



# **<u>Certification Report</u>**

Tatsuo Tomita, Chairman Information-technology Promotion Agency, Japan

Target of Evaluation (TOE)	
Application Date/ID	2015-10-16 (ITC-5567)
Certification No.	C0549
Sponsor	KYOCERA Document Solutions Inc.
TOE Name	TASKalfa 6052ci, TASKalfa 5052ci, TASKalfa 4052ci,
	TASKalfa 3552ci, TASKalfa 6052ciG, TASKalfa
	5052ciG, TASKalfa 4052ciG(KYOCERA), CS 6052ci,
	CS 5052ci, CS 4052ci, CS 3552ci(Copystar), 6006ci,
	5006ci, 4006ci(TA Triumph-Adler/UTAX)
	all of the above with Data Security Kit (E) and FAX
	System 12
TOE Version	System: 2ND_20IS.C01.010HS
	Panel: 2ND_70IS.CI1.010
	FAX: 3R2_5100.002.005
PP Conformance	IEEE Std 2600.1 <sup>TM</sup> -2009
Assurance Package	EAL3 augmented with ALC_FLR.2
Developer	KYOCERA Document Solutions Inc.
<b>Evaluation Facility</b>	Information Technology Security Center,
	Evaluation Department

This is to report that the evaluation result for the above TOE is certified as follows.

2017-05-25

Takumi Yamasato, Technical Manager Information Security Certification Office IT Security Center Technology Headquarters

**Evaluation Criteria, etc.:** The TOE is evaluated in accordance with the following standards prescribed in the "IT Security Evaluation and Certification Scheme Document."

- Common Criteria for Information Technology Security Evaluation Version 3.1 Release 4
- Common Methodology for Information Technology Security Evaluation Version 3.1 Release 4

#### Evaluation Result: Pass

"TASKalfa 6052ci, TASKalfa 5052ci, TASKalfa 4052ci, TASKalfa 3552ci, TASKalfa 6052ciG, TASKalfa 5052ciG, TASKalfa 4052ciG(KYOCERA), CS 6052ci, CS 5052ci, CS 4052ci, CS 3552ci(Copystar), 6006ci, 5006ci, 4006ci(TA Triumph-Adler/UTAX) all of the above with Data Security Kit (E) and FAX System 12" has been evaluated based on the standards required, in accordance with the provisions of the "Requirements for IT Security Certification" by Information-technology Promotion Agency, Japan, and has met the specified assurance requirements.

Notice:

This document is the English translation version of the Certification Report published by the Certification Body of Japan Information Technology Security Evaluation and Certification Scheme.

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## 1. Executive Summary

This Certification Report describes the content of the certification result in relation to IT Security Evaluation of "TASKalfa 6052ci, TASKalfa 5052ci, TASKalfa 4052ci, TASKalfa 6052ci, TASKalfa 6052ciG, TASKalfa 5052ciG, TASKalfa 4052ciG(KYOCERA), CS 6052ci, CS 5052ci, CS 4052ci, CS 3552ci(Copystar), 6006ci, 5006ci, 4006ci(TA Triumph-Adler/UTAX) all of the above with Data Security Kit (E) and FAX System 12, Version System: 2ND\_20IS.C01.010HS Panel: 2ND\_70IS.CI1.010 FAX: 3R2\_5100.002.005" (hereinafter referred to as the "TOE") developed by KYOCERA Document Solutions Inc., and the evaluation of the TOE was finished on 2017-05-08 by Information Technology Security Center, Evaluation Department (hereinafter referred to as the "Evaluation Facility"). It is intended to report to the sponsor, KYOCERA Document Solutions Inc., and provide security information to procurement entities and consumers who are interested in the TOE.

Readers of the Certification Report are advised to read the Security Target (hereinafter referred to as the "ST") described in Chapter 10. Especially, details of the security functional requirements, assurance requirements and rationale for sufficiency of these requirements of the TOE are described in the ST.

This Certification Report assumes "procurement entities who purchase the TOE" to be readers. Note that the Certification Report presents the certification result based on assurance requirements to which the TOE conforms, and does not guarantee an individual IT product itself.

#### 1.1 Product Overview

An overview of the TOE functions and operational conditions is described as follows. Refer to Chapter 2 and subsequent chapters for details.

## 1.1.1 Assurance Package

Assurance Package of the TOE is EAL3 augmented with ALC\_FLR.2.

## 1.1.2 TOE and Security Functionality

The TOE is a digital Multi-function Product (hereafter "MFP"), which provides the basic functions such as copy function, scan to send function, print function, FAX function and box function.

In addition to the basic functions of the MFP, the TOE provides security functions to protect document data used in the basic functions and the setting data affecting security, from disclosure and alteration.

For these security functionalities, the validity of the design policy and the accuracy of the implementation were evaluated in the scope of the assurance package. The next clause describes the assumed threats and assumptions of the TOE.

## 1.1.2.1 Threats and Security Objectives

The TOE assumes the following threats and provides the security functions to counter them.

For protected assets such as user document data and the setting data affecting security, there are threats of unauthorized disclosure and alteration caused by unauthorized operation of the TOE and by unauthorized access to the communication data on the network that the TOE is connected.

The TOE provides the security functions such as identification and authentication, access control and encryption, to prevent those protected assets from unauthorized disclosure and alteration.

#### 1.1.2.2 Configuration and Assumptions

The evaluated product is assumed to be operated under the following configuration and assumptions.

The TOE is assumed to be located in an environment where physical components and interfaces of the TOE are protected from the unauthorized access. For the operation of the TOE, the TOE shall be properly configured, maintained, and managed according to the guidance documents.

#### 1.1.3 Disclaimers

In this evaluation, once the following operations are performed on the TOE, it will not be assured by this evaluation.

- The setting conditions described in "7.5 Evaluated Configuration" are changed.
- The maintenance functions for service engineers are used.

## 1.2 Conduct of Evaluation

Under the IT Security Evaluation and Certification Scheme that the Certification Body operates, the Evaluation Facility conducted IT security evaluation and completed on 2017-05, based on functional requirements and assurance requirements of the TOE according to the publicized documents "IT Security Evaluation and Certification Scheme Document"[1], "Requirements for IT Security Certification"[2], and "Requirements for Approval of IT Security Evaluation Facility"[3] provided by the Certification Body.

