```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/04/25
----------------------------------------------------------------
[Program Name] Printer
----------------------------------------------------------------
[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.] M1875756H
[File Information]
 File Name      M1875756H.fwu
 File Type      Module for Service
 Size          3.12 MB ( 3267276 byte )
[File Information]
 File Name      M1875756H.rfu
 File Type      Module for Remote Upgrade
 Size          3.12 MB ( 3272960 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/03
----------------------------------------------------------------


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

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


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

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

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


Symptom corrected:
- Printing job might hang after recovering from a paper feed error.


------------------------------------------------------------------------
[Modification history]
-----------------------------------------
Version 1.10
Symptom corrected:
- RPCS print jobs might be canceled with the P1 Command error or blank pages
  might be printed.
- The specific combination of "Duplex/Booklet" and "Bypass Tray" might not be
  selectable from the settings in the SDK application even though the combination
  is supported.
- A print job conducted from Ricoh Smart Device Print&Scan via Enhanced Locked
  Print NX FS v2 cannot be printed.
- 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.
- IPDS printing might stall if IPDS jobs are printed continuously.
- The functions of Enable mode and Disable mode are reversed in
  "Engy Sv Md to Dsbl Prt Srv".




-----------------------------------------
Version 1.09
Symptom corrected:
- Minor bug correction.




-----------------------------------------
Version 1.08
Symptom corrected:
- Under all of the following conditions, paper is fed from the device trays even
though the paper feed tray setting in the driver is set to the bypass tray:
   - The "Tray Setting Priority" of the bypass tray is "Driver/Command".
   - The "Paper Confirmation for Bypass Tray Display" setting is "Display".
   - The "Tray Switching" setting is "On".
   - The paper size and paper type set on the device matches to the setting
     configured on the driver is selected.
- When attempting to preview a large-size JPEG image from
  "Print/Scan (Memory Storage Device)", an SC899 error occurs.
- 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.
```

Version 1.06
Other changes:
Added support for adhering to the Lot 6 regulation of the EU in
European devices.

Version 1.05
Symptom corrected:
-Turning the power OFF and then ON causes the fusing OFF mode to return to
 the default setting, ON.

Other Changes:
-The range for image density adjustment was expanded from "-6 to +3" to
 "-6 to +6" and the image density mode was added to the UP mode.
-Support for Korean and Traditional Chinese in Asia-Pacific models.
 This firmware is dependent on the following firmware module versions:
  - System firmware v1.05 or later (M1875770D)
  - Web Support firmware v1.08 or later (M1875750D)

Version 1.03
Other changes:
Support for AirPrint.
This firmware is dependent on the following firmware modules.
Please be sure to update all of them:
 - Network Support firmware: v13.29 or later (M1875753B)
 - Web Support firmware: v1.07 or later (M1875750C)

Version 1.02
1st Mass production

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2017/05/02
--------------------------------------------------------------------------------
[Program Name] PS3 Font
--------------------------------------------------------------------------------
[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.] M1095275A
[File Information]
 File Name       M1095275A.fwu
 File Type       Module for Service
 Size            4.59 MB ( 4815356 byte )
[File Information]
 File Name       M1095275A.rfu
 File Type       Module for Remote Upgrade
 Size            4.60 MB ( 4821248 byte )
--------------------------------------------------------------------------------
[Production reflection] 2017/05
--------------------------------------------------------------------------------


