

SHARP®

Secure Office Systems



Data and Network Security



Addressing the MFPs Document Privacy Vulnerabilities

Retained Information

Unauthorized Access

Output Privacy



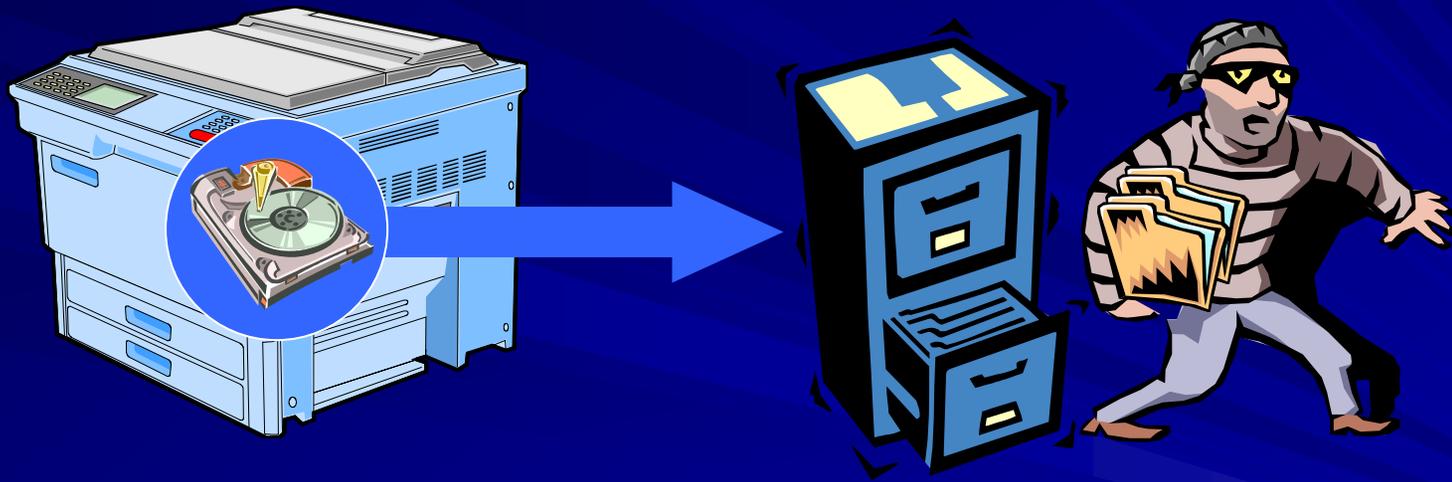
Network Vulnerabilities





The Risk to Privacy Compliance

Digital Copiers Store *Thousands* of Records in Internal Memory

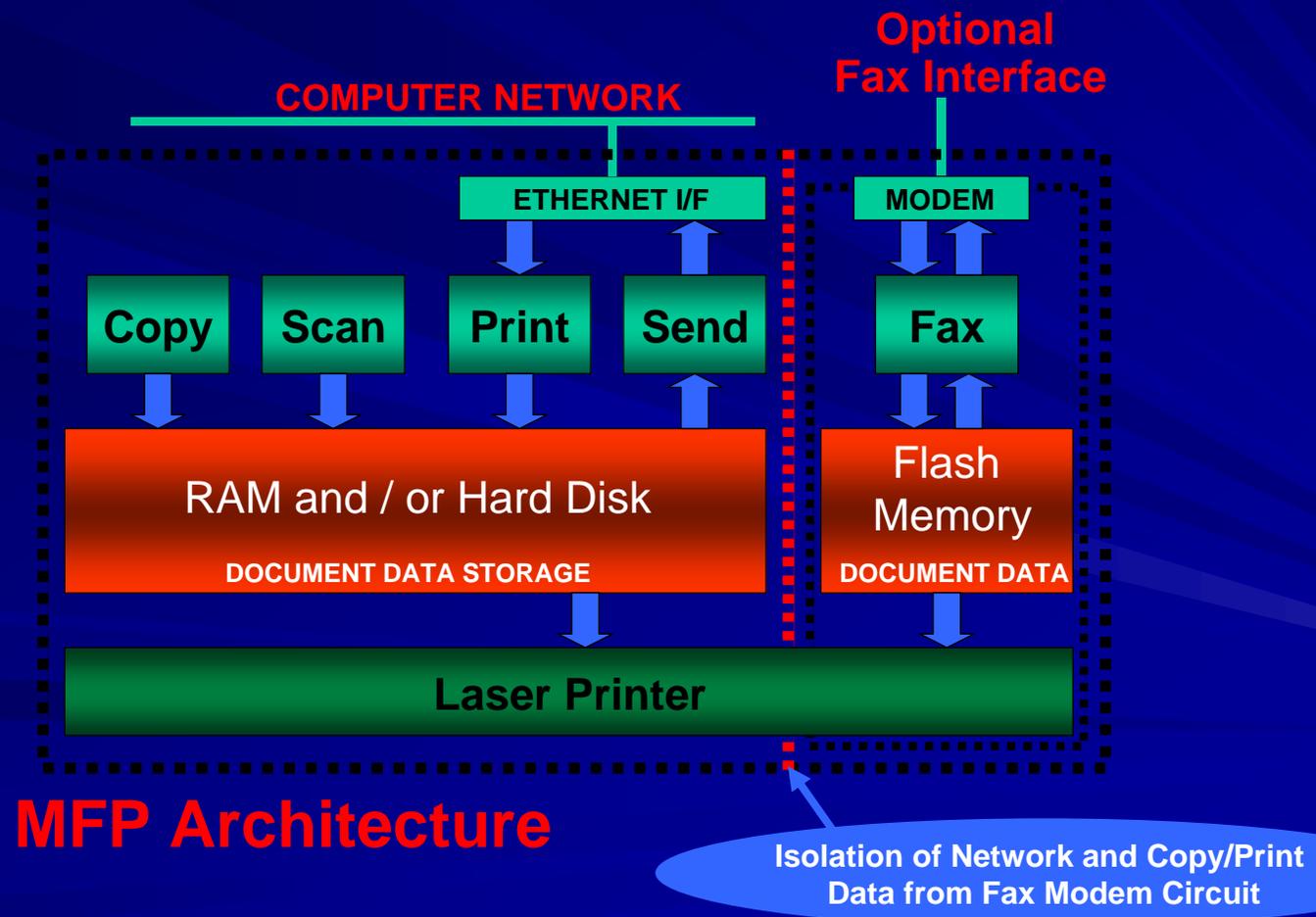


At the end of a copier's lease period, thousands of records retained on the hard drive can fall into the wrong hands...this poses a privacy compliance risk