## 1.3 Certification

The Certification Body verified the Evaluation Technical Report [13] prepared by the Evaluation Facility and evaluation documentation, and confirmed that the TOE evaluation was conducted in accordance with the prescribed procedure. The Certification Body confirmed that the TOE evaluation had been appropriately conducted in accordance with the CC ([4][5][6] or [7][8][9]) and the CEM (either of [10][11]). The Certification Body prepared this Certification Report based on the Evaluation Technical Report submitted by the Evaluation Facility and fully concluded certification activities.

## 2. Identification

The TOE is identified as follows:

TOE Name:	TASKalfa 6052ci, TASKalfa 5052ci, TASKalfa 4052ci, TASKalfa
	3552ci, TASKalfa 6052ciG, TASKalfa 5052ciG, TASKalfa
	4052ciG(KYOCERA), CS 6052ci, CS 5052ci, CS 4052ci, CS
	3552ci(Copystar), 6006ci, 5006ci, 4006ci(TA Triumph-Adler/UTAX)
	all of the above with Data Security Kit (E) and FAX System 12
TOE Version:	System: 2ND_20IS.C01.010HS
	Panel: 2ND_70IS.CI1.010
	FAX: 3R2_5100.002.005
Developer:	KYOCERA Document Solutions Inc.

The name of the TOE is composed of the MFP model name and mandatory options' name.

Users can verify that a product is the TOE, which is evaluated and certified, by following means.

Users confirm the MFP model name printed on the surface of the MFP body by comparing with the following list.

KYOCERA TASKalfa 6052ci, KYOCERA TASKalfa 5052ci, KYOCERA TASKalfa 4052ci, KYOCERA TASKalfa 3552ci, KYOCERA TASKalfa 6052ciG, KYOCERA TASKalfa 5052ciG, KYOCERA TASKalfa 4052ciG, Copystar CS 6052ci, Copystar CS 5052ci, Copystar CS 4052ci, Copystar CS 3552ci, TA Triumph-Adler 6006ci, TA Triumph-Adler 5006ci, TA Triumph-Adler 4006ci, UTAX 6006ci, UTAX 5006ci, UTAX 4006ci

Users operate on the operation panel according to the description in the product guidance documents, and confirm the mandatory option name and the TOE version displayed on the MFP operation panel by comparing them with the following list.

- Option name: "Data Security Kit (E)" and "FAX System 12"

- Each version of System, Panel, and FAX

## 3. Security Policy

This chapter describes security function policies and organizational security policies that the TOE adopts to counter threats.

The TOE provides the basic functions of the MFP such as copy function, scan to send function, print function, FAX function, and box function, and has functions to store user document data in the HDD inside the TOE and to communicate with user clients and various servers via network.

When using those functions, the TOE provides security functions that meet the security functional requirements required by the Protection Profile for MFPs, IEEE Std  $2600.1^{\text{TM}}-2009$  [14] (hereinafter referred to as the "PP"). The security functions that the TOE provides include user identification and authentication, access control, encryption of the document data and the setting data stored in the HDD, overwrite-erase upon deletion of the document data, and encryption communication. Those functions prevent user document data and the setting data affecting security that are protected assets from unauthorized disclosure and alteration of the data.

The TOE assumes the following user roles.

- Normal user

A user of the basic functions of the MFP, such as copy function, scan to send function, print function, FAX function, and box function that the TOE provides.

- Device Administrator

A TOE user who has special authority to configure settings of the TOE security functions.

- TOE Owner

Any person or organizational entity responsible for protecting TOE assets and realizing the security objectives for operational environment of the TOE.

The protected assets of the TOE are also defined as follows.

- User Document Data

Document data of users.

- User Function Data

User Function Data are the information relevant to user document data or jobs to be processed by the TOE. For the TOE, job data that are generated when performing the basic functions of the MFP are included.

- TSF Confidential Data

TSF Confidential Data are the data used for security functions, and whose integrity and confidentiality are required. For the TOE, login user passwords, an encryption key, and audit logs are included.

- TSF Protected Data

TSF Protected Data are the data used for security functions and whose integrity only is required. For the TOE, various setting values of security functions, such as login user names, job executable authorization, box permission that stores document data, and network setting, excluding TSF Confidential Data, are included.

## 3.1 Security Function Policies

The TOE possesses the security functions to counter the threats shown in Section 3.1.1, and to meet the organizational security policies shown in Section 3.1.2.

## 3.1.1 Threats and Security Function Policies

## 3.1.1.1 Threats

The TOE assumes the threats shown in Table 3-1 and provides the security functions to counter them. These threats are the same as the threats described in the PP.

Identifier	Threat
T.DOC.DIS	User Document Data may be disclosed to unauthorized
	persons.
T.DOC.ALT	User Document Data may be altered by unauthorized
	persons.
T.FUNC.ALT	User Function Data may be altered by unauthorized
	persons.
T.PROT.ALT	TSF Protected Data may be altered by unauthorized
	persons.
T.CONF.DIS	TSF Confidential Data may be disclosed to
	unauthorized persons.
T.CONF.ALT	TSF Confidential Data may be altered by unauthorized
	persons.

## Table 3-1 Assumed Threats

## 3.1.1.2 Security Function Policies against Threats

The TOE counters the threats shown in Table 3-1 by the following security function policies. Details of the respective security functions are described in Chapter 5.

1) Countermeasures against the threats "T.DOC.DIS," "T.DOC.ALT," and "T.FUNC.ALT"

These are threats to user data (User Document Data and User Function Data). The TOE counters the threats by the "User Management function," the "Job Authorization function," the "Data Access Control function," the "Overwrite-Erase function," and the "Network Protection function."

The "User Management function" of the TOE is a function that allows only successfully identified and authenticated users to use the TOE.

The "Job Authorization function" of the TOE is a function that checks the executable authorization assigned to the users, and allows only authorized users to use the basic functions, when identified and authenticated users attempt to use the basic functions of the MFP such as copy function, scan to send function, print function, FAX function, and box function.

The "Data Access Control function" of the TOE is a function that performs access control when users attempt to operate the basic function of the MFP on user data, and allows only authorized users to access to the user data.

The "Overwrite-Erase function" of the TOE is a function that overwrites the area of the HDD where the document data were stored when the document data are deleted. This protects the residual information from being referred to.

The "Network Protection function" of the TOE is a function that uses encryption communication protocol and encrypts the communication data when the TOE communicates with client PCs and various servers.

With the above-described functions, the TOE prevents the user data to be protected from disclosure and alteration caused by unauthorized usage of the TOE or unauthorized access to the communication data.

2) Countermeasures against the threats "T.PROT.ALT," "T.CONF.DIS," and "T.CONF.ALT"

These are threats to data used for security functions. The TOE counters the threats by the "User Management function," the "Security Management function," and the "Network Protection function."

