



Web Application SDK for Epson ColorWorks User's Manual

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1 About This Document

Please read this document before using the Web Application SDK for Epson ColorWorks.

1.1 Application

This document applies to the Web Application SDK for Epson ColorWorks.

1.2 Purpose

This document provides the specifications for communication between clients using the SDK, and specifications of each API.

1.3 Prerequisite knowledge

The following prerequisite knowledge is required to comprehend this document:

- Basic knowledge about HTTP
- Basic knowledge about Web application development

1.4 Reference documents

Abbreviation	Document
RFC2068	RFC2068: Hypertext Transfer Protocol–HTTP/1.1
RFC3986	RFC3986: Uniform Resource Identifier (URI): Generic Syntax
RFC5646	RFC5646: Tags for Identifying Languages
ISO639	ISO639: Codes for the representation of names of languages
ISO3166-1	ISO3166-1: Codes for the representation of names of countries and their subdivisions–Part 1: Country codes

1.5 Trademarks

Product names used herein are for identification purposes only and may be trademarks of their respective owners.

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2 Overview

2.1 Web Application SDK for Epson ColorWorks

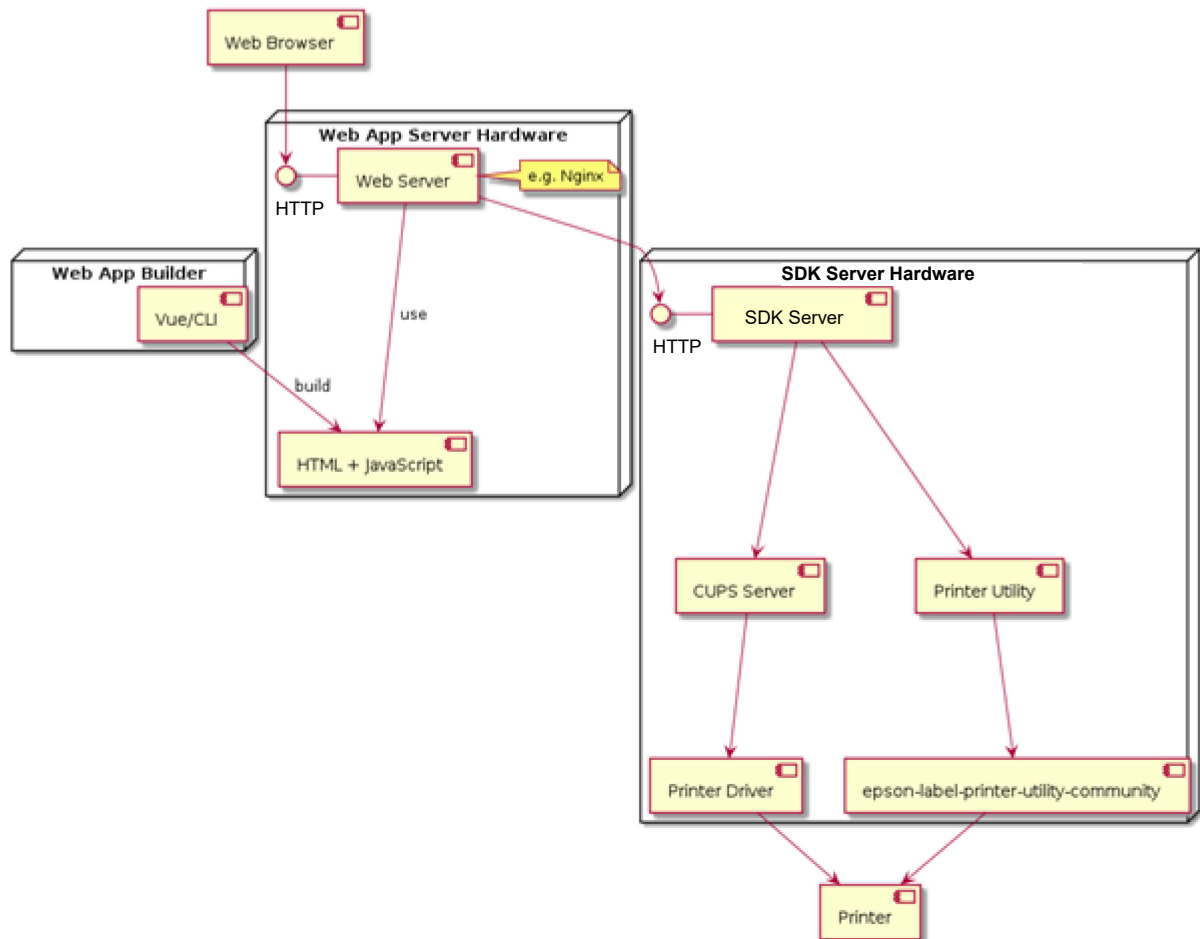
The Web Application SDK for Epson ColorWorks provides the following functions to an Epson Label Printer:

- Printing function Externally executes/controls printing
- Printer setting function Externally controls printer settings
- Printer status check function Externally gets the printer status

Epson's distribution modules are as follows:

- SDK Server
- Printer Driver
- Printer Utility
- Epson-label-printer-utility-community

The following is the example of a system configuration using the modules provided by Epson:



2.2 Glossary

Term	Description
Print capabilities	Print settings available for the device such as Paper size/Paper type/Borderless. Any print settings that are not available for the device cannot be used for printing.

