

EPSON OPOS ADK for .NET Manual

Application Development Guide

LineDisplay(DM-D70)

Version 1.14.25 Dec. 2022

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Chapter 1 Introduction

This section explains how to use LineDisplay when using EPSON OPOS ADK for .NET, including any related information and special notes regarding the device.

For details on the POS for .NET API, refer to the "UnifiedPOS Retail Peripheral Architecture Version 1.14.1" specification and the MSDN "POS for .NET v1.14.1 SDK Documentation":
Refer to the release notes for information on where to find the latest information.

1.1 Terminology

- "Unified POS Retail Peripheral Architecture Version 1.14.1" may be abbreviated as "UPOS".
- "Microsoft POS for .NET" may be abbreviated as "POS.NET".
- "EPSON OPOS ADK for .NET Version 1.14.25" may be abbreviated as "OPOS.NET".
- "LineDisplay" may be abbreviated as "the device".
- "The ServiceObject of LineDisplay provided by OPOS.NET" may be abbreviated as "ServiceObject".
- "ErrorCode properties of PosControlException" may be abbreviated as "ErrorCode".
- "ErrorCodeExtended properties of PosControlException" may be abbreviated as " ErrorCodeExtended".
- "Exception" indicates "PosControlException".
- The EPSON original device constant used with this device is defined in "jp.co.epson.uposcommon.EpsonUPOSConst" and "jp.co.epson.uposcommon.EpsonLineDisplayConst".

Chapter 2 Before Using LineDisplay

This chapter explains how to set up LineDisplay, as well as notes and restrictions on using it.

2.1 Device Setting

After checking the hardware model and the hardware settings, select the correct device using the SetupPOS utility. Refer to “[Appendix D Hardware settings](#)” for information on setting the hardware, and “[Appendix B SetupPOS Settings](#)” for information on how to use the SetupPOS utility.

2.2 Notes and Restrictions

- In the event that printer is rebooted in the midst of executing methods involved in transmitting to device, the data displayed may be corrupted.
- Because data transmitted by utilizing the DISP_DI_OUTPUT command of the **DirectIO** method is not checked by the ServiceObject, the ServiceObject may be obstructed and may lead to unexpected results.
- All the character codes (Unicode) expressed in strings are converted to single-byte codes based on the values set in the **CharacterSet** property. When doing byte-code conversions, sufficient care should be exercised if extended ASCII codes are specified.
- If the same port where POSPrinter is connected is used, the communication conditions of POSPrinter and LineDisplay should be adjusted.
- If used with POSPrinter connected, the status of the LineDisplay may become OFFLINE depending on the status of the POSPrinter. In this state, the methods involved in transmitting to the device (such as **DisplayText** method) will fail.
- The setting of the Attribute parameter of the **DisplayText(At)** method executed in the marquee initialization mode is reflected when coming out of the marquee initialization mode.
- The total window area (viewport size) defined by CreateWindow cannot exceed one base window screen.
- If the window areas are overlapped and defined in CreateWindow, the overlapping lower area is not displayed. (Transparent display is not possible) At this time, even if the current window is switched, the overlapping lower windows do not exist on the top surface and are not displayed. Please switch using RefreshWindow.

- DestroyWindow is executed, the drawn contents of the discarded window will be deleted.
- The screen cannot be turned off even if specify 0 for the DeviceBrightness property. Brightness will be set 20%.
- When sending commands using DirectIO method, be sure to read description of the target command in the product manual.
- When the DirectIO method is used to send data to the display, there may be data within the range from 128 to 255 that is not sent correctly. Accordingly, some data patterns of the downloaded characters cannot be specified.
- When the parent device is in the busy state (waiting for insertion of SLIP paper, or when cover is open, etc.), methods such as DisplayText will fail. Errors such as ResultCode=OPOS_E_ILLEGAL. ResultCodeExtended=Printer error details, etc. will be generated. Teletype display and Marquee display will not be updated while the printer is in the busy state.
- The settable baud rates and code pages differ with the device. Refer to the respective manuals.
- The DM series cannot automatically display period and comma characters using DirectIO.
- Depending on the operating environment, there can be a case of missing data when transmitting data via serial port. In order to prevent such cases of missing data, it is recommended to set a smaller value for the FIFO setting for the serial communication.
- If the ReadCharacterAtCursor method is executed when there is no character information at the cursor position, character code 127 is returned.
- The error code differs by that timing when the power is turned OFF.

Chapter 3 Properties and Methods

3.1 Properties

The properties that differ from those functions described in UPOS are shown below.

3.1.1 CapPowerReporting property

Description

The notification capability of the device is identified.

This property is set to one of the following values.

Value	Meaning
PowerReporting.Standard	ServiceObject can determine between and provide notification of the two power statuses: OFF_OFFLINE (the device is turned off or offline) and ONLINE.

3.1.2 PowerState property

Description

The power supply status of the device is identified.

However, if the LineDisplay is connected to the POSPrinter, the value of this property may get updated depending on the power status of the POSPrinter.

3.1.3 DeviceEnabled property

Description

When set to “true”, the operation of the marquee mode and teletype mode is resumed based on the properties set at that time.

When set to “false”, the operation of the marquee mode and teletype mode is halted.

3.1.4 CharacterSet property

Description

The values that can be set are limited to the values found in the **CharacterSetList** property. If the property value is set to 932, the display for ASCII code 0x5C is changed to the yen symbol "¥".

3.1.5 DeviceBrightness property

Description

The device brightness is set in terms of percentages from 0 to 100.
The relation between brightness set at the device and the property setting value is as follows:

DeviceBrightness property	Device brightness
0 – 39	20%
40 – 59	40%
60 – 79	60%
80 – 100	100%

3.1.6 DeviceWindows property

Description

This property is always set to 4.

3.2 Methods

The methods that differ from those functions described in UPOS are shown below.

3.2.1 Claim method

Description

When the **Claim** method is executed, the connection of the port to which the device is connected, and the acquisition and setting of device information are performed.

If the acquisition and setting of device information, or port connection fails, an exception is thrown.

The execution of the **Claim** method after executing the **Release** method redraws the contents that were displayed when the **Release** method was executed. However, if the **Close** method or the **Open** method was executed prior to executing the **Claim** method, there is no redrawing.

3.2.2 CheckHealth method

Description

This ServiceObject supports only "HealthCheckLevel.Interactive".

It can be executed when all the windows are in Immediate mode.

When "HealthCheckLevel.Interactive" is executed, the following dialog box appears.



The operations when the respective buttons are clicked are as follows:

- **[Display] button**

It performs testing.

The following character strings are displayed to the device:

- Interactive HCheck !!
- DeviceName=device name

- **[Close] button**

It ends the processing of **CheckHealth** method.

After executing the method, the following values can be acquired in the **CheckHealthText** property.

And besides, the following value is retrieved as the returned value of method.

Value	Meaning
Interactive HCheck: Canceled	Ends CheckHealth without doing anything.
Interactive HCheck: Complete	Ends CheckHealth after the last operation ends normally.
Interactive HCheck: Error - <Message>	Ends CheckHealth after the last operation ends with an error. The content of the error appears as a <i>Message</i> .

3.2.3 DirectIO method

Description

The **DirectIO** method can be used when the **DeviceEnabled** property is “true”.