The "User Management function" and the "Security Management function" of the TOE are functions that allow only identified and authenticated device administrators to refer to and change the data used for security functions. For normal users, they are allowed to change their login passwords.

The "Network Protection function" of the TOE is a function that uses encryption communication protocol and encrypts the communication data when the TOE communicates with client PCs and various servers.

With the above-described functions, the TOE prevents the data to be protected from disclosure and alteration caused by unauthorized usage of the TOE or unauthorized access to the communication data.

## 3.1.2 Organizational Security Policies and Security Function Policies

## 3.1.2.1 Organizational Security Policies

Organizational security policies required in use of the TOE are shown in Table 3-2. These organizational security policies are the same as the security policies described in the PP, except that P.HDD.ENCRYPTION is added.

Identifier	Organizational Security Policy
P.USER.AUTHORIZATION	To preserve operational accountability and security,
	Users will be authorized to use the TOE only as
	permitted by the TOE Owner.
P.SOFTWARE.VERIFICATION	To detect corruption of the executable code in the TSF,
	procedures will exist to self-verify executable code in
	the TSF.
P.AUDIT.LOGGING	To preserve operational accountability and security,
	records that provide an audit trail of TOE use and
	security-relevant events will be created, maintained,
	and protected from unauthorized disclosure or
	alteration, and will be reviewed by authorized
	personnel.
P.INTERFACE.MANAGEMENT	To prevent unauthorized use of the external interfaces
	of the TOE, operation of those interfaces will be
	controlled by the TOE and its IT environment.
P.HDD.ENCRYPTION	To improve the confidentiality of the documents, User
	Data and TSF Data stored in HDD will be encrypted
	by the TOE.

## Table 3-2 Organizational Security Policies

3.1.2.2 Security Function Policies to Organizational Security Policies

The TOE provides the following security functions to meet the organizational security policies shown in Table 3-2. Details of the respective security functions are described in Chapter 5.

1) Means to support organizational security policy "P.USER.AUTHORIZATION"

The TOE realizes this policy by the "User Management function" and the "Job Authorization function."

The "User Management function" of the TOE is a function that allows only successfully identified and authenticated users to use the TOE.

The "Job Authorization function" is a function that checks the executable authorization assigned to the users, and allows only authorized users to use the basic functions, when identified and authenticated users attempt to use the basic functions of the MFP such as copy function, scan to send function, print function, FAX function, and box function.

2) Means to support organizational security policy "P.SOFTWARE.VERIFICATION"

The TOE realizes this policy by the "Self-Test function."

The "Self-Test function" of the TOE is a function that verifies whether or not the HDD encryption function using an encryption key correctly performs upon start-up, and that verifies the integrity of TSF executable code upon receipt of an instruction from a device administrator.

3) Means to support organizational security policy "P.AUDIT.LOGGING"

The TOE realizes this policy by the "Audit Log function."

The "Audit Log function" of the TOE is a function that records security-relevant events as audit logs. Only identified and authenticated device administrators can read out and delete the stored audit logs. However, they cannot modify the audit logs.

4) Means to support organizational security policy "P.INTERFACE.MANAGEMENT"

The TOE realizes this policy by the "User Management function" and the "Network Protection function."

The "User Management function" of the TOE is a function that allows only successfully identified and authenticated users to use the TOE. When a state in which a user does not perform any operations continues for the specified period of time, the TOE terminates a session.

Regarding the "Network protection function" of the TOE, the data received from the external interfaces of the TOE must be processed by the TOE. This prevents unauthorized forwarding of the data from the external interfaces, including telephone lines, to the internal network.

5) Means to support organizational security policy "P.HDD.ENCRYPTION"

The TOE realizes this policy by the "HDD Encryption function."

The "HDD Encryption function" of the TOE is a function that encrypts data to be written to the HDD. The encryption algorithm is 256 bits AES.

## 4. Assumptions and Clarification of Scope

This chapter describes the assumptions and the operational environment to operate the TOE as useful information for the assumed readers to determine the use of the TOE.

#### 4.1 Usage Assumptions

Table 4-1 shows assumptions to operate the TOE. These assumptions are the same as the assumptions described in the PP. The effective performances of the TOE security functions are not assured unless these assumptions are satisfied.

Identifier	Assumptions
A.ACCESS.MANAGED	The TOE is located in a restricted or monitored environment
	that provides protection from unmanaged access to the
	physical components and data interfaces of the TOE.
A.USER.TRAINING	TOE Users are aware of the security policies and procedures of
	their organization, and are trained and competent to follow
	those policies and procedures.
A.ADMIN.TRAINING	Administrators are aware of the security policies and
	procedures of their organization, are trained and competent to
	follow the manufacturer's guidance and documentation, and
	correctly configure and operate the TOE in accordance with
	those policies and procedures.
A.ADMIN.TRUST	Administrators do not use their privileged access rights for
	malicious purposes.

#### Table 4-1 Assumptions

## 4.2 Environmental Assumptions

The TOE is installed in offices and connected to the internal network, and it is used from client PCs connected to the internal network as well. Figure 4-1 shows the general operational environment of the TOE.

Although it is not shown in Figure 4-1, it is possible to use the print function of the TOE by connecting client PCs to the TOE via USB ports.

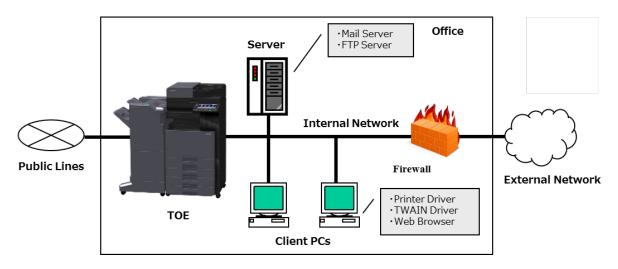


Figure 4-1 Operational environment of the TOE

The following are components, excluding the TOE, in the operational environment of the TOE:

1) Client PC

Client PC is used for users to use the TOE functions via the internal network or USB ports. The following software is necessary.