2.3 API list

API Name	Method	URI
Printer queue list	Get	/api/v1/printers/list
Print capability	Get	/api/v1/printers/{queueName}/print/capability
Print setting	Post	/api/v1/printers/{queueName}/print/setting
Execute print	Post	/api/v1/printers/{queueName}/print
Printer capability	Get	/api/v1/printers/{queueName}/printer/capability
Printer setting	Post	/api/v1/printers/{queueName}/printer/setting
Printer status	Get	/api/v1/printers/{queueName}/printer/status
Printer info	Get	/api/v1/printers/{queueName}/printer/info
Send command	Post	/api/v1/printers/{queueName}/printer/sendcommand

Please refer to "4 APIs" on page 10 for more details of the API functions.

3 API Communication Protocol

3.1 Overview

The API communication protocol is a protocol used to send and receive required commands and data between the Web Application SDK for Epson ColorWorks server and a client.

3.2 Lower protocol

HTTP is used as the lower protocol for communication between clients and the server.

- HTTP version 1.1 is used.
- HTTP cookies are not used.
- UTF-8N (BOM is not added to head of string) is used as the character code for delivered parameters and JSON objects.
- This complies with what described as "MUST" in RFC2068

3.3 HTTP communication method

- The Web Application SDK for Epson ColorWorks basically uses the RESTful format.
- For a RESTful API, the basic unit for data is called a resource.
- A unique URL is assigned to each resource.
- Each operation corresponds to one HTTP request/response.
- The JSON format is used for resource representation.
- UTF-8 is used as the character code.
- Dates in the resource are represented in UTC.

3.4 URI

`http://xxx.xxx.xxx/api/v1/printers/{%resource%}`

The host name is the server's address where you installed SDK.

3.5 Request

3.5.1 Operation

Resource operation is specified in the HTTP method.

Insert: POST

Get: GET

A Method is defined per API.

3.5.2 Query string

Specify in the application/x-www-form-urlencoded format.

3.5.3 HTTP body

Set the resource defined per API.

3.5.4 Request example

The following is an example of a print API request.

URI:/api/v1/printers/XXXXXXXXXX/print

Method: POST

Query string: None

HTTP Query body (resource):

```
{
  "mime-type" : "image/pdf",
  "image" : "(Base64encoded data)"
}
```

3.6 Response

3.6.1 HTTP status code

The following status codes are used for normal and error responses:

Status code		Description
200	OK	Request succeeded. (Normal response to POST/GET/PUT/DELETE)
204	No Content	Currently not in use but might return in the future.
400	Bad Request	The specified query string value is invalid. The specified resource object is invalid.
403	Forbidden	Access of the specified access token is not permitted.
404	Not Found	The specified URI is invalid.
405	Method Not Allowed	An unsupported HTTP method was used.
415	Unsupported Media Type	An unsupported media method was specified for the Content-Type header.
500	Internal Server Error	An unexpected error occurred.

3.6.2 HTTP body (Normal response)

Return resources are defined per API.

- Response example

The following is a response example of the Get printer queue list information API:

URI:/api/v1/printers/list

Method: GET

Query string: None

Status code: 200

HTTP Response body (resource):

```
[
  "Epson CW-C6520-1",
  "Epson CW-C6520-2"
]
```


3.6.3 HTTP body (Error response)

If an error response (status code 4xx, 5xx) is returned, an error resource is returned with the following property:

```
{  
  "message" : "value1"  
}
```

4 APIs

4.1 Printer queue list

Retrieves the printer queue list.

4.1.1 Request

- Command URI

/api/v1/printers/list

Item name	Required	Value
None		

- HTTP Method

GET

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

None

Item name	Required	Type	Description
None			

4.1.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code

200 OK

- HTTP Body

```
[  
  "Epson FoobarQueue"  
]
```

(2) Error response

Please refer to 3.6.

4.2 Print capability

Retrieves the specified printer's printing capability.

4.2.1 Request

- Command URI

/api/v1/printers/{queueName}/print/capability

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method
GET

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

None

Item name	Required	Type	Description
None			

4.2.2 Responses

- (1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code
200 OK

- HTTP Body

```
[
  {
    "name": "MediaSaving",
    "type": "string",
    "capabilitytype": "array",
    "current": "NoSaving",
    "values": [
      "NoSaving",
      "SaveBottom",
      "SaveTopBottom"
    ]
  },
  {
    "name": "Collate",
    "type": "boolean",
    "capabilitytype": "boolean",
    "current": true
  },
  {
    "name": "CutInterval",
    "type": "num",
    "capabilitytype": "range",
    "current": "1",
    "max": 100,
    "min": 1,
    "step": 1
  }
]
```

Item name	Required	Type	Description
name	Yes	string	Capability name.
type	Yes	string	Current value type. It takes 'string', 'num', 'boolean' or 'pagesize'.
capabilitytype	Yes	string	Capability type. It takes 'array', 'range' or 'boolean'.
current	Yes	string or number or boolean or object	Currently set value. Its type is specified in the 'type' key.
customWidth		number	Custom page width (mm). It is available only when 'type' is 'pagesize' and 'values' contains 'Custom.WIDTHxHEIGHT'.
customHeight		number	Custom page height (mm). It is available only when 'type' is 'pagesize' and 'values' contains 'Custom.WIDTHxHEIGHT'.
values		array of strings	Selectable values. This key is contained only when 'capabilitytype' is 'array'.
max		number	Max value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
min		number	Min value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
step		number	Step value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.

