```
==========================================================================
*** Basic Information ***
==========================================================================
[Create date] 2019/03/08
----------------------------------------------------------------------
[Program Name] GWFCU3.8-17(WW)
----------------------------------------------------------------------
[Version] 05.00.00
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965406E
[File Information]
 File Name        D2965406E.fwu
 File Type        Module for Service
 Size           3.94 MB ( 4129296 byte )
[File Information]
 File Name        D2965406E.rfu
 File Type        Module for Remote Upgrade
 Size           3.95 MB ( 4137216 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection] 2019/03
----------------------------------------------------------------------

==========================================================================
*** Note ***
==========================================================================
[Note]

----------------------------------------------------------------------



==========================================================================
*** Important Notes ***
==========================================================================
[Important Notes]

----------------------------------------------------------------------



==========================================================================
*** Modification History ***
```

```
===============================================================================
[Modifications made:]
Rank C

Symptom corrected:
- When the Capture function for sending FAX is enabled, (SP5836-001
  and SP5836-004 set to '1') the received FAX document cannot be
  printed correctly if the machine power is turned OFF while
  capturing the data.
- The machine will not print on the correct size paper if the
  following conditions are met:
  - User parameter switch 05 (just size printing for Fax document)
    is set as 1 (On)
  - No paper is set on the tray specified for A3 use
  - Receive an A3 size print job
- SC 871-01 might occur and the Fax application might go into a
  stall when recovering from the energy saving mode.


--------------------------------------------------------------------
[Modification history]
--------------------------------------
Version 04.00.00
Rank C

Symptom corrected:
- If temporary memory overflows when function of storing a document
  for fax is used, the machine cannot use FAX for two days.
- If temporary memory overflows when the machine receive the fax documents,
  fax reception operation is canceled and Job Log is recorded as user cancellation.


--------------------------------------
Version 03.00.00
 Symptom corrected:
- FAX cannot be sent with the status showing "processing" possibly
  followed by a SC843-02.
- Message "FAX jobs will be full soon" may appear after continuously
  using the Remote FAX.
  If continuously used in this condition, message "FAX jobs are
  full" appears and Remote FAX function becomes disabled.
- SC871 may occur when turning OFF the machine power, if the Back-up
  Transmission is enabled.
- If [Store and Print] is enabled and a document is deleted from
  GlobalScan, the FAX function becomes inoperable.


--------------------------------------
Version 02.00.00
Symptom corrected:
- When attempted to send a folder, the memory is consumed and
  prevents the machine from receiving any documents for an extended
  period.


--------------------------------------
Version 01.00.00
```

1st Mass production

```
==============================================================================
*** Basic Information ***
==============================================================================
[Create date] 2019/04/24
------------------------------------------------------------------------
[Program Name] IRIPS PDF
------------------------------------------------------------------------
[Version] 1.11
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965418K
[File Information]
 File Name        D2965418K.fwu
 File Type        Module for Service
 Size             3.03 MB ( 3181724 byte )
[File Information]
 File Name        D2965418K.rfu
 File Type        Module for Remote Upgrade
 Size             3.04 MB ( 3186944 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2019/04
------------------------------------------------------------------------

==============================================================================
*** Note ***
==============================================================================
[Note]

------------------------------------------------------------------------



==============================================================================
*** Important Notes ***
==============================================================================
[Important Notes]

------------------------------------------------------------------------



==============================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:

- PDF files that are generated by certain applications might not print via Direct Print.
- The minus sign (-) in a PDF file might not be printed via PDF Direct.
- When printing a PDF file that contains circled letters or numbers, the circle itself might be distorted.

[Modification history]

Version 1.10
Rank C

Symptom corrected:

- When printing a PDF file that contains exceptionally small fonts, an invalid font error might occur, and the print job might not be printed correctly.
- When printing a file containing images as a booklet, the output might be distorted.
- A locked print job might not be stored on the machine if it is printed using PJL commands.
- Images might not appear as expected when printing a PDF file via AirPrint.
- When printing a PDF file that contains downloaded fonts, an invalid font error might occur, and the print job might be canceled.

Version 1.09
Rank C

Symptom corrected:

- The image might be vertically extended and the upper part missing when faxing via the Remote Fax.
- When printing images using the PostScript driver with the following settings, the printed color might be weaker than expected.
  - Color Profile is set to 'ICM (Image Color Management)'.
  - Paper Type is set to anything other than 'Plain'.
- When sending a fax via the SmartSDK, images might be missing or output at the wrong size.
- Data that includes a masked background image might not print correctly.
- An SC899 error might occur when printing PostScript data that includes a watermark with a non-standard font using the PS V4 driver.
- When printing from a memory storage device from the Bypass Tray, if there is a paper size mismatch between the System Settings and the paper size specified for the Bypass Tray, it might not print correctly.
- When printing a PDF with an embedded TrueType font, some characters might be garbled.
- Some Type 0 fonts in a PDF might not print correctly.
- Some Symbolic fonts in a PDF might not print correctly.
- The image might be rotated 180 degrees when printing Landscape document via the SmartSDK.
- When printing a PDF with a specific command, an invalidfont error might occur.

Version 1.08
Rank C

Symptom corrected:
- Characters might be printed with the wrong magnification if a CID font is used.
- Characters might become too thick if the transparency is specified.
- Linux print jobs in Stored Print might be canceled.
- Pages printed as a booklet might be centered incorrectly.
- With booklet printing or N-Up printing, the scaling ratio might be wrong.
- The scaling might be wrong when printing PDF data that contains the FITTOPAGESIZE command but not PRINTSCALING.

Version 1.07
Symptom corrected:
- The top and bottom ends might be missing if the size is scaled when PDF printing.
- SC899 might occur while PDF printing.
- Characters in italics might be unrecognizable.
- Some characters might print in the wrong position when printing a PDF containing certain fonts.
- Both ends of the watermark might be cut off when printing from the V4 driver.

Version 1.06
Fixed:
- An "Invalidfont" error might occur when printing a job including specific data.
- SC899 might occur when a watermark is printed from the V4 driver.
- Some characters might be garbled when using the TrueType Font.
- PS printing might stall if PS jobs are printed continuously.
- An incorrect paper size may be fed while printing via AirPrint.
- The printing of a PDF file created by the "Microsoft Print to PDF" function might be canceled.
- Some characters might be printed upside down.

Version 1.05
Fixed:
- Adjusting the color balance in the driver doesn't work as expected.
- The device may stall when printing many pages and using specific fonts.

Version 1.04
Symptom corrected:
When conducting host printing, if a resident font is specified in the data, cedillas will not print as expected.

Version 1.03
1st Mass production

```
<<Package>>
package_ALL [GRIC3a_pk]
 D2965430F Ver. 5.00 -> D2965430G Ver. 6.00

<<Separate>>
System/Copy [GRIC3a_system]
 D2965400P Ver. 1.12 -> D2965400Q Ver. 1.13


NetworkDocBox [GRIC3a_netfile]
 D2965790C Ver. 1.02 -> D2965790D Ver. 1.03


Network Support [GRIC3a_net]
 D2965792K Ver. 16.57 -> D2965792L Ver. 16.58


M2a_System [M2a_System]
 D2411425F Ver. 1.27.2 -> D2411425H Ver. 1.29


M2a_LegacyUI [M2a_LegacyUI]
 D2411427Y Ver. 1.21 -> D2411427Z Ver. 1.22


M2a_WLanguage [M2a_WLanguage]
 D2411431J Ver. 1.09 -> D2411431K Ver. 1.10


M2a_WTonner [M2a_WTonner]
 D2411434G Ver. 1.05 -> D2411434H Ver. 1.06


M2a_WFaxInfo [M2a_WFaxInfo]
 D2411435E Ver. 1.03 -> D2411435F Ver. 1.04


M2a_WEcoInfo [M2a_WEcoInfo]
 D2411437F Ver. 1.06 -> D2411437G Ver. 1.07


M2a_SimpleCopy [M2a_SimpleCopy]
 D2411443S Ver. 1.20 -> D2411443T Ver. 1.21


M2a_SimpleScan [M2a_SimpleScan]
 D2411444R Ver. 1.15 -> D2411444S Ver. 1.16


M2a_SmartCopy [M2a_SmartCopy]
 D2411454X Ver. 1.25 -> D2411454Y Ver. 1.26
```

M2a_SmartScan [M2a_SmartScan]
 D2411456S Ver. 1.16 -> D2411456T Ver. 1.17

M2a_SmartFAX [M2a_SmartFAX]
 D2411457T Ver. 1.22 -> D2411457W Ver. 1.24

M2a_MeidaPrtScn [M2a_MeidaPrtScn]
 D2411447S Ver. 1.19 -> D2411447T Ver. 1.20

M2a_PrinterSJob [M2a_PrinterSJob]
 D2411446Q Ver. 1.74 -> D2411446R Ver. 1.75

Application Site [M2a_zoo]
 D2411467K Ver. 1.05.02 -> D2411467L Ver. 1.05.03

<<Package>>
Package_02 [GRIC3r_pk1]
D2965434A Ver. 1.01 -> D2965434B Ver. 2.00

<<Separate>>
System/Copy [GRIC3a_system]
D2965400G Ver. 1.04

Fax [GRIC3a_fax]
D2965784E Ver. 04.00.00

RemoteFax [GRIC3a_fax2]
D2965785C Ver. 02.00.00

GWFCU3.8-17(WW) [GW1a_efax_fcu2C]
D2965406C Ver. 03.00.00

Scanner [GRIC3a_scn]
D2965787E Ver. 01.03

Web Support [GRIC3a_web]
D2965788D Ver. 1.03

Network Support [GRIC3a_net]
D2965792E Ver. 16.52

Printer [GRIC3e_printer]
D2965794E Ver. 1.03

PCL [GRC3e_prt_PCL]
D2965797D Ver. 1.03

IRIPS PDF [GRC3e_prt_IPDF]
D2965418D Ver. 1.05

M2a_System [M2a_System]
D2411421Z Ver. 1.22.2 -> D2411429 Ver. 1.23

M2a_LegacyUI [M2a_LegacyUI]
D2411427R Ver. 1.15.1 -> D2411427S Ver. 1.16

M2a_SimpleCopy [M2a_SimpleCopy]
D2411443P Ver. 1.17 -> D2411443Q Ver. 1.18

M2a_SimpleScan [M2a_SimpleScan]
D2411444P Ver. 1.13 -> D2411444Q Ver. 1.14

M2a_SimpleFAX [M2a_SimpleFAX]
D2411445M Ver. 1.12 -> D2411445N Ver. 1.13

M2a_PrinterInfo [M2a_PrinterInfo]
D2411458M Ver. 1.11 -> D2411458N Ver. 1.12

M2a_SmartCopy [M2a_SmartCopy]
D2411454R Ver. 1.21 -> D2411454T Ver. 1.22.1

M2a_SmartScan [M2a_SmartScan]
D2411456N Ver. 1.13 -> D2411456Q Ver. 1.14.1

M2a_SmartFAX [M2a_SmartFAX]
D2411457N Ver. 1.18 -> D2411457Q Ver. 1.19.1

M2a_PrinterSJob [M2a_PrinterSJob]
D2411446M Ver. 1.63 -> D2411446N Ver. 1.72

M2a_ICCdDisptch [M2a_ICCdDisptch]
D2411450A Ver. 2.12.04 -> D2411450B Ver. 2.12.05

M2a_HelpService [M2a_HelpService]
D2411471 Ver. 1.00

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2019/05/07
------------------------------------------------------------------------
[Program Name] System/Copy
------------------------------------------------------------------------
[Version] 1.17
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965450A
[File Information]
 File Name         D2965450A.fwu
 File Type         Module for Service
 Size              28.15 MB ( 29517608 byte )
[File Information]
 File Name         D2965450A.rfu
 File Type         Module for Remote Upgrade
 Size              28.16 MB ( 29524224 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2019/04
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------


========================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:

- Fails to download files from the firmware download center using ARFU.
- The machine might stall if it enters energy saving mode during ARFU.
- The machine wakes up from the sleep mode when it receives a MIB request from @Remote.
- A part of registered address may not be shown in Smart Scan feature.
- When the address book is backed up from an 11S or earlier model and restored to a 14S or later model, SC899 might occur after restoring the address book and restarting the machine.
- When "Application Authentication Settings" is enabled, SC899 might occur after registering or updating an address book over 220 times from Web Image Monitor.
- An SC error might occur when scanning with AirPrint, WSD-Scanner, or DSM.
- When the auto logout setting is enabled, logout failed message might appear during the printing.
- Cannot log-in with VM less application during daylight saving time. (Only in the case that the daylight saving time period start at Oct-Dec)
- When scanning with ClearlightPDF JPEG2000, SC865-56 might occur.
- @Remote 3G fails to connect to @Remote center server when a device turns to an engine off mode.
- User and SP settings information in the Copy (Classic) application and the Scanner (Classic) application might be cleared after version up or down to specific firmware version.
- Wireless direct connection might fail in Group Owner Mode.
- The SC991 log is recorded if the capture file log fails to transfer.

Other changes:

- If a firmware package is unpublished (for example, when a bug is discovered after release), it is possible to apply a previous firmware package via ARFU, SFU, and Application Site.(Previously, if a firmware package is unpublished then ARFU, SFU, and Application Site would display an error dialog and the function could not be used.)
- In the event that a problem is discovered which only affects ARFU, SFU, and/or Application Site, updates via those functions can be disabled on the global download server side. (While still allowing manual downloads by a technician)
- The Java VM version can be confirmed via @Remote.
- Supported RICOH SmartSDK v2.60

[Modification history]

Version 1.16
Rank C

Supported:

- The CPU is replaced with a newer model, so the BIOS is also updated to support the new model.

Version 1.15
Rank C

Symptom corrected:
- Image log might not be sent and stay in the device.
- When the SMC List is saved to the SD card as a CSV file, SP7507 (Latest Jam History) is not correctly recorded.
- SC 998 may occur in case that user performs "Export Device Setting Information" from Web Image Monitor when the device is in energy-saving mode.

Version 1.14
Rank C

Symptom corrected:
- SmartSDK application cannot reply to UDP packet when machine is in Energy Saver Mode.
- Installation of the Cheetah application from the Web Image Monitor fails when the SSL encryption level is set to "Ciphertext Priority" or "Ciphertext Only".
- The document receipt by Mail to Print function might not be printed, in case the device receives the document at either of the followings conditions;
  1) The device is turned on, but the booting procedure is not completed.
  2) The device is rebooted after SC, and the dialog of reboot is displayed on the device.
  3) The device is printing the document through Enhanced Locked Print.
- If "Interrupt mode" is pressed in a Legacy application, the home screen might be displayed instead of the original application after "Interrupt mode" is released.
- The machine might stall when executing SP5-858-122 and SP5-585-111
- Preview screen of a print job on Enhanced Locked Print might freeze, when the page is repeatedly moved.
- Generated files may not be deleted and occupy HDD even after sending E-mail via Scan to URL in the case OCR function is enabled.
- Copy application and FAX application mihgt not start when pressing these application icons.
- Login might fail and the application icon might not be displayed.
- If the functions below are enabled, the machine might not be able to recover from STR mode, and the functions will fail:
- Auto-backup of the application and its setting for the Smart Operation Panel
- Auto-reception for Cloud Fax
- Auto-update of applications installed via the Application Site

Other changes:
- Supported the Remote Panel Operation.
  Multiple firmware modules are required to use Remote Panel Operation. Please refer to GKM Answer ID 251361 for detailed information regarding required firmware.
- Supported RICOH SmartSDK v2.60
- A minor change only for the Japanese model.
- Added html format for Scan to Email function.

Version 1.13
Rank C

Symptom corrected:
- SC899 might occur when the log capture function is enabled.
- Printer capture data might not be sent when printing a blank page if the capture function is enabled.

Other changes:
- Minor change for domestic market.

Version 1.12
Rank C

Symptom corrected:
- The following symptoms might occur when executing:
  1. SP5-846-051 (Backup All Addr Book)
     - A backup failure message might appear.
  2. SP5-846-052 (Restore All Addr Book)
     - SC899 might occur.
     - The machine might stall.

Version 1.11
Rank C

Symptom corrected:
- The user might not be able to log in if the machine repeatedly enters and exits Energy Saver Mode.

Version 1.10
Rank C

Symptom corrected:
- If some characters are included in a user name, login authentication is not correctly done.

Other changes:
- Added a new feature for the SmartSDK WebAPI.

Version 1.09
Symptom corrected
- In the "Printing text and serial numbers" mode, blank text with serial numbers cannot be copied on the copying sheets.
- Remote un-installation for Streamline NX might fail.
- When the device has just gone into energy saver mode, even if a copy job is sent from a SmartSDK application, copying does not start.
- The quota notification cannot be displayed on some SmartSDK

applications.
- @Remote 3G dongle fails to communicate to the @Remote center server.

Other changes
- Supported RICOH SmartSDK v2.50.

Version 1.08
Symptom corrected:
- SC687 may occur when restarting a large print job.
- User usage restrictions do not come into effect if authentication is enabled in Quick Card Authentication.
- When JavaVM is not enabled and only IPv6 is enabled, the list of installed applications is not displayed in Extended Feature Info on the Web Image Monitor.
- When capture processing and either thumbnail or preview processing occur at the same time, capture processing might not operate normally if the capture setting is enabled and Media Link Board is installed.
- When using Windows authentication, LDAP authentication, or external authentication, if exporting the address book from Device Manager NX, the export data cannot be imported.

Other changes:
- Added the function to set user usage restrictions for each application.
- Supports Arabic
- Supported RICOH SmartSDK v2.40.
- Reboot will be retried if reboot fails after updating remotely.

Version 1.07
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 1.05
Symptom corrected:
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- An invalid value is returned when obtaining the counter MIB, ricohEngCounterValue, during device shutdown.
- Fax may print out from the secure tray if you change the secure

tray in user settings while receiving a fax.
- "No paper loaded" alert may appear when the fax receiving tray and the secure tray are set as the same.
- The operation panel may freeze, if the Start button is pressed in copy mode immediately after recovering from the energy saver mode.
- SC998 may occur when powering on if an ESA application is set as a function priority.
- OCR cannot recognize characters if converting scanned image to searchable PDF.

Version 1.04
Symptom corrected:
- Pressing an application on the touch panel very soon after going into Energy Saver mode might cause the device to stall on the "Please Wait" screen.
- SC672 occurs after recovering from sleep mode.
- SC673-10 may occur when turning ON the machine power.
- SC845 may occur while updating a package firmware, if the machine was turned OFF during the previous update via ARFU.
- SC816-98 may occur during the STR mode even if the machine is not experiencing any problems.

Other changes:
- When the Auto Logout timer is invoked can be changed:
  SP5-401-230 bit7 = 1: When the job executed from the operation panel is completed.
  SP5-401-230 bit7 = 0: When the user last had interaction with the panel.

Version 1.03
Symptom corrected:
- SC819 may occur, if the auto log-out timer and the energy saving timer are set to the same value.
Other changes:
- When using "Enhanced Print Volume Use Limitation" in a SmartSDK application and "Tracking Permission" and "Stop Printing" are enabled, the "Print Volume Use" pop-up window is not displayed.

Version 1.02
Symptom Corrected:
- After entering the user code to start up the Copy application, the user code input screen does not disappear.
- If a jam occurs on the first page of a job on a machine set with user code authentication and then, the start button and log-out button are pressed together, the start button becomes ineffective.
- SC819 may occur after removing a jam that occurred while printing a large job that fully consumes the printer memory.
- When the device is using "Card Authentication Package" or another custom authentication and then the following fields on the server

are blank, the fields in the address book on the device might not
overwritten:
- Email address
- FAX address
- Folder address

Other Change:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

- More languages supported for the smart operation panel.
- When executing a Firmware configuration task via Device Manager NX Pro/Enterprise, an RFU package with the appropriate destination (USA/Europe/Asia/Korea/Taiwan model or China model) can be selected and downloaded from the RICOH Global Server.

Version 1.01

Other changes:
- To enable quicker the detection time and shut down time when SC670 occurs.

Symptom corrected:
- Can not recovery from energy saving mode and SC672-11 may occur.
- If the device enters Energy Save Mode after automatically logging out of an account, the device might stall when IC card authentication is used to recover from Energy Save Mode once out of every 200 times.
- SC991/SC899 may occur or stall may occur during use of application on @Remote connected machines.
- Connection error message may appear mistakenly on @Remote connected machines.

Version 1.00.1

1st Mass production

