

TM-S1000II-NW

Web API Reference Guide

Overview of Web API and Scan Web API

Scan Web API Programming Guide

ScanWebAPI Reference

Scan Web API Sample Program

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For Safety

Key to Symbols

The symbols in this manual are identified by their level of importance, as defined below. Read the following carefully before handling the product.

 NOTE	Indicates supplementary explanations and information you should know.
-----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------

About this Manual

Aim of the Manual

This manual is aimed to provide developers with information required for developing and designing applications using TM-S1000II-NW Web API.

Manual Content

The manual is made up of the following sections:

Chapter 1	Overview of Web API and Scan Web API
Chapter 2	Scan Web API Programming Guide
Chapter 3	ScanWebAPI Reference
Chapter 4	Scan Web API Sample Program

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Overview of Web API and Scan Web API

Overview of Web API

The TM-S1000II-NW Web APIs use web applications to control TM-S1000II-NW. They consist of the following APIs.

- Scan Web API:
Controls the check scanner, card scanner, and cut-sheet printing for TM-S1000II-NW.

Provided Files

File name	Description
TM-S1000IINW_WebAPI_Referenc-Guide_en_revXX.zip	Web API Reference Guide package file.
TM-S1000II_webapi_rg_en_revA.pdf	This Document.
EpsonScanWebAPI.v1.0.0.postman_collection.json	Configuration file for Postman.
scan-webapi-sample_v2.0.0.zip	Scan Web API sample program.

Enabling Encryption (HTTPS)

Check the followings for HTTPS communication.

- Prepare a certificate and secret key for the server, then register them to the printer.
- Common name of the server certificate and the host name of the printer must be the same. Otherwise, HTTPS communication will fail with an error.
- Embed a CA (certificate authority) certificate, which is used to authenticate the CA signature on the server certificate, in your program. Otherwise, HTTPS communication will fail with an error.
- When creating an iOS application, make sure to satisfy the requirements of ATS (App Transport Security).
- Comply with requirements for HTTPS communication of your application development environment.
- To send print data to the printer from an application on a HTTPS Web site, make sure to use HTTPS instead of HTTP to communicate with the printer. Otherwise, the communication will fail with an error.

Overview of Scan Web API

Scan Web API is a generic term that refers to using your own application for check scanning, and image capture without drivers.

With the use of Scan Web API, you can securely control Epson check scanners from any client terminal with a network connection.

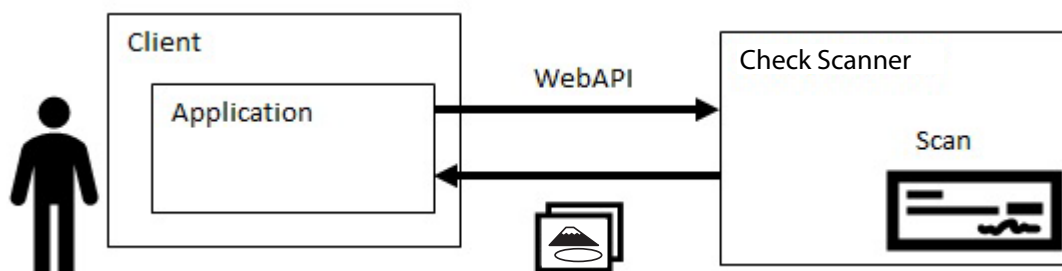
Functions

Scan Web API provides the following functions for client terminals with a network connection.

- ☐ Scanning
 - Scan Check
 - Image porcessing (Compress, binarize, skew etc)
 - Read MICR
 - Endorsement (Electronic)
 - Franking
 - Ring buzzer
 - IQA processing
 - Read OCR A/B
- ☐ Maintenance
 - Reset device
 - Cleaning MICR
 - Get/Reset maintenance counter

Overview of Scanning Process

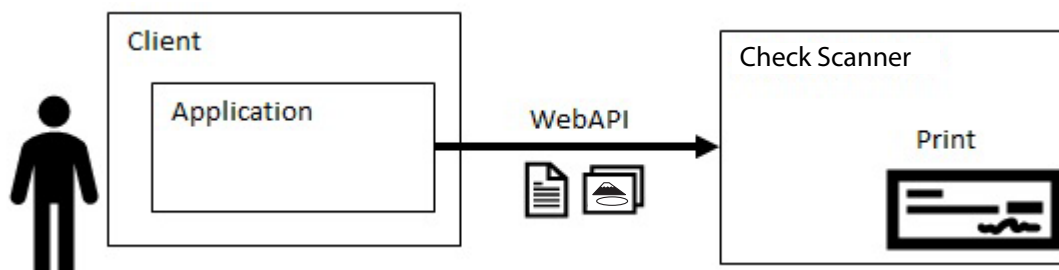
The following diagram shows how to use Scan Web API and a scanner to scan and capture a check as image data.