4.3 Print setting

Sends print setting.

4.3.1 Request

- Command URI

/api/v1/printers/{queueName}/print/setting

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method
POST

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

<pre>{ "PageSize": "108x174.8mm", "MediaSaving": "NoSaving", "MediaType": "PlainPaper", "Collate": true, "ActionMode": "PeelerManualMode", "CutInterval": 0, "PrintQuality": "Normal", "Pause": "None", "ColorAdjustment": "High", "InkProfile": 0, "Brightness": 0, "Contrast": 0, "Saturation": 0, "Cyan": 0, "Magenta": 0, "Yellow": 0, "BiDirection": "On", "BlackRatio": 0, "DryingTime": 0 }</pre>
--

Item name	Required	Type	Description
PageSize		string or object	non-empty
customWidth		number	
customHeight		number	
MediaSaving		string	non-empty

MediaType		string	non-empty
Collate		boolean	
ActionMode		string	non-empty
CutInterval		number	
PrintQuality		string	non-empty
Pause		string	non-empty
ColorAdjustment		string	non-empty
InkProfile		number	
Brightness		number	
Contrast		number	
Saturation		number	
Cyan		number	
Magenta		number	
Yellow		number	
BiDirection		string	
BlackRatio		number	
DryingTime		number	
EdgeCorrection		string	
ShrinkCorrection		number	
PrintingSpeed		number	
HeadMaintenance		string	
BandingReduction		number	
Buzzer		string	

4.3.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code
200 OK

- HTTP Body

```
[
  {
    "name": "MediaSaving",
    "type": "string",
    "capabilitytype": "array",
    "current": "NoSaving",
    "values": [
      "NoSaving",
      "SaveBottom",
      "SaveTopBottom"
    ]
  },
  {
    "name": "Collate",
    "type": "boolean",
    "capabilitytype": "boolean",
    "current": true
  },
  {
    "name": "CutInterval",
    "type": "num",
    "capabilitytype": "range",
    "current": "1",
    "max": 100,
    "min": 1,
    "step": 1
  }
]
```

Item name	Required	Type	Description
name	Yes	string	Capability name.
type	Yes	string	Current value type. It takes 'string', 'num', 'boolean' or 'pagesize'.
capabilitytype	Yes	string	Capability type. It takes 'array', 'range' or 'boolean'.
current	Yes	string or number or boolean or object	Currently set value. Its type is specified in the 'type' key.
customWidth		number	Custom page width (mm). It is available only when the 'type' is 'pagesize' and 'values' contains 'Custom.WIDTHxHEIGHT'.
customHeight		number	Custom page height (mm). It is available only when the 'type' is 'pagesize' and 'values' contains 'Custom.WIDTHxHEIGHT'.
values		array of strings	Selectable values. This key is contained only when 'capabilitytype' is 'array'.
max		number	Max value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
min		number	Min value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.

step		number	Step value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
------	--	--------	--

4.4 Print document

Do Print

4.4.1 Request

- Command URI

/api/v1/printers/{queueName}/print

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method

POST

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

<pre>{ "mime-type": "application/pdf", "image": "JVBERi0xL...", "copies": 1 }</pre>

Item name	Required	Type	Description
mime-type	Yes	string	Data's mime-type.
image	Yes	string	Data to be printed in base64 encoded strings.
copies		number [1 .. 100]	Number of copies.

4.4.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code

200 OK

- HTTP Body

```
{
  "res": [
    "request id is TestQueue-1 (1 file(s))"
  ]
}
```

Item name	Required	Type	Description
res	Yes	array of strings	Queued result strings that include the job ID.

(2) Error response

Please refer to 3.6.

4.5 Printer capability

Retrieves the specified printer capability.