Multifunctional Systems Memory Vulnerability Assessment



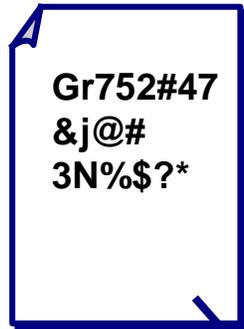
MFP Architecture



SHARP Security Solution

Electronic Data Disclosure Prevention

Copy/Print Data



Data is erased every time copy/print job is completed. "Clear all memory" mode enables MFP to erase all data area when MFP is turned on.

Encryption

Data Clear



HDD



HDD, RAM, FAX Flash memory are erased



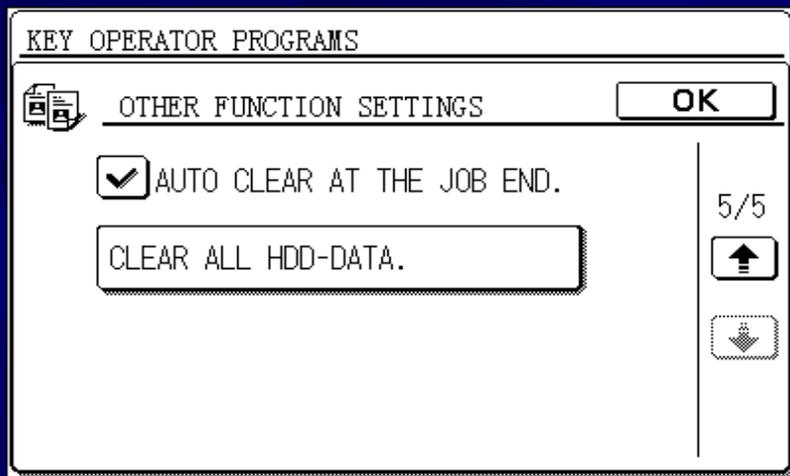
Volatile Memory





User Notification

Manual Mode



Message displayed at the completion of each job indicating that the memory has been cleared

