIP is a PC-type motherboard. 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
<b>SDRAM</b>	4GB for the 100/120/144ppm 200/288ppm configurations 8GB option kit for 200/288ppm configuration	N	Main System RAM to contain executable code. No job data stored here persistently	Power Off System
<b>SDRAM</b>	512MB / 1GB	N	Video Display memory No job data stored here persistently	Power Off System
<b>SRAM</b>	6MB [Intel® i5-6500 Skylake]	N	CPU SmartCache No job data stored here persistently	Power Off System
<b>SDRAM</b>	1MB	N	DVD Writer Buffer Memory Cache No job data stored here persistently	Power Off System
<b>SDRAM</b>	16MB / 64MB	N	Hard Disk Drive Buffer Memory Cache No job data stored here persistently	Power Off System
<b>SDRAM</b>	4GB for the 100/120/144ppm 200/288ppm configurations 8GB option kit for 200/288ppm configuration	N	Main System RAM to contain executable code. No job data stored here persistently	Power Off System
<b>SDRAM</b>	512MB / 1GB	N	Video Display memory No job data stored here persistently	Power Off System

Non-Volatile Memory Description				
Type (Flash, EEPROM, etc.)	Size	User Modifiable (Y/N)	Function or Use	Process to Clear
Flash	2MB	Y – upgrade firmware version	System BIOS firmware No job data stored here	N/A
CMOS RAM	256 Bytes	Y	Battery Backed-up storage of configuration information/settings. No job data stored here	Remove battery & +3.3V standby power, Clear CMOS jumper

## 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	Minimum 160GB  1TB [optional secondary system disk]	No	N with normal operation	Operating System, Fonts, configuration file storage, incoming network print jobs, saved jobs	Diagnostic Procedure
Image Disk	Minimum 160GB	No	N with normal operation	Job Images	Diagnostic Procedure

### Additional Information:

This System disk contains the Solaris Operating System and stores executables, fonts, and settings files. During normal operation job files remain stored on this disk until completed or removed. Under typical system usage job images may also be stored temporarily on the System disk in the Solaris-managed “swap partition”. Images are stored in a proprietary encoded format and fragments of the job data are stored at random locations in the swap partition. Reverse engineering of the swap partition area would be needed to retrieve the encoded image which would then need to be decoded for viewing.

The optional second system disk is typically used as a large repository for the “Saved Job Queue” holding jobs indefinitely for reprint on-demand. The additional disk space could also be used for storage of large amounts of font data, etc.

The Image Disk stores page images in a proprietary encoded format in contiguous blocks.

NOTE: User data and image data may be completely erased if optional Disk Overwrite kit is installed and enabled. These disks are cleared using a four-pass algorithm which conforms to U.S. Department of Defense Directive 5200.28-M (DOD Directive 8500.1 supersedes 5200.28M).

NOTE: For even greater security, Xerox provides a Removable Hard Drives (RHD) option so that disk drives may be removed from the system and physically secured elsewhere.

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	8.5 GB	Y	Yes File Storage	Backup Device, Print Job Submission.	Destroy media. Overwrite RW media
<p><b>Additional Information:</b>            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.</p>					

USB Port(s)	
USB port and locations	Purpose
FreeFlow Print Server DFE / PSIP motherboard contains 8 USB: 4 USB 3.0 ports with a speed up to 640Mbps; 4 USB 2.0 with a speed up to 480Mbps. 6 ports on the rear I/O panel and 2 ports onboard.	2 of the 6 Rear I/O panel USB ports are brought out to the front cover: One port used for USB keyboard One port available for User to store scanned images of job files on Flash Media or submit print jobs from Flash Media. Physical security of this information is the responsibility of the User or Operator. 1 of the 6 Rear I/O panel USB ports connects to USB hub built in to Dell 19"W monitor. Remainder of USB ports are unused.
19"W Monitor with built-in USB Hub	Ports of USB hub allow User to store scanned images of job files on Flash Media or submit print jobs from Flash Media. Physical security of this information is the responsibility of the user or operator.
USB keyboard with built-in USB Hub	USB Mouse can be connected to one port of the USB hub. Additional ports of USB hub allow User to store scanned images of job files on Flash Media or submit print jobs from Flash Media. Physical security of this information is the responsibility of the user or operator.
<p><b>Additional Information:</b>            A number of devices can be connected to USB ports on the FreeFlow Print Server DFE/PSIP. 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.</p>	

## Print Engine (Marking Module) Descriptions

The data tables below detail the information regarding the volatile and non-volatile memory contained in the Nuvera™ EA/MX Production Systems print engine.

The Print Engine is controlled by a series of custom circuit boards.

