```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[Program Name] System/Copy
----------------------------------------------------------------
[Version] 1.18
----------------------------------------------------------------
[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.] D2555745A
[File Information]
 File Name        D2555745A.fwu
 File Type        Module for Service
 Size          26.39 MB ( 27670796 byte )
[File Information]
 File Name        D2555745A.rfu
 File Type        Module for Remote Upgrade
 Size          26.39 MB ( 27676928 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/06
----------------------------------------------------------------


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

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


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

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


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

===
[Modifications made:]
Rank C

Symptom corrected:
- Color registration shift occurs.
- A part of registered address may not be shown in Smart Scan feature.
- When "Application Authentication Settings" is enabled, SC899 might occur after
  registering or updating an address book over 220 times from Web Image Monitor.
- 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.
- The language set for each user may not be applied when logging in during
  Energy Saving mode.
- 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)
- Wireless direct connection might fail in Group Owner Mode.
- When the auto logout setting is enabled, logout failed message might appear
  during the printing.
- If the authentication setting is changed remotely while logging in from the
  panel, the operation might hang, and the panel might stall.
- 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.
- 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.
- SmartSDK application cannot reply to UDP packet when machine is in
  Energy Saver Mode.

Other changes:
- Supported RICOH SmartSDK v2.60
- 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.)
- 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.).

[Modification history]

Version 1.17
Rank C

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

Version 1.16
Rank C

Symptom corrected:
- The machine might not recover from SC995-002 after replacing the
  NVRAM on the controller board.
- When scanning with ClearlightPDF JPEG2000, SC865-56 might occur.
- Image log might not be sent and stay in the device.
- An SC error might occur when scanning with AirPrint, WSD-Scanner, or DSM.
- 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.

Version 1.15
Rank C

Symptom corrected:
- When the device receive a response of "ICMP unreachable" from a network device,
  the communication might fail.
- It takes time to login after authenticating the card.
- If an application icon on the monitor is pressed just after the machine enters
  into energy saver mode, the application stalls.
- Copy application and FAX application mihgt not start when pressing
  these application icons.
- 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 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.

Other changes:
- Added html format for Scan to Email function.
- A minor change only for the Japanese model.
- Added a new feature for the SmartSDK WebAPI.

Version 1.14
Rank C

Symptom corrected:
- Installation of the Cheetah application from the Web Image Monitor
  fails when the SSL encryption level is set to "Ciphertext Priority"
  or "Ciphertext Only".
- When the SMC List is saved to the SD card as a CSV file, SP7507
  (Latest Jam History) is not correctly recorded.
- 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.
- Login might fail and the application icon might not be displayed.
- If the device was restarted after sending the URL link to a PDF
  file scanned by OCR, the PDF file cannot be accessed from the URL link.
- When a capture and a thumbnail or preview are processed at the
  same time, the capture might not be processed normally if the
  capture setting is enabled and the Media Link Board is installed.

- Cancelling scanning might result in SC990/991 occurring and the
  machine rebooting.

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.

Version 1.13
Rank C

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

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.
- 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.
- If some characters are included in a user name, login authentication
  is not correctly done.
- SC845 might occur after ARFU.

Version 1.10
Rank C

Symptom corrected:
- If user authentication is set to something other than User Code,
  the Eco information screen might not be displayed at the expected
  timing when a user logs in.
- Cannot refer to the address book in the Simple Fax or Simple Copy
  applications under the following conditions:
  - Address book usage or registration restrictions are enabled
  - Administrator setting restrictions are enabled
- 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
- When using Windows authentication, LDAP authentication, or external
  authentication, if exporting the address book from Device Manager NX,

the export data cannot be imported.
- A bug of SmartSDK API was fixed.
- Remote un-installation for Streamline NX might fail.
- User usage restrictions do not come into effect if authentication is
  enabled in Quick Card Authentication.
- 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 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.
- 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.
- 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.
- In the "Printing text and serial numbers" mode, blank text with
  serial numbers cannot be copied on the copying sheets.
- The following symptoms may occur when restarting the operation panel:
  - IC card does not respond
  - Cannot enter SP mode
  - Cannot connect to WIM (Web Image Monitor)
  - If log tracing on Web Image Monitor is cancelled just after
    using the function, the machine enters into off-line mode.
- SC 998 might be displayed when rebooting the machine if ESA application
  is set as the priority function.
- Error message appears, if the Home button is pressed while the
  screen is displaying the Current Job tab in Check Status.

Other changes:
- Supports Arabic
- Reboot will be retried if reboot fails after updating remotely.
- Added the function to set user usage restrictions for each application.
- Supported RICOH SmartSDK v2.40.
- Supported RICOH SmartSDK v2.50.
- Some of the ARFU related SP settings and logs can be obtained using @Remote.

Version 1.09
Other changes:
- Support for a new eMMC used on the CTL board.

Version 1.08
Symptom corrected:
A key mark may appear on the bypass tray even when [Auto Paper Select]
is selected.

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 v1.08 (D2555770J)

Network Support v15.61.1 (D2555753F)
Web Support v1.05 (D2555750G)
Scanner v01.04 (D2555779F)
Animation v1.02 (D2555752D)

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

Version 1.07
Symptom corrected:
- A true/false based API control was added to check the capability
  of Scan and FAX.
- Printer SP, SP1-006-001 (Sample/Proof Print), was missing from SP mode.
- [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.

Other changes:
- The conditions that initiate the Auto Logout timer were changed as follows.
  SP5-401-230 bit7 = 1: Initiates after completing the last job run from the operation panel.
  SP5-401-230 bit7 = 0: Initiates after the last action performed on the operation panel.

Version 1.06
Symptom corrected:
- SC819 may occur, if the auto log-out timer and the energy saving
  timer are set to the same value.
- Error 22 may occur during ARFU.
- SC899 may occur when rebooting after updating a firmware.
- SC819 may occur after removing a jam that occurred while printing
  a large job that fully consumes the printer memory.
- After entering the user code to start up the Copy application, the
  user code input screen does not disappear.
- The operation panel may freeze, if the Start button is pressed in
  copy mode immediately after recovering from the energy saver mode.
- SC673-10 may occur when turning ON the machine power.

Other changes:
- Reduced time for controller firmware update and improved progress
  bar feature.
- Changed that the Engine(IPU) firmware version is displayed on the
  Web Image Monitor, the operation panel, and the Device Manager NX.
  This firmware is dependent on Web Support firmware v1.03(D2555750E)
  or later, so please be sure to update it.

Version 1.05
Symptom corrected:
- SC899 may occur when installing @Remote.
- The service mode lock can falsely be unlocked by the user under
  particular conditions.

Other changes:

- 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.
- More than five languages can be added to the "Change Langs. Widget"
  on the smart operation panel.

Version 1.04
Symptom corrected:
- Can not recovery from energy saving mode and SC672-11 may occur.
- Saving a scanned filed onto a USB memory stick may cause the file
  to corrupt.
- When an application accesses the HDD after turning ON the power,
  the machine may stall.
- SC899 may occur after updating with the packaged firmware.
- Recovering from the energy saver mode takes about 5 seconds longer
  than usual.
- Hard keys become ineffective on the Copy screen, if operated as follows:
  Log in and copy either on the exposure glass or from ADF, or run a batch copy job.
  Press the Stop key before the copies are delivered. Manually or automatically log out.
  Log in again.
- Behavior of the SDK applications (CAP/ELP/SLNX/GSNX/etc.) may be
  incorrect or inconsistent as described below. Both the Standard
  (Compatibility mode) and SOP Optimized (Hybrid mode) applications
  are affected by these issues.
   - Cannot log in.
   - Cannot scan.
   - Cannot print.
   - Error message appears.
   - etc.
- 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.
- If logged in using CAP and the device enters Energy Save mode, the
  device may stall and logging out will fail.
- The SLNX Hybrid mode application might not be installed correctly.
- Error occurs, if new addresses are continuously registered to the
  address book using Smart SDK.

Other changes:
- Modified the default value of SSL in the SMC Report.
- 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 Web Support firmware v1.01 (D2555750C)
  or later, so please be sure to update that firmware as well.

Version 1.03
Symptom corrected:
- Package RFU update may fail.
- Emergency firmware update may not work occasionally.

Other changes:
ARFU function supported.

Version 1.02
Symptom corrected:
- SC819 may occur when printing particular files.

Version 1.01
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/11/30
----------------------------------------------------------------
[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.] D2555750K
[File Information]
 File Name        D2555750K.fwu
 File Type        Module for Service
 Size           6.69 MB ( 7018808 byte )
[File Information]
 File Name        D2555750K.rfu
 File Type        Module for Remote Upgrade
 Size           6.70 MB ( 7024896 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/11
----------------------------------------------------------------


================================================================
*** 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.

Other changes:
- 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

[Modification history]

Version 1.07
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.

Version 1.06
Rank C

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

Version 1.05
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 v1.08 (D2555770J)
Network Support v15.61.1 (D2555753F)
Web Support v1.05 (D2555750G)
Scanner v01.04 (D2555779F)
Animation v1.02 (D2555752D)

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

Version 1.04
Symptom corrected:
- When changing the password policy in the "Extended Security" menu
  through Web Image Monitor, the access log might be not recorded.

Version 1.03
Other changes:
- Changed that the Engine(IPU) firmware version is displayed on the
  Web Image Monitor, the operation panel, and the Device Manager NX.
  This firmware is dependent on System/Copy firmware v1.06(D2555770G)
  or later, so please be sure to update it.

Version 1.02
Other changes:
- Minor changes.

Version 1.01
Symptom corrected:
- When downloading "Eco-friendly Counter" data in "Status/Information >
  Display Eco-friendly Counter", the SYSTEM counter data for that
  period is not included in the exported .csv file.

Other changes:
- Added a setting to be able to set a notification sound when a
  received fax has finished printing.
  This firmware is dependent on the following firmware modules.
  Please be sure to update all of them:
   - CheetahSystem firmware: v1.12 or later (D2411420M)
   - LegacyUI firmware: v1.09 or later (D2411427K)

- 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 v1.04 (D2555770E)
  or later, so please be sure to update that firmware as well.

Version 1.00
1st Mass production