The function that the **DirectIO** method supports is as follows:

Command	Outline of functions
DISP_DI_OUTPUT	Output the data specified in “pString”.
DISP_DI_LAYOUT	Setting layout.
DISP_DI_ROW_COLUMN	Setting rows and columns.
DISP_DI_DISPLAY_BACKGROUND_COLOR	Setting background color.
DISP_DI_SLIDESHOW	Setting slide show.
DISP_DI_SET_TEXT_COLOR	Setting text color.
DISP_DI_SET_BARCODE_DATA	Register barcode data.
DISP_DI_DISPLAY_BARCODE	Display barcode.
DISP_DI_CLEAR_BARCODE	Clear displayed barcode.
DISP_DI_REGISTER_IMAGE	Register download image.
DISP_DI_DISPLAY_IMAGE	Display download image.
DISP_DI_DISPLAY_NV_IMAGE	Display NV image.
DISP_DI_CLEAR_IMAGE	Clear displayed image.
DISP_DI_SET_FONT	Set the first priority font.
DISP_DI_GET_FONT	Get the setting font.

For the combination of functions and screens supported by the **DirectIO** method, refer to “[Appendix F DirectIO function details](#)”.

3.2.3.1 DISP_DI_OUTPUT

Parameter

<i>command</i>	DISP_DI_OUTPUT
<i>data</i>	Not used.
<i>object(byte[]: type)</i>	Transmission data.

Description

It sends the data specified in the *object* parameter directly to device.

It is to be used only when sending ESC/POS commands to the device. ServiceObject does not check data sent through this command. ESC/POS commands such as those that change the amount of line feed or font size obstruct the operations of ServiceObject and should not be sent.

3.2.3.2 DISP_DI_LAYOUT

Parameter

<i>command</i>	DISP_DI_LAYOUT
<i>data</i>	Layout number.
<i>object</i>	Not used.

Description

Select a layout. Destroy all windows if they have been created.

3.2.3.3 DISP_DI_ROW_COLUMN

Parameter

<i>command</i>	DISP_DI_ROW_COLUMN
<i>data</i>	Not used
<i>object(string[]: type)</i>	Specify the number of lines and digits as a comma-separated character string. ex: "2,20"

Description

Specify the number of lines and columns.

Destroy all windows if they have been created.

The maximum number of lines and digits depends on the layout number.

Note:

Details for valid combinations, refer to "[Appendix F DirectIO function details](#)".

3.2.3.4 DISP_DI_DISPLAY_BACKGROUND_COLOR

Parameter

<i>command</i>	DISP_DI_ROW_COLUMN
<i>data</i>	Not used
<i>object(string[]: type)</i>	Specify the color and target line with a comma-separated character string.

Background color

- 24bit RGB888 format.
- CSS3 extended color.

Target line

- DISP_BG_COLOR_ODD: Odd lines.
- DISP_BG_COLOR_EVEN: Even lines.
- Empty string(""): All lines.
- Comma separated numbers: line numbers.

ex: Changing blue, 1st and 3rd lines.

(EpsonLineDisplayConst.DISP_DI_BLUE).ToString() + ",1,3"

Description

Specifies the background color of the text area.

For details on the colors that can be set with constant values, refer to ["Appendix F DirectIO function details"](#).

3.2.3.5 DISP_DI_SLIDESHOW

Parameter

<i>command</i>	DISP_DI_SLIDESHOW
<i>data</i>	DISP_DI_SLIDESHOW_START DISP_DI_SLIDESHOW_STOP
<i>object</i>	Not used.

Description

Start or stop the slide show.

Note:

This feature requires the utility to pre-register the image.

3.2.3.6 DISP_DI_SET_TEXT_COLOR

Parameter

<i>command</i>	DISP_DI_SET_TEXT_COLOR
<i>data</i>	Not used.
<i>object(long: type)</i>	Text color <ul style="list-style-type: none"> - 24bit RGB888 format. - CSS3 extended color.

Description

Set the text color.

If you specify the text color, the text color to be output after that is displayed in the specified color.

For details on the colors that can be set with constant values, refer to [“Appendix F DirectIO function details”](#).

3.2.3.7 DISP_DI_SET_BARCODE_DATA

Parameter

<i>command</i>	DISP_DI_SET_BARCODE_DATA
<i>data</i>	Barcode type <ul style="list-style-type: none"> - DISP_DI_QRCODE_MODEL_1: QR code model1. - DISP_DI_QRCODE_MODEL_2: QR code model2.
<i>object(string[]): type</i>	Barcode data.

Description

Register the barcode data.

Note:

The error correction level is fixed at 7%. A quiet zone is added.

3.2.3.8 DISP_DI_DISPLAY_BARCODE

Parameter

<i>command</i>	DISP_DI_DISPLAY_BARCODE
<i>data</i>	Barcode type <ul style="list-style-type: none"> - DISP_DI_QRCODE_MODEL_1: QR code model1. - DISP_DI_QRCODE_MODEL_2: QR code model2.
<i>object(string[]): type</i>	Specify the display X position, display Y position, and size as a comma-separated string. <p>Landscape: X position: 0 to 799, Y position: 0 to 479</p> <p>Portrait: X position: 0 to 479, Y position: 0 to 799</p> <p>Size: 1 ~ 16 ex: "0,0,5"</p>

Description

Display the registered barcode.

Note:

The maximum value of the display X position and Y position differs depending on the layout number.

3.2.3.9 DISP_DI_CLEAR_BARCODE

Parameter

<i>command</i>	DISP_DI_SET_TEXT_COLOR
<i>data</i>	Not used.
<i>object</i>	Not used.

Description

Clear the displayed barcode.

3.2.3.10 DISP_DI_REGISTER_IMAGE

Parameter

<i>command</i>	DISP_DI_REGISTER_IMAGE
<i>data</i>	Image registration number. (Range:1~255)
<i>object(string[] :type)</i>	Image file name.

Description

Register the download image.

If you register multiple images, you must to change the registration number. At that time, specify consecutive numbers without skipping the numbers.

For example, you cannot register to number 3 after registering to number 1. Please register at number 2 after number 1.

Up to 255 images can be registered. However, if the total size of the registered files exceeds 1.5 Mbytes, it cannot be registered.

Note1:

The display supports PNG and JPEG formats. The OPOS driver does not validate the image format. If no error occurs and the image cannot be displayed, check the image data format.

Note2:

When using a JPEG format image, use an image with a Width value of 2 or more. Also, if you specify an image that exceeds the maximum value of the device, it will be cropped to the device size and displayed.

Note3:

If this DirectIO is executed due to poor communication, but the return value is not returned, immediately execute the **Close** method and re-initialize the LineDisplay.

Note4:

This API converts the image format and the number of pixels in order to fit the specification before registering it to the customer display. Therefore, the image size may increase due to the conversion process, please consider a margin for the total size of the images to be registered. Even if registration cannot be performed due to insufficient free space in the download graphics memory, an error cannot be detected.

3.2.3.11 DISP_DI_DISPLAY_IMAGE

Parameter

<i>command</i>	DISP_DI_DISPLAY_IMAGE
<i>data</i>	Registered image number. (Range:1~255)
<i>object(string[] :type)</i>	Specify the X position, Y position, width W, and height H of the image to be displayed separated by commas.
	Landscape X position: 0~799 Y position: 0~479
	Portrait X position: 0~479 Y position: 0~799
	W: 0~1440 H: 0~1440
	ex:"100,100,0,0"

Description

The image is displayed at the specified position.

The maximum value of the display X position and Y position differs depending on the layout number.

3.2.3.12 DISP_DI_DISPLAY_NV_IMAGE

Parameter

<i>command</i>	DISP_DI_DISPLAY_NV_IMAGE
<i>data</i>	Not used.
<i>object(string[] :type)</i>	Specify two key codes, X position, Y position, width W, and height H of the image to be displayed, separated by commas.

Key code: $65 \leq k \leq 90$, $97 \leq k \leq 122$

Landscape: X position: 0~799
Y position: 0~479

Portrait: X position: 0~479
Y position: 0~799

W: 0~1440

H: 0~1440

Description

The NV image is displayed at the specified position.

The maximum value of the display X position and Y position differs depending on the layout number.

Note:

Use the display utility to register NV images.