Overview of Printing Process

The following diagram shows how to use Scan Web API for cut-sheet printing.

Unlike scanning, image data is not captured with cut-sheet printing.



Explanation of Terms

Term	Description
Document	Check to be scanned
Transaction Number	Number assigned to a scan target

API list

API Name	Method	URI	Page
Connect	POST	/api/connect	p.18
KeepAlive	POST	/api/keepalive	p.20
Disconnect	POST	/api/disconnect	p.22
ScanSetting(Check)	POST	/api/scan/setting/check	p.24
ScanStart(Check)	POST	/api/scan/start/check	p.36
ScanCancel	POST	/api/scan/cancel	p.38
GetDocumentList	GET	/api/docs	p.40
DeleteAllDocuments	DELETE	/api/docs	p.48
GetImage	GET	/api/docs/{transaction_number}/{image_file_name}	p.50
GetDeviceStatus	GET	/api/device/status	p.52
DeviceReset	POST	/api/device/reset	p.54
MICRCleaning	POST	/api/device/cleaning/micr	p.56
GetCounter	GET	/api/device/counter	p.58
ResetCounter	DELETE	/api/device/counter/{counter_name}	p.60
GetDefaultScanSetting(Check)	GET	/api/scan/setting/check	p.62
SaveDefaultScanSetting(Check)	PUT	/api/scan/setting/check	p.64
ResetDefaultScanSetting(Check)	DELETE	/api/scan/setting/check	p.66

*If the scanner receives an unsupported or undefined Web API, a 404 error (Not Found) is returned.

Operating Environment

Web browser

- Mozilla Firefox 91 or later
- Google Chrome 89 or later
- Microsoft Edge 91 or later
- Safari on iOS 13 or later

* Windows Internet Explorer is not supported.

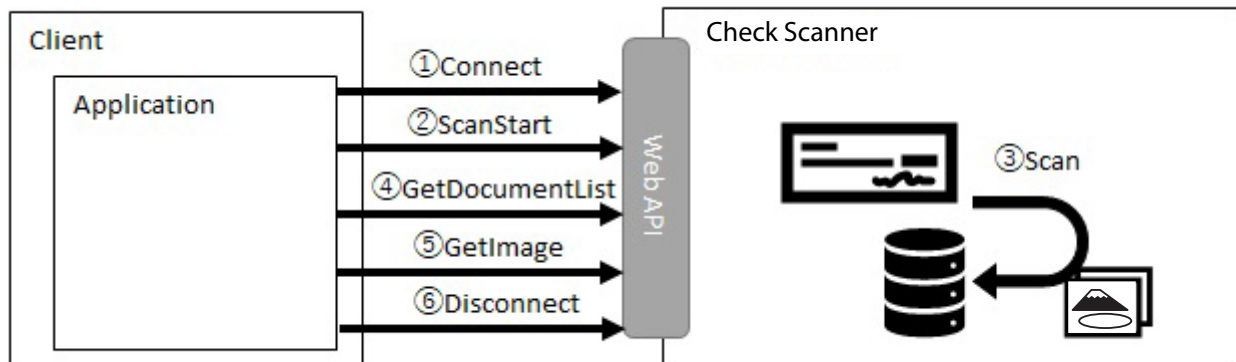
Restrictions

- This Web API scanning function is not available if the scanner is connected via USB.
- After scanning a large number of images, a 503 error (output_json_data_too_large) might occur if a GetDocumentList command (GET /api/docs) is issued to acquire the results of the scanning process. After scanning at least enough checks to fill the pocket, issue a GetImage command (GET /api/docs/{transaction_number}/{image_file_name}). This error can be resolved by issuing a GetImage command (GET /api/docs/{transaction_number}/{image_file_name}) to reduce the output json data size.

Scan Web API Programming Guide

Scanning Flow

The following figure shows the work flow for using the Scan Web API to scan a check with the client terminal.