```
===============================================================================
*** Modification History ***
===============================================================================
[Modifications made:]
Rank C

Other changes:
- Minor changes for its internal operations.


----------------------------------------------------------------------
[Modification history]
---------------------------------------
Version 12.57.00
Symptom corrected
- The printing speed is not as fast as the past model if CAP V2 is installed.
- The SDK application may stop suddenly due to the increase of memory usage.


---------------------------------------
Version 12.55.02
Symptom corrected:
- The SDK application icon might not be displayed after recovering
  from energy saving mode under the following conditions:
  - An SDK application is set as a priority function.
  - An SDK application is set as a function key.
- SC899-00 may occur if logging in from a keyboard.
- FAX cannot be transmitted if CAP v2 is installed.
- The wrong JavaVM firmware can be mistakenly installed on any machine,
  possibly leading to unexpected errors occurring with JavaVM or
  bootup failing.


---------------------------------------
Version 12.53.01
Symptom corrected:
- Startup may take a long time and SC998 may occur if Streamline NX
  and CAP v2 are installed.
- SDK applications (e.g. Streamline NX, GlobalScan NX, CAP/ELP) may
  not be able to start during the boot process due to a Java VM error.
- If only IPv6 is enabled on the device, utility tools (e.g. Device
  Manager NX family or Streamline NX v3) will fail to install
  applications remotely.
- The following issues occur if any device certificate is imported
  using the Device Manager NX Enterprise Certificate Management Tool.
    - Device Manager NX Enterprise fails to retrieve the information
      about the application(s) installed on the device.
    - GlobalScan NX fails to apply profiles or retrieve device
      information when using the AdminTool.


---------------------------------------
Version 12.50.01
```

Symptom corrected:

- When showing the device status via a Solution Product (Streamline and CAP/ELP), the device's HDD capacity is not displayed correctly.
- Under the following conditions, when performing on-demand printing with the Enhanced Locked Print, the SC899 error might occur.
  - More than 100 connected devices are set as the host name.
  - Host name resolution fails on DNS server.

Version 12.47.01

Symptom corrected:

- Replacing with a new controller board installed with the latest Java VM version may disallow downgrading to previous version or retrieve customized version and cause trouble for users who wish to use specific or customized versions.
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- When conducting location-free printing or authentication processing by using a solution product, an SC899 error might occur or Java VM might close unexpectedly and an SC error related to Java VM not responding might occur.
- The DSDK application fails to connect to the LDAP server when using Kerberos authentication.

Version 12.45.00

Symptom corrected:

1. After applying the security update that changes the priority order for cipher suites, SSL communication fails between an application that includes an SSL server function and the Windows operating system.
2. When "Tracking Permission" and "Stop Printing" are enabled in "Enhanced Print Volume Limitation", processing of the job might fail.
3. SDK application behavior may be incorrect or inconsistent. (CAP/ELP/SLNX/GSNX/etc.)
   Both the Standard (Compatibility mode) application and the SOP Optimized (Hybrid mode) application are affected by these issues.
   - Cannot log in.
   - Cannot scan.
   - Cannot print.
   - Error message appears.

   etc.

Version 12.41.04

1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2017/06/02
--------------------------------------------------------------------------------
[Program Name] PowerSaving Sys
--------------------------------------------------------------------------------
[Version] F.L3.06.1
--------------------------------------------------------------------------------
[PCB No.]
--------------------------------------------------------------------------------
[Interchangeability] X / O
--------------------------------------------------------------------------------
[Other Firmware Requirements] None
--------------------------------------------------------------------------------
[PCB Requirements] None
--------------------------------------------------------------------------------
[Software category] Normal Release
--------------------------------------------------------------------------------
[Release category] Normal Release
--------------------------------------------------------------------------------
[Program category] Firmware
--------------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965783A
[File Information]
 File Name         D2965783A.fwu
 File Type         Module for Service
 Size              4.00 MB ( 4194832 byte )
[File Information]
 File Name         D2965783A.rfu
 File Type         Module for Remote Upgrade
 Size              4.01 MB ( 4202752 byte )
--------------------------------------------------------------------------------
[Production reflection] 2017/04
--------------------------------------------------------------------------------

================================================================================
*** Note ***
================================================================================
[Note]

--------------------------------------------------------------------------------


================================================================================
*** Important Notes ***
================================================================================
[Important Notes]

--------------------------------------------------------------------------------
```

```
================================================================================
*** Modification History ***
================================================================================
[Modifications made:]
Symptom corrected:
- SC816-98 may occur during the STR mode even if the machine is not
  experiencing any problems.


------------------------------------------------------------------------
[Modification history]
----------------------------------------
Version F.L3.06
1st Mass production
```

```
===========================================================================
*** Basic Information ***
===========================================================================
[Create date] 2018/03/15
-----------------------------------------------------------------------
[Program Name] Fax
-----------------------------------------------------------------------
[Version] 07.00.00
-----------------------------------------------------------------------
[PCB No.]
-----------------------------------------------------------------------
[Interchangeability] X / O
-----------------------------------------------------------------------
[Other Firmware Requirements] None
-----------------------------------------------------------------------
[PCB Requirements] None
-----------------------------------------------------------------------
[Software category] Normal Release
-----------------------------------------------------------------------
[Release category] Normal Release
-----------------------------------------------------------------------
[Program category] Firmware
-----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965784H
[File Information]
 File Name        D2965784H.fwu
 File Type        Module for Service
 Size             2.39 MB ( 2507536 byte )
[File Information]
 File Name        D2965784H.rfu
 File Type        Module for Remote Upgrade
 Size             2.40 MB ( 2515200 byte )
[Availability of RFU] Yes
-----------------------------------------------------------------------
[Production reflection] 2018/03
-----------------------------------------------------------------------

===========================================================================
*** Note ***
===========================================================================
[Note]

-----------------------------------------------------------------------


===========================================================================
*** Important Notes ***
===========================================================================
[Important Notes]

-----------------------------------------------------------------------
```

==
*** Modification History ***
==
[Modifications made:]
Rank C

Symptom corrected:
- When sending a fax via the SmartSDK, images might be missing or
  output at the wrong size.
- When Hook Dial is pressed or when Manual Entry is selected,
  the SmartFax application might crash.

[Modification history]

Version 06.00.00
Symptom corrected:
- The printing and capturing of received faxes is stopped and the fax
  application screen might freeze when receiving faxes intermittently
  from multiple lines if the fax reception capturing function is enabled.

Version 05.00.00
 Symptom corrected:
[NA - HC model] Fax may print out from the secure tray if you change
the secure tray in user settings while receiving a fax.
[NA-HC Model] "No paper loaded" alert may appear when the fax
receiving tray and the secure tray are set as the same.

Version 04.00.00
Symptom corrected:
- Cannot exit from job stop screen and FAX function does not work,
  if the SNTP time setting and STR setting are enabled.

Other changes:
- When the Auto Logout timer is invoked can be changed:
  SP5-401-230 bit7 = 1: When the job executed from the operation
  panel is completed.
  SP5-401-230 bit7 = 0: When the user last had interaction with the
  panel.

Version 03.00.00
Specification change:
- Paper Feed Unit PB1080TE supported.

Symptom Corrected:
- AirPrint (FaxOut) results in error.

Other changes:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 02.00.00
Symptom corrected:
SC899 may occur when logging out from a machine with the user authentication enabled.

Version 01.00.00
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2019/07/09
------------------------------------------------------------------------
[Program Name] Scanner
------------------------------------------------------------------------
[Version] 01.11
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965787N
[File Information]
 File Name        D2965787N.fwu
 File Type        Module for Service
 Size        5.23 MB ( 5485756 byte )
[File Information]
 File Name        D2965787N.rfu
 File Type        Module for Remote Upgrade
 Size        5.24 MB ( 5492992 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2019/06
------------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

------------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

------------------------------------------------------------------------


======================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:
- If "scan and store temporarily (send image/file)" is selected for the job mode, images might not be stored in the destination, which specified by the user when scanning the images via a SmartSDK scanner application.
- Image log of Scan job (OCR or high compression PDF) may not be collected correctly.

[Modification history]

Version 01.10
Rank B

Symptom corrected:
- User and SP settings information in the Copy (Classic) application and the Scanner (Classic) application might be cleared after version up or down to specific firmware version.
- If a file was stored through the SmartSDK scanner application and user authentication is set to something other than basic, the file password might be displayed in the username on the file details screen.
- An error might occur when sending mail if the billing code is used with the Card Authentication Package v2.
- When sending a saved document, the captured image file might not be sent if a SmartSDK scanner application is installed.

Version 01.09
Rank C

Symptom corrected:
- If scanning is cancelled three times within five minutes when scanning with the IC Card Scan & Copy Application, the device cannot transfer to Energy Saver Mode.
- When SP5-836-143 is enabled, the combination of "Black and White" and "High Compression PDF" can be selected even though it should not be selectable.