3.2.3.13 DISP_DI_CLEAR_IMAGE

Parameter

<i>command</i>	DISP_DI_CLEAR_IMAGE
<i>data</i>	Not used.
<i>object</i>	Not used.

Description

Clear the image displayed in the image area.

3.2.3.14 DISP_DI_SET_FONT

Parameter

<i>command</i>	DISP_DI_SET_FONT
<i>data</i>	Specify the font to be displayed preferentially. DISP_DI_FONT_ANK: Alphanumeric font. DISP_DI_FONT_JP: Japanese font. DISP_DI_FONT_SC: Simplified Chinese font. DISP_DI_FONT_TC: Traditional Chinese font. DISP_DI_FONT_KO: Korean font.
<i>object</i>	Not used.

Description

Set the type of font to be displayed.

The specified font is set as the first priority, and the first priority font before designation is set as the second priority font.

3.2.3.15 DISP_DI_GET_FONT

Parameter

<i>command</i>	DISP_DI_GET_FONT
<i>data</i>	Specify the priority number of the font to be acquired. (Range: 1~5)
<i>object</i>	Not used.

Description

Gets the font to the specified priority.

After executing this function, specified priority number is set in “data” parameter.

The defined values are following.

DISP_DI_FONT_ANK	: Alphanumeric font.
DISP_DI_FONT_JP	: Japanese font.
DISP_DI_FONT_SC	: Simplified Chinese font.
DISP_DI_FONT_TC	: Traditional Chinese font.
DISP_DI_FONT_KO	: Korean font.

3.2.4 ResetStatistics Method

- **Parameter type:** *Microsoft.PointOfService.StatisticCategories*

Parameter

Microsoft.PointOfService.StatisticCategories

Specify one of the following.

- *StatisticCategories.Upos*
- *StatisticCategories.Manufacturer*
- *StatisticCategories.All*

Description

Of the items included in the specified category, only the items for which O appeared for the permission reset in "[Appendix G DeviceStatistics](#)" are reset.

All the statistics supported by the ServiceObject are defined in UPOS. If "StatisticCategories.Manufacturer" is specified, nothing is reset.

- **Parameter type:** *String[]*

Parameter

String[]

An array of the item names to reset

Description

Of the items included in the specified category, only the items for which O appears for the reset permission in "[Appendix G DeviceStatistics](#)" are reset when "U_", "M_", or an empty string is specified for item names.

If an illegal item name or non-resettable item name is included, this method reports an error. When this happens, correctly specified items are also not reset.

All the statistics supported by the ServiceObject are defined in UPOS. If "M_" is specified, nothing is reset.

3.2.5 ResetStatistic Method

Description

Of the items included in the specified category, only the items for which O appears for the reset permission in "[Appendix-E DeviceStatistics](#)" are reset when "U_", "M_", or an empty string is specified for item names.

If an illegal item name or non-resettable item name is specified, this method reports an error.

All the statistics supported by the ServiceObject are defined in UPOS. If "M_" is specified, nothing is reset.

3.2.6 RetrieveStatistics Method

- **Parameter type:** *Microsoft.PointOfService.StatisticCategories*

Parameter

Microsoft.PointOfService.StatisticCategories

Specify one of the following.

- *StatisticCategories.Upos*
- *StatisticCategories.Manufacturer*
- *StatisticCategories.All*

Description

The Statistics supported by ServiceObject are all defined in UPOS. If "StatisticCategories.Manufacturer" is specified, the minimum information specified by UPOS (the 4 items; UPOS version, manufacturer name, device name, and device category) is acquired.

- **Parameter type: *String[]***

Parameter
<i>String[]</i>

An array of the item names to retrieve

Description

If an illegal item name is included, this method reports an error.

The Statistics supported by ServiceObject are all defined in UPOS. If “M_” is specified, the minimum information specified by UPOS (the 4 items; UPOS version, manufacturer name, device name, and device category) is acquired.

- **Parameter type: None**

Description

The information of all defined items is retrieved.

3.2.7 RetrieveStatistic Method**Description**

If an illegal item name is included, this method reports an error.

If multiple item names separated by commas are specified (UPOS Specification), an error is reported.

The Statistics supported by ServiceObject are all defined in UPOS. If “M_” is specified, the minimum information specified by UPOS (the 4 items; UPOS version, manufacturer name, device name, and device category) is acquired.

3.2.8 UpdateStatistics Method

- Parameter type: *Microsoft.PointOfService.Statistic[]*

Parameter

<i>Microsoft.PointOfService.Statistic[]</i>	Specifies <i>Microsoft.PointOfService.Statistic</i> array for which item names and new values have been set.
---	---

Description

Of the items included in the specified category, only the items for which O appears for the update permission in "[Appendix-G DeviceStatistics](#)" are updated when "U_", "M_", or an empty string is specified for item names. If an illegal item name or non-updatable item name is included, this method reports an error. In this case, correctly specified items are also not updated.

The Statistics supported by ServiceObject are all defined by UPOS. If "M_" is specified, nothing is updated.

- **Parameter type: *Microsoft.PointOfService.StatisticCategories***

Parameter

Microsoft.PointOfService.StatisticCategories

Specify one of the following.

- StatisticCategories.Upos
- StatisticCategories.Manufacturer
- StatisticCategories.All

Object

Specify the new value after updating.

Description

Of the items included in the specified category, only the items for which O appeared for the update permission in "Appendix-E DeviceStatistics" are updated.

All the statistics supported by the ServiceObject are defined in UPOS. If "StatisticCategories.Manufacturer" is specified, nothing is update.

3.2.9 UpdateStatistic Method

Description

Of the items included in the specified category, only the items for which O appears for the update permission in "Appendix-G DeviceStatistics" are updated when "U_", "M_", or an empty string is specified for item names. If an illegal item name or non-updatable item name is specified, this method reports an error.

The Statistics supported by ServiceObject are all defined by UPOS. If "M_" is specified, nothing is updated.

3.2.10 CreateWindow method

Description

It can create a new window.

The theoretical size of window that can be created is up to 50 lines vertically and 200 columns horizontally.

3.2.11 DisplayText method

Description

It can display characters.

All escape sequences are not supported on the DM-D70.

3.2.12 DisplayTextAt method

Description

It can display characters starting from specified position.

All escape sequences are not supported on the DM-D70.

3.2.13 ReadCharacterAtCursor method

Description

It reads the character displayed at the current cursor position, and returns the character code.

If character information is not present at the cursor position, it returns 127 (decimal number).

Appendix A Revision history

A.1 EPSON OPOS ADK for .NET 1.14.25

(1) Update Combination of “Display mode” and “Device”.

