CITIZEN

# CITIZEN XML Print Service
# JavaScript Label Print SDK
## Programming Manual

**For Ver. 1.03**

CITIZEN SYSTEMS JAPAN CO., LTD.

# Revision History

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| 12/22/2023 | | - Added CL-S700III/703III to support model. (Page 8) |

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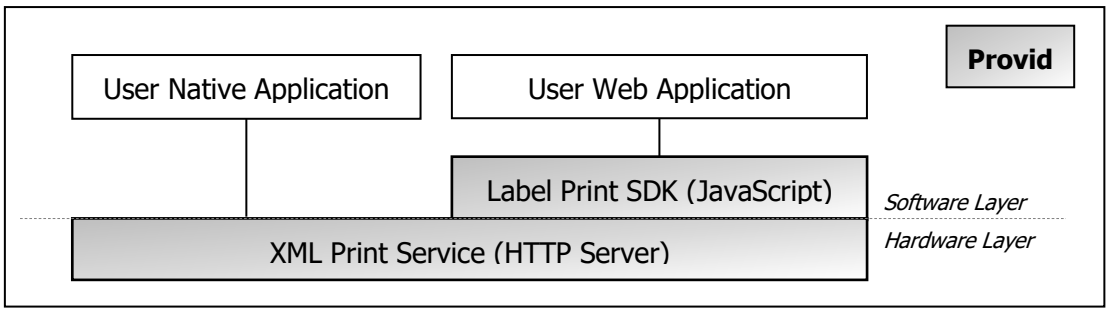
# 1. Introduction

This document is a manual for programmers for CITIZEN XML Print Service and JavaScript Label Print SDK.

## 1.1. System Overview

CITIZEN XML Print Service is provided to control a printer without a device driver in a multi-platform environment which is not operating system dependent.
Since the control method is HTTP (XML) based, a printer can be controlled easily from a Web service environment. Furthermore, CITIZEN XML-Label Print API is provided as a library for CITIZEN XML Print Service to print using JavaScript on the client side. The following shows a conceptual diagram of the provided service.

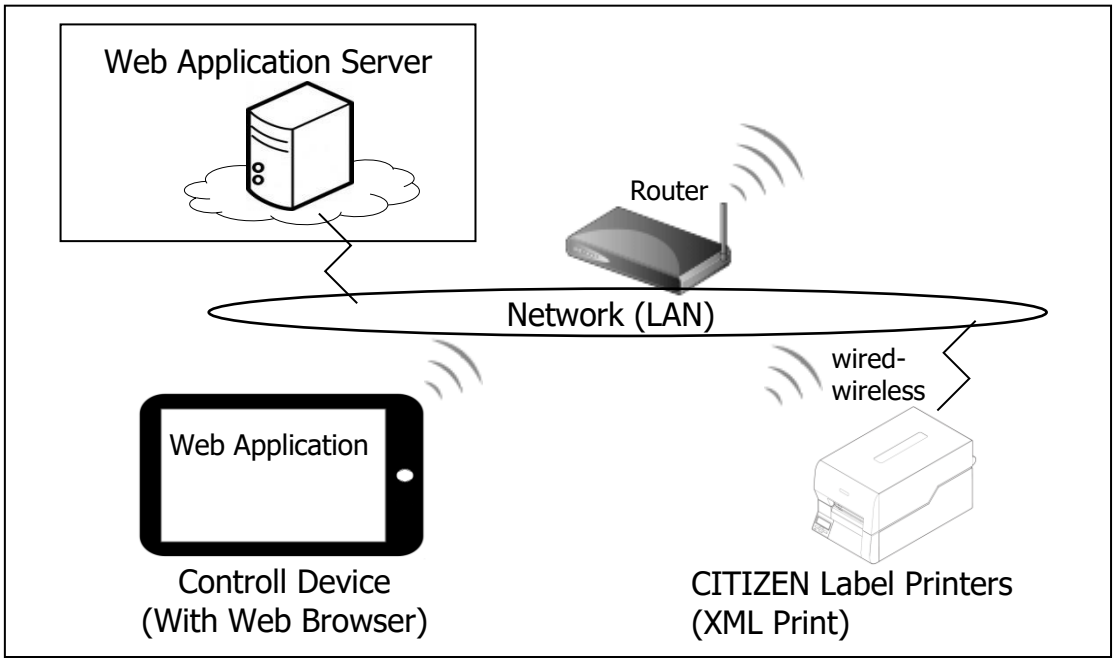



## 1.2. Scope of This Document

This document is intended to be a reference for developers of applications that use CITIZEN XML Print Service compatible printers.
For the control specifications for HTTP (XML) based printing, refer to "2. XML Print Service Messages", "3. Device Control Tags", and "4. XML Print Service Settings" in this document.
For the API specifications for printing from a Web service environment, refer to "5. JavaScript Label Print SDK".

## 1.3. System Configuration Example

The following shows a system configuration example for CITIZEN XML Print Service.



## 1.4. Supported Models

The applicable models of this service and the corresponding interfaces for those models are as follows. For details on the functions of each model, refer to the instruction manual of the corresponding printer.

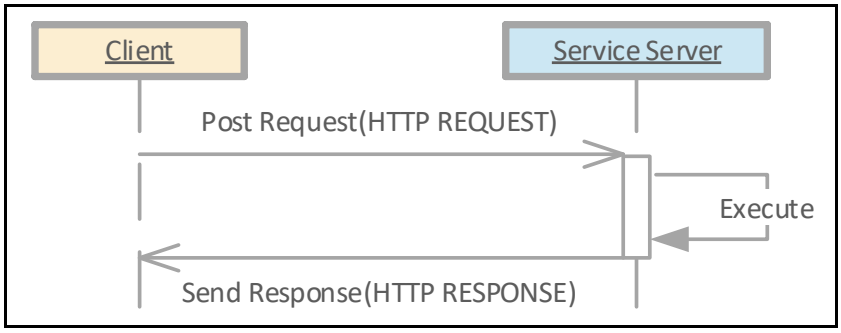
| Applicable Model | Interface |
|---|---|
| CL-S400DT | IWired LAN (model number: IF1-EFX1*, IF1-EFX2)<br>Wired LAN / Wireless LAN (model number: IF1-WFx4, IF1-WFx6) |
| CL-S700III/703II | |
| CL-E720/730 | |
| CL-E300EX/303EX | Wired LAN (model number: IF1-EFX1*, IF1-EFX2)<br>Wired LAN / Wireless LAN (model number: IF1-WFx5, IF1-WFx6) |
| CL-E321EX/331EX | |
| CL-S700/703 | Wired LAN (model number: IF5-EFX1) |
| CL-S700II/703II | |
| CL-S620/630 | |
| CL-S620II/630II | |
| CL-S520/530 | |
| CL-S520II/530II | |

* Not available in HTTPS environment (only available in HTTP environment)

For the version number of this service, refer to "4.1.2. Service Status screen / XML Print". Usage and functions may differ depending on the version.

# 2. XML Print Service Messages

The service user issues a request message as an HTTP request and then receives a response message from the service as an HTTP response as shown in the figure below. Request messages and response messages are defined in the "CitizenXML-Print.xsd" XML schema file.




## 2.1. Request Messages

Control of the device (printer) is performed in accordance with the request messages issued from clients.

### 2.1.1. Transmission Method and Message Structure

Send a SOAP message using the following method for a request message.

- HTTP URL: http(s)://[IP address of this service]/xmlprint
  * The https is supported by IF5-EFX1 and other service versions 2.1 or later.
  * In the service version 2.0 and earlier other than IF5-EFX1, http://[IP address of this service]:8080
- HTTP method: POST
- HTTP header: Content-Type:text/xml; charset=UTF-8

The structure of a request message is as follows.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>

  <POSPrinterRequest xmlns=http://www.citizen.co.jp/POSPrinter/
   MajorVersion="1">
   <!-- RequestID -->
   <MessageID>3ea2110f-8d31-24ef-e2a5-ca98d2af5f8d</MessageID>
   <!— Send printer command -->
   <SendData>
    <Data>ASMNCg==</Data>
   </SendData>
  </POSPrinterRequest>

 </s:Body>
</s:Envelope>
```

<POSPrinterRequest> Tag

### 2.1.2. POSPrinterRequest Tag

Insert the device control tag within the <POSPrinterRequest> tag in the request message for controlling the device. For details on the device control tags, refer to "3. Device Control Tags" in this document.

## 2.2. Response Messages

The result of a request can be checked from the response message from this service.

### 2.2.1. Message Structure

The structure of a response message is as follows.

```
<?xml version="1.0" encoding="UTF-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>

  <POSPrinterResponse xmlns=http://www.citizen.co.jp/POSPrinter/
   MajorVersion="1">
   <MessageID>0011e507451e-648e8cd7</MessageID>
   <Response ResponseCode="OK">
    <RequestID>26fc854c-e6f2-9a86-9060-6d76069cf4e2</RequestID>
   </Response>
  </POSPrinterResponse>

 </s:Body>
</s:Envelope>
```

<POSPrinterResponse> Tag

### 2.2.2. Acquiring the Request Result

The result of a request can be checked in the information within the <POSPrinterResponse> tag.

| Item | Description |
|---|---|
| ResponseCode attribute | Stores the process result. |
| MessageID element | Stores the ID for identifying the response message. |
| RequestID element | Stores the message ID specified when the message was sent. |
| BusinessError element | Stores the error information when an error occurred. |

**Checking for Error Occurrence**

Whether or not an error occurred can be checked by checking the value of the ResponseCode attribute of the Response element.

| Code | Description |
|---|---|
| OK | Ended normally. |
| Rejected | Error occurred. |

The following is an example of the Response element when the process ended normally.

```
<Response ResponseCode="OK">
  <RequestID>26fc854c-e6f2-9a86-9060-6d76069cf4e2</RequestID>
</Response>
```

**Checking Error Information**

The cause of a result can be checked from the contents of the Code and Description elements in the BusinessError element within the Response element when an error occurs. For details, refer to "2.2.3. Error Codes" in this document.

The following is an example of the Response element when an error occurred.

```
<Response ResponseCode="Rejected">
  <RequestID></RequestID>
  <BusinessError Severity="Error">
    <Code>ETimeout</Code>
   <Description>The device is not respond.</Description>
  </BusinessError>
</Response>
```

### 2.2.3. Error Codes

The error code, error description, and other detailed information are set in the BusinessError element in the Response element within a response message. The error codes used with this service are shown below.

| Code | Description |
|---|---|
| RequestInvalid | Request information is invalid |
| EConnectNotFound | Unsupported model |
| EOffline | Device is offline |
| EIllegal | Unsupported or invalid parameter |
| ETimeout | Processing timeout |

## 2.3. Acquiring Device Status

To acquire the device status, use the GetDeviceInfo tag to specify a device information acquisition request.

**Parameters**

| Attribute | Description | Setting range |
|---|---|---|
| BarcodePrinterStatus | BC printer information flag | Add BC printer information when "true" is specified. |
| BarcodePrinterErrorInfo | BC printer error information flag | Add BC printer error information when "true" is specified. |

An example of a request message is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <POSPrinterRequest xmlns=http://www.citizen.co.jp/POSPrinter/
   MajorVersion="1">
   <!-- Device information acquisition request -->
   <GetDeviceInfo BarcodePrinterStatus='true'
                  BarcodePrinterErrorInfo='true' />
  </POSPrinterRequest>
 </s:Body>
</s:Envelope>
```

An example of a request message is shown below.

```
<?xml version="1.0" encoding="UTF-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <POSPrinterResponse xmlns=http://www.citizen.co.jp/POSPrinter/
   MajorVersion="1">
   <MessageID>0011e507451e-648e8cd8</MessageID>
   <Response ResponseCode="OK">
    <RequestID></RequestID>
   </Response>
   <GetDeviceInfo>
    <Device BarcodePrinterStatus="NNNNNYNN"
            BarcodePrinterErrorInfo="60404040" />
   </GetDeviceInfo>
  </POSPrinterResponse>
 </s:Body>
</s:Envelope>
```

<GetDeviceInfo> tag

For the contents of the device information, the status is stored in the BarcodePrinterStatus attribute and BarcodePrinterErrorInfo attribute of the Device element of the response message.
*In the above example of the response message, it indicates that the printer is pausing.

**BarcodePrinterStatus attribute**

The printer status is stored as Yes / No.

| Index | Description |
|---|---|
| [0] | Shows the printer status if the interpreter is processing commands. |
| [1] | Shows the printer status if there is a paper error. |
| [2] | Shows the printer status if there is a ribbon end error. |
| [3] | Shows the status if the printer is processing batch print jobs. |
| [4] | Shows the status if the printer is currently printing. |
| [5] | Shows the status if the printer is in the pause mode. |
| [6] | Shows the status if the printer is in the wait for peeling status. |
| [7] | Reserved. *Always "N" |

**BarcodePrinterErrorInfo attribute**

The internal status of the printer is stored as 4-byte data. (Supported by IF5-EFX1 of wired LAN I/F)

| Byte | Bit | Description | Error status |
|---|---|---|---|
| 1 | 0 | Battery exhaustion (Unsupported) | Yes:1 No:0 |
| | 1 | Head at low temperature (Unsupported) | |
| | 2 | Main PCB at low temperature (Unsupported) | |
| | 3 | Wear and tear on a head | |
| | 4 | Spare | Always 0 |
| | 5 | Pause | Yes:1 No:0 |
| | 6 | Fixed | Always 1 |
| | 7 | | Always 0 |
| 2 | 0 | Spare | Always 0 |
| | 1 | Head overheat | Yes:1 No:0 |
| | 2 | Spare | Always 0 |
| | 3 | | |
| | 4 | Mechanism is exposed | Yes:1 No:0 |
| | 5 | Paper end | |
| | 6 | Fixed | Always 1 |
| | 7 | | Always 0 |
| 3 | 0 | Paper out | Yes:1 No:0 |
| | 1 | Ribbon end | |
| | 2 | Overheating of Main PCB (Unsupported) | |
| | 3 | Spare | Always 0 |
| | 4 | Abnormality in option boards (Unsupported) | Yes:1 No:0 |
| | 5 | Abnormality in auto cutter | |
| | 6 | Fixed | Always 1 |
| | 7 | | Always 0 |
| 4 | 0 | Fan motor stop (Unsupported) | Yes:1 No:0 |
| | 1 | Spare | Always 0 |
| | 2 | | |
| | 3 | | |
| | 4 | | |
| | 5 | Error is occurring | Yes:1 No:0 |
| | 6 | Fixed | Always 1 |
| | 7 | | Always 0 |

# 3. Device Control Tags

## 3.1. Device Control Tag List

The device control tags that can be used with this service are shown below.

| Function | Tag | Description |
|---|---|---|
| Message ID | <MessageID> | To specify for the sender to identify the message. |
| Command send | <SendData> | To specify printer commands to send. |
| Device information | <GetDeviceInfo> | Refer to "2.3. Acquiring Device Status". |

## 3.2. Details of Print Control Tags

### 3.2.1. Message ID (MessageID Tag)

**Value**

Specify the request message ID.