4.5.1 Request

- Command URI

/api/v1/printers/{queueName}/printer/capability

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method

GET

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

None

Item name	Required	Type	Description
None			

4.5.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code

200 OK

- HTTP Body

```
[
  {
    "capabilitytype": "array",
    "current": "internal_roll",
    "name": "paperSource",
    "type": "string",
    "values": [
      "internal_roll",
      "rear_feed_fanfold",
      "rear_feed_roll"
    ]
  },
  {
    "capabilitytype": "array",
    "current": "continuous_paper_no_detection",
    "name": "paperForm",
    "type": "string",
    "values": [
      "diecut_label_gap_detection",
      "diecut_label_blackmark_detection",
      "continuous_label_blackmark_detection",
      "continuous_label_no_detection",
      "continuous_paper_blackmark_detection",
      "continuous_paper_no_detection",
      "wristband_blackmark_detection"
    ]
  },
  {
    "capabilitytype": "range",
    "current": 2,
    "max": 6,
    "min": 2,
    "name": "formGap",
    "step": 0.1,
    "type": "num"
  },
  {
    "capabilitytype": "range",
    "current": -10.8,
    "max": 10.8,
    "min": -10.8,
    "name": "cutPosition",
    "step": 0.1,
    "type": "num"
  }
],
```

```

    {
      "capabilitytype": "range",
      "current": -1,
      "max": 1.5,
      "min": -1.5,
      "name": "printPositionH",
      "step": 0.1,
      "type": "num"
    },
    {
      "capabilitytype": "range",
      "current": -10.9,
      "max": 10.9,
      "min": -10.9,
      "name": "printPositionV",
      "step": 0.1,
      "type": "num"
    }
  ]

```

Item name	Required	Type	Description
name	Yes	string	Capability name.
type	Yes	string	Current value type. It takes 'string', 'num' or 'boolean'.
capabilitytype	Yes	string	Capability type. It takes 'array', 'range' or 'boolean'.
current	Yes	string or number or boolean	Currently set value. Its type is specified in the 'type' key.
values		array of strings	Selectable values. This key is contained only when 'capabilitytype' is 'array'.
max		number	Max value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
min		number	Min value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
step		number	Step value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.

(2) Error response

Please refer to 3.6.

4.6 Printer device setting

Sends printer device settings.

4.6.1 Request

- Command URI

/api/v1/printers/{queueName}/printer/setting

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method
POST

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

<pre>{ "paperSource": "internal_roll", "paperForm": "continuous_paper_no_detection", "formGap": 2, "cutPosition": -10.8, "printPositionH": -1, "printPositionV": -10.9 }</pre>
--

Item name	Required	Type	Description
paperSource		string	
paperForm		string	
formGap		number	
cutPosition		number	
printPositionH		number	
printPositionV		number	
sideMargin		number	
peelPositionA		number	
peelPositionB		number	
rightMargin		number	
incomplete_labelTreatment		string	
edgeHole		number	
head_mediaClearanceHeight		number	

4.6.2 Responses

- (1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code

200 OK

- HTTP Body

```
[
  {
    "capabilitytype": "array",
    "current": "internal_roll",
    "name": "paperSource",
    "type": "string",
    "values": [
      "internal_roll",
      "rear_feed_fanfold",
      "rear_feed_roll"
    ]
  },
  {
    "capabilitytype": "array",
    "current": "continuous_paper_no_detection",
    "name": "paperForm",
    "type": "string",
    "values": [
      "diecut_label_gap_detection",
      "diecut_label_blackmark_detection",
      "continuous_label_blackmark_detection",
      "continuous_label_no_detection",
      "continuous_paper_blackmark_detection",
      "continuous_paper_no_detection",
      "wristband_blackmark_detection"
    ]
  },
  {
    "capabilitytype": "range",
    "current": 2,
    "max": 6,
    "min": 2,
    "name": "formGap",
    "step": 0.1,
    "type": "num"
  },
  {
    "capabilitytype": "range",
    "current": -10.8,
    "max": 10.8,
    "min": -10.8,
    "name": "cutPosition",
    "step": 0.1,
    "type": "num"
  },
]
```

```

{
  "capabilitytype": "range",
  "current": -1,
  "max": 1.5,
  "min": -1.5,
  "name": "printPositionH",
  "step": 0.1,
  "type": "num"
},
{
  "capabilitytype": "range",
  "current": -10.9,
  "max": 10.9,
  "min": -10.9,
  "name": "printPositionV",
  "step": 0.1,
  "type": "num"
}
]

```

Item name	Required	Type	Description
name	Yes	string	Capability name.
type	Yes	string	Current value type. It takes 'string', 'num' or 'boolean'.
capabilitytype	Yes	string	Capability type. It takes 'array', 'range' or 'boolean'.
current	Yes	string or number or boolean	Currently set value. Its type is specified in the 'type' key.
values		array of strings	Selectable values. This key is contained only when 'capabilitytype' is 'array'.
max		number	Max value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
min		number	Min value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.
step		number	Step value. This key is contained only when 'capabilitytype' is 'range' and 'type' is 'num'.

4.7 Printer status

Retrieves the specified printer's dynamic information.

4.7.1 Request

- Command URI

/api/v1/printers/{queueName}/printer/status

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method
GET

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

None

Item name	Required	Type	Description
None			

4.7.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code
200 OK

- HTTP Body

<pre>{ "destination": "Epson FooBarQueue", "status": 41, "statusDescription": "Status_IL_PAPF_Ix1", "statusGroup": 5, "statusGroupDescription": "Warning" }</pre>

Item name	Required	Type	Description
destination	Yes	string	
status	Yes	integer	
statusDescription	Yes	string	
statusGroup	Yes	integer	
statusGroupDescription	Yes	string	

(2) Error response

Please refer to 3.6.

4.8 Printer static info

Retrieves the specified printer's static information.