Other changes:
- Supported RICOH SmartSDK v2.60.

Version 01.08
Rank C

Symptom corrected:
- If the log capture function is enabled when scanning with the SmartSDK application, cancelling the scan job while the preview is displayed might cause the information of the captured image file

to be recorded incorrectly.

Version 01.07
Rank C

Symptom corrected:

- The following bug was fixed again:
  When the device is accessed from Web Image Monitor just before scanning is finished under the following conditions, the device cannot be logged out from even if "Logout" is pressed, and then the Scanner application cannot be used:
  - When user authentication is enabled.
  - When custom authentication, such as Card Authentication Package, is being used.

Version 01.06
Symptom corrected:

- When scanning from SmartSDK applications, files are stored in PDF/A format even when trying to store the files in TIFF/JPEG format.
- When OCR is set and a document over 51 pages is sent by Scan to Email, sending might fail.
- When OCR is set and a document over 256 pages is scanned, the Scanner application might freeze or SC997 might occur.
- When scanning is conducted repeatedly from a SmartSDK application that enables image log capture, the captured image file is not deleted and remains on the hard disk.
- The image logs of jobs scanned by GlobalScan NX might not be captured.
- When scanning with AirPrint in MacOS X 10.12 or later, the device sends a full color JPEG even if specifying a black and white JPEG.

Other changes:

- Supported RICOH SmartSDK v2.50.

Version 01.05
Other changes:

- Newly added SMBv2/v3 support.

This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 01.04
Symptom corrected:

1. When the cover is open or a paper jam occurs while using another application such as Copy or Printer, if "Check Status" is pressed, "Check" is displayed in the Scanner area of the status bar even though Scanner is not being used.
   This firmware is dependent on SmartScan firmware v1.11 (D2411456L) or later, so please be sure to update both firmwares.
2. Under the following conditions, when scanning a document with the OCR setting configured that consists of only blank pages or is not the original document, an SC899 error might occur:

- User authentication is enabled.
- In OCR settings, "Delete Blank Page" is enabled.
- "Download File Directly From URL Link" is set to "On".
- Scanner Features > File Emailing Method is set to either of the following:
  - Set to "Send URL Link".
  - Set to "Auto Detect" and specify the URL when scanning.
  - Set to "Set by User" and the data size of the scanned result exceeds the sending-size limit.

3. When the device is accessed from Web Image Monitor just before scanning is finished under the following conditions, the device cannot be logged out from even if "Logout" is pressed, and then the Scanner application cannot be used:

- When user authentication is enabled.
- When custom authentication, such as Card Authentication Package, is being used.

Version 01.03
Other changes:

- When the Auto Logout timer is invoked can be changed:
  SP5-401-230 bit7 = 1: When the job executed from the operation panel is completed.
  SP5-401-230 bit7 = 0: When the user last had interaction with the panel.

Version 01.02
Symptom corrected:

1. When scanning from Mac OS X 10.12 by using AirPrint, the output file cannot be opened in the viewer.
2. A3 size cannot be specified in macOS when scanning by using AirPrint.
3. When scanning from Mac OS X 10.12 by using AirPrint, the resolution is always 200 dpi.
4. When many scan jobs are scanned from an application that is based on SmartSDK under the following conditions, an error might be displayed and the device might not be able to scan until the device is rebooted:
   - "User Authentication" is enabled.
   - "Download File Directly From URL Link" is enabled.
   - "File Emailing Method" is set to "Send URL Link".
   - "OCR setting" is enabled.

Other changes:

- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 01.01
Symptom corrected:

1. When a scan job is conducted from "Simplified Scrn." under the following conditions, the files for that job cannot be deleted from the temporary memory after the job has been sent:
   - User Authentication is enabled.
   - "Download File Directly From URL Link" is enabled.
   - "File Emailing Method" is set to "Send URL Link" or "Auto Detect".

2. When "Download File Directly From URL Link" is enabled and scan to URL is conducted 100 times or more, the scan job might fail.

Version 01.00
1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2018/05/29
------------------------------------------------------------------------
[Program Name] Network Support
------------------------------------------------------------------------
[Version] 16.58
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965792L
[File Information]
 File Name       D2965792L.fwu
 File Type       Module for Service
 Size            11.81 MB ( 12385520 byte )
[File Information]
 File Name       D2965792L.rfu
 File Type       Module for Remote Upgrade
 Size            11.82 MB ( 12390656 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2018/05
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------
```

```
===========================================================================
*** Modification History ***
===========================================================================
[Modifications made:]
Rank C

Symptom corrected:
- When conducting Scan to Folder in a high-load network environment,
  the device's status gets stuck on sending and the scanner becomes
  unusable.
- When conducting Scan to Folder using SMBv2/v3, if the device
  receives UDP communication from the outside to the port used by
  SMBv2/v3, Scan to Folder might fail.


----------------------------------------------------------------------
[Modification history]
----------------------------------------
Version 16.57
Rank C

Symptom corrected:
- The device might fail to obtain the fax transmission result using FTP.
- SC819 might occur after updating firmware remotely.
- The device might freeze during data transmission when conducting
  Scan to Folder with SMBv2/v3.


----------------------------------------
Version 16.56
Rank C

Symptom corrected:
- SMB client timeout configuration is not correctly applied in the device.
- SC899 occurs when conducting Scan to Folder, and the device might automatically restart.
- When conducting Scan to Folder, if a host name is resolved to
  multiple IP addresses by NBNS, the device tries to connect to only
  the first resolved IP address.
- When a HP device is working on the same subnet, Scan to Folder will fail.
- Network browsing sometimes fails when conducting Scan to Folder.


----------------------------------------
Version 16.55
Symptom corrected:
1. Fixed unnecessary processing affecting hard disk failure and deterioration.
2. Unnecessary logs are recorded in the system logs when connecting
   to the network through a wireless LAN.
3. In wireless LAN infrastructure mode, if changing the settings
   when the PSK in WPA2-PSK is empty, SC899 occurs.
4. When using the DHCP Option204 function, the "Setting change..."
   message might be repeatedly displayed on the operation panel,
```

and a user cannot operate the device.
5. Fixed the WebAPI bug when obtaining the network property information.

Version 16.54
Symptom corrected:
- On a device with SMBv2/v3 firmware, when sending a scanned or fax document
  using the Hotfolder plug-in for GlobalScan or StreamlineNX,
  an "incorrect" document may be sent to the destination and may be
  lost the original document.

Version 16.53.1
 Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 16.52
Symptom Corrected:
- When the device is in STR mode, printing might stop and not be
  able to be conducted until the device is rebooted.

Version 16.51
Symptom corrected:
1. When the "Erase All Memory" function is conducted, an SC899 or
   SC991 error might occur. This issue occurs when Network Support
   firmware v16.44 is installed.
2. Even if SSL3.0 communication is invalidated in device security
   settings, SSL3.0 communication is falsely possible from the NRS
   port (7443/7444) on the device.

Version 16.50
Other changes:
- Minor bug correction.

Version 16.49
1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2017/10/06
------------------------------------------------------------------------
[Program Name] Printer
------------------------------------------------------------------------
[Version] 1.05
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965794G
[File Information]
 File Name        D2965794G.fwu
 File Type        Module for Service
 Size             4.92 MB ( 5161408 byte )
[File Information]
 File Name        D2965794G.rfu
 File Type        Module for Remote Upgrade
 Size             4.93 MB ( 5169408 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2017/10
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------


========================================================================
*** Modification History ***
```

===

[Modifications made:]
Symptom Corrected:
- It might take time to resume a job if it is suspended while the
  device is in Energy Saver mode.

[Modification history]

Version 1.04
Other change:
When there is a paper size mismatch between the setting and the actual paper fed from the bypass tray, an alert will be displayed on the operation panel.

Version 1.03
Other changes:
When the Auto Logout timer is invoked can be changed:
SP5-401-230 bit7 = 1: When the job executed from the operation panel is completed.
SP5-401-230 bit7 = 0: When the user last had interaction with the panel.

Version 1.02
Symptom corrected:
A PCL font numbered 64 or later cannot be used as the default font.
(GFPR#RE17010004)

Version 1.01
Symptom corrected:
1. After an SC reboot occurs, if the dialog window stating that the automatic reboot has occurred is not closed, SDK-J applications cannot be started, which results in an SC990 error occurring.
2. Notifications are not displayed in MFP applications even if key counter management or external charge unit management is enabled.

Other changes:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 1.00
1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2017/10/10
------------------------------------------------------------------------
[Program Name] PCL
------------------------------------------------------------------------
[Version] 1.04
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965797E
[File Information]
 File Name         D2965797E.fwu
 File Type         Module for Service
 Size              1.37 MB ( 1432692 byte )
[File Information]
 File Name         D2965797E.rfu
 File Type         Module for Remote Upgrade
 Size              1.37 MB ( 1437952 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2017/10
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------


========================================================================
*** Modification History ***
```

==

[Modifications made:]

Fixed:

- The printing results of the second and subsequent pages might not be as expected while PCL5 host printing.
- The device might stall when printing a heavy-duty job.
- When printing PCL6 jobs containing the TrueType Font, the job might be canceled and the Illegal Font Data error printed instead.

[Modification history]

Version 1.03

Symptom corrected:

- Image backgrounds might be filled unexpectedly.
- A pattern put on top of an image or graphic might be blacked out.
- When printing a PCL job which contains images via host printing, an SC899 error might occur.

Version 1.02

Symptom corrected:

- An SC899 error might occur when printing a PCL5 job that contains command for selecting the Raw TrueType font.
- When conducting host printing, if a resident font is specified in the data, cedillas will not print as expected.

Version 1.01

1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2017/08/29
------------------------------------------------------------------------
[Program Name] animation
------------------------------------------------------------------------
[Version] 1.01
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(ja,en,f,e,d,i,nl,s,n,dk,sf,p,pl,h,cz,ru,sc,tc,kr,br,tr,ca,gr)
[Firmware No.] D2965791C
[File Information]
 File Name        D2965791C.fwu
 File Type        Module for Service
 Size             11.01 MB ( 11541116 byte )
[File Information]
 File Name        D2965791C.rfu
 File Type        Module for Remote Upgrade
 Size             11.01 MB ( 11546880 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection]
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------
```

==
*** Modification History ***
==
[Modifications made:]
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

[Modification history]

Version 1.00
1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2019/12/24
------------------------------------------------------------------------
[Program Name] Engine
------------------------------------------------------------------------
[Version] 1.08:01
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965775L
[File Information]
 File Name         D2965775L.fwu
 File Type         Module for Service
 Size              7.94 MB ( 8323572 byte )
[File Information]
 File Name         D2965775L.rfu
 File Type         Module for Remote Upgrade
 Size              7.95 MB ( 8331520 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2019/12
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------



========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------



========================================================================
*** Modification History ***
```

```
===========================================================================
[Modifications made:]
Rank C

Symptom corrected:
- SC990 or SC670-02 may occur when Toner Cartridge ID chip contact
  failure.
- Toner remaining value might display 20-31% when machin is turned
  OFF and ON after toner near end occurrs.
- If selecting ADF silent mode, the machine may be hang up when
  receiving the print job.


----------------------------------------------------------------------
[Modification history]
---------------------------------------
Version 1.07:01
Symptom corrected:
- JAM 025 occurs on the first sheet when a duplex printing is
  resumed after a jam is cleared or new paper is loaded.



---------------------------------------
Version 1.06:01
 Others:
-If the bypass paper tray detects a paper size mismatch, an alert
 screen to confirm the paper size setting is displayed on the
 operation panel.

-This firmware is dependent on the following firmware modules.
 Please be sure to update both of them:
  System/Copy v1.05 (D2965400H)
  Engine v1.06:01 (D2965775J)



---------------------------------------
Version 1.05:01
 Symptom Corrected:
- SC990 may occur with heavy scan jobs using the SPDF.
- Firmware update does not complete when updated via RFU.



---------------------------------------
Version 1.04:01
Symptom Corrected:
- SC374 may occur after recovery from toner end.



---------------------------------------
Version 1.03:01
Symptom Corrected:
Turning Off/On the machine falsely deletes the value saved in
following SP.
-SP7-950-145
-SP7-950-147
-SP7-950-148
-SP7-950-169
```

Version 1.02:01
Minor bug correction.

Version 1.01:01
1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2017/11/30
-----------------------------------------------------------------------
[Program Name] Web Uapl
-----------------------------------------------------------------------
[Version] 1.04
-----------------------------------------------------------------------
[PCB No.]
-----------------------------------------------------------------------
[Interchangeability] X / O
-----------------------------------------------------------------------
[Other Firmware Requirements] None
-----------------------------------------------------------------------
[PCB Requirements] None
-----------------------------------------------------------------------
[Software category] Normal Release
-----------------------------------------------------------------------
[Release category] Normal Release
-----------------------------------------------------------------------
[Program category] Firmware
-----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965789E
[File Information]
 File Name         D2965789E.fwu
 File Type         Module for Service
 Size              1.93 MB ( 2028272 byte )
[File Information]
 File Name         D2965789E.rfu
 File Type         Module for Remote Upgrade
 Size              1.94 MB ( 2035968 byte )
[Availability of RFU] Yes
-----------------------------------------------------------------------
[Production reflection] 2017/11
-----------------------------------------------------------------------

================================================================================
*** Note ***
================================================================================
[Note]

-----------------------------------------------------------------------



================================================================================
*** Important Notes ***
================================================================================
[Important Notes]

-----------------------------------------------------------------------
```

==

*** Modification History ***

==

[Modifications made:]

Symptom corrected:

- When using the Web Image Monitor through the Edge browser, a PDF or PDF/A file stored in the Document Server is not downloaded when clicked.

[Modification history]

Version 1.03

Symptom corrected:

- If using Google Chrome when downloading the scanned data from a URL received by email sent through the Scan to URL function, the PDF file cannot download.

Version 1.02

Other changes:

- Suffix update only. There is no change to the firmware.