**Description**

This tag is for the sender to identify the message.
The specified request message ID is added to the <RequestID> tag of the response message. For details on response messages, refer to "2.2. Response Messages" in this document.

**Usage example**

```
<MessageID>12345678</MessageID>
```

### 3.2.2. Send command

#### Parameters

| Element | Description | Acceptable values |
|---|---|---|
| Data | Send data | Base64 encoded data. |

#### Description

This tag is to send printer command to the printer.
Printer command needs to base64 encode bainary data.

#### Usage example

The following is a description example of SendData tag when sending a printer command.

Printer command

| | |
|---|---|
| [02][1B]G0 | Set the command set to "DMI/DMW" |
| [02]L | Starts the label format mode |
| D11 | Sets the pixel size |
| 1X1100000100000b0100010000050005 | Prints the rectangle |
| Q0001 | Sets the number of print |
| E | Ends the label format mode and prints |

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <POSPrinterRequest xmlns="http://www.citizen.co.jp/POSPrinter/"
     MajorVersion="1">
      <MessageID>00000001</MessageID>
      <SendData>
        <Data>AhtHMA0KAkwNCkQxMQ0KMVgxMTAwMDAwMTAwMDAwYjAxMDAwMTAwMDAw
         NTAwMDUNClEwMDAxDQpFDQo=</Data>
      </SendData>
    </POSPrinterRequest>
  </s:Body>
</s:Envelope>
```

# 4. XML Print Service Settings

This chapter describes how to set CITIZEN XML Print Service.

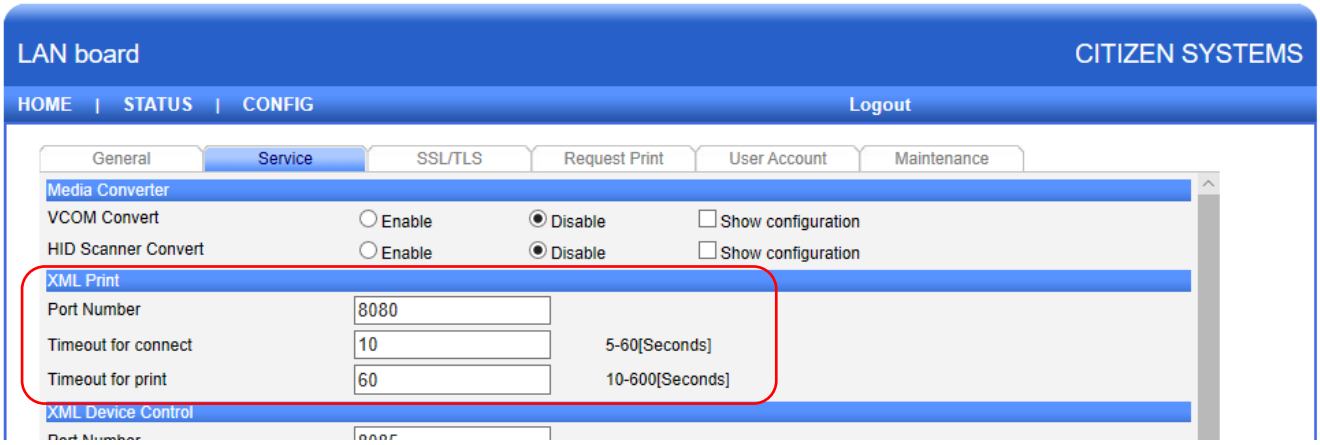
## 4.1. Web Manager

The settings for the printers can be changed by connecting from a Web browser to each printer. For details on the basic operations, refer to the interface board instruction manual of the printer.

This document describes the setting items of XML Print Service.

### 4.1.1. Service Setting Screen / XML Print

The settings of the service provided by the printer can be set in the Service screen.

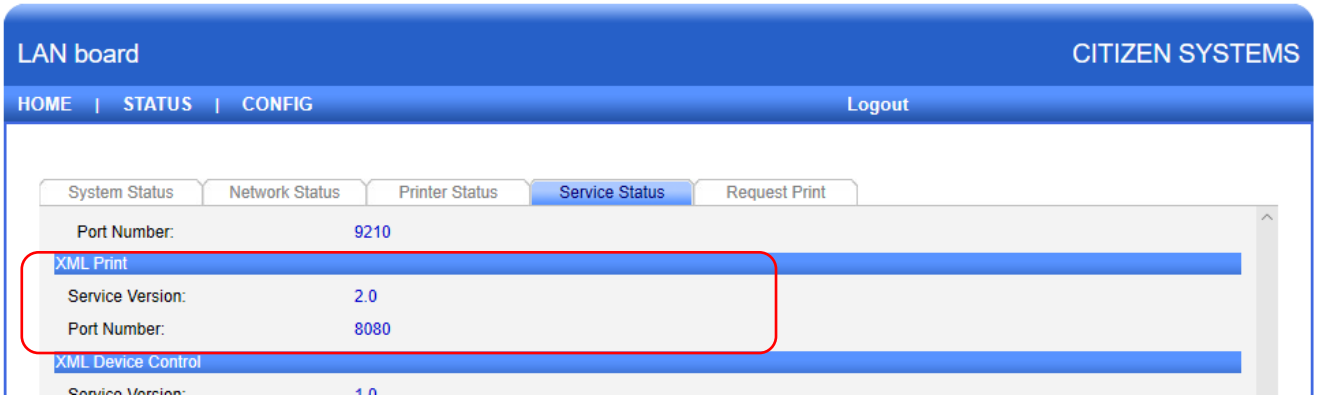



| Item | Initial value | Acceptable range | Description |
|---|---|---|---|
| Port Number | 8080 | 1025 to 65535 | Port number to connect |
| Timeout for connect | 10 | 5 to 60 | Timeout value for starting printing |
| Timeout for print | 60 | 10 to 600 | (unused) |

*This page won't be displayed for non-supported printer models.
*Each set value will be persistent through a power cycle, will be reset to the default value by the factory reset.

### 4.1.2. Service Status Screen / XML Print

The service version and setting information can be check in the Service Status screen.



# 5. JavaScript Label Print SDK

Label Print SDK is a JavaScript library to control the CITIZEN XML Print service from client side. This allows you to print labels from web application by using JavaScript.

## 5.1. Operating Environment

The web browser must support HTML5.

## 5.2. Programming Guide

### 5.2.1. Placement of SDK File

Label Print SDK is provided as JavaScript. To use the SDK, place "cxmlp-label-api.js" to the web server. Do not modify the source code of the SDK. It may not work properly otherwise.

### 5.2.2. Program Configuration

To control a device, insert your program in the HTML <script> tag placed on the web server.
The program structure looks as below.

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8" />
  <title>Label Print SDK Sample</title>
  <script type="text/javascript" src=" cxmlp-label-api.js"></script>
  <script type="text/javascript">
    //Create an LabelDesign object
    var design = new citizen.LabelDesign();
    //Register design of label
    design.drawCircle(50, 50, 15);
    design.drawRect(20, 30, 180, 280, 10);
    //Create an Device Control object
    var print = new citizen.LabelPrint();
    //Set response receive callback function
    print.OnReceive = function (res, xml) {
      alert(res.ResponseCode);
    };
    //Set send error callback function
    print.OnError = function (res) {
      alert(res.status);
    };
    //Set RequestMessageID
    print.MessageID('12345678');
    //Execute sending
    print.print('http://192.168.129.178/xmlprint', design, 1);
  </script>
</head>

<body>
      .
      .
</body>
</html>
```

Integrating SDK

Program text

### 5.2.3. Label design

Label designing is done by the LabelDesign object. A label design is defined by creating a "citizen.LabelDesign" instance and using design methods. For details on the design methods, refer to the "5.6. LabelDesign class".

An example of label design is shown bellow.

```
//Create an LabelDesign object
design = new citizen.LabelDesign();
//Register design of label
design.drawCircle(50, 50, 15);
design.drawRect(20, 30, 180, 280, 10);
```

### 5.2.4. Creating Device Control Object

Device control is done by the LabelPrint object. Create a "citizen.LabelPrint" instance first.

### 5.2.5. Setting Response Receive Callback Function

The control result can be checked in the argument information of the function by setting a callback function in the OnReceive properties of Device Control Object.

| Item | Description |
|---|---|
| ResponseCode | Stores the process result. |
| MessageID | Stores the ID for identifying the response message. |
| RequestID | Stores the message ID specified when the message was sent. |
| ErrorCode | Stores the error code when an error occurred. |
| Description | Stores the explanation when an error occurred. |

An example of setting the response receive callback function is shown below.

```
//Set response receive callback function
print.OnReceive = function (res, xml) {
  var msg;
  if(res.ResponseCode == 'OK'){
    msg = 'Print success!\n\n';
  }
  else{
    msg = 'Print failure!\n\n';
    msg += ' Code: ' + res.ErrorCode + '\n';
    msg += ' Description: ' + res.Description + '\n\n';
  }
  msg += ' RequestID: ' + res. RequestID + '\n';
  alert(msg);
};
```

**Checking for Error Occurrence**

Errors can be confirmed by checking the ResponseCode value.

| Code | Description |
|---|---|
| OK | Done successfully. |
| Rejected | Error occurred. |

**Checking Error Information**

The cause of a result can be checked from the contents of the ErrorCode and Description elements stored when an error occurs.
The error codes used with this service are shown below.

| Code | Description |
|---|---|
| EConnectNotFound | Unsupported model |
| EOffline | Device is offline |
| ETimeout | Processing timeout |

### 5.2.6. Setting Send Error Callback Function

The error details can be checked in the argument information of the function by setting a callback function in the OnError properties of Device Control Object.
The status when an error occurs is stored in status, and the response details are stored in responseText.

An example of setting the send error callback function is shown below.

```
//Set send error callback function
print.OnError = function (res) {
  var msg = 'Send failure!\n\n';
  msg += ' status: ' + res. status + '\n';
  msg += ' responseText: ' + res. responseText + '\n';
  alert(msg);
};
```

### 5.2.7. Executing Sending

The sending process is started by calling the method of the LabelPrint object by specifying the URL of the XML Print Service in the Device Control Object. When the process ends, the set response receive callback function is called and the control result can be acquired. For details on acquiring control results, refer to "5.2.5. Setting Response Receive Callback Function" in this document.

The format of the specified URL is shown below.
http(s)://[IP address of this service]/xmlprint
* The https is supported by IF5-EFX1 and other service versions 2.1 or later.
* In the service version 2.0 and earlier other than IF5-EFX1, http://[IP address of this service]:8080

An example of specifying the executing of sending is shown below.

```
//Execute sending (for https)
print.print("https://192.168.129.178/xmlprint/", design, 1);

//Execute sending (for http)
print.print("http://192.168.129.178/xmlprint/", design, 1);

//Execute sending (for http of the service version 2.0 and earlier)
print.print("http://192.168.129.178:8080/", design, 1);
```

## 5.3. Class summary

### 5.3.1. Device Control function(LabelPrint class)

**Methods (LabelPrint class)**

| No | Method | Description |
|---|---|---|
| 1 | LabelPrint | Constructor. |
| 2 | messageID | Set the message ID. |
| 3 | printerCheck | Gets status of a printer. |
| 4 | print | Prints labels. |
| 5 | storeNVBitmap | Stores a bitmap image into the flash memory. |
| 6 | clearOutput | Clears all data in the printer buffer. |
| 7 | sendData | Sends binary data to a printer. |