If a "(1) Connect" command is received, Scan Web API issues a token. This allows the user to use the scanner exclusively.

If a scan command is received with "(2) ScanStart", the Scan Web API performs continuous scanning of checks. The processes performed with "(3) Scan" include image processing, MICR reading, endorsement printing, IQA, OCR character reading, and franking.

The scanned image data is retained inside the scanner device, and a list of the document information that is retained is returned by the "(4) GetDocumentList" command.

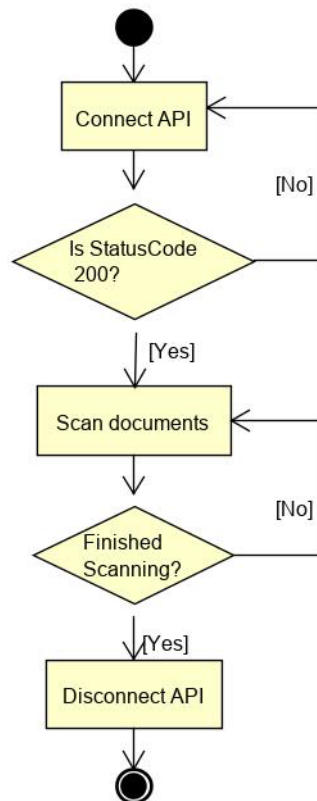
Scanned image data is obtained by calling "(5) GetImage" based on the list of document information.

If a "(6) Disconnect" command is received, the network scanner deletes all document information and image data that has been retained, which allows the device to be shared securely.

Document Scanning Flow

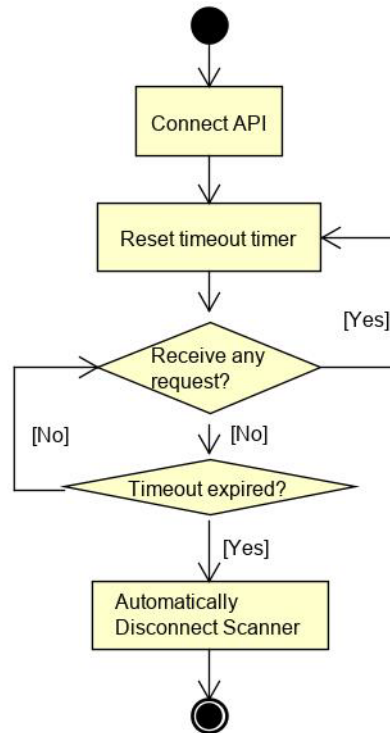
Connecting/Disconnecting

In order to scan a document, a connection must be made from the client to the scanner. Once a connection is made, the client can scan documents. When scanning is complete, the client is disconnected so that the scanner can be used by other clients.