```
===============================================================
*** Basic Information ***
===============================================================
[Create date] 2018/11/21
---------------------------------------------------------------
[Program Name] Printer
---------------------------------------------------------------
[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.] D2555756L
[File Information]
 File Name        D2555756L.fwu
 File Type        Module for Service
 Size            4.36 MB ( 4571100 byte )
[File Information]
 File Name        D2555756L.rfu
 File Type        Module for Remote Upgrade
 Size            4.36 MB ( 4575488 byte )
[Availability of RFU] Yes
---------------------------------------------------------------
[Production reflection] 2018/11
---------------------------------------------------------------


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

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

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

==
[Modifications made:]
Rank C

Symptom corrected:
- SC899 might occur when printing a Hold Print file scheduled for a certain time.
- Printing job might hang after recovering from a paper feed error.

[Modification history]

Version 1.09
Rank C

Symptom corrected:
- 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 1.08
Symptom corrected:
- It might take time to resume a job if it is suspended while the device is in
  Energy Saver mode.
- IPDS printing might stall if IPDS jobs are printed continuously.

Other changes:
- Supported for Mopria Print Service.
  This firmware is dependent on the following firmware modules. Please be sure
  to update all of them:
  - Network Support v15.63 (D2555753H) or later
  - Printer v1.08 (D2555756J) or later

Version 1.07
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.

Fixed:
- Any settings aren't displayed when creating a new IPDS Form via Web Image Monitor.

Version 1.06
Symptom corrected:
1. An error may occur when trying to display a preview in the Print
   from Storage Device application.
2. 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.
3. Notifications are not displayed in MFP applications even if key
   counter management or external charge unit management is enabled.

Version 1.05
Symptom corrected:
1. When attempting to print data that contains a blank page via
   AirPrint, the job might be canceled.
2. When printing from AirPrint, the paper weight "Plain 2 (75 to 81g/
   square metre)" is out of the search target of "Auto Tray Select"
   even if "Plain Paper or Recycled Paper" is specified in the job.

Other changes:
Minor changes.

Version 1.04
Symptom corrected:
Miner software bug corrected.

Version 1.03
Symptom corrected:
1. An SC899 error might occur when the Printer application starts up,
   which causes the device to stall.
2. While a job is being printed by using Enhanced Locked Print NX v2,
   some jobs might not start being processed on the device until the
   current job is finished.

Version 1.02
Other changes:
- Support for AirPrint.
This firmware is dependent on Network Support firmware v15.58.1(D2555753C) or later,
so please be sure to also update that firmware.

Version 1.01
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/11/30
----------------------------------------------------------------
[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.] D2555770R
[File Information]
 File Name        D2555770R.fwu
 File Type        Module for Service
 Size          26.37 MB ( 27647108 byte )
[File Information]
 File Name        D2555770R.rfu
 File Type        Module for Remote Upgrade
 Size          26.37 MB ( 27652352 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/11
----------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- When the device receive a response of "ICMP unreachable" from a network device,
  the communication might fail.
- It takes time to login after authenticating the card.
- If an application icon on the monitor is pressed just after the machine enters
  into energy saver mode, the application stalls.
- Copy application and FAX application mihgt not start when pressing
  these application icons.
- 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 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.

Other changes:
- Added html format for Scan to Email function.
- A minor change only for the Japanese model.
- Added a new feature for the SmartSDK WebAPI.

[Modification history]

Version 1.14
Rank C

Symptom corrected:
- Installation of the Cheetah application from the Web Image Monitor
  fails when the SSL encryption level is set to "Ciphertext Priority"
  or "Ciphertext Only".
- When the SMC List is saved to the SD card as a CSV file, SP7507
  (Latest Jam History) is not correctly recorded.
- 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.
- Login might fail and the application icon might not be displayed.
- If the device was restarted after sending the URL link to a PDF
  file scanned by OCR, the PDF file cannot be accessed from the URL link.
- When a capture and a thumbnail or preview are processed at the
  same time, the capture might not be processed normally if the
  capture setting is enabled and the Media Link Board is installed.
- Cancelling scanning might result in SC990/991 occurring and the
  machine rebooting.

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.

Version 1.13
Rank C

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

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.
- 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.
- If some characters are included in a user name, login authentication
  is not correctly done.
- SC845 might occur after ARFU.

Version 1.10
Rank C

Symptom corrected:
- If user authentication is set to something other than User Code,
  the Eco information screen might not be displayed at the expected
  timing when a user logs in.
- Cannot refer to the address book in the Simple Fax or Simple Copy
  applications under the following conditions:
  - Address book usage or registration restrictions are enabled
  - Administrator setting restrictions are enabled
- 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
- When using Windows authentication, LDAP authentication, or external
  authentication, if exporting the address book from Device Manager NX,
  the export data cannot be imported.
- A bug of SmartSDK API was fixed.
- Remote un-installation for Streamline NX might fail.
- User usage restrictions do not come into effect if authentication is
  enabled in Quick Card Authentication.
- 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 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.
- 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.
- 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.
- In the "Printing text and serial numbers" mode, blank text with
  serial numbers cannot be copied on the copying sheets.
- The following symptoms may occur when restarting the operation panel:
  - IC card does not respond
  - Cannot enter SP mode
  - Cannot connect to WIM (Web Image Monitor)
  - If log tracing on Web Image Monitor is cancelled just after
    using the function, the machine enters into off-line mode.
- SC 998 might be displayed when rebooting the machine if ESA application
  is set as the priority function.
- Error message appears, if the Home button is pressed while the
  screen is displaying the Current Job tab in Check Status.

Other changes:
- Supports Arabic
- Reboot will be retried if reboot fails after updating remotely.
- Added the function to set user usage restrictions for each application.
- Supported RICOH SmartSDK v2.40.
- Supported RICOH SmartSDK v2.50.
- Some of the ARFU related SP settings and logs can be obtained using @Remote.

Version 1.09
Other changes:
- Support for a new eMMC used on the CTL board.