**Properties (LabelPrint class)**

| No | Property | Attribute | Description |
|---|---|---|---|
| 1 | HorizontalMagnification | R/W | Horizontal magnification of the label. |
| 2 | VerticalMagnification | R/W | Vertical magnification of the label. |
| 3 | FormatAttribute | R/W | Specifies how to print overlapped objects. |
| 4 | ContinuousMediaLength | R/W | Label length for continuous paper. |
| 5 | MeasurementUnit | R/W | Measurement unit. Inches or millimeters. |
| 6 | PrintSpeed | R/W | Print speed. |
| 7 | FeedSpeed | R/W | Feed speed. |
| 8 | SlewSpeed | R/W | Slew speed. |
| 9 | BackupSpeed | R/W | Backup speed. |
| 10 | PrintDarkness | R/W | Print darkness. |
| 11 | DoubleHeat | R/W | Double heat. |
| 12 | VerticalOffset | R/W | Vertical offset of the printing position. |
| 13 | HorizontalOffset | R/W | Horizontal offset of the printing position. |
| 14 | MediaHandling | R/W | Media handling after print. (Pause, Cut or Peel) |
| 15 | StartOffset | R/W | Vertical offset of the paper position when start printing. |
| 16 | StopOffset | R/W | Vertical offset of the paper position when stop printing. |
| 17 | LabelSensor | R/W | Label sensor type. (See through, Reflect or None) |
| 18 | PrintMethod | R/W | Thermal transfer or Direct thermal. |
| 19 | SensorLocation | R/W | Front or Rear. (for the models which have multiple sensors) |
| 20 | CommandInterpreterInAction | R | Status: CommandInterpreterInAction |
| 21 | PaperError | R | Status: PaperError |
| 22 | RibbonEnd | R | Status: RibbonEnd |
| 23 | BatchProcessing | R | Status: BatchProcessing |
| 24 | Printing | R | Status: Printing |
| 25 | Pause | R | Status: Pause |
| 26 | WaitingForPeeling | R | Status: WaitingForPeeling |
| 27 | PrintHeadLowTemp | R | Status: PrintHeadLowTemp |
| 28 | PrintHeadFailure | R | Status: PrintHeadFailure |
| 29 | PrintHeadOverheat | R | Status: PrintHeadOverheat |
| 30 | MechanismOpen | R | Status: MechanismOpen |
| 31 | AutoCutterError | R | Status: AutoCutterError |
| 32 | FanMotorError | R | Status: FanMotorError |
| 33 | MiscError | R | Status: MiscError |

### 5.3.2. Label Design function(LabelDesign class)

**Methods (LabelDesign class)**

| No | Method | Description |
|---|---|---|
| 1 | LabelDesign | Constructor. |
| 2 | drawTextPtrFont | Draws text by using a printer device font. |
| 3 | drawTextDLFont | Draws text by using a downloaded font. |
| 4 | drawNVBitmap | Draws a bitmap image stored in the flash memory of the printer. |
| 5 | drawBitmap | Draws a bitmap file in the computer. |
| 6 | drawBarCode | Draws a barcode. |
| 7 | drawMaxiCode | |
| 8 | drawPDF417 | |
| 9 | drawDataMatrix | |
| 10 | drawQRCode | |
| 11 | drawAztec | |
| 12 | drawGS1DataBar | |
| 13 | drawLine | Draws a line. |
| 14 | drawRect | Draws a rectangular. |
| 15 | fillRect | Draws a rectangular filled with a specified pattern. |
| 16 | drawCircle | Draws a circle. |
| 17 | fillCircle | Draws a circle filled with a specified pattern. |
| 18 | drawPolygon | Draws a polygon. |
| 19 | fillPolygon | Draws a polygon filled with a specified pattern. |
| 20 | embedRawDesignCommand | Embeds raw printer commands. |

## 5.4. Return value

| Return value | Description |
|---|---|
| CLS_SUCCESS (0) | The operation has been done successfully. |
| CLS_E_ILLEGAL (1101) | The operation is not supported by the printer or an invalid parameter was used. |

## 5.5. LabelPrint class

### 5.5.1. Constructor

**Syntax**
citizen.LabelPrint ()

**Parameters**
none

**Description**
Creates an instance of the LabelPrint class.

**Return value**
none

**Example**
```
var print = new citizen.LabelPrint();
```

### 5.5.2. messageID method

**Syntax**

messageID (messageID)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| messageID | [IN] | Request message ID | |

**Description**

This method is used to enable the sender to identify the message.
The specified request message ID is added to the RequestID parameter of the control result. For details on control results, refer to "5.2.5. Setting Response Receive Callback Function" in this document.

**Return value**

none

**Example**

```
print.messageID("00000001");
```

### 5.5.3. printerCheck method

**Syntax**

printerCheck (address)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| address | [IN] | HTTP URL | |

**Description**

Gets the status of the printer and stores information into the properties, CommandInterpreterInAction, PaperError, RibbonEnd, BatchProcessing, Printing, Pause and WaitingForPeeling as well as PrintHeadLowTemp, PrintHeadFailure, PrintHeadOverheat, MechanismOpen, AutoCutterError, FanMotorError and MiscError. (PrintHeadLowTemp, PrintHeadFailure, PrintHeadOverheat, MechanismOpen, AutoCutterError, FanMotorError and MiscError properties ware supported by IF5-EFX1 and other service versions 2.1 or later.)
When this method returns an error, a communication failure or a device error might occur. In this case, make sure that the contents of the specified address are correct, or that the printer is connected to the network.

For printers of CL-S5xx/6xx/70x, change the setting of "Parallel Error Output" to OFF beforehand. This can be done in the "Advanced" tab of the Label Printer Utility.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
//Below, the processing in the receive callback function
function myOnReceive(res, xml)
{
    if (res.ResponseCode == 'OK')
    {
        // CommandInterpreterInAction Property
        if (print.getCommandInterpreterInAction() == 1) {
            // Command interpreter in action
        }
        // PaperError Property
        if (print.getPaperError() == 1) {
            // Paper error
        }
        // RibbonEnd Property
        if (print.getRibbonEnd() == 1) {
            // Ribbon end
        }
        // BatchProcessing Property
        if (print.getBatchProcessing == 1) {
            // Batch processing
        }
        // Printing Property
        if (print.getPrinting()== 1) {
            // Printing
        }
        // Pause Property
        if (print.getPause() == 1) {
            // Pause
        }
```

```
        // WaitingForPeeling Property
        if (print.getWaitingForPeeling() == 1) {
            // Waitiong for peeling
        }

        // PrintHeadLowTemp Property
        if (print.getPrintHeadLowTemp() == 1) {
            // Print head low temp
        }
        // PrintHeadFailure Property
        if (print.getPrintHeadFailure() == 1) {
            // Print head failure
        }
        // PrintHeadOverheat Property
        if (print.getPrintHeadOverheat() == 1) {
            // Print head overheat
        }
        // MechanismOpen Property
        if (print.getMechanismOpen() == 1) {
            // Mechanism open
        }
        // AutoCutterError Property
        if (print.getAutoCutterError() == 1) {
            // Auto cutter error
        }
        // FanMotorError Property
        if (print.getFanMotorError() == 1) {
            // Fan motor error
        }
        // MiscError Property
        if (print.getMiscError() == 1) {
            // Misc error
        }
    }
    else
    {
        // Fail
    }
}


//Set response receive callback function
print.OnReceive = myOnReceive;


//Send Status Acquisition Command
print.messageID("00000001");
print.printerCheck("http://192.168.129.178/xmlprint");

//When a response to the status acquisition command is received from
//the printer, the reception callback function myOnReceive () is called
```

### 5.5.4. print method

**Syntax**

print (address, design, quantity)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| address | [IN] | HTTP URL | |
| design | [IN] | Instance of LabelDesignclass | |
| quantity | [IN] | Number of labels to print | 1 - 9999 |

**Description**

Prints labels by sending a label design created in the LabelDesign class, followed by printer configuration commands if any of properties are set.

**Return value**

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Example**

```
design.fillCircle(50, 50, 50, citizen.LabelConst.CLS_SHADED_PTN_11);
print.messageID("00000001");
print.print("http://192.168.129.178/xmlprint", design, 1);
```

### 5.5.5. storeNVBitmap method

**Syntax**

storeNVBitmap (image, address, name, rotation, width, height)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| image | [IN] | Image object | |
| address | [IN] | HTTP URL | |
| name | [IN] | File name to store | ASCII characters except below:<br>-Underscore cannot be the first character.<br>-The following symbols.<br>□/ : * ? " < > \| |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotate<br>CLS_RT_RIGHT90: Rotate right 90<br>CLS_RT_ROTATE180: Rotate 180<br>CLS_RT_LEFT90: Rotate left 90 |
| width | [IN] | Horizontal size (pixels) | |
| height | [IN] | Vertical size (pixels) | |

**Description**

Stores a bitmap image into the flash memory with specified settings such as file name, rotation, width and height. The stored bitmap image can be used by the drawNVBitmap method.
Supported graphic file formats are BMP/GIF/EXIF/JPG/PNG/TIFF.

The image is resized by the specified width and height with keeping the original aspect ratio.
Example: The image size will be 200 x 50 pixels under the following conditions.
The original image size: 400 x 100 pixels
Width: 200
Height: 200

If 0 is set to either width or height, the image size will be calculated by another parameter.
Example: The image size will be 800 x 200" pixels under the following conditions.
The original image size: 400 x 100 pixels
Width: 0
Height: 200

**Return value**

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Example**

```
var image = new Image();

//Omit the image reading process

print.messageID("00000001");
print.storeNVBitmap(image, "http://192.168.129.178/xmlprint",
          "Dice_1.bmp", citizen.LabelConst.CLS_RT_NORMAL, 0, 0);
```

### 5.5.6. clearOutPut method

**Syntax**

clearOutput ()

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| address | [IN] | HTTP URL | |

**Description**

Clears data in the print buffer. This triggers the initialization process which is equivalent to the boot sequence.

**Return value**

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Example**

```
print.messageID("00000001");
print.clearOutput();
```

### 5.5.7. sendData method

**Syntax**

sendData (address, data)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| address | [IN] | HTTP URL | |
| data | [IN] | Send data | |

**Description**

Sends binary data to a printer.
This can be used only when sending raw printer commands to the printer.

**Return value**

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Example**

```
var data = new Array(0x01, 0x23, 0x0D, 0x0A); // [01]# (Reset)

print.messageID("00000001");
print.sendData("http://192.168.129.178/xmlprint", data);
```

### 5.5.8. HorizontalMagnification property

**Syntax**
HorizontalMagnification

**Attribute**
Read/Write

**Description**
Horizontal dot size. "1" or "2".

**Setter method**
setHorizontalMagnification (horizontalMagnification)

"1" or "2" must be set as a parameter.
Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getHorizontalMagnification ()

**Example**

```
var pixelsize;

pixelsize = print.getHorizontalMagnification();
print.setHorizontalMagnification(2);
```

### 5.5.9. VerticalMagnification property

**Syntax**
VerticalMagnification

**Attribute**
Read/Write

**Description**
Vertical dot size. "1", "2" or "3".

**Setter method**
setVerticalMagnification (verticalMagnification)

"1", "2" or "3" must be set as a parameter.
Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getVerticalMagnification ()

**Example**

```
var pixelsize;

pixelsize = print.getVerticalMagnification();
print.setVerticalMagnification(3);
```

### 5.5.10. FormatAttribute property

**Syntax**
formatAttribute

**Attribute**
Read/Write

**Description**
Specifies how to print the area where multiple objects are overlapped.

0: XOR mode. Overlapped area will not be printed.
1: OR mode. Overlapped area will be printed.

**Setter method**
setFormatAttribute (formatAttribute)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getFormatAttribute ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var attr;

print.setFormatAttribute(1);
attr = print.getFormatAttribute();
```

**Printing Result**

XOR 

OR 

### 5.5.11. ContinuousMediaLength property

**Syntax**
ContinuousMediaLength

**Attribute**
Read/Write

**Description**
Sets a paper length for continuous paper.

| | |
|---|---|
| Inch system | 0001 – 9999 (0.01 - 99.99 inches) |
| Metric system | 0001 – 9999 (0.1 - 999.9 mm) |

**Setter method**
setContinuousMediaLength (continuousMediaLength)

The default value in the printer is "0000."
Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getContinuousMediaLength ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var medialength;

print.setContinuousMediaLength(2000);
medialength = print.getContinuousMediaLength();
```

### 5.5.12. MeasurementUnit property

**Syntax**
MeasurementUnit

**Attribute**
Read/Write

**Description**
Sets the measurement unit.

| Value | Description |
|---|---|
| CLS_UNIT_MILLI (0) | Metric system |
| CLS_UNIT_INCH (1) | Inch system |

**Setter method**
setMeasurementUnit (measurementUnit)

The default value in the printer is "1."
Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getMeasurementUnit ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var unit;

print.setMeasurementUnit(citizen.LabelConst.CLS_UNIT_MILLI);
unit = print.getMeasurementUnit();
```

### 5.5.13. PrintSpeed property

**Syntax**
PrintSpeed

**Attribute**
Read/Write

**Description**
Sets the print speed.
See "5.7.2. Predefined Constants", No.18 for available value.
*Initial and maximum value vary depending on the printer model.