Auto Mode





Sharp has the Answer: Common Criteria Validated Data Security Kit

- Special Secure Firmware option analyzed by the Common Criteria Program
 - Sponsored by the National Security Agency
 - Difficult standard to attain
 - Sharp is on its **Second Generation** design
 - Successful track record in government/military applications
- Encrypts data stored in memory
 - 128 bit encryption of all data (for print, copy, scan, or fax jobs) stored on the Hard Drive and RAM
- Overwrites data after job is completed
 - Random data overwrite (programmable up to **Seven Times**) of the information stored in memory





National Information Assurance Partnership Website

http://niap.nist.gov/cc-scheme/ST_VID2012.html

THE COMMON CRITERIA EVALUATION AND VALIDATION SCHEME
 NIAP Home CCEVS Home About Us Contact Us Help Site Map

BY 1 JULY 2002, THE ACQUISITION OF ALL COTS IA AND IA-ENABLED PRODUCTS TO BE USED ON SYSTEMS [PROCESSING] NATIONAL SECURITY INFORMATION SHALL BE LIMITED ONLY TO THOSE WHICH HAVE BEEN EVALUATED AND VALIDATED IAW THE CC, NIAP CCEVS OR FIPS.
 -- NSTISSP 11 POLICY LETTER, DATED JANUARY 2002.

Click here >>>

Validated Products
 A CALL FOR PRODUCTS

Validating IA and IA-Enabled Products
 THE PROCESS

Comments of Interest & Related Policy

Available products to assist in making a more secure infrastructure.

Boosting consumer confidence through evaluation and testing of vendor products.

Policy that our adhe the Comm

The Big CCEVS Picture

- Defining the CCEVS
- CCEVS Objectives
- Eval/Validation Primer
- CCEVS Validation Body
- Historical Perspective
- Guidance to Consumers
- CC Testing Labs
- CCRA & Partners
- Acronyms & Terms
- Upcoming Events
- The OR/OD Process
- What's New

CCEVS Products

- Validated Products List
- Validated Protection Profiles
- Products in Evaluation
- PPs in Development
- Archived Validated Products

Docs & Guidance

- FAQs
- Scheme Policy Letters

VPL (by Product Type)

- VPL (by Assurance Level)
- VPL (by Product Name)
- VPL (by Vendor)
- Archived Evaluated Products
- Products in Evaluation
- Validated Protection Profiles
- PPs in Development

Getting a Product Evaluated

- Finding a CCTL
- Getting a CCTL Accredited

DOD Directive #8

- DOD Instruction #
- NSTISSP #11 Fac
- NIST Spec Pub 8
- NSD 42
- NSTISSAM Comp
- USAF CIO Memor
- Pres. Decision Di

For a comprehensive list of pertinent IA-related documents, click [Click Here](#).

THE COMMON CRITERIA EVALUATION AND VALIDATION SCHEME
 NIAP Home CCEVS Home About Us Contact Us Help Site Map

Validated Products List

Sharp Corporation Multifunction Device with Data Security Kit, AR-FR4 V.M.10, AR-FR5 V.E.10, AR-FR6 V.J.10

SHARP

Search NIAP CCEVS

Go

The Big CCEVS Picture

- Defining the CCEVS
- CCEVS Objectives
- Eval/Validation Primer
- CCEVS Validation Body
- Historical Perspective
- Guidance to Consumers
- CC Testing Labs
- CCRA & Partners
- Acronyms & Terms
- Upcoming Events
- The OR/OD Process
- What's New

CCEVS Products

- Validated Products List
- Validated Protection Profiles
- Products in Evaluation
- PPs in Development
- Archived Validated Products

Docs & Guidance

- FAQs
- Scheme Policy Letters
- Scheme Publications
- CC Documentation
- CEM Documentation
- Forms

Other Useful Links

- Precedent Database
- Public Interps Database
- Int'l Interps Database
- Validators Only
- NVLAP Lab Accreditations
- TTAP

Product Name: Sharp Corporation Multifunction Device with Data Security Kit, AR-FR4 V.M.10, AR-FR5 V.E.10, AR-FR6 V.J.10

Product Type: Multi Function Device

Date: 2 December 2002

Conformance Claim: EAL 2

PP Identifier: None

Security Target:

Validation Report:

CC Certificate Image:

Key Words: Sharp, Sharp Corporation, Sharp Imager Family, copy services, print services, scan services, object reuse, residual information protection

Vendor: Sharp Electronics Corporation

POC: Mr. Peter Cybuck

Phone: 201-214-8760

Fax:

Email: Peter.Cybuck@sharpsec.com

Web: <http://www.sharpsusa.com>

CC Testing Lab: Computer Sciences Corporation

PRODUCT DESCRIPTION:
 The TOE is a multi-function device with print, copy, scan and FAX options (hereafter referred to as a MFD). A Data Security Kit (DSK) is available to upgrade existing printers and copiers to the evaluated configuration.