Version 1.08
Symptom corrected:
A key mark may appear on the bypass tray even when [Auto Paper Select]
is selected.

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 v1.08 (D2555770J)
Network Support v15.61.1 (D2555753F)
Web Support v1.05 (D2555750G)
Scanner v01.04 (D2555779F)
Animation v1.02 (D2555752D)

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

Version 1.07
Symptom corrected:

- A true/false based API control was added to check the capability
  of Scan and FAX.
- Printer SP, SP1-006-001 (Sample/Proof Print), was missing from SP mode.
- [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.

Other changes:
- The conditions that initiate the Auto Logout timer were changed as follows.
  SP5-401-230 bit7 = 1: Initiates after completing the last job run from the operation panel.
  SP5-401-230 bit7 = 0: Initiates after the last action performed on the operation panel.

Version 1.06
Symptom corrected:
- SC819 may occur, if the auto log-out timer and the energy saving
  timer are set to the same value.
- Error 22 may occur during ARFU.
- SC899 may occur when rebooting after updating a firmware.
- SC819 may occur after removing a jam that occurred while printing
  a large job that fully consumes the printer memory.
- After entering the user code to start up the Copy application, the
  user code input screen does not disappear.
- The operation panel may freeze, if the Start button is pressed in
  copy mode immediately after recovering from the energy saver mode.
- SC673-10 may occur when turning ON the machine power.

Other changes:
- Reduced time for controller firmware update and improved progress
  bar feature.
- Changed that the Engine(IPU) firmware version is displayed on the
  Web Image Monitor, the operation panel, and the Device Manager NX.
  This firmware is dependent on Web Support firmware v1.03(D2555750E)
  or later, so please be sure to update it.

Version 1.05
Symptom corrected:
- SC899 may occur when installing @Remote.
- The service mode lock can falsely be unlocked by the user under
  particular conditions.

Other changes:
- 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.
- More than five languages can be added to the "Change Langs. Widget"
  on the smart operation panel.

Version 1.04
Symptom corrected:

- Can not recovery from energy saving mode and SC672-11 may occur.
- Saving a scanned filed onto a USB memory stick may cause the file
  to corrupt.
- When an application accesses the HDD after turning ON the power,
  the machine may stall.
- SC899 may occur after updating with the packaged firmware.
- Recovering from the energy saver mode takes about 5 seconds longer
  than usual.
- Hard keys become ineffective on the Copy screen, if operated as follows:
  Log in and copy either on the exposure glass or from ADF, or run a batch copy job.
  Press the Stop key before the copies are delivered. Manually or automatically log out.
  Log in again.
- Behavior of the SDK applications (CAP/ELP/SLNX/GSNX/etc.) may be
  incorrect or inconsistent as described below. Both the Standard
  (Compatibility mode) and SOP Optimized (Hybrid mode) applications
  are affected by these issues.
   - Cannot log in.
   - Cannot scan.
   - Cannot print.
   - Error message appears.
   - etc.
- 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.
- If logged in using CAP and the device enters Energy Save mode, the
  device may stall and logging out will fail.
- The SLNX Hybrid mode application might not be installed correctly.
- Error occurs, if new addresses are continuously registered to the
  address book using Smart SDK.

Other changes:
- Modified the default value of SSL in the SMC Report.
- 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 Web Support firmware v1.01 (D2555750C)
  or later, so please be sure to update that firmware as well.

Version 1.03
Symptom corrected:
- Package RFU update may fail.
- Emergency firmware update may not work occasionally.

Other changes:
ARFU function supported.

Version 1.02
Symptom corrected:
- SC819 may occur when printing particular files.

Version 1.01
1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2018/08/03
--------------------------------------------------------------------------
[Program Name] Java VM v12 std for eDC
--------------------------------------------------------------------------
[Version] 12.62.00
--------------------------------------------------------------------------
[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.] D2555773K_edc
[File Information]
 File Name        D2555773K_edc.ifu
 File Type        Module for Service
 Size            63.88 MB ( 66986380 byte )
[Availability of RFU] No
--------------------------------------------------------------------------
[Production reflection] 2018/07
--------------------------------------------------------------------------


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

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



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

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



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

==
[Modifications made:]
Rank C

Symptom corrected:
- The package firmware might not be updated if the firmware includes
  an application that needs to be rebooted when updated.

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

[Modification history]

Version 12.60.02
Rank C

Symptom corrected:
- Gloria don't start up when power off/on then system settings
  can't be used.

Other changes:
- Minor changes for its internal operations.

Version 12.57.00
Rank C

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.
- 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 12.53.01
Symptom corrected:
- When showing the device status via a Solution Product (Streamline
  and CAP/ELP), the device's HDD capacity is not displayed correctly.
- 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 12.49.00
Symptom corrected:
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. If the "Chng Stgs" button is pressed after pressing the "Preview"
   button in ELP-NX, the "Change Print Settings" configuration may
   not be set correctly.
2. 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.
3. When "Tracking Permission" and "Stop Printing" are enabled in
   "Enhanced Print Volume Limitation", processing of the job might fail.
4. 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 12.38.04
Symptom corrected:
- Sending fax from the document server using IPv4-mapped address may
  result in an error.
- An alert message unrelated to scan operation (for example, JAM)
  appears across the entire screen of the operation panel, disabling
  scan operation.
- If attempted to install an application from Web Image Monitor,
  installation may fail with an error.

Version 12.33.00
Symptom corrected:
- Error may occur, if ESA application is uninstalled with the
  extended features of WIM.
- Pre-installed application can be falsely uninstalled with the
  extended features of Web Image Monitor.
- Application may be not able to use because of not starting Java VM.
- ESA applications that support distribution of inbound FAX
  documents (such as GlobalScan or SLNX SFM) will deliver inbound
  FAX documents that include the metadata from other FAX jobs.

Version 12.25.05
1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================

[Create date] 2018/08/03
------------------------------------------------------------------------
[Program Name] Java VM v12 std UpdateTool
------------------------------------------------------------------------
[Version] 12.62.00
------------------------------------------------------------------------
[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.] D2555773K_upd
[File Information]
 File Name        D2555773K_upd.exe
 File Type        Module for Service
 Size          63.62 MB ( 66715422 byte )
 Check Sum -8Bit Sum: 84EB
        -16Bit Sum(Little Endian): 91D5
        -16Bit Sum(Big Endian): DE16
[Availability of RFU] No
------------------------------------------------------------------------
[Production reflection] 2018/07
------------------------------------------------------------------------


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

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



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

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

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


Symptom corrected:
- The package firmware might not be updated if the firmware includes
  an application that needs to be rebooted when updated.


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




------------------------------------------------------------------------
[Modification history]
-----------------------------------------
Version 12.60.02
Rank C


Symptom corrected:
- Gloria don't start up when power off/on then system settings
  can't be used.


Other changes:
- Minor changes for its internal operations.




-----------------------------------------
Version 12.57.00
Rank C


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.
- 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 12.53.01
Symptom corrected:
- When showing the device status via a Solution Product (Streamline
  and CAP/ELP), the device's HDD capacity is not displayed correctly.
```

- 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 12.49.00
Symptom corrected:
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. If the "Chng Stgs" button is pressed after pressing the "Preview"
   button in ELP-NX, the "Change Print Settings" configuration may
   not be set correctly.
2. 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.
3. When "Tracking Permission" and "Stop Printing" are enabled in
   "Enhanced Print Volume Limitation", processing of the job might fail.
4. 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 12.38.04
Symptom corrected:
- Sending fax from the document server using IPv4-mapped address may
  result in an error.
- An alert message unrelated to scan operation (for example, JAM)
  appears across the entire screen of the operation panel, disabling
  scan operation.
- If attempted to install an application from Web Image Monitor,
  installation may fail with an error.

Version 12.33.00
Symptom corrected:
- Error may occur, if ESA application is uninstalled with the
  extended features of WIM.
- Pre-installed application can be falsely uninstalled with the
  extended features of WIM.
- Application may be not able to use because of not starting Java VM.
- ESA applications that support distribution of inbound FAX
  documents (such as GlobalScan or SLNX SFM) will deliver inbound
  FAX documents that include the metadata from other FAX jobs.

Version 12.25.05
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[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.] D2555776K
[File Information]
 File Name       D2555776K.fwu
 File Type       Module for Service
 Size            2.37 MB ( 2486136 byte )
[File Information]
 File Name       D2555776K.rfu
 File Type       Module for Remote Upgrade
 Size            2.38 MB ( 2490624 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/09
----------------------------------------------------------------


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

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


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

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


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