Volatile Memory Description					
Type (SRAM, DRAM, etc)	Size	User Modifiable (Y/N)	User Modifiable Y / N	Function or Use	Process to Clear
SDRAM	512MB	N	Page images. No job data stored here persistently [Bacchus II]	Power Off System	SDRAM
SDRAM	512MB	N	Executable code, Printer control data [Sedora]	Power Off System	SDRAM
SRAM	12.5KB	N	Executable code, Printer control data [RCB]	Power Off System	SRAM
SRAM	2560Bytes	N	Executable code, Printer control data [PPC]	Power Off System	SRAM
SRAM	512Bytes	N	Executable code, Printer control data [RCM]	Power Off System	SRAM
SRAM	1KB	N	Executable code, Printer control data [PRC]	Power Off System	SRAM
SRAM	1KB	N	Executable code, Printer control data [XDC]	Power Off System	SRAM
SRAM	512Bytes	N	Executable code, Printer control data [SEM PWBA]	Power Off System	SRAM
SRAM	8KB	N	Executable code, Printer control data [FTC]	Power Off System	SRAM
<p><b>Additional Information:</b>            Except Bacchus II, all memory listed above contains code for execution and configuration information. No user or job data is stored in these locations.</p>					

Non-Volatile Memory Description					
Type (SRAM, DRAM, etc)	Size	User Modifiable (Y/N)	User Modifiable Y / N	Function or Use	Process to Clear
Flash	64-Mbit	N	Firmware [Bacchus II]	N/A	Flash
SRAM w/Battery Backup	4-Mbit	N	eTags/Configuration/Billing Counters [Bacchus II]	Remove battery	SRAM w/Battery Backup
Flash	288KB	N	Firmware [RCB]	N/A	Flash
Flash	160KB	N	Firmware [PPC]	N/A	Flash
Flash	32KB	N	Firmware [RCM]	N/A	Flash
Flash	64KB	N	Firmware [PRC]	N/A	Flash
Flash	64KB	N	Firmware [XDC]	N/A	Flash
Flash	32KB	N	Firmware [SEM PWBA]	N/A	Flash
Flash	32KB	N	Firmware [FTC]	N/A	Flash
EEPROM	2KB	N	Control set points, configuration settings [RCM]	N/A	EEPROM
<p><b>Additional Information:</b>  All memory listed above contains code for execution and configuration information. No user or job data is stored in these locations.</p>					

## Feeder Module Descriptions

The text below details the information regarding the volatile and non-volatile memory contained in the Nuvera™ EA/MX Production Systems supported feeders. This document lists the available options. Depending on the configuration purchased, your system will contain one or more of these devices.

**NOTE: None of these devices store any job data in electronic form.**

### Oversized High Capacity Sheet-feed Module

The Feeder device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### Standard Sheet-feed Module

The Feeder device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

## High Capacity Sheet-feed Insertion Module

The Feeder device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

## Standard Sheet-feed Insertion Module

The Feeder device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

## DocuSheeter™ NV Roll Feeder with Optional Grain Rotator

The DocuSheeter device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

## Finisher Module Descriptions

The text below details the information regarding the volatile and non-volatile memory contained in the Nuvera™ EA/MX Production Systems supported finishers. This document lists the available options as of the document Preparation Date. Additional finishers are continuously being certified, check with your Salesperson for a current list. Depending on the configuration purchased, your system will contain one or more of these devices. **NOTE: None of these finishing devices store any job data in electronic form.**

### Xerox® Production Stacker Module

The Production Stacker Module device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### Xerox® Multifunction Finisher: Professional and Pro Plus

The High Capacity Stacker finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### Xerox® Basic Finisher Module (BFM), BFM Plus and BFM - Direct Connect

The High Capacity Stacker finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### Xerox® Document Stacker 3500 (DS3500)

The Stacker finishing device never contains job data or Personally Identifiable Information. All memory



inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

#### **Xerox® High Capacity Document Stacker 5000 (DS5000)**

The High Capacity Stacker finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

#### **Xerox® Tape Binder**

The Tape Binder finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

#### **Xerox® DB120-D Document Binder**

The Document Binder finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### **Third Party DFA-connected finishing devices**

#### **Duplo DBM-5001 Inline Booklet Maker**

The Duplo Booklet Maker finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

#### **Plockmatic Pro 30 Booklet Maker**

The Plockmatic Booklet Maker finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

#### **C.P. Bourg Book Factory with CMT 330 3 Knife Trim**

The Bourg Book Factory finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

#### **C.P. Bourg BDFx Booklet Maker with Square Edge**

The Booklet Maker finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### **C.P. Bourg PowerSquare™ 200**

The PowerSquare finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### **GBC® FusionPunch® II with Offset Stacker**

The Fusion Punch finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### **GBC® eBinder 200™**

The eBinder finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### **LaserMate® LM-15**

The LaserMate finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

### **CEM DocuConverter™**

The DocuConverter finishing device never contains job data or Personally Identifiable Information. All memory inside the device is used for configuration settings and normal operation. Removal of any memory will void the warranty. Access to any memory is by system programs or diagnostics only.

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