Туре	Name and version
Web Browser	- Microsoft Internet Explorer 11.0
Printer Driver	- KYOCERA Document Solutions Inc. KX Driver
TWAIN Driver (Scan to send function)	- KYOCERA Document Solutions Inc. KYOCERA TWAIN Driver

Table 4-2 Software of Client PC

2) Server (Mail Server)

Mail Server is used for device administrators to read the audit logs of the TOE. The server is also necessary when using the function that sends document data in the TOE by email. The following server is necessary:

- Mail Server: SMTP protocol over IPsec (IKEv1) should be supported

3) Server (FTP Server)

FTP Server is necessary when using the function that sends document data in the TOE by using FTP. The following server is necessary:

- FTP Server: FTP protocol over IPsec (IKEv1) should be supported

Note that the reliability of hardware and cooperating software, excluding the TOE, shown in this configuration is outside the scope of this evaluation. (It is assumed to be trustworthy.)

#### 4.3 Clarification of Scope

The evaluated security functions of the TOE have the following constraint conditions.

## 1) USB memory

The TOE provides the functions that print the stored document data in the USB memory connected to the TOE, and stores the internal TOE document data into the USB memory. In this evaluation, the USB memory is treated just like a shared folder that enables box permission. Therefore, there is no assurance that other users cannot access to the stored document data in the USB memory by using other interfaces than the operation panel. It is a users' responsibility to take measures against the cases when storing the document data which cannot be shared in the USB memory, or when misplacing the USB memory.

#### 2) IPsec protocol

In this evaluation, the TOE was evaluated with IPsec only for IPv4. Since IPsec for IPv6 is not evaluated, it is not assured by this evaluation.

## 5. Architectural Information

This chapter explains the scope and the main components (subsystem) of the TOE.

#### 5.1 TOE Boundary and Components

Figure 5-1 shows the composition of the TOE.

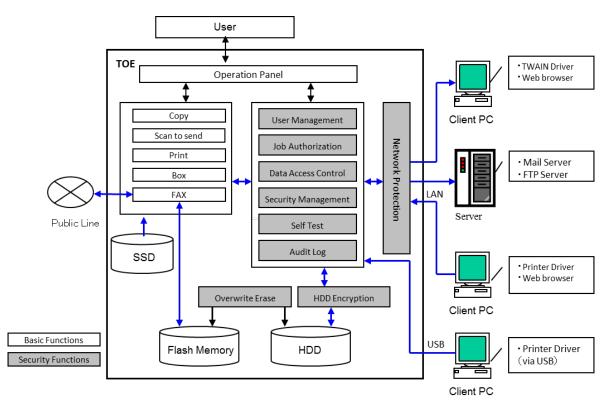


Figure 5-1 TOE Composition

As shown in Figure 5-1, the functions shaded in gray squares indicate security functions. The following describe the security functions of the TOE. It should be noted that the SSD is used to store firmware, and the document data are not stored in it.

1) User Management function

The User Management function is a function that identifies and authenticates TOE users with their login user names and login user passwords. Identification and authentication are applied to all of the following user interfaces.

- Operation panel
- Client PC (Web browser, printer driver and TWAIN driver)

In order to enhance the identification and authentication function, the following functions are provided:

- Users are required to use passwords of eight or more characters.
- When the number of consecutive authentication failures reaches the setting value set by the device administrator, the authentication process is suspended.
- If no operation is performed for a certain period of time after a user has been successfully identified and authenticated, the session is terminated.

- Passwords are masked with dummy characters (displaying '\*').
- 2) Job Authorization function

The Job Authorization function is a function that restricts only authorized users to use basic functions of the MFP such as copy function, scan to send function, print function, FAX function, and box function.

When a user attempts to use the basic functions of the MFP, the TOE checks executable authorization assigned to the user, and the user is authorized to use only the basic functions.

3) Data Access Control function

The Data Access Control function is a function that restricts the access to document data and job data used in the basic functions of the MFP to only authorized users.

Access Control is performed based on the owner information of document data and job data as well as the information for box permission storing the document data. Users are permitted to access only to the data, which users themselves are the owners, and the document data stored in box permission. Device administrators are allowed to delete all the data and perform operations on all the document data stored in the box.

4) Security Management function

The Security Management function is a function that permits only identified and authenticated device administrators to configure, refer to, and change the setting of the data used for security functions. Note that normal users are allowed to change their own passwords, refer to, and change their own box permissions.

## 5) Self-Test function

The Self-Test function is a function that performs the following self-tests:

- Upon start-up, the TOE verifies that the HDD Encryption function correctly performs, and the integrity of the encryption key is also verified simultaneously.
- Upon receipt of an instruction from a device administrator, the TOE verifies hash values of the executable module of the security functions.

#### 6) Audit Log function

The Audit Log function is a function that records security-relevant auditable events as audit logs. Only identified and authenticated device administrators can delete and read out the audit logs stored in the TOE via email (send). The audit logs cannot be modified.

If the area for storing audit logs is full, the oldest audit log will be deleted and overwritten with a new audit log that will be recorded.

#### 7) HDD Encryption function

The HDD Encryption function is a function that encrypts data to be stored in the HDD. The encryption algorithm is 256 bits AES. An encryption key is generated using SHA-256, based on a combination of eight characters and other secret information set by device administrators when the TOE is installed. The same value of the encryption key is generated every time the power is turned on and stored in the volatile memory, whereas it is deleted when the power is turned off.

8) Overwrite-Erase function

The Overwrite-Erase function is a function that overwrites and erases the internal HDD and Flash memory area, where document data were stored, when the document data are deleted. The Overwrite-Erase function is performed at the following timing:

- When document data become unnecessary after a user finishes using basic functions of the MFP. The data, which are temporarily generated in the TOE due to the TOE processing, are also included.
- When document data are deleted upon receipt of an instruction from a user.
- When the power of the MFP is turned on. If the overwrite-erase operation has not been completed when the power is turned off, the operation resumes when the power is turned on.

Device administrators can select a pattern of overwriting data, such as one pass overwrite or three pass overwrite (DoD method). The data is overwritten into the internal HDD or Flash memory without being encrypted.

9) Network Protection function

The Network Protection function is a function that encrypts communication with IT devices using the following protocols.

Client PC: TLSv1.2
Mail server: IPsec (IKEv1)
FTP server: IPsec (IKEv1)

The Network Protection function also provides a function that prevents unauthorized forwarding of the data from the external interfaces, including public lines, to the internal network via the TOE.

#### 5.2 IT Environment

Audit logs of the TOE can be read out via email (send) by using a mail server.

## 6. Documentation

The identification of documents attached to the TOE is listed below. There are guidance documents for Japan (Table 6-1) and for Overseas (Table 6-2) in regard to the TOE, and one of them is distributed depending on the sales areas.

TOE users are required to fully understand and comply with the following documents in order to satisfy the assumptions.