Version 1.01

Other changes:

- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 1.00

1st Mass production

```
==============================================================================
*** Basic Information ***
==============================================================================
[Create date] 2018/12/10
------------------------------------------------------------------------
[Program Name] System/Copy
------------------------------------------------------------------------
[Version] 1.15
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965400S
[File Information]
 File Name         D2965400S.fwu
 File Type        Module for Service
 Size            28.15 MB ( 29513904 byte )
[File Information]
 File Name         D2965400S.rfu
 File Type        Module for Remote Upgrade
 Size            28.15 MB ( 29520128 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2018/12
------------------------------------------------------------------------

==============================================================================
*** Note ***
==============================================================================
[Note]

------------------------------------------------------------------------


==============================================================================
*** Important Notes ***
==============================================================================
[Important Notes]

------------------------------------------------------------------------


==============================================================================
*** Modification History ***
```

```
=====================================================================
[Modifications made:]
Rank C

Symptom corrected:
- Image log might not be sent and stay in the device.
- When the SMC List is saved to the SD card as a CSV file, SP7507
  (Latest Jam History) is not correctly recorded.
- SC 998 may occur in case that user performs "Export Device Setting
  Information" from Web Image Monitor when the device is in energy-
  saving mode.


--------------------------------------------------------------------
[Modification history]
--------------------------------------
Version 1.14
Rank C

Symptom corrected:
- SmartSDK application cannot reply to UDP packet when machine is in
  Energy Saver Mode.
- Installation of the Cheetah application from the Web Image Monitor
  fails when the SSL encryption level is set to "Ciphertext
  Priority" or "Ciphertext Only".
- The document receipt by Mail to Print function might not be
  printed, in case the device receives the document at either of the
  followings conditions;
  1) The device is turned on, but the booting procedure is not completed.
  2) The device is rebooted after SC, and the dialog of reboot is
     displayed on the device.
  3) The device is printing the document through Enhanced Locked Print.
- If "Interrupt mode" is pressed in a Legacy application, the home
  screen might be displayed instead of the original application
  after "Interrupt mode" is released.
- The machine might stall when executing SP5-858-122 and SP5-585-111
- Preview screen of a print job on Enhanced Locked Print might freeze,
  when the page is repeatedly moved.
- Generated files may not be deleted and occupy HDD even after
  sending E-mail via Scan to URL in the case OCR function is enabled.
- Copy application and FAX application mihgt not start when pressing
  these application icons.
- Login might fail and the application icon might not be displayed.
- If the functions below are enabled, the machine might not be able
  to recover from STR mode, and the functions will fail:
- Auto-backup of the application and its setting for the Smart Operation Panel
- Auto-reception for Cloud Fax
- Auto-update of applications installed via the Application Site

Other changes:
- Supported the Remote Panel Operation.
  Multiple firmware modules are required to use Remote Panel Operation.
  Please refer to GKM Answer ID 251361 for detailed information
  regarding required firmware.
- Supported RICOH SmartSDK v2.60
- A minor change only for the Japanese model.
- Added html format for Scan to Email function.
```

Version 1.13
Rank C

Symptom corrected:
- SC899 might occur when the log capture function is enabled.
- Printer capture data might not be sent when printing a blank page if the capture function is enabled.

Other changes:
- Minor change for domestic market.

Version 1.12
Rank C

Symptom corrected:
- The following symptoms might occur when executing:
  1. SP5-846-051 (Backup All Addr Book)
     - A backup failure message might appear.
  2. SP5-846-052 (Restore All Addr Book)
     - SC899 might occur.
     - The machine might stall.

Version 1.11
Rank C

Symptom corrected:
- The user might not be able to log in if the machine repeatedly enters and exits Energy Saver Mode.

Version 1.10
Rank C

Symptom corrected:
- If some characters are included in a user name, login authentication is not correctly done.

Other changes:
- Added a new feature for the SmartSDK WebAPI.

Version 1.09
Symptom corrected
- In the "Printing text and serial numbers" mode, blank text with serial numbers cannot be copied on the copying sheets.
- Remote un-installation for Streamline NX might fail.
- When the device has just gone into energy saver mode, even if a copy job is sent from a SmartSDK application, copying does not start.

- The quota notification cannot be displayed on some SmartSDK applications.
- @Remote 3G dongle fails to communicate to the @Remote center server.

Other changes
- Supported RICOH SmartSDK v2.50.

Version 1.08

Symptom corrected:
- SC687 may occur when restarting a large print job.
- User usage restrictions do not come into effect if authentication is enabled in Quick Card Authentication.
- When JavaVM is not enabled and only IPv6 is enabled, the list of installed applications is not displayed in Extended Feature Info on the Web Image Monitor.
- When capture processing and either thumbnail or preview processing occur at the same time, capture processing might not operate normally if the capture setting is enabled and Media Link Board is installed.
- When using Windows authentication, LDAP authentication, or external authentication, if exporting the address book from Device Manager NX, the export data cannot be imported.

Other changes:
- Added the function to set user usage restrictions for each application.
- Supports Arabic
- Supported RICOH SmartSDK v2.40.
- Reboot will be retried if reboot fails after updating remotely.

Version 1.07

Other changes:
- Newly added SMBv2/v3 support.

This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 1.05

Symptom corrected:
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- An invalid value is returned when obtaining the counter MIB, ricohEngCounterValue, during device shutdown.

- Fax may print out from the secure tray if you change the secure tray in user settings while receiving a fax.
- "No paper loaded" alert may appear when the fax receiving tray and the secure tray are set as the same.
- The operation panel may freeze, if the Start button is pressed in copy mode immediately after recovering from the energy saver mode.
- SC998 may occur when powering on if an ESA application is set as a function priority.
- OCR cannot recognize characters if converting scanned image to searchable PDF.

Version 1.04
Symptom corrected:
- Pressing an application on the touch panel very soon after going into Energy Saver mode might cause the device to stall on the "Please Wait" screen.
- SC672 occurs after recovering from sleep mode.
- SC673-10 may occur when turning ON the machine power.
- SC845 may occur while updating a package firmware, if the machine was turned OFF during the previous update via ARFU.
- SC816-98 may occur during the STR mode even if the machine is not experiencing any problems.

Other changes:
- When the Auto Logout timer is invoked can be changed:
  SP5-401-230 bit7 = 1: When the job executed from the operation panel is completed.
  SP5-401-230 bit7 = 0: When the user last had interaction with the panel.

Version 1.03
Symptom corrected:
- SC819 may occur, if the auto log-out timer and the energy saving timer are set to the same value.

Other changes:
- When using "Enhanced Print Volume Use Limitation" in a SmartSDK application and "Tracking Permission" and "Stop Printing" are enabled, the "Print Volume Use" pop-up window is not displayed.

Version 1.02
Symptom Corrected:
- After entering the user code to start up the Copy application, the user code input screen does not disappear.
- If a jam occurs on the first page of a job on a machine set with user code authentication and then, the start button and log-out button are pressed together, the start button becomes ineffective.
- SC819 may occur after removing a jam that occurred while printing a large job that fully consumes the printer memory.
- When the device is using "Card Authentication Package" or another

custom authentication and then the following fields on the server are blank, the fields in the address book on the device might not overwritten:
  - Email address
  - FAX address
  - Folder address

Other Change:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

- More languages supported for the smart operation panel.
- When executing a Firmware configuration task via Device Manager NX Pro/Enterprise, an RFU package with the appropriate destination (USA/Europe/Asia/Korea/Taiwan model or China model) can be selected and downloaded from the RICOH Global Server.

Version 1.01

Other changes:
- To enable quicker the detection time and shut down time when SC670 occurs.

Symptom corrected:
- Can not recovery from energy saving mode and SC672-11 may occur.
- If the device enters Energy Save Mode after automatically logging out of an account, the device might stall when IC card authentication is used to recover from Energy Save Mode once out of every 200 times.
- SC991/SC899 may occur or stall may occur during use of application on @Remote connected machines.
- Connection error message may appear mistakenly on @Remote connected machines.

Version 1.00.1

1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2018/12/14
------------------------------------------------------------------------
[Program Name] IRIPS PDF
------------------------------------------------------------------------
[Version] 1.10
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965418J
[File Information]
 File Name       D2965418J.fwu
 File Type       Module for Service
 Size            3.03 MB ( 3181720 byte )
[File Information]
 File Name       D2965418J.rfu
 File Type       Module for Remote Upgrade
 Size            3.04 MB ( 3186944 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2018/12
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------


========================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:
- When printing a PDF file that contains exceptionally small fonts, an invalid font error might occur, and the print job might not be printed correctly.
- When printing a file containing images as a booklet, the output might be distorted.
- A locked print job might not be stored on the machine if it is printed using PJL commands.
- Images might not appear as expected when printing a PDF file via AirPrint.
- When printing a PDF file that contains downloaded fonts, an invalid font error might occur, and the print job might be canceled.

[Modification history]

Version 1.09
Rank C

Symptom corrected:
- The image might be vertically extended and the upper part missing when faxing via the Remote Fax.
- When printing images using the PostScript driver with the following settings, the printed color might be weaker than expected.
  - Color Profile is set to 'ICM (Image Color Management)'.
  - Paper Type is set to anything other than 'Plain'.
- When sending a fax via the SmartSDK, images might be missing or output at the wrong size.
- Data that includes a masked background image might not print correctly.
- An SC899 error might occur when printing PostScript data that includes a watermark with a non-standard font using the PS V4 driver.
- When printing from a memory storage device from the Bypass Tray, if there is a paper size mismatch between the System Settings and the paper size specified for the Bypass Tray, it might not print correctly.
- When printing a PDF with an embedded TrueType font, some characters might be garbled.
- Some Type 0 fonts in a PDF might not print correctly.
- Some Symbolic fonts in a PDF might not print correctly.
- The image might be rotated 180 degrees when printing Landscape document via the SmartSDK.
- When printing a PDF with a specific command, an invalidfont error might occur.

Version 1.08
Rank C

Symptom corrected:
- Characters might be printed with the wrong magnification if a CID font is used.
- Characters might become too thick if the transparency is specified.
- Linux print jobs in Stored Print might be canceled.
- Pages printed as a booklet might be centered incorrectly.
- With booklet printing or N-Up printing, the scaling ratio might be wrong.

- The scaling might be wrong when printing PDF data that contains
  the FITTOPAGESIZE command but not PRINTSCALING.

Version 1.07
Symptom corrected:
- The top and bottom ends might be missing if the size is scaled
  when PDF printing.
- SC899 might occur while PDF printing.
- Characters in italics might be unrecognizable.
- Some characters might print in the wrong position when printing a
  PDF containing certain fonts.
- Both ends of the watermark might be cut off when printing from the
  V4 driver.

Version 1.06
Fixed:
- An "Invalidfont" error might occur when printing a job including
  specific data.
- SC899 might occur when a watermark is printed from the V4 driver.
- Some characters might be garbled when using the TrueType Font.
- PS printing might stall if PS jobs are printed continuously.
- An incorrect paper size may be fed while printing via AirPrint.
- The printing of a PDF file created by the "Microsoft Print to PDF"
  function might be canceled.
- Some characters might be printed upside down.

Version 1.05
Fixed:
- Adjusting the color balance in the driver doesn't work as expected.
- The device may stall when printing many pages and using specific
  fonts.

Version 1.04
Symptom corrected:
When conducting host printing, if a resident font is specified in
the data, cedillas will not print as expected.

Version 1.03
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2018/12/05
----------------------------------------------------------------------
[Program Name] Fax
----------------------------------------------------------------------
[Version] 09.00.00
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965784K
[File Information]
 File Name         D2965784K.fwu
 File Type         Module for Service
 Size              2.39 MB ( 2510480 byte )
[File Information]
 File Name         D2965784K.rfu
 File Type         Module for Remote Upgrade
 Size              2.40 MB ( 2515200 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection] 2018/12
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------


======================================================================
*** Modification History ***
```

```
==================================================================
[Modifications made:]
Rank C

Symptom corrected:
- The fax function might not work if the machine isn't turned off
  for over 300 days after disabling energy saving mode.



-----------------------------------------------------------------
[Modification history]
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Version 08.00.00
Rank C

Symptom corrected:
- The fax function might not work if the machine isn't turned off
  for over 300 days after disabling energy saving mode.

------------------------------------
Version 07.00.00
Rank C

Symptom corrected:
- When sending a fax via the SmartSDK, images might be missing or
  output at the wrong size.
- When Hook Dial is pressed or when Manual Entry is selected,
  the SmartFax application might crash.

------------------------------------
Version 06.00.00
Symptom corrected:
- The printing and capturing of received faxes is stopped and the fax
  application screen might freeze when receiving faxes intermittently
  from multiple lines if the fax reception capturing function is enabled.



------------------------------------
Version 05.00.00
 Symptom corrected:
[NA - HC model] Fax may print out from the secure tray if you change
the secure tray in user settings while receiving a fax.
[NA-HC Model] "No paper loaded" alert may appear when the fax
receiving tray and the secure tray are set as the same.



------------------------------------
Version 04.00.00
Symptom corrected:
- Cannot exit from job stop screen and FAX function does not work,
  if the SNTP time setting and STR setting are enabled.

Other changes:
- When the Auto Logout timer is invoked can be changed:
  SP5-401-230 bit7 = 1: When the job executed from the operation
  panel is completed.
  SP5-401-230 bit7 = 0: When the user last had interaction with the
```

panel.

Version 03.00.00
Specification change:
- Paper Feed Unit PB1080TE supported.

Symptom Corrected:
- AirPrint (FaxOut) results in error.

Other changes:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 02.00.00
Symptom corrected:
SC899 may occur when logging out from a machine with the user authentication enabled.

Version 01.00.00
1st Mass production

*** Basic Information ***

[Create date] 2018/10/26

[Program Name] RemoteFax

[Version] 05.00.00

[PCB No.]

[Interchangeability] X / O

[Other Firmware Requirements] None

[PCB Requirements] None

[Software category] Normal Release

[Release category] Normal Release

[Program category] Firmware

Exported to(language) GEN(all)
[Firmware No.] D2965785F
[File Information]
 File Name   D2965785F.fwu
 File Type   Module for Service
 Size   1.63 MB (1710024 byte)
[File Information]
 File Name   D2965785F.rfu
 File Type   Module for Remote Upgrade
 Size   1.64 MB (1716480 byte)
[Availability of RFU] Yes

[Production reflection] 2018/10

*** Note ***

[Note]

*** Important Notes ***

[Important Notes]

*** Modification History ***

[Modifications made:]
Rank C

Symptom corrected:

- The document receipt by Mail to Print function might not be printed, in case the device receives the document at either of the followings conditions;
- 1) The device is turned on, but the booting procedure is not completed.
- 2) The device is rebooted after SC, and the dialog of reboot is displayed on the device.
- 3) The device is printing the document through Enhanced Locked Print.

[Modification history]

Version 04.00.00
Symptom corrected:

- Cannot send, receive, or print the transmitted fax if the sending machine disconnects during IP-FAX transmission.
- A sending error might occur with PC-FAX.

Version 03.00.00
Symptom corrected:

- Cannot receive an IP-Fax(SIP) transmitted from a Canon machine.

Version 02.00.00
Symptom Corrected:
SC899 may occur when receiving IP FAX.

Version 01.00.00
1st Mass production

```
==============================================================================
*** Basic Information ***
==============================================================================
[Create date] 2018/12/07
------------------------------------------------------------------------
[Program Name] Web Support
------------------------------------------------------------------------
[Version] 1.07
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965788H
[File Information]
 File Name        D2965788H.fwu
 File Type       Module for Service
 Size           7.25 MB ( 7605184 byte )
[File Information]
 File Name        D2965788H.rfu
 File Type       Module for Remote Upgrade
 Size           7.26 MB ( 7610624 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2018/12
------------------------------------------------------------------------

==============================================================================
*** Note ***
==============================================================================
[Note]

------------------------------------------------------------------------



==============================================================================
*** Important Notes ***
==============================================================================
[Important Notes]

------------------------------------------------------------------------



==============================================================================
*** Modification History ***
```

```
=====================================================================
[Modifications made:]
Rank C

Symptom corrected:
- The XSS vulnerability of screens in the Address Book that was
  pointed out in CVE-2018-15884 has been fixed.
- Ricoh devices already had a countermeasure to protect against the
  CSRF vulnerability pointed out in CVE-2018-15884.