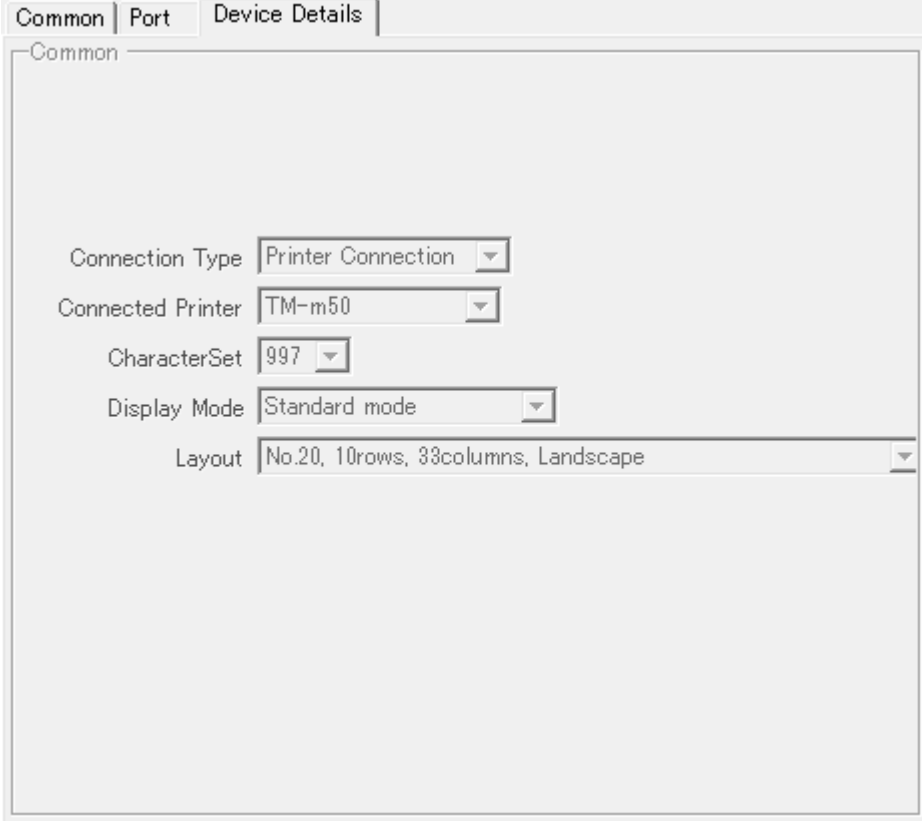
A.2 EPSON OPOS ADK for .NET 1.14.19

(1) Update Combination of “Display mode” and “Device”.

A.3 EPSON OPOS ADK for .NET 1.14.17

(1) DM-D70 is supported.

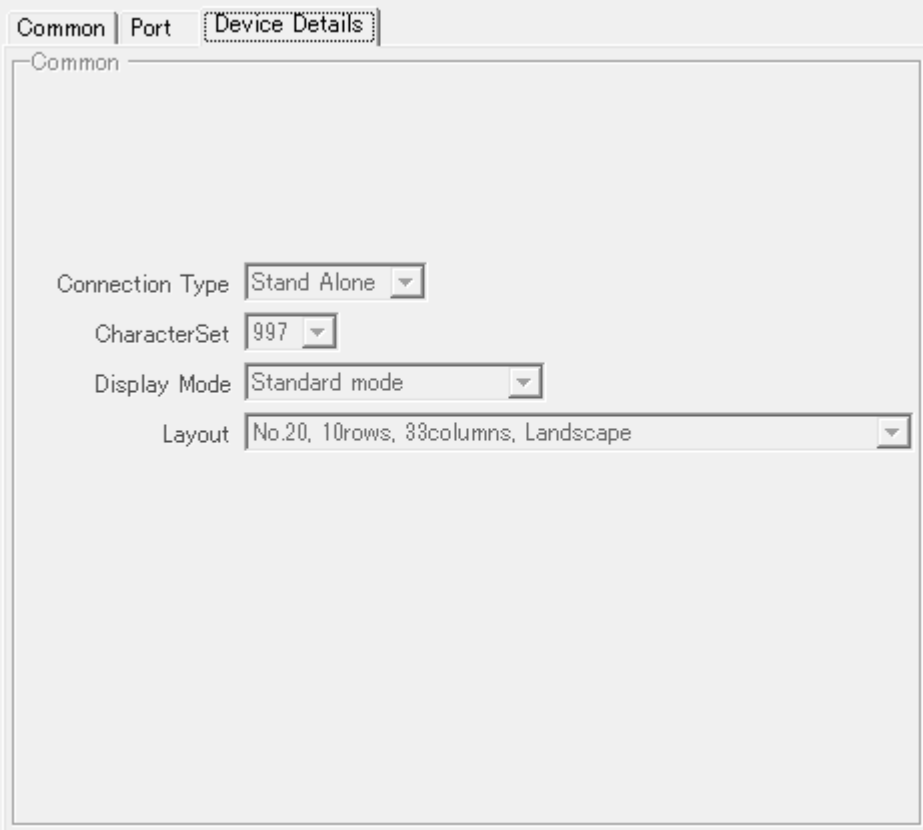
Appendix B SetupPOS Settings



The screenshot shows a dialog box titled "Common" with three tabs: "Common", "Port", and "Device Details". The "Common" tab is selected. Inside the dialog, there are five settings, each with a label and a dropdown menu:

- Connection Type: Printer Connection
- Connected Printer: TM-m50
- CharacterSet: 997
- Display Mode: Standard mode
- Layout: No.20, 10rows, 33columns, Landscape

When registering [Printer Connection]



The screenshot shows a software configuration window with three tabs: 'Common', 'Port', and 'Device Details'. The 'Device Details' tab is selected and active. Inside this tab, there are four configuration items, each with a label and a dropdown menu:

- Connection Type**: Set to 'Stand Alone'.
- CharacterSet**: Set to '997'.
- Display Mode**: Set to 'Standard mode'.
- Layout**: Set to 'No.20, 10rows, 33columns, Landscape'.

When registering [Stand Alone]

B.1 “Connection Type” combobox

Description

It sets the connection type of LineDisplay.

State	Meaning
Printer Connection	It means connecting DM-D70 to USB Type-A port of the printer directly
Stand alone	DM-D70 is used as a single unit.

B.2 “Connected Printer” combobox

Description

It sets the POSPrinter used as the host device.

Note:

This setting item is valid only when “DM-D70 (Printer Connection)” is selected.

When using LineDisplay on a USB-connected printer when multiple printers have been registered, select the proper "connected port" in the "Port" configuration window.

B.3 “Character Set” combobox

Description

Set the initial value of the “CharacterSet” property.

State

437, 997

B.4 “Display Mode” combobox

Description

Set the “display mode” when display on the DM-D70.

State	Meaning
Fixed row column mode	Layout settings that are conscious of compatibility with DM-D110 / DM-D210 / DM-D30 / DM-D500
Standard mode	It is a setting that can use all the functions added in DM-D70.

B.5 “Layout” combobox

Description

Set the screen layout when displaying on the DM-D70.

For details, refer to [\[Appendix C “Display mode” and “Layout”\]](#)

Appendix C “Display mode” and “Layout”

The following is an explanation of the "display mode" that can be set with the SetupPOS utility and the "layout" that can be set.

C.1 Combination of “Display mode” and “Device”

There are "Standard mode" and "Fixed row column mode" as display modes.

When using this device by connecting it to a printer, the supported modes differ depending on the connected printer.

Models with limited combinations are as follows.

(1) TM-T88 Series

Device Name	Standard mode	Fixed row column mode
TM-T88VI	x	○
TM-T88VII	○	○

○:Supported function

x:Not supported function

(2) TM-m30 Series

Device Name	Standard mode	Fixed row column mode
TM-m30	x	○
TM-m30II	x	○
TM-m30II-H	○ ^{*1}	○
TM-m30II-S	○ ^{*1}	○
TM-m30II-NT	○ ^{*1}	○
TM-m30II-SL	○ ^{*1}	○
TM-m30III	○	○

○:Supported function

x:Not supported function

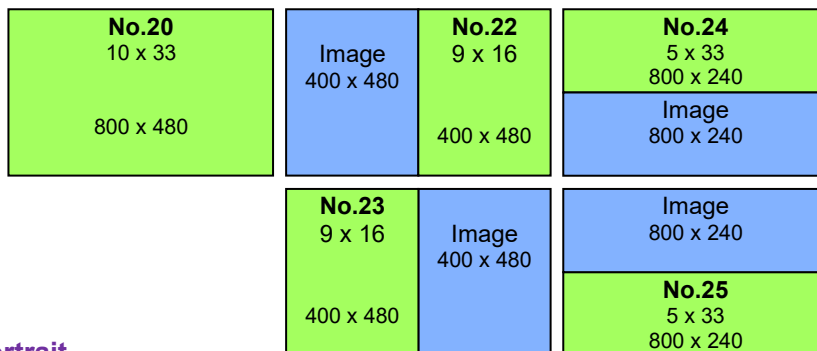
^{*1} If use the “Standard mode” function, upgrade the firmware to [03.06A ESC / POS] or [03.06B ESC / POS] or later.