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

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



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

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

```
================================================================
*** Modification History ***
================================================================
[Modifications made:]
Other changes:
This firmware was modified to support SP 450DN.




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

[Modification history]

-----------------------------------------
Version 1.16
1st Mass production
```

```
================================================================================
*** Basic Information ***
================================================================================
[Create date] 2017/07/05
--------------------------------------------------------------------------
[Program Name] Java VM v11 for eDC
--------------------------------------------------------------------------
[Version] 11.38.01
--------------------------------------------------------------------------
[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.] M1095283B_edc
[File Information]
 File Name        M1095283B_edc.ifu
 File Type        Module for Service
 Size            58.90 MB ( 61765688 byte )
[Availability of RFU] No
--------------------------------------------------------------------------
[Production reflection]
--------------------------------------------------------------------------


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

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



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

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



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

===

[Modifications made:]

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.

[Modification history]

Version 11.37.00

Symptom corrected:
- 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 11.35.01

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.

Version 11.33.02

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.

Version 11.32.04

Symptom corrected:

- Machine may stall, if scanned from the contact glass with Size
  Setting disabled.
- SC637 may occur, if the machine is shut down while printing.
- 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.
- If an ESA application is installed to or uninstalled from multiple PCs
  via Remote Install Manager or SLNX ADM at the same time, the application
  may not detect the device status for the other installations/uninstallations

----
Version 11.30.02
Symptom corrected:
- CAP V2 is disabled if switched to Energy Saver mode while CAP V2
  starts up after power ON.
- If the firmware is updated remotely while the device is in energy
  saving mode, the SDK platform may not boot up.
- User information may not be displayed, if a job is run by logging
  in with the user code authentication.
- Machine response slows down when a trouble occurs in the HDD.
- Characters are randomly broken onto new lines, if the following
  settings are configured in Scan Settings:
    1. Vertical text in a PDF file is copied and pasted into an application.
    2. "OCR Settings" is set to "On".
    3. "Cognitive Language" is set to "Japanese".
- Less than 128-bit encryption methods will be prohibited.

Version 11.26.04
- 1st Mass production for Da-P1d

Version 11.17.01
- 1st Mass production for Gim-P1c/Gim-P1d/Gim-MF1d

Version 11.17.01
 Error correction
- Supported IC card writer (PR-700UDM).

Version 11.16.00
Symptom Corrected:
- SC990 occurs when machine is powered on, and it cannot be
  recovered by the machine reboot.
- SC899 may occur when a device recovers from STR mode.
- ESA application screen may be displayed when visible/not visible
  settings for ESA counter screen is changed 5 or more times.
- Coin charge request may not be displayed on ESA application screen
  even no charge remains in a coin rack.

- If the scan function is used on a device with Streamline NX, GlobalScan NX, or RICOH Scan CX installed, the job log is not registered correctly.
- If ESA application is installed, HTTP communication may not be performed correctly.
- When using the scan function continuously on a device with Streamline NX or GS-NX is installed, a "Scanner is in use by another function" error may occur.
- As for Streamline NX, the login screen immediately after an application change is not displayed.
- USB device ESA applications use cannot be used because vender ID and product ID are not correctly registered on the device.
- Application switching might not be perfomed when Steamline NX or 3rd vendor application switches the normal application on the operation panel.
- When the device recieves a lot of data, the device may freeze.
- ELP-NX V2 does not accept the print job, even if a error code which allows printing to continue is notified.
- If CAP v2 or Streamline NX is used, card login may not be perfomed.
- When switching a language on the initial setting screen, if the initial setting screen is closed immediately, the display does not switch the language in the ESA application.
- When the device display language is Turkish or Catalan, the ESA application icon does not display on the home screen.
- A Java VM internal process causes a change to the device's configured sleep timing.
- Even if a Java VM remote update has been successful, the device may display a banner message saying "SDK/J update done FAIL" incorrectly.
- An unexpected screen may appear when a device with 9 or more ESA applications installed recovers from energy saver mode.
- An ESA application may stop during a scan with PDF creation if a paper jam occurs during the 1st page of the input document.
- ESA application installation and uninstallation may take longer than expected in specific conditions.
- When a device failed to reboot after receiving a reboot request from a device management application, installed ESA applications would not restart automatically and remained in "Stopped" status.
- Java VM might not start properly when the device is started.
- RuntimeException rarely occurs when a device with multiple ESA applications installed recovers from energy saver mode.
- Depending on a Device Java VM internal file, the device results in SC990 when it is continuously used.(for Ti-P1)

Version 11.05.04
- SC899 very rarely occurs when a device is started.
- SC998 very rarely occurs when a device recovers from energy saver mode while ESA applications are set as function priority.
- The ESA application shortcut is displayed improperly when 9 or more ESA applications are installed.
- The User Code Authentication screen may not appear properly after a device with the "Administrator Authentication Management" setting enabled recovers from energy saver mode.

- SDK/J smmary may not be printed out when 13 or more ESA applications are installed.
- 4 line LCD devices do not enter Energy Saver Mode after specific operations.
- SC899 may occur when a device with a FAX function recovers from energy saver mode.

Version 11.02.04
Pre-release

==
*** Basic Information ***
==
[Create date] 2017/07/05

[Program Name] Java VM v11 UpdateTool

[Version] 11.38.01

[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.] M1095283B_upd
[File Information]
 File Name   M1095283B_upd.exe
 File Type   Module for Service
 Size   58.62 MB (61463869 byte)
 Check Sum -8Bit Sum: C777
        -16Bit Sum(Little Endian): 40E2
        -16Bit Sum(Big Endian): FD95
[Availability of RFU] No

[Production reflection]

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

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

```
================================================================
*** Modification History ***
================================================================
[Modifications made:]
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.


