Hewlett-Packard Certificate of Volatility

Model: HP Color LaserJet Managed MFP E876XXdn HP Color LaserJet Managed Flow MFP E876XXz	Part Number: **Managed** X3A87A= E87640dn X3A90A= E87650dn X3A93A= E87660dn X3A86A= E87640z X3A89A= E87650z X3A92A= E87660z	Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714

Volatile Memory

Does the device contain volatile memory (Memory whose contents are lost when power is removed)?
☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below

Type (SRAM, DRAM, etc.):	Size:	User Modifiable:	Function:	Steps to clear memory:
DDR3 - DRAM	<u>HP Formatter</u> 3GB- Obsidian 1 GB –Accel board 4 GB - Main Formatter	☐ Yes ☒ No	Operation system and print/scan buffer	When the printer is powered off the memory is erased.
Type (SRAM, DRAM, etc.):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:

Non-Volatile Memory

Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)?
☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below

Type (Flash, EEPROM, etc.):	Size:	User Modifiable:	Function:	Steps to clear memory:
IOD EEPROM	32KB	☐ Yes ☒ No	Store customer setting data for backup/restore	There are no steps to clear this data.
HP side: SPI Flash	4MB	☒ Yes ☐No	Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images.	There are no steps to clear this data
Samsung MSOK : MSOK – TPM NVRAM MSOK – EEProm MSOK – CRUM	2 KB 32 KB 32 KB	☐ Yes ☒ No	TPM NVRAM - stores HP-signed immutable ID certificate and associated RSA key pair in locked memory. EEProm - stores device lifecycle data (e.g. device page counts), copy of device speed license, and SED (self-encrypting drive) drive lock password. CRUM - stores device page counts, consumables information, device speed information, and product serial number.	Drive lock password can be changed through the device embedded web server interface. No other data stored on the MSOK can be cleared.

Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? ⊠ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc.): 2 – Hard Drives (1 – HP formatter & 1 – Main board)	Size: 320GB/ea	User Modifiable: ⊠ Yes ☐ No	Function: Stores customer data, OS, applications, digitally signed firmware images, persistent data, and temporary data used for processing and system functions.	Steps to clear memory: 1. Secure Storage Erase – Areas temporary files and job data by overwriting information overwriting information one or three times. 2. Secure Disk Erase – Erases files when jobs finish processing by overwriting them one or three times. 3. Secure File Erase – Erases files when jobs finish processing by overwriting them one or three times.

Optional Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? ⊠ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc.): Optional Formatter HDD 500 GB FIPS Encrypted HDD	Size: 500GB	User Modifiable: ⊠ Yes ☐ No	Function: Stores customer data, OS, applications, digitally signed firmware images, persistent data, and temporary data used for processing and system functions.	Steps to clear memory: 1. Erase and Unlock Encrypted Disk – This changes the Encryption keys rendering all data unreadable. 2. Secure Storage Erase – Areas temporary files and job data by overwriting information overwriting information one or three times. 3. Secure Disk Erase – Erases files when jobs finish processing by overwriting them one or three times. 4. Secure File Erase – Erases files when jobs finish processing by overwriting them one or three times.

USB
Does the item accept USB input and if so, for what purpose (i.e. Print Jobs, device firmware updates, scan upload)? ⊠ Yes ☐ No If Yes please describe below
Print jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled.
Can any data other than scan upload be sent to the USB device)? ⊠ Yes ☐ No If Yes please describe below
Diagnostic service logs can be uploaded. Print files can be printed via a USB thumb drive.

RF/RFID	
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) ☐ Yes ⊠ No If Yes please describe below	
Purpose:	
Frequency:	Bandwidth:
Modulation:	Effective Radiate Power (ERP):
Specifications:	

Other Transmission Capabilities

Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? ⊠ Yes ☐ No If Yes please describe below:	
Purpose: WiFi Direct Print	
Frequency: 2.4 GHz, 5GHz	Bandwidth: 2401 - 2495 MHz; depending on selected channel in 2.4GHz band. 5180 - 5825 MHz; depending on selected channel in 5GHz band.
Modulation:	Effective Radiate Power (ERP):
Specifications: 802.11 b/g/n	

Other Transmission Capabilities	
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? ⊠ Yes ☐ No If Yes please describe below:	
Purpose: Device Beaconing, Secure Print Apps	
Frequency: 2.4 GHz	Bandwidth: 2400-2483.5 MHz; depending on selected channel.
Modulation:	Effective Radiate Power (ERP):
Specifications: BTLE4.0 compliant	

Other Capabilities	
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? ☐ Yes ⊠ No If Yes please describe below:	
Purpose:	
Specifications:	

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Date Prepared: 9/14/2018			