Name	Version
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 4052ci / TASKalfa	First Edition
5052ci / TASKalfa 6052ci Quick Guide	2016.1
	302ND5603001
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 3552ci / TASKalfa	2016.6
4052ci / TASKalfa 5052ci / TASKalfa 6052ci Safety Guide	302ND5622101
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 4052ci / TASKalfa	Rev.3 2017.1
5052ci / TASKalfa 6052ci Operation Guide	2NDKDJA003
FAX System 12 Operation Guide	Rev.3 2016.7
	3RKKDJA003
TASKalfa 6052ci / TASKalfa 5052ci / TASKalfa 4052ci / TASKalfa	2017.2
3252ci / TASKalfa 2552ci / TASKalfa 6002i / TASKalfa 5002i /	3MS2NDKDJA2
TASKalfa 4002i Data Security Kit (E) Operation Guide	
Command Center RX User Guide	Rev.7 2016.2
	CCRXKDJA07
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 4052ci / TASKalfa	2NDCLKDJA63
5052ci / TASKalfa 6052ci Printer Driver User Guide	1.2016.10
KYOCERA Net Direct Print User Guide	DirectPrintKDJ
	A1.2016.02
Notice	2017.2
	303 MS 5638001
Data Security Kit (E) Installation Guide	2013.1
	303MS56710-02
FAX System 12 Installation Guide	2016.6
	303RK56710-03

## Table 6-1 Guidance Documents for Japan

# Table 6-2 Guidance Documents for Overseas

Name	Version
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 3552ci / TASKalfa	2016.6
4052ci / TASKalfa 5052ci / TASKalfa 6052ci FIRST STEPS QUICK	302ND5602101
GUIDE	
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 3552ci / TASKalfa	2016.6
4052ci / TASKalfa 5052ci / TASKalfa 6052ci Safety Guide	302ND5622101
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 3552ci / TASKalfa	Rev.3 2017.3
4052ci / TASKalfa 5052ci / TASKalfa 6052ci OPERATION GUIDE	2NDKDEN003
FAX System 12 FAX OPERATION GUIDE	Rev.3 2016.07
	3RKKDEN103
TASKalfa 6052ci / TASKalfa 5052ci / TASKalfa 4052ci / TASKalfa	2017.2
3552ci / TASKalfa 3252ci / TASKalfa 2552ci / TASKalfa 6002i /	3MS2NDKDEN2
TASKalfa 5002i / TASKalfa 4002i Data Security Kit (E) Operation	
Guide	
Command Center RX User Guide	Rev.7 2016.2
	CCRXKDEN07
TASKalfa 2552ci / TASKalfa 3252ci / TASKalfa 3552ci / TASKalfa	2NDCLKTEN63
4052ci / TASKalfa 5052ci / TASKalfa 6052ci Printer Driver User	0.2016.10
Guide	
KYOCERA Net Direct Print User Guide	DirectPrintKDE
	N1.2016.02
Notice	2017.2
	303 MS 5638001
Data Security Kit (E) Installation Guide	2013.1
	303MS56710-02
FAX System 12 Installation Guide	2016.6
	303RK56710-03

## 7. Evaluation conducted by Evaluation Facility and Results

## 7.1 Evaluation Facility

Information Technology Security Center, Evaluation Department that conducted the evaluation as the Evaluation Facility is approved under JISEC and is accredited by NITE (National Institute of Technology and Evaluation), the Accreditation Body, which joins Mutual Recognition Arrangement of ILAC (International Laboratory Accreditation Cooperation). It is periodically confirmed that the above Evaluation Facility meets the requirements on the appropriateness of the management and evaluators for maintaining the quality of evaluation.

## 7.2 Evaluation Approach

The evaluation was conducted by using the evaluation methods prescribed in the CEM in accordance with the assurance components in the CC Part 3. Details for evaluation activities were reported in the Evaluation Technical Report. The Evaluation Technical Report explains the summary of the TOE as well as the content of the evaluation and the verdict of each work unit in the CEM.

## 7.3 Overview of Evaluation Activity

The history of the evaluation conducted is described in the Evaluation Technical Report as follows.

The evaluation has started on 2015-10 and concluded upon completion of the Evaluation Technical Report dated 2017-05. The Evaluation Facility received a full set of evaluation deliverables necessary for evaluation provided by the developer, and examined the evidence in relation to a series of evaluation conducted.

Additionally, the evaluator directly visited the development and manufacturing sites on 2016-04, 2016-05, 2016-07, 2016-10, 2016-11, 2016-12 and 2017-03, and examined procedural status of configuration management, delivery, and development security by investigating records and interviewing staff. For some development and manufacturing sites, site visits were omitted as the Evaluation Facility determined that the examination details of the past CC-certified products could be reused. Furthermore, the evaluator conducted the sampling check of the developer testing and the evaluator testing by using the developer testing environment at the developer site on 2017-03 and 2017-05.

## 7.4 IT Product Testing

The evaluator confirmed the validity of the testing that the developer had performed. As a result of the evidence shown in the process of the evaluation and the verification results of the testing performed by the developer, the evaluator performed the reproducibility testing, additional testing, and penetration testing based on vulnerability assessments judged to be necessary.

## 7.4.1 Developer Testing

The evaluator evaluated the integrity of the developer testing that the developer performed and the documentation of actual testing results. The content of the developer testing evaluated by the evaluator is explained as follows.

## 1) Developer Testing Environment

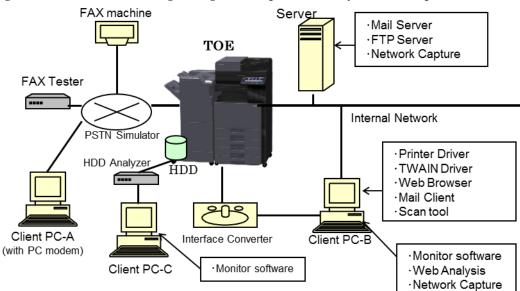


Figure 7-1 shows the testing configuration performed by the developer.

Figure 7-1 Configuration of the Developer Testing

Table 7-1 shows the components of the developer testing.

Item	Description
TOE	KYOCERA TASKalfa 6052ci, KYOCERA TASKalfa 5052ci,
	KYOCERA TASKalfa 4052ci, KYOCERA TASKalfa 3552ci
	- Data Security Kit (E) and FAX System 12 are installed.