```
===========================================================================
```
[Modifications made:]
Upgrade on the management

[Modification history]

Version 08.00.00
Rank C

Symptom corrected:
- Pressing the 'Check' button when an error message is displayed
  while using Legacy Fax causes the regular Fax application to start up.
- 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
Rank C

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

Other changes:
- The conditions that initiate the Auto Logout timer were changed as follows.
  SP5-401-230 bit7 = 1: Initiates after completing the last job run from the operation panel.
  SP5-401-230 bit7 = 0: Initiates after the last action performed on the operation panel.

Version 04.00.00
Symptom corrected:
Network error (error code:13-17) may occur when using IP-FAX with
wireless LAN.

Version 03.00.00
Minor change.

Version 02.00.00
Symptom corrected:
- If logged in with user authentication, FAX settings for Auto Print
  FAX Journal (SWUSR_03, bit7) and setting whether or not to include
  sender name in reports (SWUSR_04, bit5) may change after logging out.
- 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] 2019/09/26
------------------------------------------------------------------
[Program Name] GWFCU3.8-8(WW)
------------------------------------------------------------------
[Version] 04.00.00
------------------------------------------------------------------
[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.] D2555778D
[File Information]
 File Name      D2555778D.fwu
 File Type      Module for Service
 Size          3.94 MB ( 4129296 byte )
[File Information]
 File Name      D2555778D.rfu
 File Type      Module for Remote Upgrade
 Size          3.95 MB ( 4137216 byte )
[Availability of RFU] Yes
------------------------------------------------------------------
[Production reflection] 2019/09
------------------------------------------------------------------


==================================================================
*** 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 03.00.00
Symptom corrected:
- Communication error (code: 00-20/22) occurs, if the device is run on
  V.17 modulation and receives a fax containing many pages.
- 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.
- If [Store and Print] is enabled and a document is deleted from
  GlobalScan, the FAX function becomes inoperable.
- Network error (error code:13-17) may occur when using IP-FAX with
  wireless LAN.
- FAX cannot be sent with the status showing "processing" possibly
  followed by a SC843-02.
- When the scanning FAX memory is full, it will be recorded in the
  job log as "Canceled by User", not "Other Error".

Version 02.00.00
Symptom corrected:
The document cannot be sent and remains in the machine without an
error message.

Version 01.00.00
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[Program Name] Scanner
----------------------------------------------------------------
[Version] 01.09
----------------------------------------------------------------
[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.] D2555779L
[File Information]
 File Name        D2555779L.fwu
 File Type        Module for Service
 Size          5.08 MB ( 5330832 byte )
[File Information]
 File Name        D2555779L.rfu
 File Type        Module for Remote Upgrade
 Size          5.09 MB ( 5337344 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/06
----------------------------------------------------------------


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

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


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

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


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