C.2 “Standard mode” and “Layout”

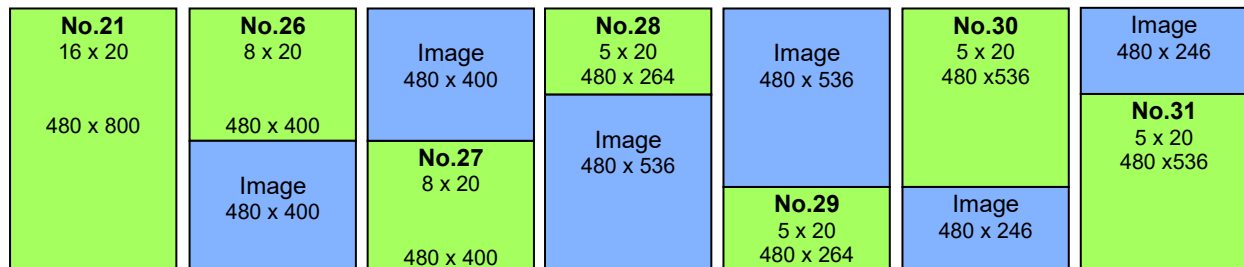
Available all the functions added in DM-D70.

No	Rows / Columns	Direction	Screen layout
No.20	10rows, 33columns	Landscape	Full text
No.21	16rows, 20columns	Portrait	Full text
No.22	9rows, 16columns	Landscape	Left: Image, Right: Text
No.23	9rows, 16columns	Landscape	Left: Text, Right: Image
No.24	5rows, 33columns	Landscape	Upper: Text, Lower: Image
No.25	5rows, 33columns	Landscape	Upper: Image, Lower: Text
No.26	8rows, 20columns	Portrait	Upper: Text, Lower: Image
No.27	8rows, 20columns	Portrait	Upper: Image, Lower: Text
No.28	5rows, 20columns	Portrait	Upper: Text (1/3), Lower: Image (2/3)
No.29	5rows, 20columns	Portrait	Upper: Image (2/3), Lower: Text (1/3)
No.30	11rows, 20columns	Portrait	Upper: Text (2/3), Lower: Image (1/3)
No.31	11rows 20columns	Portrait	Upper: Image (1/3), Lower: Text (2/3)

DM-D70: Landscape



DM-D70: Portrait



C.3 “Fixed row column mode” and “Layout”

Compatible layout with DM-D110 / DM-D210 / DM-D30 / DM-D500.

No	Rows / Columns	Direction	Screen structure
No.1	2rows, 20columns	Landscape	Upper: Text, Lower: Image
No.2			Upper: Image, Lower: Text
No.3			Center: Text
No.4	4rows, 32columns		Upper: Text, Lower: Image
No.5			Upper: Image, Lower: Text
No.6			Center: Text
No.7	8rows, 42columns		Upper: Text, Lower: Image
No.8			Upper: Image, Lower: Text
No.9			Center: Text
No.10	3rows, 32columns		Upper: Text, Lower: Image
No.11			Upper: Image, Lower: Text
No.12			Center: Text
No.13	2rows, 32columns		Upper: Text, Lower: Image
No.14			Upper: Image, Lower: Text
No.15			Center: Text

DM-D70: Landscape

No.1 2 x 20 800 x 240 Image 800 x 240	No.4 4 x 32 800 x 240 Image 800 x 240	No.7 8 x 42 800 x 240 Image 800 x 240	No.10 3 x 32 800 x 240 Image 800 x 240	No.13 2 x 32 800 x 240 Image 800 x 240
Image 800 x 240	Image 800 x 240	Image 800 x 240	Image 800 x 240	Image 800 x 240
No.2 2 x 20 800 x 240	No.5 4 x 32 800 x 240	No.8 8 x 42 800 x 240	No.11 3 x 32 800 x 240	No.14 2 x 32 800 x 240
No.3 2 x 20	No.6 4 x 32	No.9 8 x 42	No.12 3 x 32	No.15 2 x 32

Note: The grayed-out part cannot be displayed.

Appendix D Hardware Settings

D.1 DIP switch settings

DM-D70 has no DIP Switch.

Appendix E Default Values of Properties

E.1 Initial value of each property

The default values of the properties of this device are shown below.

Property	Setting value / Defined value	Acceptable setting values
CapCompareFirmwareVersion	false	-
CapPowerReporting	PowerReporting.Standard	-
CapStatisticsReporting	true	-
CapUpdateFirmware	false	-
CapUpdateStatistics	true	-
CheckHealthText	""	-
Claimed	false	-
DeviceEnabled	false	true, false
FreezeEvents	false	true false
PowerNotify	PowerNotification.Disabled	PowerNotification.Disabled, PowerNotification.Enabled
PowerState	PowerState.Unknown	-
State	ControlState.Closed	-
DeviceDescription	"EPSON DM-D70 LineDisplay": Printer Connection "EPSON DM-D70(Stand alone) LineDisplay": Stand alone	-
DeviceName	"DM-D70": Printer Connection "DM-D70SA": Stand alone	-
CapBlink	DisplayBlink.None	-
CapBitmap	false	-
CapBlinkRate	false	-
CapBrightness	true	-
CapCharacterSet	CharacterSetCapability.Unicode	-
CapCursorType	DisplayCursors.None	-
CapCustomGlyph	false	-
CapDescriptors	false	-
CapHMarquee	true	-
CapICharWait	true	-
CapMapCharacterSet	false	-
CapReadBack	DisplayReadBack.Single	-
CapReverse	DisplayReverse.None	-
CapScreenMode	false	-
CapVMarquee	false	-
BlinkRate	0	-
CharacterSet	997	Any of CharacterSetList

CharacterSetList	150,151,152,153,154,155,437, 720,737,775,850,851,852,853, 855,857,858,860,861,862,863, 864,865,866,869,932,997,998, 999,1098,1125,1250,1251,1252, 1253,1254,1255,1256,1257,1258	-
Columns	See the “ Layout affected settings ”	See the “ Layout affected settings ”
CurrentWindow	0	0 to 4
CursorColumn	0	Within the range of 0 to Columns Property
CursorRow	0	Within the range of 0 to (Rows Property - 1)
CursorType	DisplayCursors.None	-
CursorUpdate	true	true false
CustomGlyphList	""	-
DeviceBrightness	100	0 to 100
DeviceColumns	See the “ Layout affected settings ”	See the “ Layout affected settings ”
DeviceDescriptors	0	-
DeviceRows	See the “ Layout affected settings ”	See the “ Layout affected settings ”
DeviceWindows	4	-
GlyphHeight	0	-
GlyphWidth	0	-
InterCharacterWait	0	0 and above
MapCharacterSet	false	-
MarqueeFormat	DisplayMarqueeFormat.Walk	DisplayMarqueeFormat.Walk, DisplayMarqueeFormat.Place
MarqueeRepeatWait	0	0 and above
MarqueeType	DisplayMarqueeType.None	DisplayMarqueeType.None, DisplayMarqueeType.Init, DisplayMarqueeType.Left, DisplayMarqueeType.Right
MarqueeUnitWait	0	0 and above
MaximumX	0	-
MaximumY	0	-
Rows	See the “ Layout affected settings ”	See the “ Layout affected settings ”
ScreenMode	0	0
ScreenModeList	See the “ Layout affected settings ”	See the “ Layout affected settings ”

E.2 Layout affected settings

E.2.1 “Standard mode”