4.8.1 Request

- Command URI

/api/v1/printers/{queueName}/printer/info

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method
GET

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

None

Item name	Required	Type	Description
None			

4.8.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code
200 OK

- HTTP Body

<pre>{ "destination": "Epson FooBarQueue", "deviceID": "MFG:EPSON;MDL:CW-C4020;DES:EPSON CW- C4020;", "inkNameC": "SJIC43P-C", "inkNameK": "SJIC43P-MK", "inkNameMN": "SJMB4000", "inkNameY": "SJIC43P-Y" }</pre>

Item name	Required	Type	Description
destination	Yes	string	
deviceId	Yes	string	
inkNameC	Yes	string	
inkNameK	Yes	string	
inkNameMN	Yes	string	
inkNameY	Yes	string	

(2) Error response

Please refer to 3.6.

4.9 Send command

This sends any ESC/Label commands to the printer and receives responses if needed.

4.9.1 Request

- Command URI

/api/v1/printers/{queueName}/printer/sendcommand

Item name	Required	Value
queueName	Yes	Printer queue name.

- HTTP Method

POST

- HTTP Header

Header name	Required	Value
None		

- Query String

None

Item name	Required	Description
None		

- HTTP Body

<pre>{ "command": "string", "requiresResponse": true }</pre>
--

Item name	Required	Type	Description
command	Yes	string	ESC/Label command in a base64 encoded string.
requiresResponse		boolean	Indicates whether the response data has to be received or not.

4.9.2 Responses

(1) Normal response

- HTTP Header

Header name	Value
Content type	application/json

- Status Code
200 OK

- HTTP Body

"string"

Type	Description
string	Command response from the printer in a base64 encoded string.

(2) Error response

Please refer to 3.6.

5 Logs

Logs are output as a "sdk.log" file to the path where the web sdk server is running.

LogLevel can be changed in the following entry in gunicorn.conf.py.

```
loglevel = 'debug'
```

The default value is "debug" which outputs logs. If you do not need log output, you can switch this to "info" to reduce log output.

The user is able to modify sdk.py and api.py to output logs by inserting any logging code like following example into any arbitrary code location.

```
current_app.logger.debug(data)
```

6 Limitation of Usage

The following describes the limitations when using the SDK.

6.1 Limitation on file uploading

Uploaded files must be less than 10 MB in size.

6.2 Limitation on number of concurrently connected printers

There is no limit on the number of connected devices in terms of the SDK; therefore, this depends on the machine specifications of the usage environment.

7 How to Setup Web Application SDK for Epson ColorWorks

7.1 Requirements

- Ubuntu 20.04 or later / Fedora 40 or later

7.2 Steps to setup the printer driver

Step 1: Install CUPS as a root user.

Ubuntu:

```
# apt install cups libcupsimage2
```

Fedora:

```
# dnf install cups
```

Step 2: Download and install the printer driver and utility for the product.

Epson Business System Products Technical Support:

https://www.epson.jp/support/support_menu/ks/19.htm

Step 3: Create a printer queue as a root user.

Example:

```
# lpadmin -p QUEUE_NAME -v ipp://IP_ADDRESS/ipp/print -P  
PPD_PATH -E
```

7.3 Steps to setup SDK

Step 1: Install Python3 and pip as a root user.

Ubuntu:

```
# apt install python3 python3-pip
```

Fedora:

```
# dnf install python3 python3-pip
```

Step 2: Install the required packages using pip with requirements.txt.

```
# pip3 install -r requirements.txt
```

Step 3: Move to the websdk (directory) located under the path where you expanded the SDK (package).

Step 4: In Gunicorn (program) installed in the step above, start up the SDK together with gunicorn.conf.py (settings file).

```
$ gunicorn -c gunicorn.conf.py
```

By default, SDK listens on port 3000. If you want to change the listening port, please modify bind in gunicorn.conf.py.

In this example, Gunicorn runs as foreground process. For further usage, please refer to Gunicorn's documents.

NOTE

- From a security perspective, the SDK is prevented from starting as a root user's process. If you want to start the SDK as a root user's process, please modify the sdk.py script at your own liability.

8 Sample Web App

This is a sample web application for Web Application SDK for Epson ColorWorks.

8.1 Requirements

This document describes a web application based on Ubuntu 20.04.

[For building]

- npm

[For serving app]

- Nginx

However, any other web server can be used.

8.2 Steps to build

Step 1: Install npm with the following command.

```
# apt install npm
```

Step 2: Change the directory to this WebApp directory on the terminal.

Step 3: Install the required packages written in package.json using the following command.

```
$ npm install
```

Step 4: Build the files to be served from the web server using following command.

```
$ npm run build
```

The built files are created under the dist directory. Under this directory, index.html and other required files/directories are located.

8.3 Steps to serve

This document describes a web application based on the Nginx web server.

Step 1: Install Nginx using following command.

```
# apt install nginx
```

Step 2: Change the web server settings so that requests to the URI /api/ are passed to the Web Application SDK for Epson ColorWorks server and port (the port is 3000 by default).