--------------------------------------------------------------
[Modification history]
-----------------------------------------
Version 11.37.00
Symptom corrected:
- 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 11.35.01
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.


-----------------------------------------
Version 11.33.02
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.
```

Version 11.32.04
Symptom corrected:
- SC637 may occur, if the machine is shut down while printing.
- 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.
- Machine may stall, if scanned from the contact glass with Size
  Setting disabled.

Version 11.30.02
Symptom corrected:
- CAP V2 is disabled if switched to Energy Saver mode while CAP V2
  starts up after power ON.
- If the firmware is updated remotely while the device is in energy
  saving mode, the SDK platform may not boot up.
- User information may not be displayed, if a job is run by logging
  in with the user code authentication.
- Machine response slows down when a trouble occurs in the HDD.
- Characters are randomly broken onto new lines, if the following
  settings are configured in Scan Settings:
    1. Vertical text in a PDF file is copied and pasted into an application.
    2. "OCR Settings" is set to "On".
    3. "Cognitive Language" is set to "Japanese".
- Less than 128-bit encryption methods will be prohibited.

Version 11.26.04
- 1st Mass production for Da-P1d

Version 11.17.01
- 1st Mass production for Gim-P1c/Gim-P1d/Gim-MF1d

Version 11.17.01
 Error correction
- Supported IC card writer (PR-700UDM).

Version 11.16.00
Fixed:
- If the scan function is used on a device with Streamline NX,
  GlobalScan NX, or RICOH Scan CX installed, the job log is not
  registered correctly.
- If ESA application is installed, HTTP communication may not be
  performed correctly.

Version 11.05.04
- SC899 very rarely occurs when a device is started.
- SC998 very rarely occurs when a device recovers from energy saver mode
  while ESA applications are set as function priority.
- The ESA application shortcut is displayed improperly when 9 or more
  ESA applications are installed.
- The User Code Authentication screen may not appear properly after a device with the
  "Administrator Authentication Management" setting enabled recovers from energy saver mode.
- SDK/J smmary may not be printed out when 13 or more ESA applications are installed.
- 4 line LCD devices do not enter Energy Saver Mode after specific operations.
- SC899 may occur when a device with a FAX function recovers from energy saver mode.

Version 11.02.04
Pre-release

```
==============================================================================
*** Basic Information ***
==============================================================================
[Create date] 2019/03/07
------------------------------------------------------------------------
[Program Name] Engine
------------------------------------------------------------------------
[Version] 1.19:08
------------------------------------------------------------------------
[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.] M1875550L
[File Information]
 File Name        M1875550L.fwu
 File Type        Module for Service
 Size            0.39 MB ( 410228 byte )
[File Information]
 File Name        M1875550L.rfu
 File Type        Module for Remote Upgrade
 Size            0.40 MB ( 418048 byte )
[Availability of RFU] No
-------------------------------------------------------------------------
[Production reflection] 2018/12
-------------------------------------------------------------------------


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

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


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

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


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

===
[Modifications made:]
Rank C

Symptom corrected:
- The some print process has been changed to reduce the dirty back
  ground problem and SC364.
- SC990 may occur two minutes after the jam occurred from the PFU.

Other changes:
- Improved the toner supply control.

[Modification history]

Version 1.17:08
Rank C

Symptom corrected:
- New SP has been added.
- SP1-991-001: By-pass CL chage
- 0: Free, 1: Normal (default is, 1: Normal)
- If the image is reduced in the sub scan derection when using th by-pass
  free mode, change the SP value to "0".
- When the "Sleep Mode Timer" or the "Fusing Unit Off Mode (Energy Saving)
  On/Off" setting is changed from the default setting, the PCDU might
  keep rolling, which might cause the screw to break and waste toner
  to spill out of the PCDU.

Other changes:
- Instead of displaying SC541 or SC544, a message that prompts users
  to reset the fusing unit is displayed.

