



## Certificate of Volatility

Manufacturer: **Xerox**

Equipment Name: **Phaser**

Model: **3635**

Configuration: This item is offered in 2 configurations: Copier/Network Printer/Scanner and Copier/Network Printer/Scanner/Fax/Convenience Stapler

General description: **This device is a Copier/Printer/Scanner or Copier/Printer/Scanner/Fax.**

Purpose: **Copy, Print, Scan and Analog Fax functions.**

### 1. **Type of memory:**

**Volatile memory:** What is the amount? What period of time does the unit need to be powered off to completely erase this memory?

**User Interface Volatile memory:**

DDRAM: 86 MB (Includes printing)

**Scanner Volatile Memory:**

DDRAM: 65 MB (No user image data stored.)

**Copy Controller Volatile Memory:**

N/A – All Copy memory is contained in memory used for Scanning and Printing

**FAX Volatile Memory:**

DDRAM: 2 MB

**Network Controller Volatile Memory:**

DDRAM 13 MB

**Video Volatile Memory:**

DDRAM 40 MB



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### Non-Volatile Memory:

**Type:** What type(s) of non-volatile memory are included, EPROM, EEPROM, Flash memory, NVRAM, and battery backed, etc. (fill in)

### User Interface Non-Volatile memory:

Flash ROM: 1 MB

EEPROM: 32 KB

Hard Disk: 80 GB

### Scanner Non-Volatile Memory:

N/A

### Copy Controller Non-Volatile Memory:

N/A

### FAX Non-Volatile Memory:

Hard Disk is location. Upwards of 5 GB available.

### Network Controller Non-Volatile memory:

EEPROM: 9 KB

### Hard Disk:

80 GB (Fonts, Network Credentials and User image data stored. User data overwritten if image overwrite option is enabled. Hard Disk is encrypted using 128 Bit AES.)

2. **Accessibility:** Is it accessible by accidental/intentional keystroke, or software malfunction?  
**No.** However, the login system administrator or service technician (via diagnostic operation) may adjust certain machine operational parameters. User data is never accessible.

3. If "YES, it is accessible, describe location and purpose.

Purpose: typical uses for non-volatile memory location are system identification number and system configuration, boot, and initialization parameters, for example (battery-backed NVRAM on SUNs); put in for future design needs, internal depot repair, clock circuit, "nice" to have, or to flag unauthorized software, etc.

If "NO", it is not accessible, \_\_\_**X**\_\_\_ (Check here).

4. *Required memory:* Is device needed for normal operation, i.e. required for this processing period?  
**All memory listed is required for normal operation.**

5. *Removal consequences:* If device memory chip is erased, what impact will this have on operation and normal function of device?

Example: If the SUN is turned on without this means of checking for the authorized configuration, the system will not boot and therefore the data cannot be processed per the standard Practice Procedure (SPP).

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Memory device content is required and essential for operation and normal function of the device. Loss would render the device inoperable.

ROM memory does not contain user data. This memory is not overwritten or erased during normal operation.

Hard Disk memory processes user data. Content of this memory is encrypted on the Hard Disk and can be overwritten at user request or on a per job basis.

6. *Method of access:* How is it accessed? Is non-volatile memory location theoretically accessible with any system code, not just via the operating system or low level booting firmware?

There is no user access to the memory devices, except as provided programmatically to control device behaviors.

Remember: Modifying internal programming to access is not the same thing as unknowingly accessing from an accidental keyboard stroke.

7. *Warranty:* Does chip removal or EEPROM erasure void the warranty?

Yes, memory removal or erasure will void the warranty. Disk removal of the internal disk drive will void the warranty, unless performed in accordance with Xerox Disk Removal Program guidelines.

8. *Size:* How much memory is contained? Number of bytes, etc.  
See section 1, "Type of Memory"

9. *Spacing:* Is the memory fully utilized or does it have available memory space for additional information to be placed?

The non-volatile memory devices are sized to contain the necessary amount of data required for system operation. Usually there are some unused memory addresses where additional information could be theoretically stored. Without access to the software developers' memory maps, determining the location of this unused memory would require reverse engineering the software.

10. Can this non-volatile memory be addressed to ensure that only authorized information is resident? If yes, how?

At boot-up, the system computes a checksum for each non-volatile memory device. (Note: The computed checksum is compared against a value stored in the device itself. This is sufficient to detect hardware failures, but not necessarily intentional corruption.)



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Evaluation and summary of this equipment was completed by the following:

Michael Piccirilli Signature

MICHAEL PICCIRILLI (Printed name)

Program Manager (Title)

   (Job function)

Larry Kovnat Signature

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