Example of Nginx settings (/etc/nginx/nginx.conf) :

```
# When Web Application SDK for Epson ColorWorks server is
# Address: SDK_ADDR
# Port: 3000

http {
    ...
    server {
        ...
        location /api/ {
            proxy_pass http://SDK_ADDR:3000;
        }
    }
}
```

e.g.) If this Nginx server address is ADDRESS, the request to Nginx server:

http://ADDRESS/api/v1/printers/list

is passed as:

`http://SDK_ADDR:3000/api/v1/printers/list`

to Web Application SDK for Epson ColorWorks server with the settings above.

Step 3: Copy all the built files/directories under `dist` directory onto the web server and serve them so that the entry point `index.html` in the built files is accessed by a web browser.

For the example of Nginx, the default public path in Ubuntu 20.04 is:

```
/var/www/html
```

Step 4: Start Nginx with following command:

```
# nginx
```

Step 5: On a web browser, open the URL to `index.html` which is served by the web server.

For example, if you are on a Linux desktop where the web server is setup and the listening port is 80, the URL is:

```
http://localhost:80/index.html
```

8.4 Usage

8.4.1 Common Control

[Printer Queue]

Used to select the printer queues currently added to the CUPS server. If there is no printer queue, the text "Not found" is shown instead of a selection box.

Using API:

```
[GET]
/api/v1/printers/list
```

[Menu]

Used to select the main functions from:

- Printer Info
- Printer Status
- Printer Setting
- Print Setting (selected by default)
- Print
- Cancel

In response to the selection, the function-specific controls will appear.

8.4.2 Printer Info

Shows the printer's static information.

Using API:

```
[GET]
/api/v1/printers/{queueName}/printer/info
```

8.4.3 Printer Status

Shows the printer's current status.

Using API:

```
[GET]
/api/v1/printers/{queueName}/printer/status
```

8.4.4 Printer Setting

Shows the printer's device settings and is able to change them using the Set button.

Using API:

```
[GET]
/api/v1/printers/{queueName}/printer/capability

[POST]
/api/v1/printers/{queueName}/printer/setting
```

8.4.5 Print Setting

Shows the printer's print settings and is able to change them using the Set button.

Using API:

```
[GET]
/api/v1/printers/{queueName}/print/capability

[POST]
/api/v1/printers/{queueName}/print/setting
```

8.4.6 Print

Requests printing using the Print button after choosing the image file (e.g. PDF, JPEG and so on) to be printed using the Choose File button.

Using API:

```
[POST]
/api/v1/printers/{queueName}/print
```


Appendix A Supported Models

- CW-C4000 Series

[Auto-Cutter Model]

CW-C4000u / CW-C4000e / CW-C4010 / CW-C4020 / CW-C4030 / CW-C4040 / CW-C4050

- CW-C6000 Series/CW-C6500 Series

[Auto-Cutter Model]

CW-C6000Au / CW-C6000Ae / CW-C6010A / CW-C6020A / CW-C6030A / CW-C6040A / CW-C6050A

CW-C6500Au / CW-C6500Ae / CW-C6510A / CW-C6520A / CW-C6530A / CW-C6540A / CW-C6550A

[Peeler Model]

CW-C6000Pu / CW-C6000Pe / CW-C6010P / CW-C6020P / CW-C6030P / CW-C6040P / CW-C6050P

CW-C6500Pu / CW-C6500Pe / CW-C6510P / CW-C6520P / CW-C6530P / CW-C6540P / CW-C6550P

- CW-D6000 Series/CW-D6500 Series

[Auto-Cutter Model]

CW-D6000Ae / CW-D6500Ae

[Peeler Model]

CW-D6000Pe / CW-D6500Pe

- CW-C8000 Series

[Auto-Cutter Model]

CW-C8000u / CW-C8000e / CW-C8010 / CW-C8020 / CW-C8030 / CW-C8040 / CW-C8050

Appendix B Supported Print Settings Options

The following options implement the functions using a driver. Setting values of the Printer Setting API are as follows:

- CW-C4000 Series,
CW-C6000 Series/CW-C6500 Series/CW-D6000 Series/CW-D6500 Series

Key	Value
PageSize	108 x 174.8 mm (default)
	CustomSize
	• CW-C4000 Series
	Width (0.1 mm)
	Length (0.1 mm)
	max
	1080
	4064
	min
	214: Diecut Contlabel
	254: Contpaper WristBand
	80
	• CW-C6000 Series/CW-C6500 Series CW-D6000 Series/CW-D6500 Series
	Width (0.1 mm)
	Length (0.1 mm)
	max
	2159
	6096
	min (Auto-Cutter Model)
	214
	80
	min (Peeler Model)
	214
	127
	*If a Length of less than 15 mm is specified, auto cutting is not performed even if the paper operation setting after printing is set to "AutoCutCollateEndCut".
	However, in the case of a multi-page job, auto cutting is performed if the total paper length is 15 mm or more.
	[Custom size printing method]
	Specify as follows in the “/ api / v1 / printers / {queueName} / print / setting” API.
	<pre> "PageSize": { "CustomWidth": 100, "CustomHeight": 100 }, </pre>
MediaForm (CW-C4000 Series Only)	Diecut_Gap (die-cut label (gap detection) (default))
	Diecut_Blackmark (die-cut label (black mark detection))
	Contlabel_Blackmark (continuous label (black mark detection))
	Contlabel_no_detection (continuous label (no detection))
	Contpaper_Blackmark (continuous paper (black mark detection))
	Contpaper_no_detection (continuous paper (no detection))
	WristBand_Blackmark (WristBand (black mark detection))
MediaSaving	SaveBottom
	SaveTopBottom
	NoSaving (default)
MediaType	PlainPaper
	MattePaper (default)
	Synthetic
	TexturePaper
	WristBand
	GrossyPaper