Server	It is used as a mail server and FTP server.
	- PC with Windows Server 2012 R2 Standard
	- Mail server: PMail Server 1.91
	- FTP server: Microsoft Internet Information Services
	8.5.9600.16384
	*Other than the above-described, the following developer testing tool is installed:
	- Network Capture Software: WireShark v1.12.2
Client PC-B	It is used as TOE user client PC.
	- PC with Windows 8.1 Enterprise
	- Printer Driver: KX Driver v6.3.1625
	- TWAIN Driver: KYOCERA TWAIN Driver v2.0.6525
	- Web Browser: Internet Explorer 11.0
	- Mail Client: Mozilla Thunderbird 38.1.0
	- Scan tool: IrfanView v3.91
	(This tool imports images scanned on the TOE via TWAIN
	driver, and displays them.)
	*Other than the above-described, the following developer
	testing tools are installed:
	- Monitor Software: Tera Term Professional v4.78
	- Web Analysis tool: Fiddler v4.5.1.5
	- Network Capture Software: WireShark v1.12.2
Interface Converter	A board to connect the developer interface inside the TOE
	- KYOCERA Document Solutions proprietary board
Client PC-C	It is connected to HDD analyzer and used to monitor data
	transferred to and from the internal HDD of the TOE.
	- PC with Windows 7 Professional SP1
	- Monitor Software: Tera Term Professional v4.78
HDD Analyzer	A device that analyzes data transferred to and from the
	internal HDD of the TOE.
	- SATA Command Monitor
FAX machine	It is used to send and receive FAX transmission to and
	from the TOE.
	- FS-3640MFP
	(The MFP manufactured by KYOCERA Document
	Solutions Inc.)

FAX Tester	Super G3 Facsimile Tester corresponding to ITU-T	
	recommendation	
	- Super G3 Facsimile Tester AFT-336N	
PSTN Simulator	A device that performs a pseudo operation as public line	
	- X4008 Switch Simulator (AD SYSTEMS)	
Client PC-A	It is used to confirm a function to prevent unauthorized	
	forwarding via public line.	
	- PC with Windows 7 Professional SP1	

The TOEs used in the developer testing are all MFP models which have names starting with "KYOCERA TASKalfa" and ending with "ci," and are the same TOEs as described in TOE identification of Chapter 2.

Table 7-2 shows the relation between MFP models used in the developer testing and other models of the TOE. The products listed in the same row are the same models but have different product names. It is considered that the configuration of the developer testing includes all of the TOEs identified.

	MFP used for the developer testing	Series A	Series B	Series C	Series D
1	KYOCERA	KYOCERA	Copystar	TA Triumph-Adler	UTAX
	TASKalfa 6052ci	TASKalfa 6052ciG	CS~6052ci	6006ci	6006ci
2	KYOCERA	KYOCERA	Copystar	TA Triumph-Adler	UTAX
	TASKalfa 5052ci	TASKalfa 5052ciG	CS 5052 $ci$	5006ci	5006ci
3	KYOCERA	KYOCERA	Copystar	TA Triumph-Adler	UTAX
	TASKalfa 4052ci	TASKalfa 4052ciG	CS 4052ci	4006ci	4006ci
4	KYOCERA	-	Copystar	-	-
	TASKalfa 3552ci		CS 3552ci		

Table 7-2 TOE Variation

The developer testing was performed in the same TOE testing environment as the TOE configuration identified in the ST.

2) Summary of the Developer Testing

A summary of the developer testing is described as follows.

a. Developer Testing Outline

An outline of the developer testing is described as follows.

<Developer Testing Approach>

For the behaviors that can be confirmed through the external interfaces provided by the TOE, the responses to the input operations, the TOE behavior, and communication data are confirmed using them.

For the behaviors that cannot be confirmed through the external interfaces provided by the TOE, the internal behaviors are confirmed using the developer interfaces and HDD Analyzer. In addition, by using the modified firmware to acquire logs inside the TOE for the testing, its log information and memory contents are confirmed through the interfaces for developers.

It is confirmed that the encryption algorithm is implemented as specified by comparing the data that were obtained by the above approach, with the known data calculated by a different approach.

## <Developer Testing Tools>

Table 7-3 shows the tools used in the developer testing.

Tool Name	Outline and Purpose of Use
Network Capture Software	It captures communication data on the internal network. It
(WireShark v1.12.2)	is used for confirming communication protocols.
Web Analysis Tool	It analyzes communication between Web browser and the
(Fiddler v4.5.1.5)	TOE to refer to and change the communication data
	between them.
HDD Analyzer & Monitor	It captures data traveling through SATA interface of the
Software (Client PC-C)	internal HDD of the TOE. It is used for confirming the
	encryption of the HDD and overwrite-erase of the data.
Firmware for testing	Firmware for testing, which is modified to output
Encryption function	information, such as encryption key of the HDD encryption
	function, as logs.
	The implementation part of encryption key generation and
	encryption algorithm is the same as the TOE.
Firmware for testing	Firmware for testing, which is modified to enable
Self-Test function	developers to specify target of verification for self-tests.
	The implementation part of self-tests is the same as the
	TOE.
Hash calculating tool	It is used as a comparison target to validate the result of
GNU coreutils v5.97	the encryption key generation by the TOE.
Encryption tool	It is used as a comparison target to validate the result of
OpenSSL 1.0.1h	the encryption by the TOE.
Interface Converter	By using interfaces for TOE developers, it refers to logs of
& Monitor Software	firmware for testing and performs memory dump, etc.
(Client PC-B)	

## Table 7-3 Developer Testing Tools

IPsec Test Server	It is used to confirm that the TOE cannot be connected
(used as Server instead of	with the IPsec options, IKEv2 and aggressive mode of
the one in Table 7-1)	IKEv1, which are disabled with the TOE setting.
	- PC with Linux (Fedora Release 19)
	- IPsec: strongswan-5.1.3-1.fc19.i686
	- Mail server (SMTP): postfix-2.10.3-1.fc19.i686
	- Mail server (POP): dovecot-2.2.15-1.fc19.i686
	- FTP server: vsftpd-3.0.2-5.fc19.i686

<Content of the Performed Developer Testing>

By operating basic functions of the MFP and security management functions from various interfaces, it was confirmed that the security functions to be applied to various input parameters behave as specified.

The variations of the input parameters include the rewrite of communication data between Web browser and the TOE, and the data that might cause unauthorized processing such as buffer overflow.

#### b. Scope of the Performed Developer Testing

The developer testing was performed on 117 items by the developer. By the coverage analysis, it was verified that all security functions and external interfaces described in the functional specification had been tested. By the depth analysis, it was verified that all the subsystems and subsystem interfaces described in the TOE design had been sufficiently tested.