--------------------------------------------------------------------
[Modification history]
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Version 1.06
Rank C

Other changes:
- Supported the Remote Panel Operation.
   Multiple firmware modules are required to use Remote Panel Operation.
   Please refer to GKM Answer ID 251361 for detailed information regarding required firmware.
- Added html format for Scan to Email function.
- The following values can be set with solution software that uses SOAP I/F.
- "SNMPv3 Setting"
   - SNMPv3 Trap Communication
   - Encryption Algorithm
   - Permit SNMPv3 Communication
- "Program/Change Administrator"
   - Encryption Password

--------------------------------------
Version 1.05
Other changes:
- Added the function to set user usage restrictions for each application.



--------------------------------------
Version 1.04
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.



--------------------------------------
Version 1.03
 Symptom corrected:
- When changing the password policy in the "Extended Security" menu
  through Web Image Monitor, the access log might be not recorded.
```

Version 1.02
Other changes:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 1.01
Other changes:
- Added an SP setting for enabling or disabling the "Screen
  Monitoring" function.
  SP5-885-205: default = 0 ("Screen Monitoring" is enabled)
This firmware is dependent on System/Copy firmware v1.01 (D2965400D)
or later, so please be sure to update that firmware as well.

Version 1.00
1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2018/12/05
----------------------------------------------------------------------
[Program Name] NetworkDocBox
----------------------------------------------------------------------
[Version] 1.05
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965790F
[File Information]
 File Name         D2965790F.fwu
 File Type         Module for Service
 Size              2.32 MB ( 2432764 byte )
[File Information]
 File Name         D2965790F.rfu
 File Type         Module for Remote Upgrade
 Size              2.32 MB ( 2437376 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection] 2018/12
----------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

----------------------------------------------------------------------



========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

----------------------------------------------------------------------



========================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:
- The log time reported to the SmartSDK application might be wrong.

[Modification history]

Version 1.04
Rank C

Symptom corrected:
- When using the application for the Japanese market, the Job Log transfer settings might not be set correctly when importing the preference information from another device.
- Fixed a SmartSDK WebAPI bug with serverless transfer requests for device logs.

Other changes:
- The following values can be set with solution software that uses SOAP I/F.
- "SNMPv3 Setting"
    - SNMPv3 Trap Communication
    - Encryption Algorithm
    - Permit SNMPv3 Communication
- "Program/Change Administrator"
    - Encryption Password

Version 1.03
Rank C

Symptom corrected:
- If the device is abnormally turned off, the collect logs settings might be initialized and the log data might not be transferred after that.

Version 1.02
Rank C

Symptom corrected:
- When the image log capture function is enabled and a large number of jobs are performed, the capture cannot be executed and the device will freeze.
- Unnecessary retransmissions might be occur in the image log capture.

Other changes:
- Added a new feature for the SmartSDK WebAPI.

Version 1.01
Symptom corrected:
1. The device might not be able to be accessed via Web Image

Monitor.

2. When the following conditions are met, SC899 and SC991 might occur:

- Job Log collection is being performed.
- The document being faxed is targeted for capture, and the fax is sent.

Version 1.00
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2018/11/05
----------------------------------------------------------------------
[Program Name] animation
----------------------------------------------------------------------
[Version] 1.02
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(ja,en,f,e,d,i,nl,s,n,dk,sf,p,pl,h,cz,ru,sc,tc,kr,br,tr,ca,gr)
[Firmware No.] D2965791D
[File Information]
 File Name        D2965791D.fwu
 File Type        Module for Service
 Size             11.01 MB ( 11544628 byte )
[File Information]
 File Name        D2965791D.rfu
 File Type        Module for Remote Upgrade
 Size             11.02 MB ( 11550976 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection]
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------



======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------



======================================================================
*** Modification History ***
```

```
==============================================================================
[Modifications made:]
Rank D

Other changes:
- Minor bug fixes.


------------------------------------------------------------------------------
[Modification history]
-------------------------------------------
Version 1.01
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.


-------------------------------------------
Version 1.00
1st Mass production
```

```
==========================================================================
*** Basic Information ***
==========================================================================
[Create date] 2019/11/12
------------------------------------------------------------------------
[Program Name] Network Support
------------------------------------------------------------------------
[Version] 16.63
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965792Q
[File Information]
 File Name         D2965792Q.fwu
 File Type         Module for Service
 Size              11.81 MB ( 12388540 byte )
[File Information]
 File Name         D2965792Q.rfu
 File Type         Module for Remote Upgrade
 Size              11.82 MB ( 12394752 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2019/11
------------------------------------------------------------------------

==========================================================================
*** Note ***
==========================================================================
[Note]

------------------------------------------------------------------------



==========================================================================
*** Important Notes ***
==========================================================================
[Important Notes]

------------------------------------------------------------------------



==========================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:

A vulnerability (CVE-2019-1559) to a Padding Oracle Attack on CBC encryption has been fixed.
To activate this fix, CBC mode must be disabled after updating the firmware.

```
msh> set cbc down
msh> logout
```

Enter "yes" to save the changes.

[Modification history]

Version 16.61
Rank C

Symptom corrected:

- DNS name resolution for the device might fail if DDNS is enabled
  in a DHCPv6 environment.
- The DHCP address renewal request might be discarded when the DHCP
  server is configured as a failover cluster.

Other changes:

- It is now possible to close the following ports with a Telnet command:
  - 111/tcp
  - 111/udp
  - 1022/tcp
  - 1023/tcp
  - 1022/udp
  - 1023/udp
  - 2049/tcp
  - 18315/tcp
  - 54080/tcp
  - 54443/tcp
  - 65000/tcp
  - 65001/tcp

  Please refer to the RTB (RGene108a) for more details.
- Even when the certificate key length for @Remote is set to 512-bit,
  the device can connect to the firmware download server (for ARFU, SFU, etc.).

Version 16.60
Rank C

Other changes:

It is now possible to close the following ports with a Telnet command:

- 111/tcp
- 1022/tcp
- 1023/tcp
- 2049/tcp
- 18315/tcp
- 54080/tcp

- 54443/tcp
- 1022/udp
- 1023/udp

Please refer to the RTB (RGene108) for more details.

Version 16.59
Rank C

Symptom corrected:

- When conducting AirPrint, if port 80/TCP (HTTP) or port 631/TCP (IPP) in the printer is closed, the Apple device cannot find the printer.

Version 16.58
Rank C

Symptom corrected:

- When conducting Scan to Folder in a high-load network environment, the device's status gets stuck on sending and the scanner becomes unusable.
- When conducting Scan to Folder using SMBv2/v3, if the device receives UDP communication from the outside to the port used by SMBv2/v3, Scan to Folder might fail.

Version 16.57
Rank C

Symptom corrected:

- The device might fail to obtain the fax transmission result using FTP.
- SC819 might occur after updating firmware remotely.
- The device might freeze during data transmission when conducting Scan to Folder with SMBv2/v3.

Version 16.56
Rank C

Symptom corrected:

- SMB client timeout configuration is not correctly applied in the device.
- SC899 occurs when conducting Scan to Folder, and the device might automatically restart.
- When conducting Scan to Folder, if a host name is resolved to multiple IP addresses by NBNS, the device tries to connect to only the first resolved IP address.
- When a HP device is working on the same subnet, Scan to Folder will fail.
- Network browsing sometimes fails when conducting Scan to Folder.

Version 16.55
Symptom corrected:

1. Fixed unnecessary processing affecting hard disk failure and deterioration.
2. Unnecessary logs are recorded in the system logs when connecting

to the network through a wireless LAN.
3. In wireless LAN infrastructure mode, if changing the settings
when the PSK in WPA2-PSK is empty, SC899 occurs.
4. When using the DHCP Option204 function, the "Setting change..."
message might be repeatedly displayed on the operation panel,
and a user cannot operate the device.
5. Fixed the WebAPI bug when obtaining the network property information.

Version 16.54
Symptom corrected:
- On a device with SMBv2/v3 firmware, when sending a scanned or fax document
using the Hotfolder plug-in for GlobalScan or StreamlineNX,
an "incorrect" document may be sent to the destination and may be
lost the original document.

Version 16.53.1
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 16.52
Symptom Corrected:
- When the device is in STR mode, printing might stop and not be
able to be conducted until the device is rebooted.

Version 16.51
Symptom corrected:
1. When the "Erase All Memory" function is conducted, an SC899 or
SC991 error might occur. This issue occurs when Network Support
firmware v16.44 is installed.
2. Even if SSL3.0 communication is invalidated in device security
settings, SSL3.0 communication is falsely possible from the NRS
port (7443/7444) on the device.

Version 16.50
Other changes:
- Minor bug correction.

Version 16.49
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2018/12/05
----------------------------------------------------------------------
[Program Name] Printer
----------------------------------------------------------------------
[Version] 1.07
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965794J
[File Information]
 File Name         D2965794J.fwu
 File Type         Module for Service
 Size            4.92 MB ( 5160732 byte )
[File Information]
 File Name         D2965794J.rfu
 File Type         Module for Remote Upgrade
 Size            4.93 MB ( 5165312 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection] 2018/12
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------


======================================================================
*** Modification History ***
```

==
[Modifications made:]
Rank C

Symptom corrected:
- SC899 might occur when printing a Hold Print file scheduled for a certain time.

[Modification history]

Version 1.06
Rank C

Symptom corrected:
- If the machine reboots due to a forced shut-down, a power outage, unplugging a power cable, or an SC819 error, jobs using certain applications might not print.
- An SC899 error might occur if displaying the print job history on the Web Image Monitor after printing a file with a long name.

Version 1.05
Symptom Corrected:
- It might take time to resume a job if it is suspended while the device is in Energy Saver mode.

Version 1.04
Other change:
When there is a paper size mismatch between the setting and the actual paper fed from the bypass tray, an alert will be displayed on the operation panel.

Version 1.03
Other changes:
When the Auto Logout timer is invoked can be changed:
SP5-401-230 bit7 = 1: When the job executed from the operation panel is completed.
SP5-401-230 bit7 = 0: When the user last had interaction with the panel.

Version 1.02
Symptom corrected:
A PCL font numbered 64 or later cannot be used as the default font.
(GFPR#RE17010004)

Version 1.01

Symptom corrected:

1. After an SC reboot occurs, if the dialog window stating that the automatic reboot has occurred is not closed, SDK-J applications cannot be started, which results in an SC990 error occurring.
2. Notifications are not displayed in MFP applications even if key counter management or external charge unit management is enabled.

Other changes:

- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

--------------------------------------

Version 1.00
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2018/12/13
----------------------------------------------------------------------
[Program Name] PCL
----------------------------------------------------------------------
[Version] 1.06
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965797G
[File Information]
 File Name        D2965797G.fwu
 File Type        Module for Service
 Size             1.37 MB ( 1432816 byte )
[File Information]
 File Name        D2965797G.rfu
 File Type        Module for Remote Upgrade
 Size             1.37 MB ( 1437952 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection] 2018/12
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------


======================================================================
*** Modification History ***
```

```
===============================================================
[Modifications made:]
Rank C

Symptom corrected:
- Double-byte characters of Asian languages such as Japanese, Chinese,
  and Korean might be missing.


--------------------------------------------------------------------
[Modification history]
--------------------------------------
Version 1.05
Rank C

Symptom corrected:
- The overlay image might not be correctly printed with PCL.
- Some characters might be filled with black when the color balance
  is set below zero.

--------------------------------------
Version 1.04
Fixed:
- The printing results of the second and subsequent pages might not
  be as expected while PCL5 host printing.
- The device might stall when printing a heavy-duty job.
- When printing PCL6 jobs containing the TrueType Font, the job
  might be canceled and the Illegal Font Data error printed instead.


--------------------------------------
Version 1.03
Symptom corrected:
- Image backgrounds might be filled unexpectedly.
- A pattern put on top of an image or graphic might be blacked out.
- When printing a PCL job which contains images via host printing,
  an SC899 error might occur.


--------------------------------------
Version 1.02
Symptom corrected:
- An SC899 error might occur when printing a PCL5 job that contains
  command for selecting the Raw TrueType font.
- When conducting host printing, if a resident font is specified in
  the data, cedillas will not print as expected.


--------------------------------------
Version 1.01
1st Mass production
```

```
==============================================================================
*** Basic Information ***
==============================================================================
[Create date] 2018/10/23
------------------------------------------------------------------------------
[Program Name] PDF
------------------------------------------------------------------------------
[Version] 1.02
------------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] M5055733B
[File Information]
 File Name         M5055733B.fwu
 File Type         Module for Service
 Size              4.44 MB ( 4658900 byte )
[File Information]
 File Name         M5055733B.rfu
 File Type         Module for Remote Upgrade
 Size              4.45 MB ( 4665600 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------------
[Production reflection] 2018/10
------------------------------------------------------------------------------

==============================================================================
*** Note ***
==============================================================================
[Note]

------------------------------------------------------------------------------


==============================================================================
*** Important Notes ***
==============================================================================
[Important Notes]

------------------------------------------------------------------------------


==============================================================================
*** Modification History ***
```

```
============================================================================
[Modifications made:]
Rank C

Symptom corrected:
- Printing a PDF with a transparent image and a shaded image might take a long time
  due to memory release processing, and the shaded image might not be printed as expected.
- When sending a fax via the SmartSDK, images might be missing or output at the wrong size.
- A PDF might not print if the previous PDF print job was cancelled manually.
- If a PDF contains transparent images, printing might be canceled due to a lack of memory.
- When printing a PDF file that contains transparent images via PDF Direct,
  the output might be distorted.
- Printing might be cancelled due to memory leak when using a color profile.
- Images might be missing and an invalid font error might occur
  when printing a webpage with Adobe Typekit fonts.