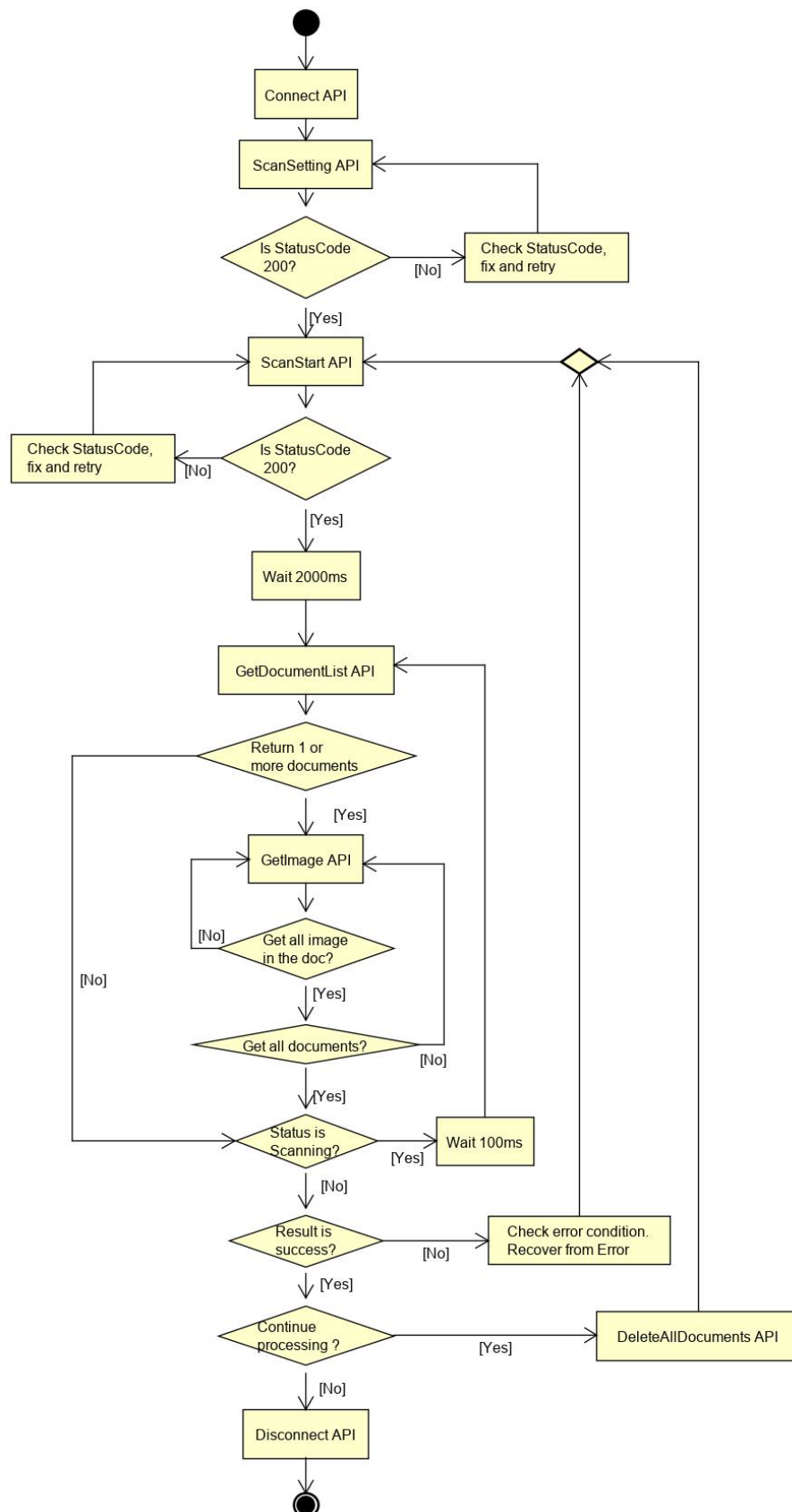
Timeout for Connecting/Disconnecting

If the client does not issue a request to the device for a certain period of time (60 seconds by default), the device will automatically disconnect. This timeout period is reset each time a request is received.



Scanning Documents

The following work flow is used to scan a check.



- Use the GetDocumentList API to obtain the Status and Result.

Deleting Image Data

Scanned image data is deleted from the scanner in the following instances.

- If all image data associated with a check is retrieved with the GetImage API, the image data that is associated with that check will be deleted.
- If the DeleteAllDocuments API is run, all image data that is retained will be deleted.
- If the Disconnect API is run, all image data that is retained will be deleted.
- If a connection timeout occurs, all image data that is retained at that time will be deleted.
- If a scan is performed with a transaction number that already exists, the previously scanned document will be deleted.

**NOTE**

When a series of scans is complete, run the DeleteAllDocuments API or Disconnect API to delete the image data.

ScanWebAPI Reference

Common API Specifications

URI

http(s)://{%IP Address%}/api/{%resource%}

Character code

UTF-8 (BOM not included)

Response

(1) HTTP body (Normal response)

When API processing is completed successfully, an HTTP status code (in the 200s) and a response object in JSON format are returned.

(2) HTTP body (Error response)

If an API processing error occurs, an HTTP status code (in the 400s and 500s) and an error object in JSON format as shown below are returned. Refer to "Common error" on page 15 for more information about common API errors.

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

```
{
  "code" : "...",
}
```

Common error

Status code	Error code string	Description
400	parse_error	The specified resource and query string format are not valid (parsing failed). Or, the specified resource and query string format are not suitable for the value (validation error).
401	access_token_verification_failed	The access token is disabled.
405	method_not_allowed	The specified HTTP method is not supported or not valid.
415	unsupported_media_type	The specified Content-Type header is not supported or not valid.
500	internal_server_error	An unknown error occurred.
503		Further commands were received while processing a command. A command was received during the power off/restart process.