**Setter method**
setPrintSpeed (printSpeed)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getPrintSpeed ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var printspeed;

print.setPrintSpeed(citizen.LabelConst.CLS_SPEEDSETTING_X);
printspeed = print.getPrintSpeed();
```

### 5.5.14. FeedSpeed property

**Syntax**
FeedSpeed

**Attribute**
Read/Write

**Description**
Sets the feed speed.
See "5.7.2. Predefined Constants", No.18 for available value.
*Initial and maximum value vary depending on the printer model.

**Setter method**
setFeedSpeed (feedSpeed)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getFeedSpeed ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**
```
var feedspeed;

print.setFeedSpeed(citizen.LabelConst.CLS_SPEEDSETTING_W);
feedspeed = print.getFeedSpeed();
```

### 5.5.15. SlewSpeed property

**Syntax**
SlewSpeed

**Attribute**
Read/Write

**Description**
Sets the slew speed.
See "5.7.2. Predefined Constants", No.18 for available value.
*Initial and maximum value vary depending on the printer model.

**Setter method**
setSlewSpeed (slewSpeed)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getSlewSpeed ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**
```
var slewspeed;

print.setSlewSpeed(citizen.LabelConst.CLS_SPEEDSETTING_V);
slewspeed = print.getSlewSpeed();
```

### 5.5.16. BackupSpeed property

**Syntax**
BackupSpeed

**Attribute**
Read/Write

**Description**
Sets the backup speed. See below for the acceptable values.

| Value | Description |
|---|---|
| CLS_SPEEDSETTING_A or CLS_SPEEDSETTING_B | 1.0 inch( 25.4mm) / sec |
| CLS_SPEEDSETTING_C or CLS_SPEEDSETTING_D | 2.0 inch( 50.8mm) / sec |
| CLS_SPEEDSETTING_E or CLS_SPEEDSETTING_F | 3.0 inch( 76.2mm) / sec |
| CLS_SPEEDSETTING_G or CLS_SPEEDSETTING_H | 4.0 inch(101.6mm) / sec |
| CLS_SPEEDSETTING_I or CLS_SPEEDSETTING_J | 5.0 inch(127.0mm) / sec |
| CLS_SPEEDSETTING_K or CLS_SPEEDSETTING_L | 6.0 inch(152.4mm) / sec |
| CLS_SPEEDSETTING_M or CLS_SPEEDSETTING_N | 7.0 inch(177.8mm) / sec |
| CLS_SPEEDSETTING_O | 8.0 inch(203.2mm) / sec |
| CLS_SPEEDSETTING_1 - CLS_SPEEDSETTING_8 | 1.0 inch( 25.4mm) / sec - 8.0 inch(203.2mm) / sec |

*Initial and maximum value vary depending on the printer model.

**Setter method**
setBackupSpeed (backupSpeed)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getBackupSpeed ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var backupspeed;

print.setBackupSpeed(citizen.LabelConst.CLS_SPEEDSETTING_O);
backupspeed = print.getBackupSpeed();
```

### 5.5.17. PrintDarkness property

**Syntax**
PrintDarkness

**Attribute**
Read/Write

**Description**
Sets the print density. The acceptable values are below:

| | |
|---|---|
| Setting range | 0 - 30 |
| Default value | 10 |

**Setter method**
setPrintDarkness (printDarkness)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getPrintDarkness ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var printdarkness;

print.setPrintDarkness(30);
printdarkness = print.getPrintDarkness();
```

### 5.5.18. DoubleHeat property

**Syntax**
DoubleHeat

**Attribute**
Read/Write

**Description**
Sets the double heat option. The acceptable values are below:

0: OFF (Default)
1: ON

**Setter method**
setDoubleHeat (doubleHeat)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getDoubleHeat ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var doubleheat;

print.setDoubleHeat(1);
doubleheat = print.getDoubleHeat();
```

### 5.5.19. VerticalOffset property

**Syntax**
VerticalOffset

**Attribute**
Read/Write

**Description**
Sets the vertical offset to adjust the vertical printing position on the paper.

| | |
|---|---|
| Inch system | 0000 – 9999 (0.00 inch - 99.99 inches) |
| Metric system | 0000 – 9999 (0.0 mm - 999.9 mm) |
| Default value | 0000 |

**Setter method**
setVerticalOffset (verticalOffset)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getVerticalOffset ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var verticaloffset;

print.setVerticalOffset(10);
verticaloffset = print.getVerticalOffset();
```

### 5.5.20. HorizontalOffset property

**Syntax**
HorizontalOffset

**Attribute**
Read/Write

**Description**
Sets the horizontal offset to adjust the horizontal printing position on the paper.

| | |
|---|---|
| Inch system | 0000 – 9999 (0.00 inch - 99.99 inches) |
| Metric system | 0000 – 9999 (0.0 mm - 999.9 mm) |
| Default value | 0000 |

**Setter method**
setHorizontalOffset (horizontalOffset)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getHorizontalOffset ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var horizontaloffset;

print.setHorizontalOffset(20);
horizontaloffset = print.getHorizontalOffset();
```

### 5.5.21. MediaHandling property

**Syntax**
MediaHandling

**Attribute**
Read/Write

**Description**
Sets the way how to handle media after printing.

| Value | Description |
|---|---|
| CLS_MEDIAHANDLING_NONE (0) | To print without any special actions. |
| CLS_MEDIAHANDLING_TEAROFF (1) | To feed labels to the tear bar. |
| CLS_MEDIAHANDLING_DISPENSES (2) | To feed labels to the tear bar, and wait for removal. |
| CLS_MEDIAHANDLING_PAUSE (3) | To pause after printing. |
| CLS_MEDIAHANDLING_CUT (4) | To cut after printing. |
| CLS_MEDIAHANDLING_CUTANDPAUSE (5) | To cut and pause after printing. |
| CLS_MEDIAHANDLING_PEELOFF (6) | To peel labels off the backing and wait for removal. |
| CLS_MEDIAHANDLING_REWIND (7) | To use a rewinder. |

**Setter method**
setMediaHandling (mediaHandling)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getMediaHandling ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var mediahandling;

print.setMediaHandling(citizen.LabelConst.CLS_MEDIAHANDLING_PAUSE);
mediahandling = print.getMediaHandling();
```

### 5.5.22. StartOffset property

**Syntax**
StartOffset

**Attribute**
Read/Write

**Description**
Specifies the distance between paper sensor and print head to change the print starting position.

| Inch system | | | Metric system | | |
|---|---|---|---|---|---|
| Initial value | Minimum value | Max value | Initial value | Minimum value | Max value |
| 0220 | 0120 | 0320 | 0559 | 0305 | 0813 |

*0.01 inches or 0.1 mm

**Setter method**
setStartOffset(startOffset)

Make sure to set a valid value since the consistency with the selected measurement unit will never be checked.
Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getStartOffset ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**
```
var startoffset;

print.setStartOffset(220);
startoffset = print.getStartOffset();
```

## 5.5.23. StopOffset property

### Syntax
StopOffset

### Attribute
Read/Write

### Description
Specifies the distance between paper sensor and cutter or peeler to change the print stop position.

Note that the initial values are calculated to stop paper at an appropriate position. An insufficient value truncates the printed label, an exceeded value truncates the next label.

| Media handling | Inch system | | | Metric system | | |
|---|---|---|---|---|---|---|
| | Initial value | Minimum value | Max value | Initial value | Minimum value | Max value |
| None | 0000 | 0000 | 9999 | 0000 | 0000 | 9999 |
| Cutter | 0100 | | | 0254 | | |
| Peel Off | 0050 | | | 0127 | | |
| Tear Off | 0070 | | | 0178 | | |

*0.01 inches or 0.1 mm

### Setter method
setStopOffset (stopOffset)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

### Getter method
getStopOffset ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

### Example
```
var stopoffset;

print.setStopOffset(240);
stopoffset = print.getStopOffset();
```

## 5.5.24. LabelSensor property

### Syntax
LabelSensor

### Attribute
Read/Write

### Description
Sets the label sensor type.

| Value | Description |
|---|---|
| CLS_SELSENSOR_NONE (0) | None.<br>This assumes that a continuous paper roll is used. Therefore a valid length must be set in the ContinuousMediaLength property, returns CLS_E_ILLEGAL (1101) otherwise. |
| CLS_SELSENSOR_SEETHROUGH (1) | Gap sensor.<br>To detect a gap between labels or a notch on tags. |
| CLS_SELSENSOR_REFLECT (2) | Reflect sensor.<br>Detect a black mark on the back side of the label. |

### Setter method
setLabelSensor (labelSensor)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

### Getter method
getLabelSensor ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

### Example
```
//Other than "CLS_SELSENSOR_NONE"
var labelsensor;

print.setLabelSensor(citizen.LabelConst.CLS_SELSENSOR_SEETHROUGH);
labelsensor = print.getLabelSensor();


//"CLS_SELSENSOR_NONE"
var labelsensor;

print.setContinuousMediaLength(100);
print.setLabelSensor(citizen.LabelConst.CLS_SELSENSOR_NONE);
labelsensor = print.getLabelSensor();
```

### 5.5.25. PrintMethod property

**Syntax**
PrintMethod

**Attribute**
Read/Write

**Description**
Sets the print method to either thermal transfer or direct thermal.

| Value | Description |
|---|---|
| CLS_PRTMETHOD_TT (0) | Thermal transfer |
| CLS_PRTMETHOD_DT (1) | Direct thermal |

**Setter method**
setPrintMethod (printMethod)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getPrintMethod ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**

```
var printmethod;

print.setPrintMethod(citizen.LabelConst.CLS_PRTMETHOD_DT);
printmethod = print.getPrintMethod();
```

### 5.5.26. SensorLocation property

**Syntax**
SensorLocation

**Attribute**
Read/Write

**Description**
Selects the sensor to use for the models which have multiple paper sensors, front and rear.
The choice will be stored in the non-volatile flash memory and will be kept until overwritten.

| Value | Description |
|---|---|
| CLS_SENS_LOCATION_FRONT (0) | Front sensor |
| CLS_SENS_LOCATION_ADJUSTABLE (1) | Rear sensor |

**Setter method**
setSensorLocation (sensorLocation)

Returns CLS_SUCCESS (0) on success. See "5.4. Return value" for the error codes.

**Getter method**
getSensorLocation ()

Returns the set value. If nothing has been set, it returns CLS_PROPERTY_DEFAULT(999999).

**Example**
```
var location;

print.setSensorLocation(citizen.LabelConst.CLS_SENS_LOCATION_ADJUSTABLE);
location = print.getSensorLocation();
```

### 5.5.27. CommandInterpreterInAction property

**Syntax**
CommandInterpreterInAction

**Attribute**
Read

**Description**
Shows the printer status if the interpreter is processing commands.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getCommandInterpreterInAction ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.28. PaperError property

**Syntax**
PaperError

**Attribute**
Read

**Description**
Shows the printer status if there is a paper error.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getPaperError ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.29. RibbonEnd property

**Syntax**
RibbonEnd

**Attribute**
Read

**Description**
Shows the printer status if there is a ribbon end error.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getRibbonEnd ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.30. BatchProcessing property

**Syntax**
BatchProcessing

**Attribute**
Read

**Description**
Shows the status if the printer is processing batch print jobs.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getBatchProcessing ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.31. Printing property

**Syntax**
Printing

**Attribute**
Read

**Description**
Shows the status if the printer is currently printing.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getPrinting ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.32. Pause property

**Syntax**
Pause

**Attribute**
Read

**Description**
Shows the status if the printer is in the pause mode.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getPause ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.33. WaitingForPeeling property

**Syntax**
WaitingForPeeling

**Attribute**
Read

**Description**
Shows the status if the printer is in the wait for peeling status.

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getWaitingForPeeling ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.34.PrintHeadLowTemp property

**Syntax**
PrintHeadLowTemp

**Attribute**
Read

**Description**
Shows the printer status if there is a print head low temp error. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getPrintHeadLowTemp ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.35.PrintHeadFailure property

**Syntax**
PrintHeadFailure

**Attribute**
Read

**Description**
Shows the printer status if there is a print head failure. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getPrintHeadFailure ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.36.PrintHeadOverheat property

**Syntax**
PrintHeadOverheat

**Attribute**
Read

**Description**
Shows the printer status if there is a print head over heat error. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getPrintHeadOverheat ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.37.MechanismOpen property

**Syntax**
MechanismOpen

**Attribute**
Read

**Description**
Shows the printer status if there is a mechanism open error. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getMechanismOpen ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.38.AutoCutterError property

**Syntax**
AutoCutterError

**Attribute**
Read

**Description**
Shows the printer status if there is an auto cutter error. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getAutoCutterError ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.39.FanMotorError property

**Syntax**
FanMotorError

**Attribute**
Read

**Description**
Shows the printer status if there is a fan motor error. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getFanMotorError ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

### 5.5.40.MiscError property

**Syntax**
MiscError

**Attribute**
Read

**Description**
Shows the printer status if there is a misc error. (Supported by IF5-EFX1 of wired LAN I/F)

Note that the status properties won't be updated automatically.
printerCheck method checks the status and updates the value, must be called before referring to this property.

**Setter method**
none

**Getter method**
getMiscError ()

Returns one of the following values.

| Value | Description |
|---|---|
| 0 | No |
| 1 | Yes |
| CLS_PROPERTY_DEFAULT(999999) | Nothing has been set. |

**Example**
See printerCheck method.

## 5.6. LabelDesign class

### 5.6.1. Constructor

**Syntax**
citizen.LabelDesign ()

**Parameters**
none

**Description**
Creates an instance of the LabelDesign class.

**Return value**
none

**Example**
```
var design = new citizen.LabelDesign();
```

### 5.6.2. drawTextPtrFont method

**Syntax**

drawTextPtrFont (data, locale, font, rotation, hexp, vexp, size, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | * Unsupported characters will be replaced with "?" text. |
| locale | [IN] | Locale | CLS_LOCALE_JP: Japan<br>CLS_LOCALE_OTHER: Other<br>CLS_LOCALE_CN: Chinese<br>CLS_LOCALE_KR: Korean |
| font | [IN] | Font typeface | CLS_PRT_FNT_0: SystemFont 0<br>CLS_PRT_FNT_1: SystemFont 1<br>CLS_PRT_FNT_2: SystemFont 2<br>CLS_PRT_FNT_3: SystemFont 3<br>CLS_PRT_FNT_4: SystemFont 4<br>CLS_PRT_FNT_5: SystemFont 5<br>CLS_PRT_FNT_6: SystemFont 6<br>CLS_PRT_FNT_7: SystemFont 7<br>CLS_PRT_FNT_8: SystemFont 8<br>CLS_PRT_FNT_TRIUMVIRATE: Smooth font<br>CLS_PRT_FNT_TRIUMVIRATE_B: Smooth font (bold)<br>CLS_PRT_FNT_KANJI: Kanji (left to right)<br>CLS_PRT_FNT_KANJIT: Kanji (top to bottom) |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| hexp | [IN] | Horizontal magnification | 1 – 24 |
| vexp | [IN] | Vertical magnification | 1 – 24 |
| size | [IN] | Font size | CLS_PRT_FNT_SIZE_4: 4pt<br>CLS_PRT_FNT_SIZE_5: 5pt<br>CLS_PRT_FNT_SIZE_6: 6pt<br>CLS_PRT_FNT_SIZE_8: 8pt<br>CLS_PRT_FNT_SIZE_10: 10pt<br>CLS_PRT_FNT_SIZE_12: 12pt<br>CLS_PRT_FNT_SIZE_14: 14pt<br>CLS_PRT_FNT_SIZE_18: 18pt<br>CLS_PRT_FNT_SIZE_24: 24pt<br>CLS_PRT_FNT_SIZE_30: 30pt<br>CLS_PRT_FNT_SIZE_36: 36pt<br>CLS_PRT_FNT_SIZE_48: 48pt<br>CLS_PRT_FNT_KANJI_SIZE_16: Kanji 16dot<br>CLS_PRT_FNT_KANJI_SIZE_24: Kanji 24dot<br>CLS_PRT_FNT_KANJI_SIZE_32: Kanji 32dot *<br>CLS_PRT_FNT_KANJI_SIZE_48: Kanji 48dot *<br>* Not supported in locale for Chinese model. |
| x | [IN] | X-coordinate | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws characters by using a printer device font with specifying options such as rotation, magnification, size and coordinates.

Available font sizes depend on typeface.
Kanji: 16, 24, 32, 48 *dots
Smooth font: 4, 5, 6, 8, 10, 12, 14, 18, 24, 30, 36, 48
Other: Fixed sizes depend on typeface.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
//Locale:OTHER
design.drawTextPtrFont("drawTextPtrFont",
        citizen.LabelConst.CLS_LOCALE_OTHER,
        citizen.LabelConst.CLS_PRT_FNT_TRIUMVIRATE,
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1,
        citizen.LabelConst.CLS_PRT_FNT_SIZE_10,
        100, 100);


//Locale:JP
design.drawTextPtrFont("テキスト印刷(プリンタフォント)",
        citizen.LabelConst.CLS_LOCALE_JP,
        citizen.LabelConst.CLS_PRT_FNT_KANJI,
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1,
        citizen.LabelConst.CLS_PRT_FNT_KANJI_SIZE_16, 100, 300);


//Locale:CN
design.drawTextPtrFont("测试打印",
        citizen.LabelConst.CLS_LOCALE_CN,
        citizen.LabelConst.CLS_PRT_FNT_KANJI,
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1,
        citizen.LabelConst.CLS_PRT_FNT_KANJI_SIZE_16, 100, 300);


//Locale:KR
design.drawTextPtrFont("테스트 인쇄",
        citizen.LabelConst.CLS_LOCALE_KR,
        citizen.LabelConst.CLS_PRT_FNT_KANJI,
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1,
        citizen.LabelConst.CLS_PRT_FNT_KANJI_SIZE_16, 100, 300);
```