```
========================================================================
```
[Modifications made:]
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.
- Image log of Scan job (OCR or high compression PDF) may not be collected correctly.

[Modification history]

Version 01.08
No specification changes. The version number was updated for management purposes.

Version 01.07
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 01.06
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.
- 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.

Version 01.05
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.
- If scanning while "Download File Directly from URL Link" is set to On,
  "Insert Additional Email Info" is set to Off, and OCR is enabled,
  an SC899 error might occur after the original is scanned.
- 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 01.04
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 v1.08 (D2555770J)
Network Support v15.61.1 (D2555753F)
Web Support v1.05 (D2555750G)
Scanner v01.04 (D2555779F)
Animation v1.02 (D2555752D)

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

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 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.

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.

4. 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.

Version 01.01
Symptom corrected:
1. When "Download File Directly From URL Link" is enabled and scan to
   URL is conducted 100 times or more, the scan job might fail.
2. 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".
3. When scanning from Mac OS X 10.12 by using AirPrint, the output
   file cannot be opened in the viewer.
4. A3 size cannot be specified in macOS when scanning by using AirPrint.
5. When scanning from Mac OS X 10.12 by using AirPrint, the resolution
   is always 200 dpi.
6. When "Copy Server : Set Function" (SP5-967-001) is set to OFF on
   a printer that has an HDD installed, "Program Setting for Destinations"
   does not appear in Scanner Features.

Version 01.00
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/04/15
----------------------------------------------------------------
[Program Name] Engine
----------------------------------------------------------------
[Version] 01.08:01
----------------------------------------------------------------
[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.] D2555830B
[File Information]
 File Name        D2555830B.fwu
 File Type        Module for Service
 Size          0.47 MB ( 492020 byte )
[File Information]
 File Name        D2555830B.rfu
 File Type        Module for Remote Upgrade
 Size          0.48 MB ( 499968 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/03
----------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- When scanning in color via the DF, a horizontal line may appear
  at the trailing edge.
- SC549 (Disconnected Fusing Lamp Error) may occur when printing continuously
  for roughly 200 pages on long, narrow paper, such as 4.25 x 11 inches.
   Note 1: This firmware can be used on both standard and HC models.
   Note 2: The speed decreases to 8 PPM when selecting certain paper types
        with the following custom sizes:
        Types: Middle Thick to Thick Paper 3
        Custom Sizes: (Width:70-105 mm, Length: over 210.1 mm) or
        (Width:105-148 mm, Length: over 216.1 mm)

Other changes:
- The machine will make less noise when waking up from sleep mode.

[Modification history]

Version 01.05:01
Symptom corrected:
The machine may freeze with "copying" displayed on the operation panel.

Version 01.04:01
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[Program Name] System
----------------------------------------------------------------
[Version] 1.16
----------------------------------------------------------------
[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.] M2815745C
[File Information]
 File Name       M2815745C.fwu
 File Type       Module for Service
 Size            21.09 MB ( 22109428 byte )
[File Information]
 File Name       M2815745C.rfu
 File Type       Module for Remote Upgrade
 Size            21.09 MB ( 22114560 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/11
----------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- The unused ports 54080 and 54443, which were open to the outside, can be now closed.
  Use SP5-848-025 Bit 3 to revert to the previous implementation.
    SP5-848-025 Bit 3
    0: Port closed (Default)
    1: Port open (Previous implementation)
- Color registration shift occurs.

[Modification history]

Version 1.15
Upgrade on the management

Version 1.14
Rank C

Symptom corrected:
- Wireless direct connection might fail in Group Owner Mode.

Version 1.13
Rank C

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

Version 1.12
Rank C

Symptom corrected:
- The machine might not recover from SC995-002 after replacing the
  NVRAM on the controller board.

Version 1.11
Rank C

Symptom corrected:
- FAX transmission from PC-FAX driver might fail on the device with custom authentication,
  when the transmission is tried within five seconds after turning to energy saving mode.
- 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.
- It takes time to login after authenticating the card.

Version 1.10
Rank C

Symptom corrected:
- When connecting a key stroke card reader, the card reader is
  recognized as a keyboard and cannot be used.

Version 1.09
Rank C

Symptom corrected:
- If log tracing on Web Image Monitor is cancelled just after using
  the function, the machine enters into off-line mode.

Version 1.08
Other changes:
Support for a new eMMC used on the CTL board.

Version 1.06
System corrected:
- SC819 may occur, if the auto log-out timer and the energy saving
  timer are set to the same value.
- SC819 may occur after removing a jam that occurred while printing
  a large job that fully consumes the printer memory.
- SC673-10 may occur when turning ON the machine power.

Other changes:
- Reduced time for controller firmware update and improved progress
  bar feature.

Version 1.05
Symptom corrected:
- SC899 may occur when installing @Remote.
- The operation panel displays "Printout Failed" and jobs cannot be
  printed, if SMC all print (SP5-990-001) or NIB summary (SP5-990-007)
  is executed on machines set to Chinese.

Version 1.04
Symptom corrected:
- When an application accesses the HDD after turning ON the power,
  the machine may stall.

- Behavior of the SDK applications (CAP/ELP/SLNX/GSNX/etc.) may be
  incorrect or inconsistent as described below. Both the Standard
  (Compatibility mode) and SOP Optimized (Hybrid mode) applications
  are affected by these issues.
  - Cannot log in.
  - Cannot scan.
  - Cannot print.

- Error message appears.
 - etc.

Other changed:
- Modified the default value of SSL in the SMC Report.

Version 1.03
Minor change

Version 1.01
Symptom corrected:
- SC819 may occur when printing particular files.

Version 1.00
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/11/01
----------------------------------------------------------------
[Program Name] Network Support
----------------------------------------------------------------
[Version] 15.64
----------------------------------------------------------------
[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.] M2815753J
[File Information]
 File Name       M2815753J.fwu
 File Type       Module for Service
 Size            10.36 MB ( 10859164 byte )
[File Information]
 File Name       M2815753J.rfu
 File Type       Module for Remote Upgrade
 Size            10.36 MB ( 10866944 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 15.63
Rank C

Symptom corrected:
- The DHCP address renewal request might be discarded when the DHCP server
  is configured as a failover cluster.

Version 15.62
Rank C

Symptom corrected:
- The device might fail to obtain the fax transmission result using FTP.
- SC819 might occur after updating firmware remotely.
- 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.
- DNS name resolution for the device might fail if DDNS is enabled
  in a DHCPv6 environment.

Version 15.61
Symptom corrected:
- When the device is in Energy Saver Mode, if information about the network
  interface for the device is being obtained from the SNMP Manager application,
  nonexistent errors are recorded in the system logs.
- Fixed unnecessary processing affecting hard disk failure and deterioration.
- Unnecessary logs are recorded in the system logs when connecting to the network
  through a wireless LAN.

Other changes:
- The default value of "Algorithm Signature" has been changed from SHA1-RSA 2048
  to SHA256-RSA 2048 when the device creates a new device certificate.
- Supported for Mopria Print Service.
  This firmware is dependent on the following firmware modules. Please be sure
  to update all of them:
   - Network Support v15.61 (M2815753F) or later
   - Printer v1.09 (M2815756J) or later

Version 15.60
Symptom Corrected:
1. When the device is in STR mode, printing might stop and not be
   able to be conducted until the device is rebooted.
2. Administrator password cannot be changed via telnet.

Version 15.59
Symptom Corrected:
1. When the device is set to use "IEEE 802.1X" and "TLS1.2" is set to
   "active", authentication will fail.
2. When the device has the USB device server option enabled and is
   connected to macOS via a USB cable, the PS driver cannot be
   installed on the computer. If the PS driver is already installed,
   printing might fail.
3. When AirPrint is set to "Disabled" in Web Image Monitor, AirPrint
   printing can still be conducted via USB cable.
4. If the device has not being used a significant amount of times,
   functions that require a network connection might fail.

Version 15.58
Other changes:

1. Support for AirPrint.

This firmware is dependent on Printer firmware v1.02(M2815756C) or later,
so please be sure to also update that firmware.

2. To avoid a window that warns about the security certificate from
   being displayed when connected to Web Image Monitor, the default
   value of the "Permit SSL/TLS Communication" setting has been
   changed from "Ciphertext Priority" to "Ciphertext/Cleartext".

Note: Configurations will not be automatically changed when the
firmware is updated. This value will be the default in devices that
have Network Support v15.58 installed from mass production.

Version 15.57
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[Program Name] Printer
----------------------------------------------------------------
[Version] 1.16
----------------------------------------------------------------
[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.] M2815756M
[File Information]
 File Name        M2815756M.fwu
 File Type        Module for Service
 Size             3.54 MB ( 3709656 byte )
[File Information]
 File Name        M2815756M.rfu
 File Type        Module for Remote Upgrade
 Size             3.54 MB ( 3715328 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/11
----------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- Printing from SDK-J applications might stall when the device is busy.

[Modification history]

Version 1.15
Rank C

Symptom corrected:
- If both Device Manager NX and Enhanced Locked Print NX v2 are installed,
  printing a job via Enhanced Locked Print NX v2 or logging out might fail.

Version 1.11
Rank C

Symptom corrected:
- Printing job might hang after recovering from a paper feed error.
- An SC899 error might occur if displaying the print job history on the Web Image Monitor
  after printing a file with a long name.
- 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.

Version 1.09
Symptom corrected:
- IPDS printing might stall if IPDS jobs are printed continuously.
- Portuguese wording correction in List/Test pages.

Other changes:
- Supported for Mopria Print Service.
  This firmware is dependent on the following firmware modules. Please be sure
  to update all of them:
   - Network Support v15.61 (M2815753F) or later
   - Printer v1.09 (M2815756J) or later

Version 1.07
Fixed:
- Any settings aren't displayed when creating a new IPDS Form via
  Web Image Monitor.

Version 1.06
Symptom corrected:
- 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.

Version 1.05
Symptom corrected:
1. When attempting to print data that contains a blank page via
   AirPrint, the job might be canceled.
2. When printing from AirPrint, the paper weight "Plain 2 (75 to 81g/
   square metre)" is out of the search target of "Auto Tray Select"
   even if "Plain Paper or Recycled Paper" is specified in the job.

Other changes:
Minor changes.

Version 1.04
Symptom Corrected:
On the Configuration Page, the "Low Power Mode Timer On/Off" setting
is marked with an asterisk that indicates the value is not the
default even though the value of the setting is the default (Off).

Version 1.03
Symptom corrected:
An SC899 error might occur when the Printer application starts up,
which causes the device to stall.

Version 1.02
Symptom corrected:
- The PDF file format is not supported when the HDD option is not installed.

Other changes:
- Support for AirPrint.
This firmware is dependent on Network Support firmware v15.58(M2815753C) or later,
so please be sure to also update that firmware.

Version 1.01
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/11/30
----------------------------------------------------------------
[Program Name] System
----------------------------------------------------------------
[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.] M2815770L
[File Information]
 File Name       M2815770L.fwu
 File Type       Module for Service
 Size            21.08 MB ( 22108328 byte )
[File Information]
 File Name       M2815770L.rfu
 File Type       Module for Remote Upgrade
 Size            21.09 MB ( 22114560 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/12
----------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- FAX transmission from PC-FAX driver might fail on the device with custom authentication,
  when the transmission is tried within five seconds after turning to energy saving mode.
- 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.
- It takes time to login after authenticating the card.

[Modification history]

Version 1.10
Rank C

Symptom corrected:
- When connecting a key stroke card reader, the card reader is
  recognized as a keyboard and cannot be used.

Version 1.09
Rank C

Symptom corrected:
- If log tracing on Web Image Monitor is cancelled just after using
  the function, the machine enters into off-line mode.

Version 1.08
Other changes:
Support for a new eMMC used on the CTL board.

Version 1.06
System corrected:
- SC819 may occur, if the auto log-out timer and the energy saving
  timer are set to the same value.
- SC819 may occur after removing a jam that occurred while printing
  a large job that fully consumes the printer memory.
- SC673-10 may occur when turning ON the machine power.

Other changes:
- Reduced time for controller firmware update and improved progress
  bar feature.

Version 1.05
Symptom corrected:
- SC899 may occur when installing @Remote.
- The operation panel displays "Printout Failed" and jobs cannot be

printed, if SMC all print (SP5-990-001) or NIB summary (SP5-990-007)
is executed on machines set to Chinese.

Version 1.04
Symptom corrected:
- When an application accesses the HDD after turning ON the power,
  the machine may stall.

- Behavior of the SDK applications (CAP/ELP/SLNX/GSNX/etc.) may be
  incorrect or inconsistent as described below. Both the Standard
  (Compatibility mode) and SOP Optimized (Hybrid mode) applications
  are affected by these issues.
  - Cannot log in.
  - Cannot scan.
  - Cannot print.
  - Error message appears.
  - etc.

Other changed:
- Modified the default value of SSL in the SMC Report.

Version 1.03
Minor change

Version 1.01
Symptom corrected:
- SC819 may occur when printing particular files.

Version 1.00
1st Mass production

\<\<Package\>\>
Package(ALL) [BRMF1a_pk]
 D2555506H Ver. 8.00 -> D2555506J Ver. 9.00

\<\<Separate\>\>
System/Copy [BRMF1a_system]
 D2555770P Ver. 1.13 -> D2555745A Ver. 1.18

Fax [BRMF1a_fax]
 D2555776H Ver. 07.00.00 -> D2555776K Ver. 09.00.00

RemoteFax [BRMF1a_fax2]
 D2555777F Ver. 05.00.00 -> D2555777G Ver. 06.00.00

Scanner [BRMF1a_scn]
 D2555779J Ver. 01.07 -> D2555779L Ver. 01.09

Web Support [BRZMF1a_web]
 D2555750H Ver. 1.06 -> D2555750K Ver. 1.08

Network Support [BRZMF1a_net]
 D2555753K Ver. 15.65 -> D2555753M Ver. 15.67

NetworkDocBox [BRMF1a_netfile]
 D2555754E Ver. 1.03 -> D2555754G Ver. 1.05

Printer [BRZMF1e_printer]
 D2555756J Ver. 1.08 -> D2555756M Ver. 1.11

PCL [BRMF1e_prt_PCL]
 D2555759D Ver. 1.04 -> D2555759G Ver. 1.07

PDF [BRMF1e_prt_PDF]
 D2555762D Ver. 1.03 -> D2555762E Ver. 1.04

GWFCU3.8-8(WW) [GW1a_efax_fcu1T]
 D2555778C Ver. 03.00.00 -> D2555778D Ver. 04.00.00

Engine(IPU) [BRMF1a_eipu]
 D2555810C Ver. 1.04:04 -> D2555810D Ver. 1.05:04

Engine [BRMF1a_eplot]
 D2555830A Ver. 01.05:01 -> D2555830B Ver. 01.08:01

M2a_System [M2a_System]
 D2411425H Ver. 1.29 -> D2411425Q Ver. 1.36

M2a_LegacyUI [M2a_LegacyUI]
 D2411427Z Ver. 1.22 -> D2411439C Ver. 1.26

M2a_MeidaPrtScn [M2a_MeidaPrtScn]
 D2411447T Ver. 1.20 -> D2411447V Ver. 1.21

M2a_SmartCopy [M2a_SmartCopy]
 D2411454Y Ver. 1.26 -> D2411448 Ver. 1.28

M2a_SmartScan [M2a_SmartScan]

D2411456T Ver. 1.17 -> D2411456X Ver. 1.20

M2a_SmartFAX [M2a_SmartFAX]
 D2411457W Ver. 1.24 -> D2411457Z Ver. 1.27

Application Site [M2a_zoo]
 D2411467L Ver. 1.05.03 -> D2411467M Ver. 1.05.04

M2a_cspf [M2a_cspf]
 D1961430B Ver. 2.02.00 -> D2411433 Ver. 2.02.01

M2a_KrbServ [M2a_KrbServ]
 D2411430A Ver. 1.02.00

M2a_M2a_RemSptSvc [M2a_RemSptSvc]
 D1961459C Ver. 1.1

M2a_RemAssist [M2a_RemAssist]
 D2411470A Ver. 1.0.5

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[Program Name] PCL
----------------------------------------------------------------
[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.] D2555759G
[File Information]
 File Name        D2555759G.fwu
 File Type        Module for Service
 Size             1.27 MB ( 1334820 byte )
[File Information]
 File Name        D2555759G.rfu
 File Type        Module for Remote Upgrade
 Size             1.28 MB ( 1339648 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/06
----------------------------------------------------------------


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

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


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

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


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

==
[Modifications made:]
Rank C

Symptom corrected:
- Double-byte characters in Asian languages might be missing from a PCL5
  host print job containing single-byte and double-byte characters.

[Modification history]

Version 1.06
Rank C

Symptom corrected:
- Double-byte characters of Asian languages such as Japanese,
  Chinese, and Korean might be missing.
- The overlay image might not be correctly printed with PCL.

Version 1.05
Rank C

Symptom corrected:
- If printing PCL5 data after installing the Andale font on the machine,
  some Chinese characters might not be printed.

Version 1.04
Symptom corrected:
1. PCL macros that were uploaded to the HDD cannot be printed.
   (GFPR#RE16080014)
2. When characters that contain the incorrect TrueType font data are
   printed, not only are incorrect characters missing but so are
   correct characters that follow incorrect characters.
   (GFPR#RE16030046)

Version 1.03
Symptom corrected:
Some lines of text and/or dotted lines might be missing when using
the PCL overlay macro. (GFPR#RC16040013)

Version 1.02
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/11/21
----------------------------------------------------------------
[Program Name] PDF
----------------------------------------------------------------
[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.] D2555762E
[File Information]
 File Name        D2555762E.fwu
 File Type        Module for Service
 Size            4.28 MB ( 4483844 byte )
[File Information]
 File Name        D2555762E.rfu
 File Type        Module for Remote Upgrade
 Size            4.28 MB ( 4489472 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/11
----------------------------------------------------------------


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

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



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

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



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

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

Symptom corrected:
- The device might stall during PDF direct printing if a job contains
  a Bezier curve.
- The device might stall during PDF direct printing if a spot color is used.
- If a PDF contains transparent images, printing might be canceled due to
  a lack of memory.
- 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 printing a PDF file that contains transparent images via PDF Direct,
  the output might be distorted.
- Images might be missing and an invalid font error might occur when printing
  a webpage with Adobe Typekit fonts.
- 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.

[Modification history]

Version 1.03
Fixed:
- 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.
- 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.
- 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)
- An incorrect paper size may be fed while printing via AirPrint.

Version 1.02
Symptom corrected:
- When receiving PS data, the status stays "Printing..." and the
  device might hang up.
- Images might be missing when printing from the PS3 driver.
- 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.

Version 1.01
1st Mass production