A MFD may store temporary document image data in RAM, on a hard disk drive (HDD), or in FLASH memory, depending on the hardware configuration. The MFD provides DATA CLEAR and DATA ENCRYPTION functions to enhance the security of the MFD. The DATA CLEAR function overwrites the encrypted temporary document image data (resulting from the DATA ENCRYPTION function) with random data up to seven times at the completion of each print, scan or copy job. When clearing temporary document image data from a FAX job, the DATA CLEAR function writes zeros (0) into the FLASH memory, overwriting the document images.

One component of the DATA CLEAR function is the hard disk drive (HDD)-erase function. With automatic HDD-erase, after the completion of any copy, print or scan operation encrypted temporary document image data is overwritten by random data. Invoking HDD-erase mitigates the risk that the HDD will retain readable document data when a job is completed. The DSK also allows a Key Operator to manually clear the entire HDD up to seven times on occasions such as loss of power to the copier, or when removal of the HDD is necessary. If a hard disk is not present, the MFD will create a RAM disk. This RAM disk is a virtual disk drive and is treated the same as the hard disk drive; thus, a hard disk is not required for operation. Data written to the RAM disk is also encrypted and overwritten up to seven times.

In the event of a power failure, any encrypted data currently on the HDD remains. After a successful power up, with the "Power Up Auto Clear" enabled, the DATA CLEAR function ensures that all





Sharp offers “End-to-End” Security

■ Confidential Printing

- Print is made while author is present
- Minimizes the risk of secure documents being removed from the paper tray



■ Audit Trail

- Allows network administrators to monitor all print, copy and scan activity
- Provides a comprehensive audit trail that can track network activity by user
- Tracks every page that is printed and copied





Sharp offers “End-to-End” Security

■ Secure Network Interface

- MFPs have network-accessible web administration pages
- IP Filtering and MAC Address Filtering allow administrators to restrict user access, disable protocols and disable ports





Network Vulnerability Protections



Digital Multifunctional Products Use Ethernet Interfaces Similar to Those Used In Computers

IT Staff Uses Firewall and Anti-Virus Software to Protect Computers

Printers and MFPs are Usually Overlooked





Secure Network Interface

- ◆ Enables administrators to RESTRICT remote access to the copier/printer.
- ◆ In Security Mode the network administrator can specify the IP addresses of secured servers or authorized users blocking LPR, FTP, Telnet, and Sockets printing to those not on the list.
- ◆ This feature addresses insider threats

Administrator's Network Admin Web Page



SHARP
Security Enhancement Config

Name	Value
Filter	<input type="button" value="DISABLE"/> http://172.29.22.166:129/security.htm
Telnet Remove	<input type="button" value="DISABLE"/>
JCP Remove	<input type="button" value="DISABLE"/>
RARP Remove	<input type="button" value="DISABLE"/>

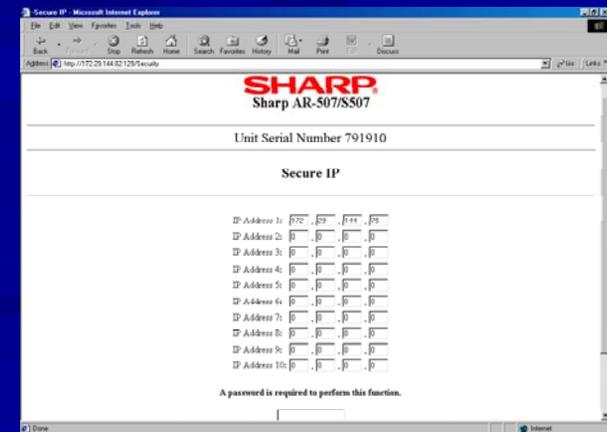
Unauthorized IP Address



Access Denied



Authorized IP Address



Secure IP - Microsoft Internet Explorer

SHARP
Sharp AR-507/SS07

Unit Serial Number 791910

Secure IP

IP Address 1:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 2:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 3:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 4:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 5:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 6:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 7:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 8:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 9:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>
IP Address 10:	<input type="text" value="172"/> . <input type="text" value="29"/> . <input type="text" value="22"/> . <input type="text" value="166"/>

A password is required to perform this function.