### 5.6.3. drawTextDLFont method

**Syntax**

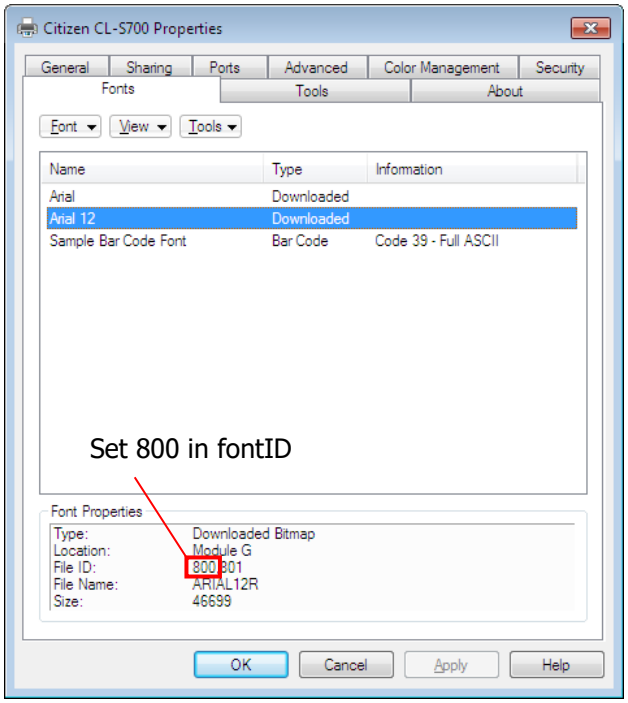
drawTextDLFont (data, encoding, fontID, rotation, hexp, vexp, point, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | * Unsupported characters will be replaced with "?" text. |
| encoding | [IN] | Character encoding | See "5.7.2. Predefined Constants". |
| fontID | [IN] | Font ID stored in the printer | Numeric characters<br>- Bitmap font<br>Alphanumeric characters<br>- TrueType font |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| hexp | [IN] | Horizontal magnification | 1 - 24 |
| vexp | [IN] | Vertical magnification | 1 - 24 |
| point | [IN] | Font size | 001 - 999 |
| x | [IN] | X-coordinate | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws characters by using a downloaded font with specifying options such as rotation, magnification, size and coordinates.
In case of bitmap font, the driver shows two IDs. Use the smaller number of ID.



**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
//TrueType font
design.drawTextDLFont("TrueType",
        citizen.LabelConst.CLS_ENC_CDPG_IBM850, "S50",
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1, 12, 100, 100);


//Bitmap font
design.drawTextDLFont("Bitmap",
        citizen.LabelConst.CLS_ENC_CDPG_IBM850, "800",
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1, 12, 100, 200);
```

### 5.6.4. drawNVBitmap method

**Syntax**

drawNVBitmap (name, hexp, vexp, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| name | [IN] | Graphic file name | ASCII characters except below:<br>-Underscore cannot be the first character.<br>-The following symbols.<br>□/ : * ? " < > \| |
| hexp | [IN] | Horizontal magnification | 1 - 24 |
| vexp | [IN] | Vertical magnification | 1 - 24 |
| x | [IN] | X-coordinate | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws a graphic by using a graphic image stored in the printer, with specifying options such as magnification and coordinates. This doesn't check the file availability or validity.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawNVBitmap("Dice_1.bmp", 1, 1, 10, 10);
```

### 5.6.5. drawBitmap method

**Syntax**

drawBitmap (image, rotation, width, height, x, y, resolution, measurementUnit)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| image | [IN] | Image object | |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| width | [IN] | Drawing width [Pixel] | |
| height | [IN] | Drawing height [Pixel] | |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |
| resolution | [IN] | Resolution [dpi] | CLS_PRT_RES_203(203dpi)<br>CLS_PRT_RES_300(300dpi)<br>* 203 dpi by default. |
| measurementUnit | [IN] | Printer Metric / Inch setting | CLS_UNIT_MILLI<br>CLS_UNIT_INCH<br>* CLS_UNIT_INCH by default. |

**Description**

Draws a graphic image stored in the local computer, with specifying options such as rotation, size and coordinates.
What this method does internally is to store a graphic image into the printer and to print the stored graphic image. This doesn't check the availability or validity of the stored file. When specifying image rotation, it is necessary to specify the resolution and unit selection settings according to the printer for reference position correction.
Supported graphic file formats are BMP/GIF/EXIF/JPG/PNG/TIFF.

The graphic will be resized based on the width/height parameters with keeping the aspect ratio and taking the maximum available size to fit.

Example: The sizes will be "200x50" in the case below.
Original sizes: 400x100 pixels
Width parameter: 200
Height parameter: 200

When 0 is set to either width or height, the sizes will be calculated based on another (non-zero) parameter. When both parameters are zero, the original sizes will be used.

Example：The sizes will be "800x200" in the case below.
Original sizes: 400x100 pixels
Width parameter: 0
Height parameter: 200

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
var image = new Image();

//Omit the image reading process

design.drawBitmap(image,
        citizen.LabelConst.CLS_RT_RIGHT90, 0, 0, 10, 10,
        citizen.LabelConst.CLS_PRT_RES_203,
        citizen.LabelConst.CLS_UNIT_INCH);
```

### 5.6.6. drawBarCode method

**Syntax**

drawBarCode (data, symbology, rotation, thick, narrow, height, x, y, showText)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | ASCII code character string. |
| symbology | [IN] | Barcode type | CLS_BCS_CODE39: Code 3 of 9<br>CLS_BCS_UPCA: UPC-A<br>CLS_BCS_UPCE: UPC-E<br>CLS_BCS_INTERLEAVED25: Interleaved 2 of 5<br>CLS_BCS_CODE128: Code 128<br>CLS_BCS_EAN13: EAN-13(JAN-13)<br>CLS_BCS_EAN8: EAN-8(JAN-8)<br>CLS_BCS_HIBC: HIBC<br>CLS_BCS_CODABAR: CODABAR(NW-7)<br>CLS_BCS_INT25: Int 2 of 5<br>CLS_BCS_PLESSEY: Plessey<br>CLS_BCS_CASECODE: CASE CODE<br>CLS_BCS_UPC2DIG: UPC 2DIG ADD<br>CLS_BCS_UPC5DIG: UPC 5DIG ADD<br>CLS_BCS_CODE93: Code93<br>CLS_BCS_ITF14: ITF-14<br>CLS_BCS_ZIP: ZIP<br>CLS_BCS_ITF16: IFT-16<br>CLS_BCS_UCCEAN128: UCC/EAN-128<br>CLS_BCS_INDUSTRIAL25: Industrial 2 of 5<br>CLS_BCS_UCCEAN128KMART:<br>UCC/EAN-128(for K-MART)<br>CLS_BCS_COOP25: COOP 2 of 5<br>CLS_BCS_UCCEAN128RANDOMWEIGHT:<br>UCC/EAN-128 Random Weight<br>CLS_BCS_TELEPEN: Telepen |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| thick | [IN] | Thick bar width | 1-24 |
| narrow | [IN] | Narrow bar width | 1-24 |
| height | [IN] | Height of barcode | 001-999 |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |
| showText | [IN] | Human readable text | CLS_BCS_TEXT_HIDE: Hide<br>CLS_BCS_TEXT_SHOW: Show |

**Description**

Draws a 1D (one-dimensional) barcode with specifying options such as barcode type, rotation, thick/narrow bar width, coordinates and human readable text.

* Supported thick/narrow bar ratio or data type depends on symbology. Refer to the command reference for details.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
// Code3of9
var code39 = "ABC123456789";
design.drawBarCode(code39, citizen.LabelConst.CLS_BCS_CODE39,
        citizen.LabelConst.CLS_RT_NORMAL, 6, 2, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UPC-A
var upca = "01234567890";
design.drawBarCode(upca, citizen.LabelConst.CLS_BCS_UPCA,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UPC-E
var upce = "123456";
design.drawBarCode(upce, citizen.LabelConst.CLS_BCS_UPCE,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 2, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// Interleaved2of5
var interleaved25 = "1234567890";
design.drawBarCode(interleaved25, citizen.LabelConst.CLS_BCS_INTERLEAVED25,
        citizen.LabelConst.CLS_RT_NORMAL, 5, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// Code128
var code128 = "1234567890";
design.drawBarCode(code128, citizen.LabelConst.CLS_BCS_CODE128,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 4, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// EAN-13
var ean13 = "123456789012";
design.drawBarCode(ean13, citizen.LabelConst.CLS_BCS_EAN13,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 3, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// EAN-8
var ean8 = "1234567";
design.drawBarCode(ean8, citizen.LabelConst.CLS_BCS_EAN8,
        citizen.LabelConst.CLS_RT_NORMAL, 4, 4, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// HIBC
var hibc = "1234567890";
design.drawBarCode(hibc, citizen.LabelConst.CLS_BCS_HIBC,
        citizen.LabelConst.CLS_RT_NORMAL, 6, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// CODABAR
var codabar = "a1234567890b";
design.drawBarCode(codabar, citizen.LabelConst.CLS_BCS_CODABAR,
        citizen.LabelConst.CLS_RT_NORMAL, 6, 2, 40, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);
```

```
// Interleaved2of5 W/BARS
var int25 = "1234567890";
design.drawBarCode(int25, citizen.LabelConst.CLS_BCS_INT25,
        citizen.LabelConst.CLS_RT_NORMAL, 5, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// PLESSEY
var plessey = "1234567890";
design.drawBarCode(plessey, citizen.LabelConst.CLS_BCS_PLESSEY,
        citizen.LabelConst.CLS_RT_NORMAL, 4, 2, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// CASE CODE
var casecode = "1234567890123";
design.drawBarCode(casecode, citizen.LabelConst.CLS_BCS_CASECODE,
        citizen.LabelConst.CLS_RT_NORMAL, 5, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UPC 2DIG ADD
var upca = "01234567890";
var upc2dig = "12";

design.drawBarCode(upca, citizen.LabelConst.CLS_BCS_UPCA,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);

design.drawBarCode(upc2dig, citizen.LabelConst.CLS_BCS_UPC2DIG,
        citizen.LabelConst.CLS_RT_NORMAL, 4, 2, 50, 130, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UPC 5DIG ADD
var upca = "01234567890";
var upc5dig = "12345";

design.drawBarCode(upca, citizen.LabelConst.CLS_BCS_UPCA,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);

design.drawBarCode(upc5dig, citizen.LabelConst.CLS_BCS_UPC5DIG,
        citizen.LabelConst.CLS_RT_NORMAL, 4, 2, 50, 130, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);

// Code93
var code93 = "1234ABCD";
design.drawBarCode(code93, citizen.LabelConst.CLS_BCS_CODE93,
        citizen.LabelConst.CLS_RT_NORMAL, 6, 6, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// ITF-14
var itf14 = "1234567890123";
design.drawBarCode(itf14, citizen.LabelConst.CLS_BCS_ITF14,
        citizen.LabelConst.CLS_RT_NORMAL, 5, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);
```

```
// ZIP
var zip = "123456789";
design.drawBarCode(zip, citizen.LabelConst.CLS_BCS_ZIP,
        citizen.LabelConst.CLS_RT_NORMAL, 1, 1, 10, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// ITF-16
var itf16 = "123456789012345";
design.drawBarCode(itf16, citizen.LabelConst.CLS_BCS_ITF16,
        citizen.LabelConst.CLS_RT_NORMAL, 5, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UCC/EAN-128
var uccean128 = "12345678901234567890";
design.drawBarCode(uccean128, citizen.LabelConst.CLS_BCS_UCCEAN128,
        citizen.LabelConst.CLS_RT_NORMAL, 4, 4, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// Industrial2of5
var industrial25 = "1234567890";
design.drawBarCode(industrial25, citizen.LabelConst.CLS_BCS_INDUSTRIAL25,
        citizen.LabelConst.CLS_RT_NORMAL, 5, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UCC/EAN-128(for K-MART)
var uccean128kmart = "12345678901234567890";
design.drawBarCode(uccean128kmart, citizen.LabelConst.CLS_BCS_UCCEAN128KMART,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 3, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// COOP 2 of 5
var coop25 = "0123456789";
design.drawBarCode(coop25, citizen.LabelConst.CLS_BCS_COOP25,
        citizen.LabelConst.CLS_RT_NORMAL, 10, 4, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// UCC/EAN-128 Random Weight
var uccean128randomweight = "12345678901234567890123456789099999";
design.drawBarCode(uccean128randomweight,
        citizen.LabelConst.CLS_BCS_UCCEAN128RANDOMWEIGHT,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 2, 50, 10, 10,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);


// Telepen
var telepen = "1234567890";
design.drawBarCode(telepen, citizen.LabelConst.CLS_BCS_TELEPEN,
        citizen.LabelConst.CLS_RT_NORMAL, 2, 2, 50, 10, 100,
        citizen.LabelConst.CLS_BCS_TEXT_SHOW);
```