PrintQuality	GrossyFilm
	HighGrossy
	MaxSpeed
	Speed
	Normal (default)
	Quality
Collate	MaxQuality
	false (default)
ActionMode (Auto-Cutter Model Only)	true
	AutoCutLastPage (Cut (after printing the last label))
	AutoCutPeriodically (Cut (for each specified label))
	AutoCutCollateEndCut (final page of copy printing)
	FeedToPeelPosition (Do not cut (stop at cut position) (default))
	FeedToCutPosition (Do not cut (stop at peeling position))
ActionMode (Peeler Model Only)	PauseAtPrintEnd (Do not cut (stop at print end position))
	PeelerAutoMode
CutInterval	PeelerManualMode (default)
	PeelerReelModel
Buzzer	1–100 (default 1)
Pause	None (default)
	AfterCut
	LastPage
	CollateEnd
ColorAdjustment	None (default)
	AfterCut
	LastPage
	CollateEnd
InkProfile	Vivid (default)
	Photo
	None
Brightness	-6–+4 (default 0)
Contrast	-25–25 (default 0)
Saturation	-25–25 (default 0)
Cyan	-25–25 (default 0)
Magenta	-25–25 (default 0)
Yellow	-25–25 (default 0)
BiDirection	On (default)
	Off
BlackRatio	-6–0 (default 0)
DryingTime (Drying time for each head pass)	0–50 (default 0)

- CW-C8000 Series

Key	Value		
PageSize	108 x 152.4 mm (default)		
	CustomSize		
	• CW-C8000 Series		
		Width (0.1 mm)	Length (0.1 mm)
	max	1120	10160
	min	214	80
	[Custom size printing method] Specify as follows in the “/ api / v1 / printers / {queueName} / print / setting” API. "PageSize": { "CustomWidth": 100, "CustomHeight": 100 },		
MediaForm	Diecut_Gap (die-cut label (gap detection) (default))		
	Diecut_Blackmark (die-cut label (black mark detection))		
	Contlabel_Blackmark (continuous label (black mark detection))		
	Contlabel_no_detection (continuous label (no detection))		
	Contpaper_Blackmark (continuous paper (black mark detection))		
	Contpaper_no_detection (continuous paper (no detection))		
	Tag_Hole (Tag (Hole))		
MediaType	PlainPaper		
	MattePaper (default)		
	Synthetic		
	TexturePaper		
	GrossyPaper		
	GrossyFilm		
	HighGrossy		
Collate	false (default)		
	true		
ActionMode	AutoCutLastPage (Cut (after printing the last label))		
	AutoCutPeriodically (Cut (for each specified label))		
	AutoCutCollateEndCut (final page of copy printing)		
	FeedToPeelPosition (Do not cut (stop at cut position) (default))		
	PauseAtSpecifiedPosition (Do not cut (stop at specified position))		
CutInterval	1–100 (default 1)		
Buzzer	None (default)		
	AfterCut		
	LastPage		
Pause	None (default)		
	AfterCut		
	LastPage		
	CollateEnd		
ColorAdjustment	Vivid		
	Standard		
	Photo (default)		
	None		
InkProfile	-3–+10 (default 0)		
Brightness	-25–25 (default 0)		
Contrast	-25–25 (default 0)		
Saturation	-25–25 (default 0)		

Cyan	-25–25 (default 0)
Magenta	-25–25 (default 0)
Yellow	-25–25 (default 0)
BlackRatio	-6–0 (default 0)
EdgeCorrection	Off (default)
	On
ShrinkCorrection	0–12 (default 0)
PrintingSpeed	150
	300 (default)
HeadMaintenance	Continuous
	Pause (default)
BandingReduction	-7–10 (default 0)

Appendix C Supported Printer Settings Options

The following values are returned from the " Get Printer info " API.

C.1 StatusGroup

StatusGroup	statusGroup Description
0	BeforeComm
1	Error
2	Pause
3	Printing
4	Warning
5	Others

C.2 Status

Status Group	Status	statusDescription	Description
0:Before Comm	0	Status_Unsettled,	Searching...
	1	Status_Offline,	Printer is offline. Check all connections and make sure all devices are turned on.
	2	Status_BadDevice	The device found is different from the specified device. Attempting to connect to a device different from the one specified in the driver. Check the driver and the device.
	3	Status_CommError	Communication error Check all cable connections and that the printer is turned on. If this does not fix the problem, try restarting the printer.
1:Fatal Error	100	Status_ER_FE	General error Delete all print jobs in the spool manager and turn the printer off. Remove any foreign objects from inside the printer and then turn the printer back on. If this is the first print job, please check to make sure all packing materials and parts have been removed.
2 :Error	200	Status_ER_NI	Printing data from another port. Please wait.
	201	Status_ER_CO	Roll paper cover open. Close the roll paper cover.
	202	Status_ER_SJ	Paper jam. Remove the jammed paper, and then reload the paper.
	203	Status_ER_IE_NACI	Ink cartridge undetected Epson recommends the genuine Epson cartridges.
	204	Status_ER_IE_RR	Replace ink cartridge. Epson recommends the genuine Epson cartridges.