#### c. Result

The evaluator confirmed the approach of the performed developer testing and the legitimacy of tested items, and confirmed consistencies between the testing approach described in the testing plan and the actual testing approach. The evaluator confirmed consistencies between the testing results expected by the developer and the actual testing results performed by the developer.

## 7.4.2 Evaluator Independent Testing

The evaluator performed the sampling testing to reconfirm the execution of security functions by the test items extracted from the developer testing. Additionally, the evaluator performed the evaluator independent testing (hereinafter referred to as the "independent testing") to gain further assurance that security functions are surely implemented, based on the evidence shown in the process of the evaluation. The independent testing performed by the evaluator is explained as follows.

#### 1) Independent Testing Environment

The configuration of the independent testing performed by the evaluator is the same as that in the developer testing environment shown in Figure 7-1, except for the following.

<sup>-</sup> As the TOE, only TASKalfa 6052ci and TASKalfa 3552ci were used.

The evaluator determined that it was sufficient to test only two models because the difference among TOE models is only printing speed, and the security functions are the same.

The independent testing was performed in the same environment with the TOE configuration identified in this ST.

The components and testing tools used in the independent testing environment were the same as those which were used in the developer testing. Those include what the developer developed by themselves, but their validation confirmation and behavior tests were conducted by the evaluator.

#### 2) Summary of the Independent Testing

A summary of the independent testing performed by the evaluator is described as follows.

#### a. Viewpoints of the Independent Testing

Viewpoints of the independent testing that the evaluator designed from the developer testing and the provided evaluation documentation are shown below.

#### <Viewpoints of the Independent Testing>

- (1) To confirm the variations of the combination of different input data and operations that are not used by the developer.
- (2) To confirm the behavior that was not performed by the developer in the testing.
- (3) With sampling testing, to select the testing items of the developer testing from the following viewpoints.
  - To confirm all the security functions.
  - To confirm all interface types together with the evaluator devised testing.
  - To confirm all user roles together with the evaluator devised testing.
  - To confirm all the different testing approach such as testing tools.
  - To confirm tests to contribute to vulnerability assessments such as the rewrite of communication data.
- b. Independent Testing Outline

An outline of the independent testing that the evaluator performed is as follows.

#### <Independent Testing Approach>

The independent testing was performed by the evaluator using the same testing approach as the developer testing.

#### <Independent Testing Tools>

The same testing tools as those of the developer testing were used.

#### <Content of the Performed Independent Testing>

The evaluator performed 30 items of sampling testing and 12 items of additional independent testing, based on the viewpoints of the independent testing.

Table 7-4 shows viewpoints of the independent testing and the content of the major tests corresponding to them.

Viewpoints	Outline of the Independent Testing
Viewpoint (1)	- Confirm that the TOE behaves as specified using different
	parameters from those which the developer used, such as
	modification of password characters, threshold until the
	account locked, and user authorization.
	- Perform a combination of operations that the developer has not
	confirmed, such as modification of box owner and confirmation
	of access control when storing document, and confirm the TOE
	behaves as specified.
Viewpoint (2)	- Confirm that the number of authentication failures until the
	account locked is totaled in case of using different interfaces.
	- With the Self-Test function, confirm irregular case that the
	developer has not performed in the testing, such as alteration
	of hash value.

Table 7-4 Viewpoints of Independent Testing Performed

#### c. Result

All the independent testing performed by the evaluator was correctly completed, and the evaluator confirmed the behavior of the TOE. The evaluator confirmed consistencies between the expected behavior and all the testing results.

## 7.4.3 Evaluator Penetration Testing

The evaluator devised and performed the necessary evaluator penetration testing (hereinafter referred to as the "penetration testing") on the potentially exploitable vulnerabilities of concern under the assumed environment of use and attack level from the evidence shown in the process of the evaluation. The penetration testing performed by the evaluator is explained as follows.

## 1) Summary of the Penetration Testing

A summary of the penetration testing performed by the evaluator is described as follows.

#### a. Vulnerability of Concern

The evaluator searched into the provided documentation and the publicly available information for the potential vulnerabilities, and then identified the following vulnerabilities which require the penetration testing.

(1) There is a concern that the known vulnerability may exist on various interfaces.

- (2) There is a concern that the known vulnerability may exist in the print processing.
- (3) There is a concern that the security functions do not behave correctly when the power is

turned off during the TOE operation.

- (4) There is a concern that the security functions do not behave correctly if the character strings, which cannot be entered through Web browser, are entered into the TOE by tampering communication data.
- (5) There is a concern that a weak cipher suite is used in SSL/TLS protocol.
- (6) There is a concern that the interface for the service engineers is used for malicious purpose.

## b. Penetration Testing Outline

The evaluator performed the following penetration testing to identify potentially exploitable vulnerabilities.

#### <Penetration Testing Environment>

The penetration testing was performed in the same environment as that of the independent testing, except for the additional PC for the penetration testing. Table 7-5 shows details of the tools used in the penetration testing.

Name	Purpose of Use
Nmap	A tool to detect available network ports.
v6.49 BETA4	
netcat	It is used to send data to network ports.
v1.11	
Fiddler	It mediates the communication between Web browser and Web
v4.5.1.5	server (TOE), and refers to and changes the communication
	data between them.
Metasploit	It is used for creating the testing data to detect vulnerabilities
v4.6.2	in the PDF files.
SSLScan	A tool to confirm what kind of the cipher suites are supported in
(kali-linux-1.1.0c	SSL/TLS. The one included in Kali Linux is used.
vm-486)	

## Table 7-5 Penetration Testing Tools

<List of the Performed Penetration Testing>

Table 7-6 shows vulnerabilities of concern and the content of the penetration testing corresponding to them.

Vulnerability	Outline of the Penetration Testing	
Vulnerability (1)	- By using the Nmap for the TOE, it was confirmed that unnecessary	
	network ports are not opened.	