### 5.6.7. drawMaxiCode method

**Syntax**

drawMaxiCode (arryData, rotation, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| arryData | [IN] | String data | ASCII code character string array |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws the UPS MaxiCode barcode with specifying options such as rotation and coordinates.
The following information are required in the data parameter in order as below:

1) 5-digit - Zip code
2) 4-digit -+4 Zip code
3) 3-digit – Country Code
4) 3-digit - Class of Service
5) Up to 84 digits other information

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
var data = new Array(5);
data[0] = "90501";
data[1] = "6282";
data[2] = "840";
data[3] = "001";
data[4] = "1Z00004951";
design.drawMaxiCode(data, citizen.LabelConst.CLS_RT_NORMAL, 100, 0);
```

### 5.6.8. drawPDF417 method

**Syntax**

drawPDF417 (data, encoding, rotation, exp, ecLevel, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | * The characters available with the specified encoding. |
| encoding | [IN] | Character encoding | See "5.7.2. Predefined Constants". |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| exp | [IN] | Magnification | 1-5 |
| ecLevel | [IN] | Error correction level | CLS_PDF417_EC_LEVEL_0: Level 0<br>CLS_PDF417_EC_LEVEL_1: Level 1<br>CLS_PDF417_EC_LEVEL_2: Level 2<br>CLS_PDF417_EC_LEVEL_3: Level 3<br>CLS_PDF417_EC_LEVEL_4: Level 4<br>CLS_PDF417_EC_LEVEL_5: Level 5<br>CLS_PDF417_EC_LEVEL_6: Level 6<br>CLS_PDF417_EC_LEVEL_7: Level 7<br>CLS_PDF417_EC_LEVEL_8: Level 8 |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws the PDF417 barcode with specifying options such as character encoding, rotation, magnification, EC level and coordinates.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawPDF417("0123456789",
        citizen.LabelConst.CLS_ENC_CDPG_IBM850,
        citizen.LabelConst.CLS_RT_NORMAL, 3,
        citizen.LabelConst.CLS_PDF417_EC_LEVEL_0, 0, 0);
```

### 5.6.9. drawDataMatrix method

**Syntax**

drawDataMatrix (data, encoding, rotation, exp, ecLevel, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | -Numeric: Up to 3,116 characters<br>-Alphanumeric: Up to 2,335 characters<br>* The characters available with the specified encoding. |
| encoding | [IN] | Character encoding | See #9 in "5.7.2. Predefined Constants". |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| exp | [IN] | Magnification | 1-15 |
| ecLevel | [IN] | Error correction level | CLS_DATAMATRIX_EC_LEVEL_200：200 |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws the DataMatrix barcode with specifying options such as character encoding, rotation, magnification, EC level and coordinates.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawDataMatrix("0123456789",
        citizen.LabelConst.CLS_ENC_CDPG_IBM850,
        citizen.LabelConst.CLS_RT_NORMAL, 15,
        citizen.LabelConst.CLS_DATAMATRIX_EC_LEVEL_200, 0, 0);
```

### 5.6.10. drawQRCode method

**Syntax**

drawQRCode (data, encoding, rotation, exp, ecLevel, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | * The characters available with the specified encoding. |
| encoding | [IN] | Character encoding | See #9 in "5.7.2. Predefined Constants". |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| exp | [IN] | Magnification | 1-15 |
| ecLevel | [IN] | Error correction level | CLS_QRCODE_EC_LEVEL_L: Level L (7%)<br>CLS_QRCODE_EC_LEVEL_M: Level M (15%)<br>CLS_QRCODE_EC_LEVEL_Q: Level Q (25%)<br>CLS_QRCODE_EC_LEVEL_H: Level H (30%) |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws the QR code with specifying options such as character encoding, rotation, magnification, EC level and coordinates.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawQRCode("ｱｲｳｴｵ12345",
        citizen.LabelConst.CLS_ENC_CDPG_SHIFT_JIS,
        citizen.LabelConst.CLS_RT_NORMAL, 10,
        citizen.LabelConst.CLS_QRCODE_EC_LEVEL_H, 100, 100);
```

### 5.6.11. drawAztec method

**Syntax**

drawAztec (data, encoding, rotation, exp, ecLevel, x, y)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | String data | * The characters available with the specified encoding. |
| encoding | [IN] | Character encoding | See #9 in "5.7.2. Predefined Constants". |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| exp | [IN] | Magnification | 1-15 |
| ecLevel | [IN] | Error correction level | CLS_AXTEC_EC_LEVEL_000:<br>Level 0 (Error correction ratio 23%) |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

**Description**

Draws the Aztec barcode with specifying options such as character encoding, rotation, magnification, EC level and coordinates.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawAztec("0123456789",
        citizen.LabelConst.CLS_ENC_CDPG_IBM850,
        citizen.LabelConst.CLS_RT_NORMAL, 10,
        citizen.LabelConst.CLS_AXTEC_EC_LEVEL_000, 0, 0);
```

## 5.6.12. drawGS1DataBar method

### Syntax

drawGS1DataBar (arryData, type, rotation, exp, x, y)

### Parameters

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| arryData | [IN] | String data | ASCII code character string. |
| type | [IN] | Barcode type | CLS_GS1_DATABAR_OMNI_DIRECTIONAL: Omni-dirctional<br>CLS_GS1_DATABAR_COMPOSITE: Conposite<br>CLS_GS1_DATABAR_TRUNCATION: Truncation<br>CLS_GS1_DATABAR_STACKED: Stacked<br>CLS_GS1_DATABAR_STACKED_OMNI_DIRECTIONAL: Stacked Omni-dirctional<br>CLS_GS1_DATABAR_LIMITED: Limited<br>CLS_GS1_DATABAR_EXPANDED: Expanded |
| rotation | [IN] | Direction of rotation | CLS_RT_NORMAL: No rotation<br>CLS_RT_RIGHT90: Rotate CW 90<br>CLS_RT_ROTATE180: Rotate CW 180<br>CLS_RT_LEFT90: Rotate CCW 90 |
| exp | [IN] | Magnification | 1-15 |
| x | [IN] | X-coordinate | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Y-coordinate | |

### Description

Draws the GS1DataBar barcode with specifying options such as rotation, magnification and coordinates.

* The available text types vary depending on the symbology. Refer to the "GS1 DataBar (RSS) in the command reference.

### Return value

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

### Example

```
//GS1 DataBar Omni-Directional
var omnidirectional = new Array("1234567890123");
design.drawGS1DataBar(omnidirectional,
        citizen.LabelConst.CLS_GS1_DATABAR_OMNI_DIRECTIONAL,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);


//GS1 DataBar Composite
var composit = new Array(2);
composit[0] = "1234567890123";
composit[1] = "1234567890-07/07/07";
design.drawGS1DataBar(composit,
        citizen.LabelConst.CLS_GS1_DATABAR_COMPOSITE,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);


// GS1 DataBar Truncation
var truncation = new Array("1234567890123");
design.drawGS1DataBar(truncation,
        citizen.LabelConst.CLS_GS1_DATABAR_TRUNCATION,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);
```

```
// GS1 DataBar Stacked
var stacked = new Array("1234567890123");
design.drawGS1DataBar(stacked,
        citizen.LabelConst.CLS_GS1_DATABAR_STACKED,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);


// GS1 DataBar Stacked-Omni-Directional
var stackedOD = new Array("1234567890123");
design.drawGS1DataBar(stackedOD,
        citizen.LabelConst.CLS_GS1_DATABAR_STACKED_OMNI_DIRECTIONAL,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);


// GS1 DataBar Limited
var limited = new Array("1234567890123");
design.drawGS1DataBar(limited,
        citizen.LabelConst.CLS_GS1_DATABAR_LIMITED,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);


// GS1 DataBar Expanded
var expanded = new Array("041234567890123");
design.drawGS1DataBar(expanded,
        citizen.LabelConst.CLS_GS1_DATABAR_EXPANDED,
        citizen.LabelConst.CLS_RT_NORMAL, 3, 10, 10);
```

### 5.6.13. drawLine method

**Syntax**

drawLine (x1, y1, x2, y2, thickness)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| x1 | [IN] | Start position (X-coordinate) | 0000-9999<br>* The origin is at bottom-left.(0, 0) |
| y1 | [IN] | Start position (Y-coordinate) | |
| x2 | [IN] | End position (X-coordinate) | |
| y2 | [IN] | End position (Y-coordinate) | |
| thickness | [IN] | Line width (Reference point is center) | 0000-9999 |

**Description**

Draws a line of the specified width.
Start and stop positions will be located at the center of the line. Each coordinate must be within the range of 0000-9999. Moreover the whole line image (rectangle) including the line thickness must be within the range of 0000-9999 as well. Returns CLS_E_ILLEGAL(1101) otherwise.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
//FormatAttribute:OR
print.setFormatAttribute(1);

//Bar
design.drawLine(20, 30, 20, 300, 10);

//Horizontal line
design.drawLine(16, 34, 200, 34, 10);
```

### 5.6.14. drawRect method

**Syntax**

drawRect (x, y, width, height, thickness)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| x | [IN] | Start position (X-coordinate) | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Start position (Y-coordinate) | |
| width | [IN] | Box width | 0000 - 9999 |
| height | [IN] | Box height | |
| thickness | [IN] | Line width | 0000 - 9999 |

**Description**

Draws a box of the specified width, height and line width. Thicker line width expands the line inward and doesn't affect the outline size.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawRect(20, 30, 180, 280, 10);
```

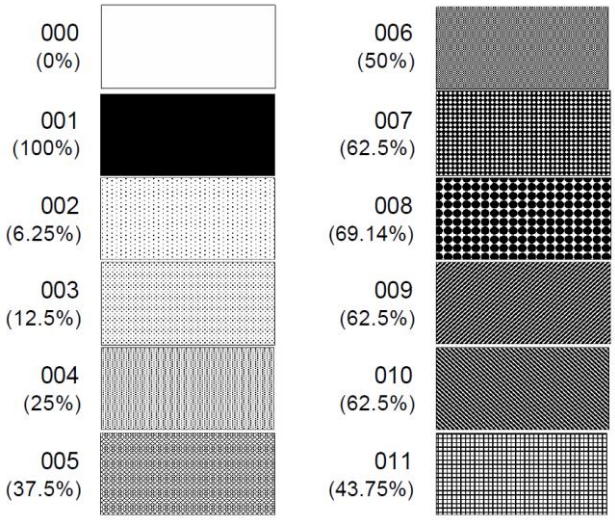
## 5.6.15. fillRect method

### Syntax
fillRect (x, y, width, height, pattern)

### Parameters

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| x | [IN] | Start position (X-coordinate) | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Start position (Y-coordinate) | |
| width | [IN] | Box width | 0000 - 9999 |
| height | [IN] | Box height | |
| pattern | [IN] | Shaded pattern | CLS_SHADED_PTN_0: Shaded pattern 000<br>CLS_SHADED_PTN_1: Shaded pattern 001<br>CLS_SHADED_PTN_2: Shaded pattern 002<br>CLS_SHADED_PTN_3: Shaded pattern 003<br>CLS_SHADED_PTN_4: Shaded pattern 004<br>CLS_SHADED_PTN_5: Shaded pattern 005<br>CLS_SHADED_PTN_6: Shaded pattern 006<br>CLS_SHADED_PTN_7: Shaded pattern 007<br>CLS_SHADED_PTN_8: Shaded pattern 008<br>CLS_SHADED_PTN_9: Shaded pattern 009<br>CLS_SHADED_PTN_10: Shaded pattern 010<br>CLS_SHADED_PTN_11: Shaded pattern 011 |

### Description
Draws a box of the specified width, height and shaded pattern.




### Return value
Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

### Example
```
design.fillRect(20, 30, 180, 280, citizen.LabelConst.CLS_SHADED_PTN_10);
```

### 5.6.16. drawCircle method

**Syntax**

drawCircle (x, y, radius)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| x | [IN] | Start position<br>(X-coordinate, center) | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Start position<br>(Y-coordinate, center) | |
| radius | [IN] | Radius | 0000 - 0398 |

**Description**

Draws a circle of the specified radius.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
design.drawCircle(50, 50, 15);
```