```
==========================================================================
*** Basic Information ***
==========================================================================
[Create date] 2019/08/02
--------------------------------------------------------------------------
[Program Name] PCL
--------------------------------------------------------------------------
[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.] M2815759G
[File Information]
 File Name       M2815759G.fwu
 File Type       Module for Service
 Size            1.27 MB ( 1335096 byte )
[File Information]
 File Name       M2815759G.rfu
 File Type       Module for Remote Upgrade
 Size            1.28 MB ( 1339648 byte )
[Availability of RFU] Yes
--------------------------------------------------------------------------
[Production reflection] 2019/07
--------------------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- Double-byte characters in Asian languages might be missing from a PCL5 host
  print job containing single-byte and double-byte characters.


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

Symptom corrected:
- Double-byte characters of Asian languages such as Japanese,
  Chinese, and Korean might be missing.
- The overlay image might not be correctly printed with PCL.

```
-----------------------------------------
```
Version 1.05
Rank C

Symptom corrected:
- If printing PCL5 data after installing the Andale font on the machine,
  some Chinese characters might not be printed.

```
-----------------------------------------
```
Version 1.04
Symptom corrected:
1. PCL macros that were uploaded to the HDD cannot be printed.
   (GFPR#RE16080014)
2. When characters that contain the incorrect TrueType font data are
   printed, not only are incorrect characters missing but so are
   correct characters that follow incorrect characters.
   (GFPR#RE16030046)


```
-----------------------------------------
```
Version 1.03
Symptom corrected:
Some lines of text and/or dotted lines might be missing when using
the PCL overlay macro. (GFPR#RC16040013)


```
-----------------------------------------
```
Version 1.02
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/08/29
----------------------------------------------------------------
[Program Name] PDF
----------------------------------------------------------------
[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.] M2815762E
[File Information]
 File Name        M2815762E.fwu
 File Type        Module for Service
 Size             4.28 MB ( 4484868 byte )
[File Information]
 File Name        M2815762E.rfu
 File Type        Module for Remote Upgrade
 Size             4.28 MB ( 4489472 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/07
----------------------------------------------------------------


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

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


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

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


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

==
[Modifications made:]
Rank C

Symptom corrected:
- The device might stall during PDF direct printing if a job contains a Bezier curve.
- The device might stall during PDF direct printing if a spot color is used.
- If a PDF contains transparent images, printing might be canceled due to a lack of memory.
- A PDF might not print if the previous PDF print job was cancelled manually.
- 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.
- Images might be missing and an invalid font error might occur when printing a webpage
  with Adobe Typekit fonts.
- When printing a PDF file that contains transparent images via PDF Direct, the output
  might be distorted.
- SC899 might occur when direct printing a PDF file that was saved incrementally.
- SC899 might occur when direct printing a PDF file that contains JBIG2-compressed data.