Version 1.15:08
Rank C

Symptom corrected:
- The some print process has been changed to reduce the dirty back
  ground problem and SC364.
- When the "Sleep Mode Timer" or the "Fusing Unit Off Mode (Energy
  Saving) On/Off" setting is changed from the default setting, the
  PCDU might keep rolling, which might cause the screw to break and
  waste toner to spill out of the PCDU.

Other changes:
- Instead of displaying SC541 or SC544, a message that prompts users
  to reset the fusing unit is displayed.

Version 1.14:08
Other changes:
- Improved the toner supply control.
- Optimized the conditions to detect SC440, to prevent false detection.

Version 1.13:08
Symptom corrected:
- Fusing offset may occur.
  Note: Other than the fix for the fusing offset problem above,
  this release is identical to v1.11:08 as the preceding v1.12:08
  was found with a defect and removed.

Version 1.11:08
Other changes:
1. SC332 may occur.
2. Supports the new model (M187-19) released for the Taiwan market.
   The following firmware must be applied for this release to take effect:
     - System firmware: v1.06 or later (M1875770E)

Version 1.09:08
Symptom corrected:
- Broken screw in the PCDU may cause waste toner to drop inside the machine
  and dirty the printouts.
NOTE: Compared to the previous firmware versions, it may take an extra two
      minutes to supply toner when turning on the machine power for the first
      time with this version.

Other change:
- Image density mode was added in the UP mode, which allows the selection of
  the range for image density adjustment, between "-6 to +3" and "-3 to +6."

Version 1.08:08
Symptom corrected:
1. Waste toner full alert appears earlier than expected.
2. SC688 may occur, if SP2-950-001 setting is changed to 4-7 from
   the default 3.

Version 1.06:08
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/10/16
----------------------------------------------------------------
[Program Name] PCL
----------------------------------------------------------------
[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.] M1875759G
[File Information]
 File Name        M1875759G.fwu
 File Type        Module for Service
 Size            1.42 MB ( 1493036 byte )
[File Information]
 File Name        M1875759G.rfu
 File Type        Module for Remote Upgrade
 Size            1.43 MB ( 1499392 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/11
----------------------------------------------------------------


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

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



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

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



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

===
[Modifications made:]
Rank C

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

[Modification history]

Version 1.10
Symptom corrected:
- When printing the contents of an A3 size document on A4 size paper via Direct
  printing, the text might be distorted.

Version 1.09
Symptom corrected:
An SC899 error occurs when using the PCL6 driver to print a PDF from the Reader
application in Windows 8.1. (GFPR#RA15050002)

Version 1.08

Symptom corrected:
1. 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)
2. The image quality output from PCL5 data might be poor if the image was
   created by using certain applications, such as RICOH ProcessDirector.
   (GFPR#RE15030034)
3. Some lines of text and/or dotted lines might be missing when using the PCL
   overlay macro. (GFPR#RC16040013)
4. A blank page or missing image is printed out if the print data created by
   certain applications (such as Microsoft Excel 2010) contains a significant
   amount of graphics and/or transparent objects.
5. An SC899 error might occur when graphics are drawn by the RGB Brush.
   (GFPR#RE15100026)

Version 1.07
Symptom corrected:
1. When printing a PCL vector job that contains an image with transparent
   parts that the PCL driver generates, the transparent parts are printed
   in black. (GFPR#RE14040024)
2. When printing an excel sheet that contains images that drawn by collar
   custom brush, the job may be canceled.
3. When "Unauthorized Copy Prevention Printing: Printer" is enabled,
   an error might occur, causing the job to be cancelled.
   (GFPR#RA14120002)

Version 1.06
Symptom corrected:
1. If a PCL5 job is printed under certain conditions related to the font
   header information when using host printing, PCL default fonts are used.
   (GFPR#RE14100009)
2. When printing a PCL5 host-printing job in which 32,000 or more of the
   fill patterns are specified, the device will stall.
   (GFPR#RA14040001, GFPR#RE14100018)
3. Using a bitmap font might result in jobs being cancelled.
   (GFPR#RE13100030)
4. If a raster image is specified in the PCL6 driver to be reduced,
   be enlarged, or undergo N-up printing, unexpected white lines might
   appear in the printout.
   (GFPR#RA14080005, GFPR#RA14110005)