------------------------------------------------------------------------
[Modification history]
---------------------------------------
Version 1.01
Symptom Corrected:
- It takes a significant amount of time to output the first page by
  using PDF Direct Print when the print data contains a large number
  of pages. (GFPR#RE16060016)
- When printing PDF data that includes overprinting via PDF Direct Print,
  after taking a significant amount of time to print the first few
  pages in a job, the job might be cancelled.
- An SC899 error might occur when printing a document that has fewer
  than four colors for CMYK specified.
- When printing a PDF file that contains graphics or text via PDF Direct,
  an SC899 error might occur.
- SC899 might occur while printing via PDF Direct if a job includes
  more than 500 pages.
- An incorrect paper size may be fed while printing via AirPrint.
- SC899 might occur if there is a large number of different characters
  used in a print job.
- The device might stall if a job includes text outside the
  printable area of the page.
- The device might stall during PDF direct printing if a spot color is used.
- The device might stall during PDF direct printing if a job contains
  a Bezier curve.


---------------------------------------
Version 1.00
1st Mass production
```

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2019/05/20
----------------------------------------------------------------------
[Program Name] Java VM v12 std UpdateTool
----------------------------------------------------------------------
[Version] 12.65.01
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965779K_upd
[File Information]
 File Name         D2965779K_upd.exe
 File Type         Module for Service
 Size              63.75 MB ( 66844892 byte )
 Check Sum -8Bit Sum: 5B6C
           -16Bit Sum(Little Endian): 0447
           -16Bit Sum(Big Endian): C325
[Availability of RFU] No
----------------------------------------------------------------------
[Production reflection] 2019/04
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------


======================================================================
*** Modification History ***
======================================================================
```

[Modifications made:]
Rank C

Symptom corrected:

- Errors might be occured by using the Globalscan.
- When JavaVM launched "NullPointerException" error message may be displayed, and JavaVM startup may fail.
- SDK application might not startup if the Stream Line NX settings changed.

[Modification history]

Version 12.62.00
Rank C

Symptom corrected:

- The package firmware might not be updated if the firmware includes an application that needs to be rebooted when updated.
- Gloria don't start up when power off/on then system settings can't be used.

Other changes:

- Login might fail if attempting to log in with an IC card while the On-demand Print screen is displayed.

Version 12.59.01
Rank C

Other changes:

- Minor changes for its internal operations.

Version 12.57.00
Symptom corrected

- The printing speed is not as fast as the past model if CAP V2 is installed.
- The SDK application may stop suddenly due to the increase of memory usage.

Version 12.55.02
Symptom corrected:

- The SDK application icon might not be displayed after recovering from energy saving mode under the following conditions:
  - An SDK application is set as a priority function.
  - An SDK application is set as a function key.
- SC899-00 may occur if logging in from a keyboard.
- FAX cannot be transmitted if CAP v2 is installed.
- The wrong JavaVM firmware can be mistakenly installed on any machine, possibly leading to unexpected errors occurring with JavaVM or bootup failing.

```
Version 12.53.01
Symptom corrected:
- Startup may take a long time and SC998 may occur if Streamline NX
  and CAP v2 are installed.
- SDK applications (e.g. Streamline NX, GlobalScan NX, CAP/ELP) may
  not be able to start during the boot process due to a Java VM error.
- If only IPv6 is enabled on the device, utility tools (e.g. Device
  Manager NX family or Streamline NX v3) will fail to install
  applications remotely.
- The following issues occur if any device certificate is imported
  using the Device Manager NX Enterprise Certificate Management Tool.
    - Device Manager NX Enterprise fails to retrieve the information
      about the application(s) installed on the device.
    - GlobalScan NX fails to apply profiles or retrieve device
      information when using the AdminTool.


--------------------------------------
Version 12.50.01
Symptom corrected:
- When showing the device status via a Solution Product (Streamline
  and CAP/ELP), the device's HDD capacity is not displayed correctly.
- Under the following conditions, when performing on-demand printing
  with the Enhanced Locked Print, the SC899 error might occur.
   - More than 100 connected devices are set as the host name.
   - Host name resolution fails on DNS server.


--------------------------------------
Version 12.47.01
Symptom corrected:
- Replacing with a new controller board installed with the latest
  Java VM version may disallow downgrading to previous version or
  retrieve customized version and cause trouble for users who wish
  to use specific or customized versions.
- When the relationship between the host name and the IP address on
  the DNS server is modified, Java VM might not recognize the change.
- When conducting location-free printing or authentication processing
  by using a solution product, an SC899 error might occur or Java VM
  might close unexpectedly and an SC error related to Java VM not
  responding might occur.
- The DSDK application fails to connect to the LDAP server when
  using Kerberos authentication.


--------------------------------------
Version 12.45.00
Symptom corrected:
1. After applying the security update that changes the priority
   order for cipher suites, SSL communication fails between an
   application that includes an SSL server function and the Windows
   operating system.
2. When "Tracking Permission" and "Stop Printing" are enabled in
   "Enhanced Print Volume Limitation", processing of the job might fail.
3. SDK application behavior may be incorrect or inconsistent.
   (CAP/ELP/SLNX/GSNX/etc.)
   Both the Standard (Compatibility mode) application and the SOP
```

Optimized (Hybrid mode) application are affected by these issues.
- Cannot log in.
- Cannot scan.
- Cannot print.
- Error message appears.

etc.

Version 12.41.04
1st Mass production

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2019/05/20
------------------------------------------------------------------------
[Program Name] Java VM v12 std for eDC
------------------------------------------------------------------------
[Version] 12.65.01
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965779K_edc
[File Information]
 File Name         D2965779K_edc.ifu
 File Type        Module for Service
 Size            64.01 MB ( 67117480 byte )
[Availability of RFU] No
------------------------------------------------------------------------
[Production reflection] 2019/04
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------


========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------


========================================================================
*** Modification History ***
========================================================================
[Modifications made:]
Rank C
```

Symptom corrected:
- Errors might be occured by using the Globalscan.
- When JavaVM launched "NullPointerException" error message may be displayed, and JavaVM startup may fail.
- SDK application might not startup if the Stream Line NX settings changed.

[Modification history]

Version 12.62.00
Rank C

Symptom corrected:
- The package firmware might not be updated if the firmware includes an application that needs to be rebooted when updated.
- Gloria don't start up when power off/on then system settings can't be used.

Other changes:
- Login might fail if attempting to log in with an IC card while the On-demand Print screen is displayed.

Version 12.59.01
Rank C

Other changes:
- Minor changes for its internal operations.

Version 12.57.00
Symptom corrected
- The printing speed is not as fast as the past model if CAP V2 is installed.
- The SDK application may stop suddenly due to the increase of memory usage.

Version 12.55.02
Symptom corrected:
- The SDK application icon might not be displayed after recovering from energy saving mode under the following conditions:
  - An SDK application is set as a priority function.
  - An SDK application is set as a function key.
- SC899-00 may occur if logging in from a keyboard.
- FAX cannot be transmitted if CAP v2 is installed.
- The wrong JavaVM firmware can be mistakenly installed on any machine, possibly leading to unexpected errors occurring with JavaVM or bootup failing.

Version 12.53.01
Symptom corrected:
- Startup may take a long time and SC998 may occur if Streamline NX

and CAP v2 are installed.
- SDK applications (e.g. Streamline NX, GlobalScan NX, CAP/ELP) may not be able to start during the boot process due to a Java VM error.
- If only IPv6 is enabled on the device, utility tools (e.g. Device Manager NX family or Streamline NX v3) will fail to install applications remotely.
- The following issues occur if any device certificate is imported using the Device Manager NX Enterprise Certificate Management Tool.
    - Device Manager NX Enterprise fails to retrieve the information about the application(s) installed on the device.
    - GlobalScan NX fails to apply profiles or retrieve device information when using the AdminTool.

Version 12.50.01
Symptom corrected:
- When showing the device status via a Solution Product (Streamline and CAP/ELP), the device's HDD capacity is not displayed correctly.
- Under the following conditions, when performing on-demand printing with the Enhanced Locked Print, the SC899 error might occur.
    - More than 100 connected devices are set as the host name.
    - Host name resolution fails on DNS server.

Version 12.47.01
Symptom corrected:
- Replacing with a new controller board installed with the latest Java VM version may disallow downgrading to previous version or retrieve customized version and cause trouble for users who wish to use specific or customized versions.
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- When conducting location-free printing or authentication processing by using a solution product, an SC899 error might occur or Java VM might close unexpectedly and an SC error related to Java VM not responding might occur.
- The DSDK application fails to connect to the LDAP server when using Kerberos authentication.

Version 12.45.00
Symptom corrected:
1. After applying the security update that changes the priority order for cipher suites, SSL communication fails between an application that includes an SSL server function and the Windows operating system.
2. When "Tracking Permission" and "Stop Printing" are enabled in "Enhanced Print Volume Limitation", processing of the job might fail.
3. SDK application behavior may be incorrect or inconsistent. (CAP/ELP/SLNX/GSNX/etc.)
   Both the Standard (Compatibility mode) application and the SOP Optimized (Hybrid mode) application are affected by these issues.
    - Cannot log in.
    - Cannot scan.

- Cannot print.
- Error message appears.

etc.

Version 12.41.04
1st Mass production

```
==============================================================================
*** Basic Information ***
==============================================================================
[Create date] 2020/05/08
------------------------------------------------------------------------------
[Program Name] IRIPS PDF
------------------------------------------------------------------------------
[Version] 1.13
------------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965418M
[File Information]
 File Name        D2965418M.fwu
 File Type        Module for Service
 Size        3.03 MB ( 3182356 byte )
[File Information]
 File Name        D2965418M.rfu
 File Type        Module for Remote Upgrade
 Size        3.04 MB ( 3186944 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------------
[Production reflection] 2020/03
------------------------------------------------------------------------------

==============================================================================
*** Note ***
==============================================================================
[Note]

------------------------------------------------------------------------------



==============================================================================
*** Important Notes ***
==============================================================================
[Important Notes]

------------------------------------------------------------------------------



==============================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:
- When File System Operation is permitted for PDF and PostScript, some directories that should not be accessed might become accessible.

[Modification history]

Version 1.12
Rank C

Symptom corrected:
- An image containing axial shading might not print as expected.

Version 1.11
Rank C

Symptom corrected:
- PDF files that are generated by certain applications might not print via Direct Print.
- The minus sign (-) in a PDF file might not be printed via PDF Direct.
- When printing a PDF file that contains circled letters or numbers, the circle itself might be distorted.

Version 1.10
Rank C

Symptom corrected:
- When printing a PDF file that contains exceptionally small fonts, an invalid font error might occur, and the print job might not be printed correctly.
- When printing a file containing images as a booklet, the output might be distorted.
- A locked print job might not be stored on the machine if it is printed using PJL commands.
- Images might not appear as expected when printing a PDF file via AirPrint.
- When printing a PDF file that contains downloaded fonts, an invalid font error might occur, and the print job might be canceled.

Version 1.09
Rank C

Symptom corrected:
- The image might be vertically extended and the upper part missing

when faxing via the Remote Fax.

- When printing images using the PostScript driver with the following settings, the printed color might be weaker than expected.
  - Color Profile is set to 'ICM (Image Color Management)'.
  - Paper Type is set to anything other than 'Plain'.
- When sending a fax via the SmartSDK, images might be missing or output at the wrong size.
- Data that includes a masked background image might not print correctly.
- An SC899 error might occur when printing PostScript data that includes a watermark with a non-standard font using the PS V4 driver.
- When printing from a memory storage device from the Bypass Tray, if there is a paper size mismatch between the System Settings and the paper size specified for the Bypass Tray, it might not print correctly.
- When printing a PDF with an embedded TrueType font, some characters might be garbled.
- Some Type 0 fonts in a PDF might not print correctly.
- Some Symbolic fonts in a PDF might not print correctly.
- The image might be rotated 180 degrees when printing Landscape document via the SmartSDK.
- When printing a PDF with a specific command, an invalidfont error might occur.

Version 1.08
Rank C

Symptom corrected:

- Characters might be printed with the wrong magnification if a CID font is used.
- Characters might become too thick if the transparency is specified.
- Linux print jobs in Stored Print might be canceled.
- Pages printed as a booklet might be centered incorrectly.
- With booklet printing or N-Up printing, the scaling ratio might be wrong.
- The scaling might be wrong when printing PDF data that contains the FITTOPAGESIZE command but not PRINTSCALING.

Version 1.07
Symptom corrected:

- The top and bottom ends might be missing if the size is scaled when PDF printing.
- SC899 might occur while PDF printing.
- Characters in italics might be unrecognizable.
- Some characters might print in the wrong position when printing a PDF containing certain fonts.
- Both ends of the watermark might be cut off when printing from the V4 driver.

Version 1.06
Fixed:

- An "Invalidfont" error might occur when printing a job including specific data.
- SC899 might occur when a watermark is printed from the V4 driver.
- Some characters might be garbled when using the TrueType Font.
- PS printing might stall if PS jobs are printed continuously.

- An incorrect paper size may be fed while printing via AirPrint.
- The printing of a PDF file created by the "Microsoft Print to PDF" function might be canceled.
- Some characters might be printed upside down.

Version 1.05
Fixed:
- Adjusting the color balance in the driver doesn't work as expected.
- The device may stall when printing many pages and using specific fonts.

Version 1.04
Symptom corrected:
When conducting host printing, if a resident font is specified in the data, cedillas will not print as expected.