[Modification history]

Version 1.03
Fixed:
- When printing a PDF file that contains graphics or text via PDF Direct,
  an SC899 error might occur.
- SC899 might occur if there is a large number of different characters
  used in a print job.
- SC899 might occur while printing via PDF Direct if a job includes
  more than 500 pages.
- The device might stall if a job includes text outside the printable area
  of the page.
- 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)
- An incorrect paper size may be fed while printing via AirPrint.

Version 1.02
Symptom corrected:
- When receiving PS data, the status stays "Printing..." and the
  device might hang up.
- Images might be missing when printing from the PS3 driver.
- 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.

Version 1.01
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/03/06
----------------------------------------------------------------
[Program Name] Font EXP
----------------------------------------------------------------
[Version] 1.00
----------------------------------------------------------------
[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.] M2815765
[File Information]
 File Name       M2815765.fwu
 File Type       Module for Service
 Size            0.10 MB ( 103204 byte )
[File Information]
 File Name       M2815765.rfu
 File Type       Module for Remote Upgrade
 Size            0.11 MB ( 110848 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2015/12
----------------------------------------------------------------


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

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


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

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


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

==
[Modifications made:]
Rank D

1st Mass production

[Modification history]

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2017/06/19
----------------------------------------------------------------
[Program Name] Option IPDS
----------------------------------------------------------------
[Version] 8.638
----------------------------------------------------------------
[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.] D3CP5712
[File Information]
 File Name       D3CP5712.fwu
 File Type       Module for Service
 Size            8.96 MB ( 9390604 byte )
[File Information]
 File Name       D3CP5712.rfu
 File Type       Module for Remote Upgrade
 Size            8.96 MB ( 9396480 byte )
----------------------------------------------------------------
[Production reflection] 1st Mass Production
----------------------------------------------------------------


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

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



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

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

==
*** Modification History ***
==
[Modifications made:]
1st mass production

[Modification history]

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/04/15
----------------------------------------------------------------
[Program Name] Engine
----------------------------------------------------------------
[Version] 01.08:01
----------------------------------------------------------------
[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.] M2815830B
[File Information]
 File Name       M2815830B.fwu
 File Type       Module for Service
 Size           0.47 MB ( 492020 byte )
[File Information]
 File Name       M2815830B.rfu
 File Type       Module for Remote Upgrade
 Size           0.48 MB ( 499968 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/03
----------------------------------------------------------------


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

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


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

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


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

==
[Modifications made:]
Rank C

Symptom corrected:
- SC549 (Disconnected Fusing Lamp Error) may occur when printing continuously
  for roughly 200 pages on long, narrow paper, such as 4.25 x 11 inches.
   Note 1: This firmware can be used on both standard and HC models.
   Note 2: The speed decreases to 8 PPM when selecting certain paper types
        with the following custom sizes:
        Types: Middle Thick to Thick Paper 3
        Custom Sizes: (Width:70-105 mm, Length: over 210.1 mm) or
        (Width:105-148 mm, Length: over 216.1 mm)

Other changes:
- The machine will make less noise when waking up from sleep mode.

[Modification history]

Version 01.05:01
Symptom corrected:
The machine may freeze with "copying" displayed on the operation panel.

Version 01.04:01
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/10/18
----------------------------------------------------------------
[Program Name] Java VM v12 for eDC
----------------------------------------------------------------
[Version] 12.67.00
----------------------------------------------------------------
[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.] M5005752G_edc
[File Information]
 File Name        M5005752G_edc.ifu
 File Type        Module for Service
 Size          63.79 MB ( 66889416 byte )
[Availability of RFU] No
----------------------------------------------------------------
[Production reflection]
----------------------------------------------------------------


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

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



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

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



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

Symptom corrected:
- If the "Below 128 bit SSL Key" prevention setting is activated
  under the "Select Available Functions" menu, it may not be
  correctly applied to the machine.
- 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.

[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 12.61.03
Rank C

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

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

Version 12.57.00
Rank C

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 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.
- The wrong JavaVM firmware can be mistakenly installed on any machine, possibly
  leading to unexpected errors occurring with JavaVM or bootup failing.

Version 12.52.00
Symptom corrected:
- 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 12.48.02
Symptom corrected:
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 12.46.01
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 12.43.01
Symptom corrected:
1. If the "Chng Stgs" button is pressed after pressing the "Preview"
   button in ELP-NX, the "Change Print Settings" configuration may
   not be set correctly.
2. 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.
3. When "Tracking Permission" and "Stop Printing" are enabled in
   "Enhanced Print Volume Limitation", processing of the job might fail.
4. 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 12.39.02
Symptom corrected:
- Cannot use applications because the Java VM does no activate.
- Sending fax from the document server using IPv4-mapped address may
  result in an error.
- If attempted to install an application from Web Image Monitor,
  installation may fail with an error.

Version 12.26.05
1st Mass production

*** Basic Information ***
==

[Create date] 2019/10/18

[Program Name] Java VM v12 UpdateTool

[Version] 12.67.00

[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.] M5005752G_upd
[File Information]
 File Name   M5005752G_upd.exe
 File Type   Module for Service
 Size   63.51 MB (66597500 byte)
 Check Sum -8Bit Sum: AF18
        -16Bit Sum(Little Endian): 7A06
        -16Bit Sum(Big Endian): 4D12
[Availability of RFU] No

[Production reflection]

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

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

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

[Modifications made:]
Rank C

Symptom corrected:
- If the "Below 128 bit SSL Key" prevention setting is activated
  under the "Select Available Functions" menu, it may not be
  correctly applied to the machine.
- 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.

[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 12.61.03
Rank C

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

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

Version 12.57.00
Rank C

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 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.
- The wrong JavaVM firmware can be mistakenly installed on any machine, possibly
  leading to unexpected errors occurring with JavaVM or bootup failing.

Version 12.52.00
Symptom corrected:
- 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 12.48.02
Symptom corrected:
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 12.46.01
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 12.43.01
Symptom corrected:
- If the "Chng Stgs" button is pressed after pressing the "Preview"
  button in ELP-NX, the "Change Print Settings" configuration may
  not be set correctly.
- 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.
- When "Tracking Permission" and "Stop Printing" are enabled in
  "Enhanced Print Volume Limitation", processing of the job might fail.
- 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 12.39.02
Symptom corrected:
- Cannot use applications because the Java VM does no activate.
- Sending fax from the document server using IPv4-mapped address may
  result in an error.
- If attempted to install an application from Web Image Monitor,
  installation may fail with an error.

Version 12.26.05
1st Mass production

===
*** Basic Information ***
===
[Create date] 2017/08/28

[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(en,f,e,d,i,nl,s,n,dk,sf,p,pl,h,cz,ru,br,tr,ca,gr)
[Firmware No.] D2555752D
[File Information]
 File Name   D2555752D.fwu
 File Type   Module for Service
 Size   10.87 MB (11400776 byte)
[File Information]
 File Name   D2555752D.rfu
 File Type   Module for Remote Upgrade
 Size   10.88 MB (11407616 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 v1.08 (D2555770J)
Network Support v15.61.1 (D2555753F)
Web Support v1.05 (D2555750G)
Scanner v01.04 (D2555779F)
Animation  v1.02 (D2555752D)

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


-------------------------------------------------------------------------
[Modification history]
-----------------------------------------
Version 1.01
Symptom corrected:
Preinstalled applications can be accidentally uninstalled from Web Image Monitor.