Layout number	Property	Setting value
No.20	Columns	33
	DeviceColumns	33
	DeviceRows	10
	Rows	10
	ScreenModeList	DisplayScreemMode[0].Rows = 10 DisplayScreemMode[0].Columns = 33
No.21	Columns	20
	DeviceColumns	20
	DeviceRows	16
	Rows	16
	ScreenModeList	DisplayScreemMode[0].Rows = 16 DisplayScreemMode[0].Columns = 20
No.22	Columns	16
	DeviceColumns	16
	DeviceRows	9
	Rows	9
	ScreenModeList	DisplayScreemMode[0].Rows = 9 DisplayScreemMode[0].Columns = 16
No.23	Columns	16
	DeviceColumns	16
	DeviceRows	9
	Rows	9
	ScreenModeList	DisplayScreemMode[0].Rows = 9 DisplayScreemMode[0].Columns = 16
No.24	Columns	33
	DeviceColumns	33
	DeviceRows	5
	Rows	5
	ScreenModeList	DisplayScreemMode[0].Rows = 5 DisplayScreemMode[0].Columns = 33
No.25	Columns	33
	DeviceColumns	33
	DeviceRows	5
	Rows	5
	ScreenModeList	DisplayScreemMode[0].Rows = 5 DisplayScreemMode[0].Columns = 33
No.26	Columns	20
	DeviceColumns	20
	DeviceRows	8
	Rows	8
	ScreenModeList	DisplayScreemMode[0].Rows = 8 DisplayScreemMode[0].Columns = 20
No.27	Columns	20
	DeviceColumns	20
	DeviceRows	8
	Rows	8
	ScreenModeList	DisplayScreemMode[0].Rows = 8 DisplayScreemMode[0].Columns = 20

No.28	Columns	20
	DeviceColumns	20
	DeviceRows	5
	Rows	5
	ScreenModeList	DisplayScreemMode[0].Rows = 5 DisplayScreemMode[0].Columns = 20
No.29	Columns	20
	DeviceColumns	20
	DeviceRows	5
	Rows	5
	ScreenModeList	DisplayScreemMode[0].Rows = 5 DisplayScreemMode[0].Columns = 20
No.30	Columns	20
	DeviceColumns	20
	DeviceRows	11
	Rows	11
	ScreenModeList	DisplayScreemMode[0].Rows = 11 DisplayScreemMode[0].Columns = 20
No.31	Columns	20
	DeviceColumns	20
	DeviceRows	11
	Rows	11
	ScreenModeList	DisplayScreemMode[0].Rows = 11 DisplayScreemMode[0].Columns = 20

E.2.2 “Fixed row column mode”

Layout number	Property	Setting value
No.1	Columns	20
	DeviceColumns	20
	DeviceRows	2
	Rows	2
	ScreenModeList	DisplayScreemMode[0].Rows = 2 DisplayScreemMode[0].Columns = 20
No.2	Columns	20
	DeviceColumns	20
	DeviceRows	2
	Rows	2
	ScreenModeList	DisplayScreemMode[0].Rows = 2 DisplayScreemMode[0].Columns = 20
No.3	Columns	20
	DeviceColumns	20
	DeviceRows	2
	Rows	2
	ScreenModeList	DisplayScreemMode[0].Rows = 2 DisplayScreemMode[0].Columns = 20
No.4	Columns	32
	DeviceColumns	32
	DeviceRows	4
	Rows	4
	ScreenModeList	DisplayScreemMode[0].Rows = 4 DisplayScreemMode[0].Columns = 32
No.5	Columns	32
	DeviceColumns	32
	DeviceRows	4
	Rows	4
	ScreenModeList	DisplayScreemMode[0].Rows = 4 DisplayScreemMode[0].Columns = 32
No.6	Columns	32
	DeviceColumns	32
	DeviceRows	4
	Rows	4
	ScreenModeList	DisplayScreemMode[0].Rows = 4 DisplayScreemMode[0].Columns = 32
No.7	Columns	42
	DeviceColumns	42
	DeviceRows	8
	Rows	8
	ScreenModeList	DisplayScreemMode[0].Rows = 8 DisplayScreemMode[0].Columns = 42
No.8	Columns	42
	DeviceColumns	42
	DeviceRows	8
	Rows	8
	ScreenModeList	DisplayScreemMode[0].Rows = 8 DisplayScreemMode[0].Columns = 42
No.9	Columns	42
	DeviceColumns	42
	DeviceRows	8
	Rows	8
	ScreenModeList	DisplayScreemMode[0].Rows = 8 DisplayScreemMode[0].Columns = 42

No.10	Columns	32
	DeviceColumns	32
	DeviceRows	3
	Rows	3
	ScreenModeList	DisplayScreemMode[0].Rows = 3 DisplayScreemMode[0].Columns = 32
No.11	Columns	32
	DeviceColumns	32
	DeviceRows	3
	Rows	3
	ScreenModeList	DisplayScreemMode[0].Rows = 3 DisplayScreemMode[0].Columns = 32
No.12	Columns	32
	DeviceColumns	32
	DeviceRows	3
	Rows	3
	ScreenModeList	DisplayScreemMode[0].Rows = 3 DisplayScreemMode[0].Columns = 32
No.13	Columns	32
	DeviceColumns	32
	DeviceRows	2
	Rows	2
	ScreenModeList	DisplayScreemMode[0].Rows = 2 DisplayScreemMode[0].Columns = 32
No.14	Columns	32
	DeviceColumns	32
	DeviceRows	2
	Rows	2
	ScreenModeList	DisplayScreemMode[0].Rows = 2 DisplayScreemMode[0].Columns = 32
No.15	Columns	32
	DeviceColumns	32
	DeviceRows	2
	Rows	2
	ScreenModeList	DisplayScreemMode[0].Rows = 2 DisplayScreemMode[0].Columns = 32

Appendix F DirectIO function details

The following is combinations of functions supported by DirectIO and display mode.

Command	Standard mode	Fixed row column mode
DISP_DI_OUTPUT	○	○
DISP_DI_LAYOUT	○	×
DISP_DI_ROW_COLUMN	○	×
DISP_DI_DISPLAY_BACKGROUND_COLOR	○	×
DISP_DI_SLIDESHOW	○	×
DISP_DI_SET_TEXT_COLOR	○	×
DISP_DI_SET_BARCODE_DATA	○	×
DISP_DI_DISPLAY_BARCODE	○	×
DISP_DI_CLEAR_BARCODE	○	×
DISP_DI_REGISTER_IMAGE	○	×
DISP_DI_DISPLAY_IMAGE	○	×
DISP_DI_DISPLAY_NV_IMAGE	○	×
DISP_DI_CLEAR_IMAGE	○	×
DISP_DI_SET_FONT	○	×
DISP_DI_GET_FONT	○	×

○:Supported function.

×:Not supported function.