	205	Status_ER_SN_IR	Paper not loaded. Load the paper.
	206	Status_ER_SN_ER	Paper not loaded. Remove any paper which is still in the printer and load new paper.
	207	Status_ER_SS	Driver media size does not match the paper loaded. Modify the media size on the printer driver to match the loaded paper.
	208	Status_ER_ST	The paper feed method differs from the printer settings. Check the paper feed method for the printer and the paper being used.
	209	Status_ER_MF	Replace the maintenance box. See your printer documentation for more information on replacing the maintenance box.
	210	Status_ER_SR	Loaded paper does not match the specified setting. Set the correct paper, or check the media layout settings or media position detection settings.
	211	Status_ER_CI	Ink cartridge cover open. Close the ink cartridge cover.
	212	Status_ER_MN	Maintenance box undetected. Install the maintenance box.
	213	Status_ER_CM	Maintenance box cover open. Close the maintenance box cover.
	214	Status_ER_SE	New paper is loaded without removing the existing paper. Remove the loaded new paper once. Remove any paper which is still in the printer and load the new paper again.
	215	Status_ER_LT	Mechanical adjustment inside printer required. If the error message still appears, contact the store where you purchased the product or an Epson service center.
	216	Status_ER_CS	The paper cover is open. Close the paper cover.
	217	Status_ER_CF	The front cover is open. Close the front cover.
	218	Status_ER_CR	The release lever is open.
	219	Status_ER_CG	The guide unit is open. Close the guide unit.
	220	Status_ER_SC	Sensor calibration error.
	221	Status_ER_IC	Insufficient ink to perform cleaning. See the LCD screen on the product and follow the instructions.

	222	Status_ER_MC	Cannot start cleaning because the Maintenance Box is near full. Printer features except cleaning are available.
	223	Status_ER_SM	Label not detected. Follow the instructions on the printer's LCD screen.
	300	Status_PS_UN	The printer is waiting for a panel operation. Check the printer's panel.
3 :Pause	301	Status_PS_SF	The storage memory is full. Check the printer's panel.
	302	Status_PS_NC	Clogged nozzles were detected while printing. Check the print results and the printer's panel.
	303	Status_PS_NW	The printer is paused. Finish menu operations, or press the Pause button on the printer's panel to release the pause.
	400	Status_SP	Printing. Please wait.
4:Printing	401	Status_PR_NSU	Cannot perform a status check of the print head. Cannot confirm the print head status because the temperature is outside the guaranteed operating range. Although you can print at this temperature, we recommend an ambient temperature from 5°C {41°F} to 35°C {95°F} to maintain optimum print quality. *This is displayed when print head status confirmation is disabled.
	402	Status_PR_NCR	Printing with supplemental clogged nozzles. Printing is being performed with unrecoverable clogged nozzles in the print head.
	403	Status_PR_WNC	Printing with clogged nozzles. Printing is being performed with unrecoverable clogged nozzles in the print head.
	500	Status_IL_PAPT_IR	Paper not loaded. Load the paper.
5:Warning	501	Status_IL_PAPT_ER	Paper not loaded. Remove any paper which is still in the printer and load new paper.
	502	Status_IL_PAPF_WNC	Print head unrecoverable clogged nozzles. Print head unrecoverable clogged nozzles are detected. The print result may be affected. You can continue printing, but contact the store where you purchased the product or an Epson service center if the print result is affected.

	503	Status_IL_PAPF_WSC	Mechanical adjustment inside printer will be required soon. Contact the store where you purchased the product or an Epson service center.
	504	Status_IL_PAPF_MNF	Maintenance box is nearing the end of its service life. Prepare a new maintenance box. You can continue printing until replacement is required.
	505	Status_IL_PAPF_Ix1	Ink is low. Prepare a new ink cartridge in advance. Epson recommends the genuine Epson cartridges. You can continue printing until replacement is required.
	506	Status_IL_PAPF_NSU	Cannot perform a status check of the print head. Cannot confirm the print head status because the temperature is outside the guaranteed operating range. Although you can print at this temperature, we recommend an ambient temperature from 5°C {41°F} to 35°C {95°F} to maintain optimum print quality. *This is displayed when print head status confirmation is disabled.
6:Others	600	Status_IL_PAPF	Ready to print.
	601	Status_PR	Printing. Please wait.
	602	Status_WT	Processing job. Please wait.
	603	Status_CL	The printer is cleaning the print head. Please wait.
	604	Status_FC	Initial ink charging is not complete. Install the ink cartridges. See the setup sheet for details.