## Table 7-6 Outline of the Penetration Testing

	- It was confirmed that the processing is not executed even if
	character strings including unauthorized script or executable $\operatorname{SQL}$
	command are entered from the operation panel, printer driver or
	Web browser.
	- It was confirmed that identification and authentication as well as
	access control are not bypassed even if URL of Web browser is
	directly specified.
Vulnerability (2)	- It was confirmed that the unauthorized processing is not executed
	even if files including unauthorized print processing by PDF,
	PostScript, print job command etc., are entered into the TOE.
Vulnerability (3)	- It was confirmed that the following security functions behave
	correctly even if the power is turned off/on during the TOE operation.
	- Maintaining the number of unsuccessful authentication until
	the account locked.
	- Maintaining an account lockout state.
	- Overwrite-erase process (resumes after the power is turned on.)
Vulnerability (4)	- It was confirmed that the TOE does not malfunction even if the
	communication data from Web browser to the TOE are rewritten by
	using Fiddler, and character strings that may cause unauthorized
	processing are inserted.
Vulnerability (5)	- It was confirmed that the communication could not be established if
	the weak encryption method is specified by using SSLScan for the
	TOE.
Vulnerability (6)	- It was confirmed that interfaces for service engineers are not
	accessible because they required the passwords to be set by each
	service engineer to use them.

## c. Result

In the penetration testing performed by the evaluator, the evaluator did not find any exploitable vulnerabilities that attackers who have the assumed attack potential could exploit.

## 7.5 Evaluated Configuration

The TOE configuration conditions, which are the assumptions of this evaluation, are as described in the guidance documents shown in Chapter 6. Device administrators of the TOE need to configure the TOE settings as described in the guidance documents to enable security functions of the TOE and securely use them. In case that these setting values are changed to the values different from the ones specified in the guidance documents, the configuration will not be assured by this evaluation.

The TOE configuration conditions include the settings that disable the functions provided by the TOE. For example, the following setting values are also included:

- Disabling print protocol, except for IPP
- Disabling SNMP
- Disabling remote diagnostics via public line

Device administrators of the TOE need to pay attention that in case these setting values, including the settings to disable functions provided by the TOE as above, are changed to the values different from the ones specified in the guidance documents, the configuration will not be assured by this evaluation.

#### 7.6 Evaluation Results

The evaluator had concluded that the TOE satisfies all work units prescribed in the CEM by submitting the Evaluation Technical Report.

In the evaluation, the following were confirmed.

- PP Conformance:

2600.1, Protection Profile for Hardcopy Devices, Operational Environment A (IEEE Std 2600.1<sup>TM-2009</sup>)

The TOE also conforms to the following SFR packages defined in the above PP.

- 2600.1-PRT, SFR Package for Hardcopy Device Print Functions, Operational Environment A
- 2600.1-SCN, SFR Package for Hardcopy Device Scan Functions, Operational Environment A
- 2600.1-CPY, SFR Package for Hardcopy Device Copy Functions, Operational Environment A
- 2600.1-FAX, SFR Package for Hardcopy Device Fax Functions, Operational Environment A
- 2600.1-DSR, SFR Package for Hardcopy Device Document Storage and Retrieval (DSR) Functions, Operational Environment A
- 2600.1-SMI, SFR Package for Hardcopy Device Shared-medium Interface Functions, Operational Environment A

- Security functional requirements: Common Criteria Part 2 Extended

- Security assurance requirements: Common Criteria Part 3 Conformant

As a result of the evaluation, the verdict "PASS" was confirmed for the following assurance components.

- All assurance components of EAL3 package
- Additional assurance component ALC\_FLR.2

The result of the evaluation is only applied to those which are composed by the TOE corresponding to the identification described in Chapter 2.

## 7.7 Evaluator Comments/Recommendations

There is no evaluator recommendation to be addressed to consumers.

## 8. Certification

The Certification Body conducted the following certification based on the materials submitted by the Evaluation Facility during the evaluation process.

- 1. The submitted documentation was sampled, the content was examined, and the related work units shall be evaluated as presented in the Evaluation Technical Report.
- 2. Rationale of the evaluation verdict by the evaluator presented in the Evaluation Technical Report shall be adequate.
- 3. The evaluator's evaluation methodology presented in the Evaluation Technical Report shall conform to the CEM.

#### 8.1 Certification Result

As a result of verification of the submitted Evaluation Technical Report and related evaluation documentation, the Certification Body determined that the TOE satisfies all assurance requirements for EAL3 augmented with ALC\_FLR.2 in the CC Part 3.

#### 8.2 Recommendations

It should be noted that procurement entities who are interested in the TOE need to consider whether the scope of the evaluation and the operational requirements of the TOE satisfy the operational conditions that they assume, by referring to the descriptions in "1.1.3 Disclaimers," "4.3 Clarification of Scope," and "7.5 Evaluated Configuration."

Especially, once the maintenance functions are used, any effects on security functions of the TOE are out of the scope of the assurance by this evaluation. Therefore, it is a responsibility of the administrator to decide whether to accept maintenance.

## 9. Annexes

There is no annex.

## 10. Security Target

The Security Target [12] of the TOE is provided as a separate document from this Certification Report.

TASKalfa 6052ci, TASKalfa 5052ci, TASKalfa 4052ci, TASKalfa 3552ci Series with Data Security Kit (E), FAX System 12 Security Target, Version 0.95, March 28, 2017, KYOCERA Document Solutions Inc.

#### 11. Glossary

The abbreviations relating to the CC used in this report are listed below.

CC	Common Criteria for Information Technology Security Evaluation
CEM	Common Methodology for Information Technology Security Evaluation
EAL	Evaluation Assurance Level
PP	Protection Profile
ST	Security Target
TOE	Target of Evaluation
TSF	TOE Security Functionality

The abbreviation relating to the TOE used in this report is listed below.

MFP Multi-Function Printer

The definitions of the terms used in this report are listed below.

#### Box:

An area that stores document data in the TOE. As security attributes, it has both box owner and box permission information.

#### Box function:

A function that stores document data in the TOE, and reads the data to print and send. The following means of sending are available: FTP Server, Mail Server, Client PC (TWAIN Driver), USB Memory connected to the TOE, and FAX. The Box function can be operated from the operation panel of the TOE or client PCs (Web browser). However, printing document data can be operated only from the operation panel.

#### Copy function:

A function that reads paper document and prints out the copy by operating from the operation panel.

#### FAX function:

A function that sends and receives documents by FAX via public line. The sent/received data by FAX are stored in the internal Flash memory of the TOE.

#### Print function:

A function that prints out document data received by the TOE from client PCs via internal network or USB ports. Once the TOE receives document data, they will be stored in the TOE, and will be outputted upon receipt of printing instructions from the operation panel.

#### Scan to Send function:

A function that reads paper documents and sends them to FTP Server, Mail Server, Client PC (TWAIN Driver), and USB Memory connected to the TOE. The instruction to read is operated from TWAIN Driver when sending documents to TWAIN Driver, or operated from the operation panel of the TOE when sending documents to others.

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