- Combinations that can be specified with DISP_DI_ROW_COLUMN

Layout number	Valid row column combinations
No.20	rows=1, $4 \leq \text{columns} \leq 44$ rows=2, $7 \leq \text{columns} \leq 44$ rows=3, $10 \leq \text{columns} \leq 44$ rows=4, $14 \leq \text{columns} \leq 44$ rows=5, $17 \leq \text{columns} \leq 44$ rows=6, $20 \leq \text{columns} \leq 44$ rows=7, $23 \leq \text{columns} \leq 44$ rows=8, $26 \leq \text{columns} \leq 44$ rows=9, $30 \leq \text{columns} \leq 44$ rows=10, $33 \leq \text{columns} \leq 44$ rows=11, $37 \leq \text{columns} \leq 44$ rows=12, $39 \leq \text{columns} \leq 44$ rows=13, $43 \leq \text{columns} \leq 44$

No.21	rows=1, $2 \leq \text{columns} \leq 22$ rows=2, $3 \leq \text{columns} \leq 22$ rows=3, $4 \leq \text{columns} \leq 22$ rows=4, $5 \leq \text{columns} \leq 22$ rows=5, $6 \leq \text{columns} \leq 22$ rows=6, $8 \leq \text{columns} \leq 22$ rows=7, $9 \leq \text{columns} \leq 22$ rows=8, $10 \leq \text{columns} \leq 22$ rows=9, $11 \leq \text{columns} \leq 22$ rows=10, $12 \leq \text{columns} \leq 22$ rows=11, $13 \leq \text{columns} \leq 22$ rows=12, $15 \leq \text{columns} \leq 22$ rows=13, $16 \leq \text{columns} \leq 22$ rows=14, $17 \leq \text{columns} \leq 22$ rows=15, $18 \leq \text{columns} \leq 22$ rows=16, $19 \leq \text{columns} \leq 22$ rows=17, $21 \leq \text{columns} \leq 22$ rows=18, $21 \leq \text{columns} \leq 22$ rows=19, $22 \leq \text{columns} \leq 22$
No.22	rows=1, $2 \leq \text{columns} \leq 22$ rows=2, $4 \leq \text{columns} \leq 22$ rows=3, $5 \leq \text{columns} \leq 22$ rows=4, $7 \leq \text{columns} \leq 22$ rows=5, $9 \leq \text{columns} \leq 22$ rows=6, $10 \leq \text{columns} \leq 22$ rows=7, $12 \leq \text{columns} \leq 22$ rows=8, $13 \leq \text{columns} \leq 22$ rows=9, $15 \leq \text{columns} \leq 22$ rows=10, $17 \leq \text{columns} \leq 22$ rows=11, $19 \leq \text{columns} \leq 22$ rows=12, $20 \leq \text{columns} \leq 22$ rows=13, $22 \leq \text{columns} \leq 22$
No.23	rows=1, $2 \leq \text{columns} \leq 22$ rows=2, $4 \leq \text{columns} \leq 22$ rows=3, $5 \leq \text{columns} \leq 22$ rows=4, $7 \leq \text{columns} \leq 22$ rows=5, $9 \leq \text{columns} \leq 22$ rows=6, $10 \leq \text{columns} \leq 22$ rows=7, $12 \leq \text{columns} \leq 22$ rows=8, $13 \leq \text{columns} \leq 22$ rows=9, $15 \leq \text{columns} \leq 22$ rows=10, $17 \leq \text{columns} \leq 22$ rows=11, $19 \leq \text{columns} \leq 22$ rows=12, $20 \leq \text{columns} \leq 22$ rows=13, $22 \leq \text{columns} \leq 22$
No.24	rows=1, $7 \leq \text{columns} \leq 44$ rows=2, $14 \leq \text{columns} \leq 44$ rows=3, $20 \leq \text{columns} \leq 44$ rows=4, $26 \leq \text{columns} \leq 44$ rows=5, $33 \leq \text{columns} \leq 44$ rows=6, $39 \leq \text{columns} \leq 44$

No.25	rows=1, $7 \leq \text{columns} \leq 44$ rows=2, $14 \leq \text{columns} \leq 44$ rows=3, $20 \leq \text{columns} \leq 44$ rows=4, $26 \leq \text{columns} \leq 44$ rows=5, $33 \leq \text{columns} \leq 44$ rows=6, $39 \leq \text{columns} \leq 44$
No.26	rows=1, $3 \leq \text{columns} \leq 22$ rows=2, $5 \leq \text{columns} \leq 22$ rows=3, $8 \leq \text{columns} \leq 22$ rows=4, $10 \leq \text{columns} \leq 22$ rows=5, $12 \leq \text{columns} \leq 22$ rows=6, $15 \leq \text{columns} \leq 22$ rows=7, $17 \leq \text{columns} \leq 22$ rows=8, $19 \leq \text{columns} \leq 22$ rows=9, $21 \leq \text{columns} \leq 22$
No.27	rows=1, $3 \leq \text{columns} \leq 22$ rows=2, $5 \leq \text{columns} \leq 22$ rows=3, $8 \leq \text{columns} \leq 22$ rows=4, $10 \leq \text{columns} \leq 22$ rows=5, $12 \leq \text{columns} \leq 22$ rows=6, $15 \leq \text{columns} \leq 22$ rows=7, $17 \leq \text{columns} \leq 22$ rows=8, $19 \leq \text{columns} \leq 22$ rows=9, $21 \leq \text{columns} \leq 22$
No.28	rows=1, $4 \leq \text{columns} \leq 22$ rows=2, $8 \leq \text{columns} \leq 22$ rows=3, $11 \leq \text{columns} \leq 22$ rows=4, $15 \leq \text{columns} \leq 22$ rows=5, $18 \leq \text{columns} \leq 22$ rows=6, $21 \leq \text{columns} \leq 22$
No.29	rows=1, $4 \leq \text{columns} \leq 22$ rows=2, $8 \leq \text{columns} \leq 22$ rows=3, $11 \leq \text{columns} \leq 22$ rows=4, $15 \leq \text{columns} \leq 22$ rows=5, $18 \leq \text{columns} \leq 22$ rows=6, $21 \leq \text{columns} \leq 22$
No.30	rows=1, $2 \leq \text{columns} \leq 22$ rows=2, $4 \leq \text{columns} \leq 22$ rows=3, $6 \leq \text{columns} \leq 22$ rows=4, $8 \leq \text{columns} \leq 22$ rows=5, $9 \leq \text{columns} \leq 22$ rows=6, $11 \leq \text{columns} \leq 22$ rows=7, $13 \leq \text{columns} \leq 22$ rows=8, $15 \leq \text{columns} \leq 22$ rows=9, $17 \leq \text{columns} \leq 22$ rows=10, $18 \leq \text{columns} \leq 22$ rows=11, $20 \leq \text{columns} \leq 22$ rows=12, $21 \leq \text{columns} \leq 22$

No.31	rows=1, $2 \leq \text{columns} \leq 22$ rows=2, $4 \leq \text{columns} \leq 22$ rows=3, $6 \leq \text{columns} \leq 22$ rows=4, $8 \leq \text{columns} \leq 22$ rows=5, $9 \leq \text{columns} \leq 22$ rows=6, $11 \leq \text{columns} \leq 22$ rows=7, $13 \leq \text{columns} \leq 22$ rows=8, $15 \leq \text{columns} \leq 22$ rows=9, $17 \leq \text{columns} \leq 22$ rows=10, $18 \leq \text{columns} \leq 22$ rows=11, $20 \leq \text{columns} \leq 22$ rows=12, $21 \leq \text{columns} \leq 22$
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- The following is colors that can be specified with

[DISP_DI_DISPLAY_BACKGROUND_COLOR] and [DISP_DI_SET_TEXT_COLOR]