Version 1.03
1st Mass production

```
<<Package>>
package_ALL [GRIC3a_pk]
 D2965430N Ver. 9.05

<<Separate>>
System/Copy [GRIC3a_system]
 D2965450C Ver. 1.19


Printer [GRIC3e_printer]
 D2965794K Ver. 1.08


Web Support [GRIC3a_web]
 D2965788J Ver. 1.08


Web Uapl [GRIC3a_webua]
 D2965789F Ver. 1.05


IRIPS PDF [GRC3e_prt_IPDF]
 D2965418M Ver. 1.13


M2a_System [M2a_System]
 D2411425R Ver. 1.37


M2a_LegacyUI [M2a_LegacyUI]
 D2411439D Ver. 1.27


M2a_WLanguage [M2a_WLanguage]
 D2411431L Ver. 1.12


M2a_WEcoInfo [M2a_WEcoInfo]
 D2411437H Ver. 1.08
```

```
========================================================================
*** Basic Information ***
========================================================================
[Create date] 2020/05/08
------------------------------------------------------------------------
[Program Name] System/Copy
------------------------------------------------------------------------
[Version] 1.19
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965450C
[File Information]
 File Name        D2965450C.fwu
 File Type        Module for Service
 Size             28.16 MB ( 29528140 byte )
[File Information]
 File Name        D2965450C.rfu
 File Type        Module for Remote Upgrade
 Size             28.17 MB ( 29536512 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2020/03
------------------------------------------------------------------------

========================================================================
*** Note ***
========================================================================
[Note]

------------------------------------------------------------------------



========================================================================
*** Important Notes ***
========================================================================
[Important Notes]

------------------------------------------------------------------------



========================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:
- Implementation of countermeasures for the CSRF vulnerability.
- Login screen freezes if attempted to gain authentication with Enhanced Locked Print NX / FlexRelease Server while operating the control panel.
- When printing multiple jobs while "Enhanced Print Volume Use Limitation" is enabled, the printing might be slower.
- Implementation of countermeasures for the three vulnerabilities listed below. (The following firmware updates are required for the countermeasures to take effect: System/Copy v1.19, Printer v1.08, Web Support v1.08, Web Uapl v1.05.)

1. A URL for Remote Panel Operation might leak, and there is a risk that an unauthenticated user could operate the device remotely.
2. There is an XSS vulnerability.
3. The Web Image Monitor sets session cookies without the HttpOnly attribute, and there is a risk the cookies might leak data.

[Modification history]

Version 1.18
Rank C

Symptom corrected:
- The language set for each user may not be applied when logging in during Energy Saving mode.
- The time on the Date and Time Widget might be incorrect if the FAX SP1-101-022 (System Switch 15) bit 1(Going into the Energy Saver mode automatically) is set to "1: Disabled".
- When logging in or out repeatedly, SC899 might occur because of an irregular memory exclusion operation.
- The device might freeze after logging in to the device at address book screen under the following conditions;
  1) Central Management is enabled.
  2) Either of Windows authentication, LDAP authentication, or Custom authentication is set on User Authentication Management.
- If the authentication setting is changed remotely while logging in from the panel, the operation might hang, and the panel might stall.

Other changes:
- Even when the certificate key length for @Remote is set to 512-bit, the device can connect to the firmware download server (for ARFU, SFU, etc.).

Version 1.17
Rank C

Symptom corrected:
- Fails to download files from the firmware download center using ARFU.
- The machine might stall if it enters energy saving mode during ARFU.
- The machine wakes up from the sleep mode when it receives a MIB

request from @Remote.
- A part of registered address may not be shown in Smart Scan feature.
- When the address book is backed up from an 11S or earlier model and restored to a 14S or later model, SC899 might occur after restoring the address book and restarting the machine.
- When "Application Authentication Settings" is enabled, SC899 might occur after registering or updating an address book over 220 times from Web Image Monitor.
- An SC error might occur when scanning with AirPrint, WSD-Scanner, or DSM.
- When the auto logout setting is enabled, logout failed message might appear during the printing.
- Cannot log-in with VM less application during daylight saving time. (Only in the case that the daylight saving time period start at Oct-Dec)
- When scanning with ClearlightPDF JPEG2000, SC865-56 might occur.
- @Remote 3G fails to connect to @Remote center server when a device turns to an engine off mode.
- User and SP settings information in the Copy (Classic) application and the Scanner (Classic) application might be cleared after version up or down to specific firmware version.
- Wireless direct connection might fail in Group Owner Mode.
- The SC991 log is recorded if the capture file log fails to transfer.

Other changes:
- If a firmware package is unpublished (for example, when a bug is discovered after release), it is possible to apply a previous firmware package via ARFU, SFU, and Application Site.(Previously, if a firmware package is unpublished then ARFU, SFU, and Application Site would display an error dialog and the function could not be used.)
- The Java VM version can be confirmed via @Remote.
- Supported RICOH SmartSDK v2.60

Version 1.16
Rank C

Supported:
- The CPU is replaced with a newer model, so the BIOS is also updated to support the new model.

Version 1.15
Rank C

Symptom corrected:
- Image log might not be sent and stay in the device.
- When the SMC List is saved to the SD card as a CSV file, SP7507 (Latest Jam History) is not correctly recorded.
- SC 998 may occur in case that user performs "Export Device Setting Information" from Web Image Monitor when the device is in energy-saving mode.

Version 1.14
Rank C

Symptom corrected:
- SmartSDK application cannot reply to UDP packet when machine is in
  Energy Saver Mode.
- Installation of the Cheetah application from the Web Image Monitor
  fails when the SSL encryption level is set to "Ciphertext
  Priority" or "Ciphertext Only".
- The document receipt by Mail to Print function might not be
  printed, in case the device receives the document at either of the
  followings conditions;
  1) The device is turned on, but the booting procedure is not completed.
  2) The device is rebooted after SC, and the dialog of reboot is
     displayed on the device.
  3) The device is printing the document through Enhanced Locked Print.
- If "Interrupt mode" is pressed in a Legacy application, the home
  screen might be displayed instead of the original application
  after "Interrupt mode" is released.
- The machine might stall when executing SP5-858-122 and SP5-585-111
- Preview screen of a print job on Enhanced Locked Print might freeze,
  when the page is repeatedly moved.
- Generated files may not be deleted and occupy HDD even after
  sending E-mail via Scan to URL in the case OCR function is enabled.
- Copy application and FAX application mihgt not start when pressing
  these application icons.
- Login might fail and the application icon might not be displayed.
- If the functions below are enabled, the machine might not be able
  to recover from STR mode, and the functions will fail:
- Auto-backup of the application and its setting for the Smart Operation Panel
- Auto-reception for Cloud Fax
- Auto-update of applications installed via the Application Site

Other changes:
- Supported the Remote Panel Operation.
  Multiple firmware modules are required to use Remote Panel Operation.
  Please refer to GKM Answer ID 251361 for detailed information
  regarding required firmware.
- Supported RICOH SmartSDK v2.60
- A minor change only for the Japanese model.
- Added html format for Scan to Email function.

Version 1.13
Rank C

Symptom corrected:
- SC899 might occur when the log capture function is enabled.
- Printer capture data might not be sent when printing a blank page
  if the capture function is enabled.

Other changes:
- Minor change for domestic market.

```
Version 1.12
Rank C

Symptom corrected:
- The following symptoms might occur when executing:
   1. SP5-846-051 (Backup All Addr Book)
      - A backup failure message might appear.
   2. SP5-846-052 (Restore All Addr Book)
      - SC899 might occur.
      - The machine might stall.


--------------------------------------
Version 1.11
Rank C

Symptom corrected:
- The user might not be able to log in if the machine repeatedly
  enters and exits Energy Saver Mode.


--------------------------------------
Version 1.10
Rank C

Symptom corrected:
- If some characters are included in a user name, login
  authentication is not correctly done.

Other changes:
- Added a new feature for the SmartSDK WebAPI.


--------------------------------------
Version 1.09
Symptom corrected
- In the "Printing text and serial numbers" mode, blank text with
  serial numbers cannot be copied on the copying sheets.
- Remote un-installation for Streamline NX might fail.
- When the device has just gone into energy saver mode, even if a
  copy job is sent from a SmartSDK application, copying does not
  start.
- The quota notification cannot be displayed on some SmartSDK
  applications.
- @Remote 3G dongle fails to communicate to the @Remote center
  server.

Other changes
- Supported RICOH SmartSDK v2.50.


--------------------------------------
Version 1.08
Symptom corrected:
- SC687 may occur when restarting a large print job.
- User usage restrictions do not come into effect if authentication
  is enabled in Quick Card Authentication.
```

- When JavaVM is not enabled and only IPv6 is enabled, the list of installed applications is not displayed in Extended Feature Info on the Web Image Monitor.
- When capture processing and either thumbnail or preview processing occur at the same time, capture processing might not operate normally if the capture setting is enabled and Media Link Board is installed.
- When using Windows authentication, LDAP authentication, or external authentication, if exporting the address book from Device Manager NX, the export data cannot be imported.

Other changes:
- Added the function to set user usage restrictions for each application.
- Supports Arabic
- Supported RICOH SmartSDK v2.40.
- Reboot will be retried if reboot fails after updating remotely.

Version 1.07
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 1.05
Symptom corrected:
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- An invalid value is returned when obtaining the counter MIB, ricohEngCounterValue, during device shutdown.
- Fax may print out from the secure tray if you change the secure tray in user settings while receiving a fax.
- "No paper loaded" alert may appear when the fax receiving tray and the secure tray are set as the same.
- The operation panel may freeze, if the Start button is pressed in copy mode immediately after recovering from the energy saver mode.
- SC998 may occur when powering on if an ESA application is set as a function priority.
- OCR cannot recognize characters if converting scanned image to searchable PDF.

Version 1.04
Symptom corrected:

- Pressing an application on the touch panel very soon after going
  into Energy Saver mode might cause the device to stall on
  the "Please Wait" screen.
- SC672 occurs after recovering from sleep mode.
- SC673-10 may occur when turning ON the machine power.
- SC845 may occur while updating a package firmware, if the machine
  was turned OFF during the previous update via ARFU.
- SC816-98 may occur during the STR mode even if the machine is not
  experiencing any problems.

Other changes:
- When the Auto Logout timer is invoked can be changed:
  SP5-401-230 bit7 = 1: When the job executed from the operation
  panel is completed.
  SP5-401-230 bit7 = 0: When the user last had interaction with the
  panel.

Version 1.03
Symptom corrected:
- SC819 may occur, if the auto log-out timer and the energy saving
  timer are set to the same value.
Other changes:
- When using "Enhanced Print Volume Use Limitation" in a SmartSDK
  application and "Tracking Permission" and "Stop Printing" are
  enabled, the "Print Volume Use" pop-up window is not displayed.

Version 1.02
Symptom Corrected:
- After entering the user code to start up the Copy application, the
  user code input screen does not disappear.
- If a jam occurs on the first page of a job on a machine set with
  user code authentication and then, the start button and log-out
  button are pressed together, the start button becomes ineffective.
- SC819 may occur after removing a jam that occurred while printing
  a large job that fully consumes the printer memory.
- When the device is using "Card Authentication Package" or another
  custom authentication and then the following fields on the server
  are blank, the fields in the address book on the device might not
  overwritten:
  - Email address
  - FAX address
  - Folder address

Other Change:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer

  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

- More languages supported for the smart operation panel.
- When executing a Firmware configuration task via Device Manager NX Pro/Enterprise, an RFU package with the appropriate destination (USA/Europe/Asia/Korea/Taiwan model or China model) can be selected and downloaded from the RICOH Global Server.

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Version 1.01
Other changes:
- To enable quicker the detection time and shut down time when SC670 occurs.

Symptom corrected:
- Can not recovery from energy saving mode and SC672-11 may occur.
- If the device enters Energy Save Mode after automatically logging out of an account, the device might stall when IC card authentication is used to recover from Energy Save Mode once out of every 200 times.
- SC991/SC899 may occur or stall may occur during use of application on @Remote connected machines.
- Connection error message may appear mistakenly on @Remote connected machines.

--------------------------------------
Version 1.00.1
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2020/05/11
----------------------------------------------------------------------
[Program Name] Java VM v12 std for eDC
----------------------------------------------------------------------
[Version] 12.69.00
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965779L_edc
[File Information]
 File Name         D2965779L_edc.ifu
 File Type         Module for Service
 Size              59.65 MB ( 62548608 byte )
[Availability of RFU] No
----------------------------------------------------------------------
[Production reflection] 2020/03
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------


======================================================================
*** Modification History ***
======================================================================
[Modifications made:]
Rank C
```

Symptom corrected:
- When the amount of file descriptor, used on JavaVM, is 256 or more, a certain print command from the SDK application might cause an error.
- Application installation using Remote Install Manager through IEEE 802.11 Interface Unit might be failed.
- Implemented vulnerability countermeasures against the ROBOT attack and the use of Static Key Ciphers.

[Modification history]

Version 12.65.01
Rank C

Symptom corrected:
- Errors might be occured by using the Globalscan.
- When JavaVM launched "NullPointerException" error message may be displayed, and JavaVM startup may fail.
- SDK application might not startup if the Stream Line NX settings changed.

Version 12.62.00
Rank C

Symptom corrected:
- The package firmware might not be updated if the firmware includes an application that needs to be rebooted when updated.
- Gloria don't start up when power off/on then system settings can't be used.

Other changes:
- Login might fail if attempting to log in with an IC card while the On-demand Print screen is displayed.

Version 12.59.01
Rank C

Other changes:
- Minor changes for its internal operations.

Version 12.57.00
Symptom corrected
- The printing speed is not as fast as the past model if CAP V2 is installed.
- The SDK application may stop suddenly due to the increase of memory usage.

Version 12.55.02
Symptom corrected:
- The SDK application icon might not be displayed after recovering from energy saving mode under the following conditions:

  - An SDK application is set as a priority function.
  - An SDK application is set as a function key.
- SC899-00 may occur if logging in from a keyboard.
- FAX cannot be transmitted if CAP v2 is installed.
- The wrong JavaVM firmware can be mistakenly installed on any machine, possibly leading to unexpected errors occurring with JavaVM or bootup failing.

Version 12.53.01

Symptom corrected:

- Startup may take a long time and SC998 may occur if Streamline NX and CAP v2 are installed.
- SDK applications (e.g. Streamline NX, GlobalScan NX, CAP/ELP) may not be able to start during the boot process due to a Java VM error.
- If only IPv6 is enabled on the device, utility tools (e.g. Device Manager NX family or Streamline NX v3) will fail to install applications remotely.
- The following issues occur if any device certificate is imported using the Device Manager NX Enterprise Certificate Management Tool.
    - Device Manager NX Enterprise fails to retrieve the information about the application(s) installed on the device.
    - GlobalScan NX fails to apply profiles or retrieve device information when using the AdminTool.

Version 12.50.01

Symptom corrected:

- When showing the device status via a Solution Product (Streamline and CAP/ELP), the device's HDD capacity is not displayed correctly.
- Under the following conditions, when performing on-demand printing with the Enhanced Locked Print, the SC899 error might occur.
    - More than 100 connected devices are set as the host name.
    - Host name resolution fails on DNS server.

Version 12.47.01

Symptom corrected:

- Replacing with a new controller board installed with the latest Java VM version may disallow downgrading to previous version or retrieve customized version and cause trouble for users who wish to use specific or customized versions.
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- When conducting location-free printing or authentication processing by using a solution product, an SC899 error might occur or Java VM might close unexpectedly and an SC error related to Java VM not responding might occur.
- The DSDK application fails to connect to the LDAP server when using Kerberos authentication.