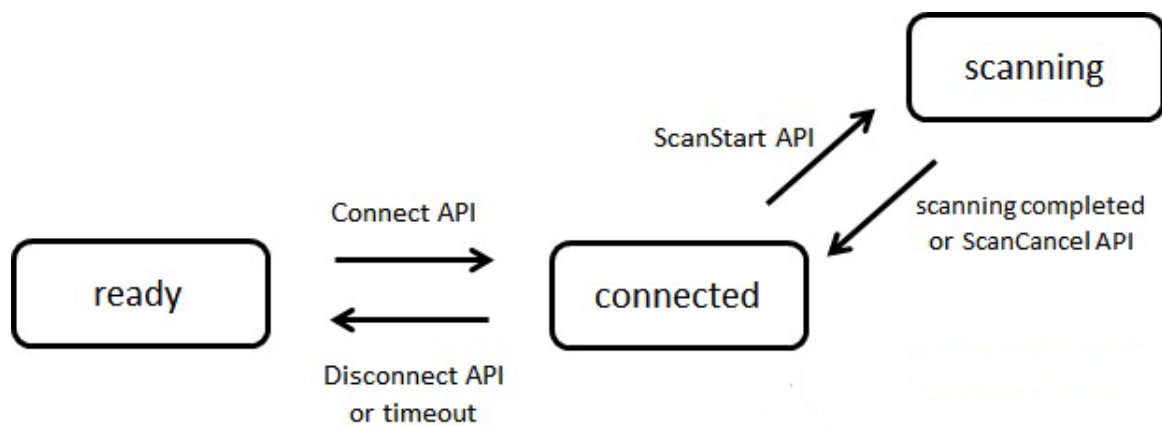
* Other errors are defined in each API.

State of Scanner

The scanner has the following four states. The state changes when the Web API is called and according to scanning operations.

State	Description
ready	You can obtain exclusive access to the scanner. To start using the scanner, run the connection API to obtain exclusive access.
connected	The scanner is connected. You can run a variety of APIs, such as for scanning and printing. The scanner will return to the ready state if the disconnect API is run or if a connection timeout occurs.
scanning	The scanning process (including endorsement printing) is in progress. When the scanning process is complete, the scanner returns to the connected state.

state change



State Matrix

The following status codes and error code strings are returned when an API is called in each state.

API / state		ready	connected	scanning
Connect	status code	200	400	400
	error code string	-	device_busy	device_busy
KeepAlive	status code	401	200	200
	error code string	access_token_verification_failed	-	-
Disconnect	status code	401	200	200 ^{*1}
	error code string	access_token_verification_failed	-	-
ScanSetting(Check)	status code	401	200	400
	error code string	access_token_verification_failed	-	device_busy
ScanStart(Check)	status code	401	200	400
	error code string	access_token_verification_failed	-	device_busy
ScanCancel	status code	401	400	200
	error code string	access_token_verification_failed	not_scanning	-

API / state		ready	connected	scanning
GetDocumentList	status code	401	200	200
	error code string	access_token_verification_failed	-	-
DeleteAllDocuments	status code	401	200	200
	error code string	access_token_verification_failed	-	-
GetImage	status code	401	200	200
	error code string	access_token_verification_failed	-	-
GetDeviceStatus	status code	200	200	200
	error code string	-	-	-
DeviceReset	status code	401	200	400
	error code string	access_token_verification_failed	-	device_busy
MICRCleaning	status code	401	200	400
	error code string	access_token_verification_failed	-	device_busy
GetCounter	status code	401	200	400
	error code string	access_token_verification_failed	-	device_busy
ResetCounter	status code	401	200	400
	error code string	access_token_verification_failed	-	device_busy
GetDefaultScanSetting(Check)	status code	200	200	400
	error code string	-	-	device_busy
SaveDefaultScanSetting(Check)	status code	200	200	400
	error code string	-	-	device_busy
ResetDefaultScanSetting(Check)	status code	200	200	400
	error code string	-	-	device_busy

*1 If scanning is in progress, the process is aborted.

Control from Multiple Clients

When Client 1 connects, it gains exclusive access until the connect timeout is reached or the client disconnects. For example, if Client 1 is using the scanner, the "connect" command from Client 2 receives "status code: 400, error code string: device_busy" as the response, and all other APIs receive "status code: 401, error code string: access_token_verification_failed" as the response.

Connect

This API is used to start the use of the scanner.

Exclusive access is obtained and an authentication token and device information are returned.