Constant value	Mean
DISP_DI_BLACK	Black
DISP_DI_NAVY	Navy
DISP_DI_DARKBLUE	DarkBlue
DISP_DI_MEDIUMBLUE	MediumBlue
DISP_DI_BLUE	Blue
DISP_DI_DARKGREEN	DarkGreen
DISP_DI_GREEN	Green
DISP_DI_TEAL	Teal
DISP_DI_DARKCYAN	DarkCyan
DISP_DI_DEEPSKYBLUE	DeepSkyBlue
DISP_DI_DARKTURQUOISE	DarkTurquoise
DISP_DI_MEDIUMSPRINGGREEN	MediumSpringGreen
DISP_DI_LIME	Lime
DISP_DI_SPRINGGREEN	SpringGreen
DISP_DI_AQUA	Aqua
DISP_DI_CYAN	Cyan
DISP_DI_MIDNIGHTBLUE	MidnightBlue
DISP_DI_DODGERBLUE	DodgerBlue
DISP_DI_LIGHTSEAGREEN	LightSeaGreen
DISP_DI_FORESTGREEN	ForestGreen
DISP_DI_SEAGREEN	SeaGreen
DISP_DI_DARKSLATEGRAY	DarkSlateGray
DISP_DI_DARKSLATEGREY	DarkSlateGrey
DISP_DI_LIMEGREEN	LimeGreen
DISP_DI_MEDIUMSEAGREEN	MediumSeaGreen
DISP_DI_TURQUOISE	Turquoise
DISP_DI_ROYALBLUE	RoyalBlue
DISP_DI_STEELBLUE	SteelBlue
DISP_DI_DARKSLATEBLUE	DarkSlateBlue
DISP_DI_MEDIUMTURQUOISE	MediumTurquoise
DISP_DI_INDIGO	Indigo
DISP_DI_DARKOLIVEGREEN	DarkOliveGreen
DISP_DI_CADETBLUE	CadetBlue
DISP_DI_CORNFLOWERBLUE	CornflowerBlue
DISP_DI_MEDIUMAQUAMARINE	MediumAquaMarine
DISP_DI_DIMGRAY	DimGray
DISP_DI_DIMGREY	DimGrey
DISP_DI_SLATEBLUE	SlateBlue
DISP_DI_OLIVEDRAB	OliveDrab
DISP_DI_SLATEGRAY	SlateGray
DISP_DI_SLATEGREY	SlateGrey
DISP_DI_LIGHTSLATEGRAY	LightSlateGray
DISP_DI_LIGHTSLATEGREY	LightSlateGrey
DISP_DI_MEDIUMSLATEBLUE	MediumSlateBlue
DISP_DI_LAWNGREEN	LawnGreen
DISP_DI_CHARTREUSE	Chartreuse
DISP_DI_AQUAMARINE	Aquamarine
DISP_DI_MAROON	Maroon
DISP_DI_PURPLE	Purple
DISP_DI_OLIVE	Olive
DISP_DI_GRAY	Gray
DISP_DI_GREY	Grey
DISP_DI_SKYBLUE	SkyBlue
DISP_DI_LIGHTSKYBLUE	LightSkyBlue
DISP_DI_BLUEVIOLET	BlueViolet

DISP_DI_DARKRED	DarkRed
DISP_DI_DARKMAGENTA	DarkMagenta
DISP_DI_SADDLEBROWN	SaddleBrown
DISP_DI_DARKSEAGREEN	DarkSeaGreen
DISP_DI_LIGHTGREEN	LightGreen
DISP_DI_MEDIUMPURPLE	MediumPurple
DISP_DI_DARKVIOLET	DarkViolet
DISP_DI_PALEGREEN	PaleGreen
DISP_DI_DARKORCHID	DarkOrchid
DISP_DI_YELLOWGREEN	YellowGreen
DISP_DI_SIENNA	Sienna
DISP_DI_BROWN	Brown
DISP_DI_DARKGRAY	DarkGray
DISP_DI_DARKGREY	DarkGrey
DISP_DI_LIGHTBLUE	LightBlue
DISP_DI_GREENYELLOW	GreenYellow
DISP_DI_PALETURQUOISE	PaleTurquoise
DISP_DI_LIGHTSTEELBLUE	LightSteelBlue
DISP_DI_POWDERBLUE	PowderBlue
DISP_DI_FIREBRICK	FireBrick
DISP_DI_DARKGOLDENROD	DarkGoldenRod
DISP_DI_MEDIUMORCHID	MediumOrchid
DISP_DI_ROSYBROWN	RosyBrown
DISP_DI_DARKKHAKI	DarkKhaki
DISP_DI_SILVER	Silver
DISP_DI_MEDIUMVIOLETRED	MediumVioletRed
DISP_DI_INDIANRED	IndianRed
DISP_DI_PERU	Peru
DISP_DI_CHOCOLATE	Chocolate
DISP_DI_TAN	Tan
DISP_DI_LIGHTGRAY	LightGray
DISP_DI_LIGHTGREY	LightGrey
DISP_DI_PALEVIOLETRED	PaleVioletRed
DISP_DI_THISTLE	Thistle
DISP_DI_ORCHID	Orchid
DISP_DI_GOLDENROD	GoldenRod
DISP_DI_CRIMSON	Crimson
DISP_DI_GAINSBORO	Gainsboro
DISP_DI_PLUM	Plum
DISP_DI_BURLYWOOD	BurlyWood
DISP_DI_LIGHTCYAN	LightCyan
DISP_DI_LAVENDER	Lavender
DISP_DI_DARKSALMON	DarkSalmon
DISP_DI_VIOLET	Violet
DISP_DI_PALEGOLDENROD	PaleGoldenRod
DISP_DI_LIGHTCORAL	LightCoral
DISP_DI_KHAKI	Khaki
DISP_DI_ALICEBLUE	AliceBlue
DISP_DI_HONEYDEW	HoneyDew
DISP_DI_AZURE	Azure
DISP_DI_SANDYBROWN	SandyBrown
DISP_DI_WHEAT	Wheat
DISP_DI_BEIGE	Beige
DISP_DI_WHITESMOKE	WhiteSmoke
DISP_DI_MINTCREAM	MintCream
DISP_DI_GHOSTWHITE	GhostWhite
DISP_DI_SALMON	Salmon
DISP_DI_ANTIQUWHITE	AntiqueWhite
DISP_DI_LINEN	Linen
DISP_DI_LIGHTGOLDENRODYELLOW	LightGoldenRodYellow

DISP_DI_OLDLACE	OldLace
DISP_DI_RED	Red
DISP_DI_FUCHSIA	Fuchsia
DISP_DI_MAGENTA	Magenta
DISP_DI_DEEPPINK	DeepPink
DISP_DI_ORANGERED	OrangeRed
DISP_DI_TOMATO	Tomato
DISP_DI_HOTPINK	HotPink
DISP_DI_CORAL	Coral
DISP_DI_DARKORANGE	Darkorange
DISP_DI_LIGHTSALMON	LightSalmon
DISP_DI_ORANGE	Orange
DISP_DI_LIGHTPINK	LightPink
DISP_DI_PINK	Pink
DISP_DI_GOLD	Gold
DISP_DI_PEACHPUFF	PeachPuff
DISP_DI_NAVAJOWHITE	NavajoWhite
DISP_DI_MOCCASIN	Moccasin
DISP_DI_BISQUE	Bisque
DISP_DI_MISTYROSE	MistyRose
DISP_DI_BLANCHEDALMOND	BlanchedAlmond
DISP_DI_PAPAYAWHIP	PapayaWhip
DISP_DI_LAVENDERBLUSH	LavenderBlush
DISP_DI_SEASHELL	SeaShell
DISP_DI_CORNSILK	Cornsilk
DISP_DI_LEMONCHIFFON	LemonChiffon
DISP_DI_FLORALWHITE	FloralWhite
DISP_DI_SNOW	Snow
DISP_DI_YELLOW	Yellow
DISP_DI_LIGHTYELLOW	LightYellow
DISP_DI_IVORY	Ivory
DISP_DI_WHITE	White

Appendix G DeviceStatistics

The summary for the Statistics function of the device is shown.

XML definition name	Description	Reset Permission	Update Permission
UnifiedPOSVersion	UPOS version	×	×
DeviceCategory	Device category	×	×
ManufactureName	Manufacturer	×	×
ModelName	Device name	×	×
SerialNumber	Serial number	×	×
ManufactureDate	Manufacturing date	×	×
MechanicalRevision	Device revision	×	×
FirmwareRevision	Firmware version	×	×
Interface	Interface	×	×
InstallationDate	Installation date	×	×
HoursPoweredCount	Length of time in operation	○	○
CommunicationErrorCount	Communication error count	○	○
OnlineTransitionCount	Number of times displayed	○	○

○: Permitted

×: Not permitted