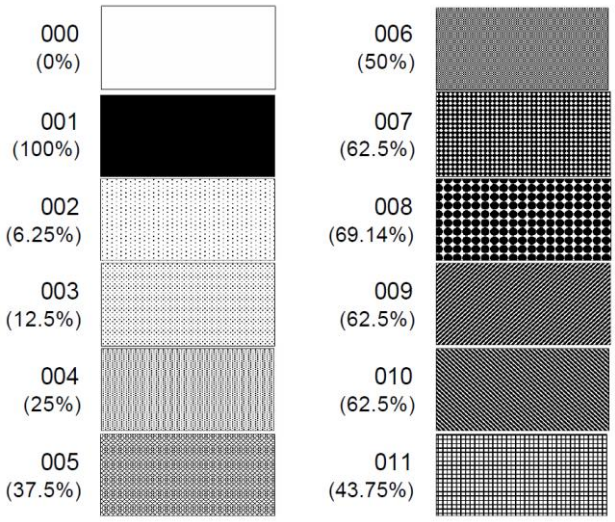
## 5.6.17. fillCircle method

### Syntax
fillCircle (x, y, radius, pattern)

### Parameters

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| x | [IN] | Start position<br>(X-coordinate, center) | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| y | [IN] | Start position<br>(Y-coordinate, center) | |
| radius | [IN] | Radius | 0000 - 0398 |
| pattern | [IN] | Shaded pattern | CLS_SHADED_PTN_0: Shaded pattern 000<br>CLS_SHADED_PTN_1: Shaded pattern 001<br>CLS_SHADED_PTN_2: Shaded pattern 002<br>CLS_SHADED_PTN_3: Shaded pattern 003<br>CLS_SHADED_PTN_4: Shaded pattern 004<br>CLS_SHADED_PTN_5: Shaded pattern 005<br>CLS_SHADED_PTN_6: Shaded pattern 006<br>CLS_SHADED_PTN_7: Shaded pattern 007<br>CLS_SHADED_PTN_8: Shaded pattern 008<br>CLS_SHADED_PTN_9: Shaded pattern 009<br>CLS_SHADED_PTN_10: Shaded pattern 010<br>CLS_SHADED_PTN_11: Shaded pattern 011 |

### Description
Draws a circle of the specified radius and shaded pattern.




### Return value
Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

### Example
```
design.fillCircle(100, 100, 40, citizen.LabelConst.CLS_SHADED_PTN_2);
```

### 5.6.18. drawPolygon method

**Syntax**

drawPolygon (arryX, arryY)

**Parameters**

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| arryX | [IN] | X points | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| arryY | [IN] | Y points | |

**Description**

Draws a closed polygon defined by arrays of x and y coordinates. Each pair of (x, y) coordinates defines a point. The number of elements must match. Returns CLS_E_ILLEGAL(1101) otherwise.

**Return value**

Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

**Example**

```
var arryX = new Array(100, 200, 250, 150);
var arryY = new Array(100, 100, 200, 200);

//Draw a parallelogram
design.drawPolygon(arryX, arryY);
```

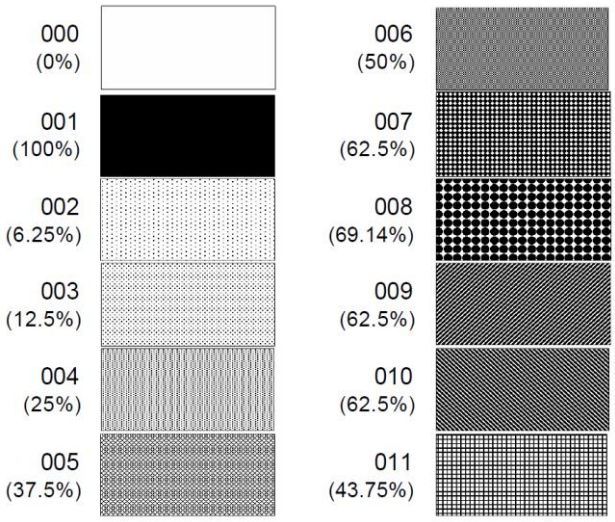
## 5.6.19. fillPolygon method

### Syntax
fillPolygon (arryX, arryY, pattern)

### Parameters

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| arryX | [IN] | X points | 0000 - 9999<br>* The origin is at bottom-left.(0, 0) |
| arryY | [IN] | Y points | |
| pattern | [IN] | Shaded pattern | CLS_SHADED_PTN_0: Shaded pattern 000<br>CLS_SHADED_PTN_1: Shaded pattern 001<br>CLS_SHADED_PTN_2: Shaded pattern 002<br>CLS_SHADED_PTN_3: Shaded pattern 003<br>CLS_SHADED_PTN_4: Shaded pattern 004<br>CLS_SHADED_PTN_5: Shaded pattern 005<br>CLS_SHADED_PTN_6: Shaded pattern 006<br>CLS_SHADED_PTN_7: Shaded pattern 007<br>CLS_SHADED_PTN_8: Shaded pattern 008<br>CLS_SHADED_PTN_9: Shaded pattern 009<br>CLS_SHADED_PTN_10: Shaded pattern 010<br>CLS_SHADED_PTN_11: Shaded pattern 011 |

### Description
Draws a closed polygon defined by arrays of x and y coordinates, with the specified shaded pattern. Each pair of (x, y) coordinates defines a point. The number of elements must match. Returns CLS_E_ILLEGAL(1101) otherwise.




### Return value
Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

### Example
```
var arryX = new Array(100, 200, 250, 150);
var arryY = new Array(100, 100, 200, 200);

// Draw a parallelogram
design.fillPolygon(arryX, arryY, citizen.LabelConst.CLS_SHADED_PTN_3);
```

## 5.6.20. embedRawDesignCommand method

### Syntax
embedRawDesignCommand (data)

### Parameters

| Parameter | [IN/OUT] | Description | Setting range |
|---|---|---|---|
| data | [IN] | Design command | Data of binary. |

### Description
Embeds raw printer commands to the label design. This allows adding raw label format commands individually.

The SendData method in the LabelPrint class requires complete label commands (both system level commands and label format commands).

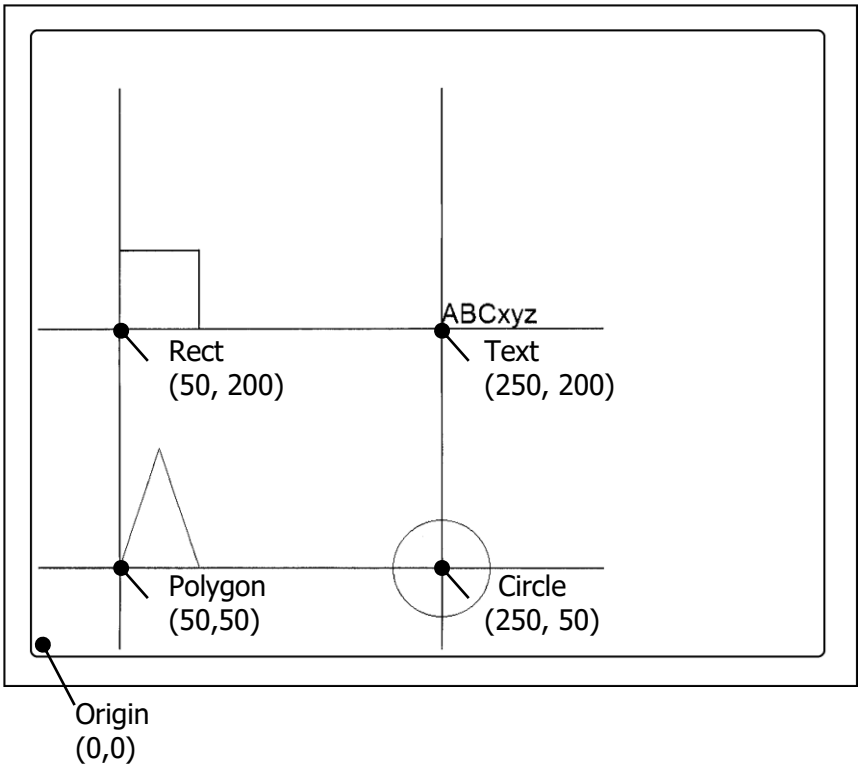
### Return value
Returns CLS_SUCCESS(0) on success, an error code otherwise. See "5.4. Return value" for the error codes.

### Example
```
To add a box command,
1X1100002000100b0300025001000100:

var hexdata = new Array(
        0x31, 0x58, 0x31, 0x31, 0x30, 0x30, 0x30, 0x30, 0x32, 0x30,
        0x30, 0x30, 0x31, 0x30, 0x30, 0x62, 0x30, 0x33, 0x30, 0x30,
        0x30, 0x32, 0x35, 0x30, 0x30, 0x31, 0x30, 0x30, 0x30, 0x31,
        0x30, 0x30, 0x0D, 0x0A );

design.embedRawDesignCommand(hexdata);
```

## 5.7. Appendix

### 5.7.1. Specifying object position

The coordinate origin of the label design is at bottom-left. The measurement unit, either inches or millimeters, is set in the printer. The MeasurementUnit property in the LabelPrint class allows setting the measurement unit.




**Example**

```
// Polygon
arryX = new Array(50, 75, 100);
arryY = new Array(50, 125, 50);
design.drawPolygon(arryX, arryY);;

// Rect
design.drawRect(50, 200, 50, 50, 1);

// Circle
design.drawCircle(250, 50, 30);

// Text
design.drawTextPtrFont("ABCxyz", citizen.LabelConst.CLS_LOCALE_JP,
        citizen.LabelConst.CLS_PRT_FNT_5, citizen.LabelConst.CLS_RT_NORMAL,
        1, 1, citizen.LabelConst.CLS_PRT_FNT_SIZE_6, 250, 200);

// Line
design.drawLine(0, 200, 350, 200, 1);       // Line-1
design.drawLine(50, 0, 50, 350, 1);         // Line-2
design.drawLine(0, 50, 350, 50, 1);         // Line-3
design.drawLine(250, 0, 250, 350, 1);       // Line-4
```

### 5.7.2. Predefined Constants

| No | Type | Name | Data Type | Value | Description |
|---|---|---|---|---|---|
| 1 | Result/Error | CLS_SUCCESS | int | 0 | Successfully completed |
| | | CLS_E_ILLEGAL | int | 1101 | Unsupported or invalid parameter |
| 2 | Property default value | CLS_PROPERTY_DEFAULT | int | 999999 | Default value of property |
| 3 | Status of printer | CLS_STS_NO | int | 0 | Status: NO |
| | | CLS_STS_YES | int | 1 | Status: YES |
| 4 | Locale | CLS_LOCALE_JP | int | 0 | Japanese model |
| | | CLS_LOCALE_OTHER | int | 1 | Non-Japanese model |
| | | CLS_LOCALE_CN | int | 2 | Chinese model |
| | | CLS_LOCALE_KR | int | 3 | Korean model |
| 5 | Font typeface | CLS_PRT_FNT_0 | int | 0 | System font:0 |
| | | CLS_PRT_FNT_1 | int | 1 | System font:1 |
| | | CLS_PRT_FNT_2 | int | 2 | System font:2 |
| | | CLS_PRT_FNT_3 | int | 3 | System font:3 |
| | | CLS_PRT_FNT_4 | int | 4 | System font:4 |
| | | CLS_PRT_FNT_5 | int | 5 | System font:5 |
| | | CLS_PRT_FNT_6 | int | 6 | System font:6 |
| | | CLS_PRT_FNT_7 | int | 7 | System font:7 |
| | | CLS_PRT_FNT_8 | int | 8 | System font:8 |
| | | CLS_PRT_FNT_TRIUMVIRATE | int | 9 | Smooth font (Triumvirate) |
| | | CLS_PRT_FNT_TRIUMVIRATE_B | int | 10 | Smooth font (Triumvirate Bold) |
| | | CLS_PRT_FNT_KANJI | int | 11 | Kanji (Writing from left to right) |
| | | CLS_PRT_FNT_KANJIT | int | 12 | Kanji (Writing from top to bottom) |
| 6 | Font size | CLS_PRT_FNT_SIZE_4 | int | 0 | 4pt |
| | | CLS_PRT_FNT_SIZE_5 | int | 1 | 5pt |
| | | CLS_PRT_FNT_SIZE_6 | int | 2 | 6pt |
| | | CLS_PRT_FNT_SIZE_8 | int | 3 | 8pt |
| | | CLS_PRT_FNT_SIZE_10 | int | 4 | 10pt |
| | | CLS_PRT_FNT_SIZE_12 | int | 5 | 12pt |
| | | CLS_PRT_FNT_SIZE_14 | int | 6 | 14pt |
| | | CLS_PRT_FNT_SIZE_18 | int | 7 | 18pt |
| | | CLS_PRT_FNT_SIZE_24 | int | 8 | 24pt |
| | | CLS_PRT_FNT_SIZE_30 | int | 9 | 30pt |
| | | CLS_PRT_FNT_SIZE_36 | int | 10 | 36pt |
| | | CLS_PRT_FNT_SIZE_48 | int | 11 | 48pt |
| | | CLS_PRT_FNT_KANJI_SIZE_16 | int | 100 | Kanji 16dot |
| | | CLS_PRT_FNT_KANJI_SIZE_24 | int | 101 | Kanji 24dot |
| | | CLS_PRT_FNT_KANJI_SIZE_32 | int | 102 | Kanji 32dot |
| | | CLS_PRT_FNT_KANJI_SIZE_48 | int | 103 | Kanji 48dot |
| 7 | Encoding | CLS_ENC_CDPG_DEFAULT | int | 0 | Default value |
| | | CLS_ENC_CDPG_IBM437 | int | 437 | IBM437 OEM USA |
| | | CLS_ENC_CDPG_IBM850 | int | 850 | ibm850 Western European(DOS) |
| | | CLS_ENC_CDPG_IBM852 | int | 852 | ibm852 Central Europe (DOS) |
| | | CLS_ENC_CDPG_IBM857 | int | 857 | ibm857 Turkish (DOS) |
| | | CLS_ENC_CDPG_IBM860 | int | 860 | IBM860 Portuguese (DOS) |
| | | CLS_ENC_CDPG_IBM861 | int | 861 | ibm861 Icelandic (DOS) |