Version 1.05
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2017/12/04
----------------------------------------------------------------
[Program Name] PDF
----------------------------------------------------------------
[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.] M1875762B
[File Information]
 File Name        M1875762B.fwu
 File Type        Module for Service
 Size            4.16 MB ( 4362284 byte )
[File Information]
 File Name        M1875762B.rfu
 File Type        Module for Remote Upgrade
 Size            4.17 MB ( 4370688 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2017/12
----------------------------------------------------------------


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

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


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

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

==
==
[Modifications made:]
Symptom corrected:
- Printing might be slow when a spreadsheet containing many cells with patterns
  that are different from the default pattern in the following setting is printed
  from Microsoft Excel 2013:
  Select "Format Cell", select the "Fill" tab, and change the "Pattern Style"
  setting
- PDF file may not be printed via direct print if the PDF file contains
  True Type fonts.
- SC899 might occur if there is a large number of different characters used
  in a print job.
- The device might stall during PDF direct printing if a job contains a
  Bezier curve.
- Images might be missing when printing from the PS3 driver.

[Modification history]

Version 1.00
1st Mass production

```
================================================================
*** Basic Information ***
================================================================
[Create date] 2017/12/04
----------------------------------------------------------------
[Program Name] XPS
----------------------------------------------------------------
[Version] 1.17
----------------------------------------------------------------
[PCB No.]
----------------------------------------------------------------
[Interchangeability] X / O
----------------------------------------------------------------
[Other Firmware Requirements] None
----------------------------------------------------------------
[PCB Requirements] None
----------------------------------------------------------------
[Software category] Normal Release
----------------------------------------------------------------
[Release category] Normal Release
----------------------------------------------------------------
[Program category] Firmware
----------------------------------------------------------------
Exported to(language) GEN(all)
[Firmware No.] M4445764C
[File Information]
 File Name        M4445764C.fwu
 File Type        Module for Service
 Size            2.01 MB ( 2108396 byte )
[File Information]
 File Name        M4445764C.rfu
 File Type        Module for Remote Upgrade
 Size            2.02 MB ( 2113792 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2017/12
----------------------------------------------------------------


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

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


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

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

```
================================================================
*** Modification History ***
================================================================
[Modifications made:]
Symptom corrected:
- When printing the contents of an A3 size document on A4 size paper via Direct
  printing, the text might be distorted.



---------------------------------------------------------------
[Modification history]
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Version 1.16
Symptom corrected:
An SC899 error might occur when graphics are drawn by the RGB Brush.
(GFPR#RE15100026)
When "Unauthorized Copy Prevention Printing: Printer" is enabled,
an error might occur, causing the job to be cancelled.


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Version 1.15
Symptom corrected:
- When "Unauthorized Copy Prevention Printing: Printer" is enabled,
  an error might occur, causing the job to be cancelled.
  (GFPR#RA14120002)


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Version 1.13
1st Mass production
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```
================================================================
*** Basic Information ***
================================================================
[Create date] 2018/06/27
----------------------------------------------------------------
[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.] M1875770J
[File Information]
 File Name        M1875770J.fwu
 File Type        Module for Service
 Size             16.50 MB ( 17304712 byte )
[File Information]
 File Name        M1875770J.rfu
 File Type        Module for Remote Upgrade
 Size             16.51 MB ( 17309952 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/03
----------------------------------------------------------------


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

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

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

Symptom corrected:
- An SC819 error might occur when using network-related functions,
  such as accessing Web Image Monitor.

[Modification history]

Version 1.10
Rank C

Symptom corrected:
- An invalid value is returned when obtaining the counter MIB, ricohEngCounterValue,
  during device shutdown.

Version 1.08
Symptom corrected:
- SC816-01 may occur after print job is completed.
- A part of the image may disappear, if the file is printed from the document
  server (saved using PS driver) with the image orientation rotated 90 degrees.
- 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 1.07
Other changes:
- Support for ErP Lot 6 compliance.

Version 1.06
Other changes:
- Supports the new model (M187-19) released for the Taiwan market.
  The following firmware must be applied for this release to take effect:
    - Engine firmware: v1.11:08 or later (M1875550E)

Version 1.05
Symptom corrected:

1. When the CTS protection function is enabled, the throughput for the
     wireless LAN connection is reduced.
  2. In wireless LAN environments, when A-MSDU is enabled, the device cannot
     receive packet data that is more than 2,048 bytes.
  3. In wireless LAN environments, when large volume printing is being conducted,
     the job is cancelled in the middle of printing.
  4. When trying to establish an ad-hoc connection among three or more devices,
     the third and subsequent devices cannot connect.
  5. The device cannot communicate when using the WMM (Wi-Fi Multimedia) function.
  6. In wireless LAN environments, when the authentication methods WPA2 and
     A-MPDU are enabled, printing might take a significant amount of time.
  7. When the threshold for fragmentation is set in the access point settings,
     the MFP/LP will fail to receive the packet data if the computer sends data
     that is larger than the threshold that is set.