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

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2017/09/11
----------------------------------------------------------------
[Program Name] GWFCU3.8-8(WW)
----------------------------------------------------------------
[Version] 03.00.00
----------------------------------------------------------------
[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.] D2555778C
[File Information]
 File Name       D2555778C.fwu
 File Type       Module for Service
 Size          3.94 MB ( 4129296 byte )
[File Information]
 File Name       D2555778C.rfu
 File Type       Module for Remote Upgrade
 Size          3.95 MB ( 4137216 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2017/08
----------------------------------------------------------------


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

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


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

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

==
*** Modification History ***
==
[Modifications made:]
Symptom corrected:
- Communication error (code: 00-20/22) occurs, if the device is run on
  V.17 modulation and receives a fax containing many pages.
- 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.
- If [Store and Print] is enabled and a document is deleted from
  GlobalScan, the FAX function becomes inoperable.
- Network error (error code:13-17) may occur when using IP-FAX with
  wireless LAN.
- FAX cannot be sent with the status showing "processing" possibly
  followed by a SC843-02.
- When the scanning FAX memory is full, it will be recorded in the
  job log as "Canceled by User", not "Other Error".

[Modification history]

Version 02.00.00
Symptom corrected:
The document cannot be sent and remains in the machine without an
error message.

Version 01.00.00
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/11/01
----------------------------------------------------------------
[Program Name] Network Support
----------------------------------------------------------------
[Version] 15.68
----------------------------------------------------------------
[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.] D2555753N
[File Information]
 File Name        D2555753N.fwu
 File Type        Module for Service
 Size             11.51 MB ( 12070208 byte )
[File Information]
 File Name        D2555753N.rfu
 File Type        Module for Remote Upgrade
 Size             11.52 MB ( 12075264 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 15.67
Rank C

Symptom corrected:
- 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.).
- Supported RICOH SmartSDK v2.60

Version 15.66
Rank C

Symptom corrected:
- DNS name resolution for the device might fail if DDNS is enabled in a DHCPv6 environment.

Version 15.65
Rank C

Symptom corrected:

- 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 15.64
Rank C

Symptom corrected:
- The device might fail to obtain the fax transmission result using FTP.
- 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.
- SC819 might occur after ARFU or RFU.
- The device might freeze during data transmission when conducting
  Scan to Folder with SMBv2/v3.
- 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 AirPrint, if port 80/TCP (HTTP) or port 631/TCP (IPP)
  in the printer is closed, the Apple device cannot find the printer.

Version 15.63
Symptom corrected:
- When the device is in Energy Saver Mode, if information about the network
  interface for the device is being obtained from the SNMP Manager application,
  nonexistent errors are recorded in the system logs.
- Fixed unnecessary processing affecting hard disk failure and deterioration.
- Unnecessary logs are recorded in the system logs when connecting to the network
  through a wireless LAN.
- Fixed the WebAPI bug when obtaining the network property information.

Other changes:
- The default value of "Algorithm Signature" has been changed from SHA1-RSA 2048
  to SHA256-RSA 2048 when the device creates a new device certificate.
- Supported for Mopria Print Service.
  This firmware is dependent on the following firmware modules. Please be sure
  to update all of them:
   - Network Support v15.63 (D2555753H) or later
   - Printer v1.08 (D2555756J) or later

Version 15.62
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 15.61.1
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 v1.08 (D2555770J)
Network Support v15.61.1 (D2555753F)
Web Support v1.05 (D2555750G)
Scanner v01.04 (D2555779F)
Animation v1.02 (D2555752D)

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

Version 15.60
Symptom Corrected:
1. When the device is in STR mode, printing might stop and not be
   able to be conducted until the device is rebooted.
2. Administrator password cannot be changed via telnet.

Version 15.59
Symptom Corrected:
1. When the device is set to use "IEEE 802.1X" and "TLS1.2" is set to
   "active", authentication will fail.
2. When the device has the USB device server option enabled and is
   connected to macOS via a USB cable, the PS driver cannot be
   installed on the computer. If the PS driver is already installed,
   printing might fail.
3. When AirPrint is set to "Disabled" in Web Image Monitor, AirPrint
   printing can still be conducted via USB cable.
4. If the device has not being used a significant amount of times,
   functions that require a network connection might fail.

Version 15.58.1
Other changes:

1. Support for AirPrint.

This firmware is dependent on Printer firmware v1.02(D2555756C) or later,
so please be sure to also update that firmware.

2. To avoid a window that warns about the security certificate from
   being displayed when connected to Web Image Monitor, the default
   value of the "Permit SSL/TLS Communication" setting has been
   changed from "Ciphertext Priority" to "Ciphertext/Cleartext".

Note: Configurations will not be automatically changed when the
firmware is updated. This value will be the default in devices that
have Network Support v15.58.1 installed from mass production.

Version 15.57
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2019/09/26
----------------------------------------------------------------
[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.] D2555754G
[File Information]
 File Name        D2555754G.fwu
 File Type        Module for Service
 Size            2.23 MB ( 2341140 byte )
[File Information]
 File Name        D2555754G.rfu
 File Type        Module for Remote Upgrade
 Size            2.24 MB ( 2347264 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2019/09
----------------------------------------------------------------


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

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


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

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


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

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

Symptom corrected:
- When SmartSDK WebAPI is used for image log and job log notification,
  there might be a delay if multiple log notifications are sent at the same time.
- When using a SmartSDK log capturing function and executing multiple stored
  scan jobs, only one image job might be recorded in the log.

Other changes:
- Supported RICOH SmartSDK v2.60


```
--------------------------------------------------------------
```
[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.
- When the OCR setting is enabled, PDF downloads might fail
  resulting in being unable to connect to the Web Image Monitor.
- The log time reported to the SmartSDK application might be wrong.

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

- 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.
- The device might not be able to be accessed via Web Image Monitor.

Version 1.01
Symptom corrected:
1. When scanning by using GlobalScan NX on the model with the Smart
   Operation Panel, the image log capture file will be sent to an
   incorrect folder even if the file includes the same user ID as before.
2. When attempting to back up the address book from Device Manager NX,
   the backup will fail and printer, copy, scan, and fax jobs cannot be conducted.

Version 1.00
1st Mass production

```
================================================================
```
*** Basic Information ***
```
================================================================
```
[Create date] 2017/12/22
```
----------------------------------------------------------------
```
[Program Name] XPS
```
----------------------------------------------------------------
```
[Version] 1.35
```
----------------------------------------------------------------
```
[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.] D3CP5738A
[File Information]
 File Name   D3CP5738A.fwu
 File Type   Module for Service
 Size   1.93 MB (2020408 byte)
[File Information]
 File Name   D3CP5738A.rfu
 File Type   Module for Remote Upgrade
 Size   1.93 MB (2027776 byte)
[Availability of RFU] Yes
```
----------------------------------------------------------------
```
[Production reflection] 2017/12
```
----------------------------------------------------------------
```


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

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


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

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

==
*** Modification History ***
==
[Modifications made:]
Symptom corrected:
- Firmware updates might fail on SP 5300/SP 5310.

[Modification history]

Version 1.34
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/11/21
----------------------------------------------------------------
[Program Name] NetworkDocBox
----------------------------------------------------------------
[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(all)
[Firmware No.] M2815754C
[File Information]
 File Name        M2815754C.fwu
 File Type        Module for Service
 Size          0.94 MB ( 984664 byte )
[File Information]
 File Name        M2815754C.rfu
 File Type        Module for Remote Upgrade
 Size          0.95 MB ( 991488 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/12
----------------------------------------------------------------


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

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



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

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



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

==
[Modifications made:]
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.
- If the device is abnormally turned off, the collect logs settings might be initialized
  and the log data might not be transferred after that.
- When attempting to back up the address book from Device Manager NX,
  the backup will fail and printer, copy, scan, and fax jobs cannot be conducted.

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

[Modification history]

Version 1.00
1st Mass production