| | | | | | |
|---|---|---|---|---|---|
| | | CLS_ENC_CDPG_IBM863 | int | 863 | IBM863 French (Canada)(DOS) |
| | | CLS_ENC_CDPG_IBM864 | int | 864 | IBM864 Arabic |
| | | CLS_ENC_CDPG_IBM865 | int | 865 | IBM865 Norwegian (DOS) |
| | | CLS_ENC_CDPG_CP866 | int | 866 | cp866 Cyrillic (DOS) |
| | | CLS_ENC_CDPG_SHIFT_JIS | int | 932 | shift_jis Japanese (Shift JIS) |
| | | CLS_ENC_CDPG_BIG5 | int | 950 | big5 traditional Chinese (Big5) |
| | | CLS_ENC_CDPG_WINDOWS_1252 | int | 1252 | Windows-1252Western European (Windows) |
| | | CLS_ENC_CDPG_EUC_KR | int | 51949 | euc-kr Korean (EUC) |
| | | CLS_ENC_CDPG_GB18030 | int | 54936 | GB18030 simplified Chinese (GB18030) |
| 8 | Direction of rotation | CLS_RT_NORMAL | int | 1 | No rotation |
| | | CLS_RT_RIGHT90 | int | 2 | Rotate 90 CW |
| | | CLS_RT_ROTATE180 | int | 3 | Rotate 180 |
| | | CLS_RT_LEFT90 | int | 4 | Rotate 90 CCW |
| 9 | Barcode symbology | CLS_BCS_CODE39 | int | 100 | Code 3 of 9 |
| | | CLS_BCS_UPCA | int | 101 | UPC-A |
| | | CLS_BCS_UPCE | int | 102 | UPC-E |
| | | CLS_BCS_INTERLEAVED25 | int | 103 | Interleaved 2 of 5 |
| | | CLS_BCS_CODE128 | int | 104 | Code 128 |
| | | CLS_BCS_EAN13 | int | 105 | EAN-13(JAN-13) |
| | | CLS_BCS_EAN8 | int | 106 | EAN-8(JAN-8) |
| | | CLS_BCS_HIBC | int | 107 | HIBC |
| | | CLS_BCS_CODABAR | int | 108 | CODABAR(NW-7) |
| | | CLS_BCS_INT25 | int | 109 | Int 2 of 5 |
| | | CLS_BCS_PLESSEY | int | 110 | Plessey |
| | | CLS_BCS_CASECODE | int | 111 | CASE CODE |
| | | CLS_BCS_UPC2DIG | int | 112 | UPC 2DIG ADD (supplementary code of 2 digits for UPC) |
| | | CLS_BCS_UPC5DIG | int | 113 | UPC 5DIG ADD (supplementary code of 5 digits for UPC) |
| | | CLS_BCS_CODE93 | int | 114 | Code93 |
| | | CLS_BCS_ITF14 | int | 115 | (Japanese model)ITF-14 |
| | | CLS_BCS_ZIP | int | 116 | (Non-Japanese model)ZIP |
| | | CLS_BCS_ITF16 | int | 117 | (Japanese model)ITF-16 |
| | | CLS_BCS_UCCEAN128 | int | 118 | (Non-Japanese model)UCC/EAN-128 |
| | | CLS_BCS_INDUSTRIAL25 | int | 119 | (Japanese model)Industrial 2 of 5 |
| | | CLS_BCS_UCCEAN128KMART | int | 120 | (Non-Japanese model) UCC/EAN-128(for K-MART) |
| | | CLS_BCS_COOP25 | int | 121 | (Japanese model)COOP 2 of 5 |
| | | CLS_BCS_UCCEAN128RANDOMWEIGHT | int | 122 | (Non-Japanese model) UCC/EAN-128 Random Weight |
| | | CLS_BCS_TELEPEN | int | 123 | Telepen |
| 10 | Human readable text of barcode | CLS_BCS_TEXT_HIDE | int | 0 | Hide |
| | | CLS_BCS_TEXT_SHOW | int | 1 | Show |
| 11 | Error correction level (PDF417) | CLS_PDF417_EC_LEVEL_0 | int | 0 | Level 0 |
| | | CLS_PDF417_EC_LEVEL_1 | int | 1 | Level 1 |
| | | CLS_PDF417_EC_LEVEL_2 | int | 2 | Level 2 |
| | | CLS_PDF417_EC_LEVEL_3 | int | 3 | Level 3 |
| | | CLS_PDF417_EC_LEVEL_4 | int | 4 | Level 4 |

| | | | | | |
|---|---|---|---|---|---|
| | | CLS_PDF417_EC_LEVEL_5 | int | 5 | Level 5 |
| | | CLS_PDF417_EC_LEVEL_6 | int | 6 | Level 6 |
| | | CLS_PDF417_EC_LEVEL_7 | int | 7 | Level 7 |
| | | CLS_PDF417_EC_LEVEL_8 | int | 8 | Level 8 |
| 12 | Error correction level (Data Matrix) | CLS_DATAMATRIX_EC_LEVEL_200 | int | 200 | |
| 13 | Error correction level (QR Code) | CLS_QRCODE_EC_LEVEL_L | int | 0 | Error correction level L (7%) |
| | | CLS_QRCODE_EC_LEVEL_M | int | 1 | Error correction level M (15%) |
| | | CLS_QRCODE_EC_LEVEL_Q | int | 2 | Error correction level Q (25%) |
| | | CLS_QRCODE_EC_LEVEL_H | int | 3 | Error correction level H (30%) |
| 14 | Error correction level (Aztec) | CLS_AXTEC_EC_LEVEL_000 | int | 0 | Error correction ratio 23% |
| 15 | Barcode symbology (GS1 DataBar) | CLS_GS1_DATABAR_OMNI_DIRECTIONAL | int | 0 | GS1DataBar Omni-dirctional |
| | | CLS_GS1_DATABAR_COMPOSITE | int | 1 | GS1DataBar Conposite |
| | | CLS_GS1_DATABAR_TRUNCATION | int | 2 | GS1DataBar Truncation |
| | | CLS_GS1_DATABAR_STACKED | int | 3 | GS1DataBar Stacked |
| | | CLS_GS1_DATABAR_STACKED_OMNI_DIRECTIONAL | int | 4 | GS1DataBar Stacked Omni-dirctional |
| | | CLS_GS1_DATABAR_LIMITED | int | 5 | GS1DataBar Limited |
| | | CLS_GS1_DATABAR_EXPANDED | int | 6 | GS1DataBar Expanded |
| 16 | Shaded pattern | CLS_SHADED_PTN_0 | int | 0 | Shaded pattern：000 |
| | | CLS_SHADED_PTN_1 | int | 1 | Shaded pattern：001 |
| | | CLS_SHADED_PTN_2 | int | 2 | Shaded pattern：002 |
| | | CLS_SHADED_PTN_3 | int | 3 | Shaded pattern：003 |
| | | CLS_SHADED_PTN_4 | int | 4 | Shaded pattern：004 |
| | | CLS_SHADED_PTN_5 | int | 5 | Shaded pattern：005 |
| | | CLS_SHADED_PTN_6 | int | 6 | Shaded pattern：006 |
| | | CLS_SHADED_PTN_7 | int | 7 | Shaded pattern：007 |
| | | CLS_SHADED_PTN_8 | int | 8 | Shaded pattern：008 |
| | | CLS_SHADED_PTN_9 | int | 9 | Shaded pattern：009 |
| | | CLS_SHADED_PTN_10 | int | 10 | Shaded pattern：010 |
| | | CLS_SHADED_PTN_11 | int | 11 | Shaded pattern：011 |
| 17 | Measurement unit | CLS_UNIT_MILLI | int | 0 | Metric |
| | | CLS_UNIT_INCH | int | 1 | Inch |
| 18 | Speed setting | CLS_SPEEDSETTING_1 | int | 1 | 1：1.0inch( 25.4mm) / sec |
| | | CLS_SPEEDSETTING_2 | int | 2 | 2：2.0inch( 50.8mm) / sec |
| | | CLS_SPEEDSETTING_3 | int | 3 | 3：3.0inch( 76.2mm) / sec |
| | | CLS_SPEEDSETTING_4 | int | 4 | 4：4.0inch(101.6mm) / sec |
| | | CLS_SPEEDSETTING_5 | int | 5 | 5：5.0inch(127.0mm) / sec |
| | | CLS_SPEEDSETTING_6 | int | 6 | 6：6.0inch(152.4mm) / sec |
| | | CLS_SPEEDSETTING_7 | int | 7 | 7：7.0inch(177.8mm) / sec |
| | | CLS_SPEEDSETTING_8 | int | 8 | 8：8.0inch(203.2mm) / sec |
| | | CLS_SPEEDSETTING_9 | int | 9 | 9：9.0inch(228.6mm) / sec |
| | | CLS_SPEEDSETTING_A | int | 10 | A：1.0inch( 25.4mm) / sec |
| | | CLS_SPEEDSETTING_B | int | 11 | B：1.0inch( 25.4mm) / sec |
| | | CLS_SPEEDSETTING_C | int | 12 | C：2.0inch( 50.8mm) / sec |
| | | CLS_SPEEDSETTING_D | int | 13 | D：2.0inch( 50.8mm) / sec |

| | | | | | |
|---|---|---|---|---|---|
| | | CLS_SPEEDSETTING_E | int | 14 | E:3.0inch( 76.2mm) / sec |
| | | CLS_SPEEDSETTING_F | int | 15 | F:3.0inch( 76.2mm) / sec |
| | | CLS_SPEEDSETTING_G | int | 16 | G:4.0inch(101.6mm) / sec |
| | | CLS_SPEEDSETTING_H | int | 17 | H:4.0inch(101.6mm) / sec |
| | | CLS_SPEEDSETTING_I | int | 18 | I:5.0inch(127.0mm) / sec |
| | | CLS_SPEEDSETTING_J | int | 19 | J:5.0inch(127.0mm) / sec |
| | | CLS_SPEEDSETTING_K | int | 20 | K:6.0inch(152.4mm) / sec |
| | | CLS_SPEEDSETTING_L | int | 21 | L:6.0inch(152.4mm) / sec |
| | | CLS_SPEEDSETTING_M | int | 22 | M:7.0inch(177.8mm) / sec |
| | | CLS_SPEEDSETTING_N | int | 23 | N:7.0inch(177.8mm) / sec |
| | | CLS_SPEEDSETTING_O | int | 24 | O:8.0inch(203.2mm) / sec |
| | | CLS_SPEEDSETTING_P | int | 25 | P:8.0inch(203.2mm) / sec |
| | | CLS_SPEEDSETTING_Q | int | 26 | Q:9.0inch(228.6mm) / sec |
| | | CLS_SPEEDSETTING_R | int | 27 | R:9.0inch(228.6mm) / sec |
| | | CLS_SPEEDSETTING_S | int | 28 | S:10.0inch(254.0mm) / sec |
| | | CLS_SPEEDSETTING_T | int | 29 | T:10.0inch(254.0mm) / sec |
| | | CLS_SPEEDSETTING_U | int | 30 | U:11.0inch(279.4mm) / sec |
| | | CLS_SPEEDSETTING_V | int | 31 | V:11.0inch(279.4mm) / sec |
| | | CLS_SPEEDSETTING_W | int | 32 | W:12.0inch(304.8mm) / sec |
| | | CLS_SPEEDSETTING_X | int | 33 | X:12.0inch(304.8mm) / sec |
| 19 | Media handling | CLS_MEDIAHANDLING_NONE | int | 0 | None |
| | | CLS_MEDIAHANDLING_TEAROFF | int | 1 | Tear-off |
| | | CLS_MEDIAHANDLING_DISPENSES | int | 2 | Dispense |
| | | CLS_MEDIAHANDLING_PAUSE | int | 3 | Pause |
| | | CLS_MEDIAHANDLING_CUT | int | 4 | Cut |
| | | CLS_MEDIAHANDLING_CUTANDPAUSE | int | 5 | Cut and Pause |
| | | CLS_MEDIAHANDLING_PEELOFF | int | 6 | Peel-off |
| | | CLS_MEDIAHANDLING_REWIND | int | 7 | Rewind |
| 20 | Label sensor | CLS_SELSENSOR_NONE | int | 0 | None |
| | | CLS_SELSENSOR_SEETHROUGH | int | 1 | See Through |
| | | CLS_SELSENSOR_REFLECT | int | 2 | Reflect |
| 21 | Print method | CLS_PRTMETHOD_TT | int | 0 | Thermal transfer |
| | | CLS_PRTMETHOD_DT | int | 1 | Direct thermal |
| 22 | Sensor location | CLS_SENS_LOCATION_FRONT | int | 0 | Front sensor |
| | | CLS_SENS_LOCATION_ADJUSTABLE | int | 1 | Rear sensor |

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