  Other changes:
  1. Support of Korean and Traditional Chinese languages for the Asia-Pacific models
        Effective with the following firmware combination:
        - Printer firmware: v1.05 or later (M1875756C)
        - Web System firmware: v1.08 or later (M1875750D)

  2. The specification of "Image Density Adjustment" was changed.
  3. The maximum data transmission speed has been changed to 130 Mbps because
     40-MHz wireless LAN bandwidth is no longer supported.

Version 1.04
Symptom corrected:
- Machine data encryption settings bug corrected.
- Address Book display error (Device Manager NX series).
- If "Display" is selected under "Paper Confirmation for Bypass Tray,"
  printing is available only in LEF.
    (User Tool -> Printer Features -> System -> Tray Setting Priority ->
      Paper Confirmation for Bypass Tray)
- Limitless Paper Feed function may not work with the bypass tray.

Version 1.03
1st Mass production

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================================================================
*** Basic Information ***
================================================================
[Create date] 2018/04/25
----------------------------------------------------------------
[Program Name] Network Support
----------------------------------------------------------------
[Version] 13.32
----------------------------------------------------------------
[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.] M1875753E
[File Information]
 File Name       M1875753E.fwu
 File Type       Module for Service
 Size          7.75 MB ( 8124100 byte )
[File Information]
 File Name       M1875753E.rfu
 File Type       Module for Remote Upgrade
 Size          7.75 MB ( 8130816 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/03
----------------------------------------------------------------


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

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

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

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

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.
- When SSL/TLS is enabled, the Device Manager NX cannot obtain the state of encryption
  even though the hard disk of the device is encrypted.
- SC819 might occur after ARFU or RFU.

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.


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[Modification history]
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Version 13.31
Symptom Corrected:
- When the device is set to use "IEEE 802.1X" and "TLS1.2" is set to "active",
  authentication will fail.



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Version 13.30
Other Changes:
- Added support for adhering to the Lot 6 regulation of the EU in
  European devices.



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Version 13.29
Symptom corrected:
1. 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.
2. When the display language of the operation panel is set to Catalan, Scan to
   Folder fails.
3. When performing IPP printing with the job spool enabled in Mac OS X 10.7 or later
   and iOS 6 or later, the document is not printed even though the machine supports
   AirPrint 1.2.

Other changes:
1. When printing from the Windows operating system, if the RAW protocol is used
   for the standard TCP/IP port, a significant amount of time might pass until
   the next job is printed. Because of this, the initial print timeout period is
   changed to 15 seconds and the shortest timeout period that can be set is changed
   to 5 seconds.
```

2. Support for AirPrint.
   This firmware is dependent on the following firmware module. Please be sure to
   update it:
     - Printer firmware: v1.03 or later (M1875756B)
     - Web Support firmware: v1.07 or later (M1875750C)
3. Changed the DH key specification to use 2,048 bits instead of 512 bits to prevent
   the Logjam vulnerability (CVE-2015-4000). In addition, by modifying this
   specification, SSL/TLS communication can be established when using
   Mac OS X 10.10.4 and iOS 8.4.

Version 13.28
1st Mass production

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================================================================
*** Basic Information ***
================================================================
[Create date] 2018/06/27
----------------------------------------------------------------
[Program Name] PowerSaving Sys
----------------------------------------------------------------
[Version] 1.20
----------------------------------------------------------------
[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.] M1875775B
[File Information]
 File Name        M1875775B.fwu
 File Type        Module for Service
 Size             4.00 MB ( 4194704 byte )
[File Information]
 File Name        M1875775B.rfu
 File Type        Module for Remote Upgrade
 Size             4.01 MB ( 4202752 byte )
[Availability of RFU] Yes
----------------------------------------------------------------
[Production reflection] 2018/03
----------------------------------------------------------------


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

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


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

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

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

Symptom corrected:
- SC672-11 may occur when the machine enters Energy Saver mode.

[Modification history]

Version 1.19
1st Mass production