Version 12.45.00

Symptom corrected:
1. After applying the security update that changes the priority
   order for cipher suites, SSL communication fails between an
   application that includes an SSL server function and the Windows
   operating system.
2. When "Tracking Permission" and "Stop Printing" are enabled in
   "Enhanced Print Volume Limitation", processing of the job might fail.
3. SDK application behavior may be incorrect or inconsistent.
   (CAP/ELP/SLNX/GSNX/etc.)
   Both the Standard (Compatibility mode) application and the SOP
   Optimized (Hybrid mode) application are affected by these issues.
   - Cannot log in.
   - Cannot scan.
   - Cannot print.
   - Error message appears.
   etc.

Version 12.41.04
1st Mass production

```
======================================================================
*** Basic Information ***
======================================================================
[Create date] 2020/05/11
----------------------------------------------------------------------
[Program Name] Java VM v12 std UpdateTool
----------------------------------------------------------------------
[Version] 12.69.00
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965779L_upd
[File Information]
 File Name         D2965779L_upd.exe
 File Type         Module for Service
 Size              59.31 MB ( 62195501 byte )
 Check Sum -8Bit Sum: 8027
           -16Bit Sum(Little Endian): 299B
           -16Bit Sum(Big Endian): 7D8C
[Availability of RFU] No
----------------------------------------------------------------------
[Production reflection] 2020/03
----------------------------------------------------------------------

======================================================================
*** Note ***
======================================================================
[Note]

----------------------------------------------------------------------


======================================================================
*** Important Notes ***
======================================================================
[Important Notes]

----------------------------------------------------------------------


======================================================================
*** Modification History ***
======================================================================
```

[Modifications made:]
Rank C

Symptom corrected:
- When the amount of file descriptor, used on JavaVM, is 256 or more, a certain print command from the SDK application might cause an error.
- Application installation using Remote Install Manager through IEEE 802.11 Interface Unit might be failed.
- Implemented vulnerability countermeasures against the ROBOT attack and the use of Static Key Ciphers.

[Modification history]

Version 12.65.01
Rank C

Symptom corrected:
- Errors might be occured by using the Globalscan.
- When JavaVM launched "NullPointerException" error message may be displayed, and JavaVM startup may fail.
- SDK application might not startup if the Stream Line NX settings changed.

Version 12.62.00
Rank C

Symptom corrected:
- The package firmware might not be updated if the firmware includes an application that needs to be rebooted when updated.
- Gloria don't start up when power off/on then system settings can't be used.

Other changes:
- Login might fail if attempting to log in with an IC card while the On-demand Print screen is displayed.

Version 12.59.01
Rank C

Other changes:
- Minor changes for its internal operations.

Version 12.57.00
Symptom corrected
- The printing speed is not as fast as the past model if CAP V2 is installed.
- The SDK application may stop suddenly due to the increase of memory usage.

Version 12.55.02

Symptom corrected:

- The SDK application icon might not be displayed after recovering from energy saving mode under the following conditions:
  - An SDK application is set as a priority function.
  - An SDK application is set as a function key.
- SC899-00 may occur if logging in from a keyboard.
- FAX cannot be transmitted if CAP v2 is installed.
- The wrong JavaVM firmware can be mistakenly installed on any machine, possibly leading to unexpected errors occurring with JavaVM or bootup failing.

Version 12.53.01

Symptom corrected:

- Startup may take a long time and SC998 may occur if Streamline NX and CAP v2 are installed.
- SDK applications (e.g. Streamline NX, GlobalScan NX, CAP/ELP) may not be able to start during the boot process due to a Java VM error.
- If only IPv6 is enabled on the device, utility tools (e.g. Device Manager NX family or Streamline NX v3) will fail to install applications remotely.
- The following issues occur if any device certificate is imported using the Device Manager NX Enterprise Certificate Management Tool.
  - Device Manager NX Enterprise fails to retrieve the information about the application(s) installed on the device.
  - GlobalScan NX fails to apply profiles or retrieve device information when using the AdminTool.

Version 12.50.01

Symptom corrected:

- When showing the device status via a Solution Product (Streamline and CAP/ELP), the device's HDD capacity is not displayed correctly.
- Under the following conditions, when performing on-demand printing with the Enhanced Locked Print, the SC899 error might occur.
  - More than 100 connected devices are set as the host name.
  - Host name resolution fails on DNS server.

Version 12.47.01

Symptom corrected:

- Replacing with a new controller board installed with the latest Java VM version may disallow downgrading to previous version or retrieve customized version and cause trouble for users who wish to use specific or customized versions.
- When the relationship between the host name and the IP address on the DNS server is modified, Java VM might not recognize the change.
- When conducting location-free printing or authentication processing by using a solution product, an SC899 error might occur or Java VM might close unexpectedly and an SC error related to Java VM not responding might occur.
- The DSDK application fails to connect to the LDAP server when using Kerberos authentication.

Version 12.45.00

Symptom corrected:

1. After applying the security update that changes the priority order for cipher suites, SSL communication fails between an application that includes an SSL server function and the Windows operating system.
2. When "Tracking Permission" and "Stop Printing" are enabled in "Enhanced Print Volume Limitation", processing of the job might fail.
3. SDK application behavior may be incorrect or inconsistent. (CAP/ELP/SLNX/GSNX/etc.)
   Both the Standard (Compatibility mode) application and the SOP Optimized (Hybrid mode) application are affected by these issues.
   - Cannot log in.
   - Cannot scan.
   - Cannot print.
   - Error message appears.

   etc.

Version 12.41.04

1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2020/05/08
------------------------------------------------------------------------
[Program Name] Web Support
------------------------------------------------------------------------
[Version] 1.08
------------------------------------------------------------------------
[PCB No.]
------------------------------------------------------------------------
[Interchangeability] X / O
------------------------------------------------------------------------
[Other Firmware Requirements] None
------------------------------------------------------------------------
[PCB Requirements] None
------------------------------------------------------------------------
[Software category] Normal Release
------------------------------------------------------------------------
[Release category] Normal Release
------------------------------------------------------------------------
[Program category] Firmware
------------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965788J
[File Information]
 File Name        D2965788J.fwu
 File Type        Module for Service
 Size             7.25 MB ( 7606212 byte )
[File Information]
 File Name        D2965788J.rfu
 File Type        Module for Remote Upgrade
 Size             7.26 MB ( 7610624 byte )
[Availability of RFU] Yes
------------------------------------------------------------------------
[Production reflection] 2020/03
------------------------------------------------------------------------

================================================================================
*** Note ***
================================================================================
[Note]

------------------------------------------------------------------------



================================================================================
*** Important Notes ***
================================================================================
[Important Notes]

------------------------------------------------------------------------



================================================================================
*** Modification History ***
```

```
==================================================================
[Modifications made:]
Rank C

Symptom corrected:
- Implementation of countermeasures for the three vulnerabilities
  listed below. (The following firmware updates are required for the
  countermeasures to take effect: System/Copy v1.19, Printer v1.08,
  Web Support v1.08, Web Uapl v1.05.)
1. A URL for Remote Panel Operation might leak, and there is a risk
   that an unauthenticated user could operate the device remotely.
2. There is an XSS vulnerability.
3. The Web Image Monitor sets session cookies without the HttpOnly
   attribute, and there is a risk the cookies might leak data.


--------------------------------------------------------------------
[Modification history]
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Version 1.07
Rank C

Symptom corrected:
- The XSS vulnerability of screens in the Address Book that was
  pointed out in CVE-2018-15884 has been fixed.
- Ricoh devices already had a countermeasure to protect against the
  CSRF vulnerability pointed out in CVE-2018-15884.



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Version 1.06
Rank C

Other changes:
- Supported the Remote Panel Operation.
    Multiple firmware modules are required to use Remote Panel Operation.
    Please refer to GKM Answer ID 251361 for detailed information regarding required firmware.
- Added html format for Scan to Email function.
- The following values can be set with solution software that uses SOAP I/F.
- "SNMPv3 Setting"
    - SNMPv3 Trap Communication
    - Encryption Algorithm
    - Permit SNMPv3 Communication
- "Program/Change Administrator"
    - Encryption Password

--------------------------------------
Version 1.05
Other changes:
- Added the function to set user usage restrictions for each application.


--------------------------------------
Version 1.04
Other changes:
- Newly added SMBv2/v3 support.
This firmware is dependent on the following firmware modules.
```

Please be sure to update all of them:

System/Copy v1.07 (D2965400J)
Network Support v16.53.1 (D2965792F)
Web Support v1.04 (D2965788E)
Scanner v01.05 (D2965787G)
animation v1.01 (D2965791C)

Please refer to the RTB(No.RGene095) for details.

Version 1.03
 Symptom corrected:
- When changing the password policy in the "Extended Security" menu
  through Web Image Monitor, the access log might be not recorded.

Version 1.02
Other changes:
- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 1.01
Other changes:
- Added an SP setting for enabling or disabling the "Screen
  Monitoring" function.
  SP5-885-205: default = 0 ("Screen Monitoring" is enabled)
This firmware is dependent on System/Copy firmware v1.01 (D2965400D)
or later, so please be sure to update that firmware as well.

Version 1.00
1st Mass production

```
===========================================================================
*** Basic Information ***
===========================================================================
[Create date] 2020/05/08
-----------------------------------------------------------------------
[Program Name] Web Uapl
-----------------------------------------------------------------------
[Version] 1.05
-----------------------------------------------------------------------
[PCB No.]
-----------------------------------------------------------------------
[Interchangeability] X / O
-----------------------------------------------------------------------
[Other Firmware Requirements] None
-----------------------------------------------------------------------
[PCB Requirements] None
-----------------------------------------------------------------------
[Software category] Normal Release
-----------------------------------------------------------------------
[Release category] Normal Release
-----------------------------------------------------------------------
[Program category] Firmware
-----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965789F
[File Information]
 File Name        D2965789F.fwu
 File Type        Module for Service
 Size             1.93 MB ( 2028604 byte )
[File Information]
 File Name        D2965789F.rfu
 File Type        Module for Remote Upgrade
 Size             1.94 MB ( 2035968 byte )
[Availability of RFU] Yes
-----------------------------------------------------------------------
[Production reflection] 2020/03
-----------------------------------------------------------------------

===========================================================================
*** Note ***
===========================================================================
[Note]

-----------------------------------------------------------------------



===========================================================================
*** Important Notes ***
===========================================================================
[Important Notes]

-----------------------------------------------------------------------



===========================================================================
*** Modification History ***
```

==

[Modifications made:]
Rank C

Symptom corrected:

- Implementation of countermeasures for the three vulnerabilities listed below. (The following firmware updates are required for the countermeasures to take effect: System/Copy v1.19, Printer v1.08, Web Support v1.08, Web Uapl v1.05.)

1. A URL for Remote Panel Operation might leak, and there is a risk that an unauthenticated user could operate the device remotely.
2. There is an XSS vulnerability.
3. The Web Image Monitor sets session cookies without the HttpOnly attribute, and there is a risk the cookies might leak data.

[Modification history]

Version 1.04
Symptom corrected:

- When using the Web Image Monitor through the Edge browser, a PDF or PDF/A file stored in the Document Server is not downloaded when clicked.

Version 1.03
Symptom corrected:

- If using Google Chrome when downloading the scanned data from a URL received by email sent through the Scan to URL function, the PDF file cannot download.

Version 1.02
Other changes:

- Suffix update only. There is no change to the firmware.

Version 1.01
Other changes:

- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 1.00
1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2020/05/08
----------------------------------------------------------------------
[Program Name] Printer
----------------------------------------------------------------------
[Version] 1.08
----------------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] D2965794K
[File Information]
 File Name       D2965794K.fwu
 File Type       Module for Service
 Size            4.92 MB ( 5161072 byte )
[File Information]
 File Name       D2965794K.rfu
 File Type       Module for Remote Upgrade
 Size            4.93 MB ( 5169408 byte )
[Availability of RFU] Yes
----------------------------------------------------------------------
[Production reflection] 2020/03
----------------------------------------------------------------------

================================================================================
*** Note ***
================================================================================
[Note]

----------------------------------------------------------------------



================================================================================
*** Important Notes ***
================================================================================
[Important Notes]

----------------------------------------------------------------------



================================================================================
*** Modification History ***
```

===

[Modifications made:]
Rank C

Symptom corrected:
- Implementation of countermeasures for the three vulnerabilities listed below. (The following firmware updates are required for the countermeasures to take effect: System/Copy v1.19, Printer v1.08, Web Support v1.08, Web Uapl v1.05.)

1. A URL for Remote Panel Operation might leak, and there is a risk that an unauthenticated user could operate the device remotely.
2. There is an XSS vulnerability.
3. The Web Image Monitor sets session cookies without the HttpOnly attribute, and there is a risk the cookies might leak data.

[Modification history]

Version 1.07
Rank C

Symptom corrected:
- SC899 might occur when printing a Hold Print file scheduled for a certain time.

Version 1.06
Rank C

Symptom corrected:
- If the machine reboots due to a forced shut-down, a power outage, unplugging a power cable, or an SC819 error, jobs using certain applications might not print.
- An SC899 error might occur if displaying the print job history on the Web Image Monitor after printing a file with a long name.

Version 1.05
Symptom Corrected:
- It might take time to resume a job if it is suspended while the device is in Energy Saver mode.

Version 1.04
Other change:
When there is a paper size mismatch between the setting and the actual paper fed from the bypass tray, an alert will be displayed on the operation panel.

Version 1.03

Other changes:
When the Auto Logout timer is invoked can be changed:
SP5-401-230 bit7 = 1: When the job executed from the operation panel is completed.
SP5-401-230 bit7 = 0: When the user last had interaction with the panel.

Version 1.02
Symptom corrected:
A PCL font numbered 64 or later cannot be used as the default font.
(GFPR#RE17010004)

Version 1.01
Symptom corrected:

1. After an SC reboot occurs, if the dialog window stating that the automatic reboot has occurred is not closed, SDK-J applications cannot be started, which results in an SC990 error occurring.
2. Notifications are not displayed in MFP applications even if key counter management or external charge unit management is enabled.

Other changes:

- Paper Feed Unit PB1080TE supported.
  Install the following firmware version when installing PB1080TE.
  - System/Copy Ver.1.02 or newer
  - Fax Ver.03.00.00 or newer
  - Printer Ver.1.01 or newer
  - Scanner Ver.01.02 or newer
  - WebSys (Web Support) Ver.1.02 or newer
  - Web Uapl Ver.1.01 or newer

Version 1.00
1st Mass production