The timeout specified in the parameters is the number of seconds since the last request from the client that the connection will be maintained. If the client sends a request to the scanner after this timeout period has elapsed, an error is returned. All documents scanned by that client will be deleted when the timeout is reached.

Request

Command URI

/api/connect

HTTP Method

POST

HTTP header

Header name	Required	Value
Content-Type	✓	application/json; charset=utf-8

Query string

None

HTTP body

Item name	Type	Required	Default value	Description
timeout	Numeric	-	60	Specify the timeout for exclusive access from 10 to 3600 (seconds).

HTTP body(Example)

```
{
  "timeout": 60
}
```

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

```
{
  "token": "550e8400-e29b-41d4-a716-446655440000",
  "hardware": {
    "device_name": "TM-S1000II-NW",
    "manufacture": "EPSON",
    "serial_number": "ABCD12345678",
    "scan_speed": "60DPM",
    "pocket": "2 pockets"
  },
  "software": {
    "scanner_version": "JM27NA",
    "interface1_version": "08.90",
    "webapi_version": "2.00"
  }
}
```

Item name	Type	Description
token	String	Authentication token (UUID format)
hardware	Object	Hardware information
device_name	String	Model name
manufacture	String	Manufacturer
serial_number	String	Serial number
scan_speed	String	Scanning speed
pocket	String	Pocket specification
software	Object	Software information
scanner_version	String	Scanner version
interface1_version	String	Interface 1 version
webapi_version	String	Web API version

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Could not get exclusive	400	device_busy

KeepAlive

This API is used if the client does not call any other APIs for a long time, but wants to stay connected in order to use the scanner.

This API is used to reset the internal timeout counter for sessions in progress.

Request

Command URI

/api/keepalive

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

{}

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Authentication error	401	access_token_verification_failed

Disconnect

This API is used to end exclusive access to the scanner.

To release control of the scanner, a current, valid authentication token must be used.

All scanned image data is deleted and does not remain in the scanner.

Any scanning or printing operations that are in progress will be stopped.

Request

Command URI

/api/disconnect

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

{}

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Authentication error	401	access_token_verification_failed

Set Scan Setting (Check)

This API is used to configure the settings for scanning checks.

These settings are retained until Disconnect is performed.

If a parameter is not specified, the default value is used.

Request

Command URI

/api/scan/setting/check

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.
Content-Type	✓	application/json; charset=utf-8

Query string

None

HTTP body

Item name	Type	Required	Default value	Description
face	String		both	Select from the following. <ul style="list-style-type: none"> • both • front • back
images	Array (Object)			This array contains captured image information objects.
format	String		tiff	Select from the following. <ul style="list-style-type: none"> • jpeg: JPEG format normal compression data • tiff: TIFF format CCITT (Group 4) compressed data • bitmap: Bitmap format uncompressed data • jpeg_high: JPEG format high compression (size priority) data • jpeg_low: JPEG format low compression (quality priority) data • jtiff: TIFF format JPEG compressed data
dual_image	Boolean		false	When dual_image is enabled. <ul style="list-style-type: none"> • If the format is tiff, a gray bitmap file will also be output. • If the format is jtiff, a jpeg file will also be output. • For all other formats, the value is false.

Item name		Type	Required	Default value	Description
	type	String		black-and-white	Select from the following. <ul style="list-style-type: none"> • grayscale • black-and-white
	ex_option	String		sharp	Select from the following. <ul style="list-style-type: none"> • sharp: Sharpening • manual: Applies the value of threshold for Black and White.
	threshold	Numeric		0	Specify the threshold when type is black-and-white and ex_option is manual. $-128 \leq \text{threshold} \leq 127$
brightness		Numeric		0	$-100 \leq \text{brightness} \leq 100$ If 0, brightness is not corrected. Look at the scan results and set the appropriate value based on the data.
contrast		Numeric		0	$-100 \leq \text{contrast} \leq 100$ If 0, contrast is not corrected. Look at the scan results and set the appropriate value based on the data.
gamma		Numeric		1.0	Select from the following. <ul style="list-style-type: none"> • 1.0 • 1.8 • 2.2 If 1.0, gamma is not corrected. Look at the scan results and set the appropriate value based on the data.
success_stamp		Boolean		false	Specify whether to stamp paper that has been scanned successfully.
success_pocket		String		main	Specify the paper output destination for paper that has been scanned successfully. <ul style="list-style-type: none"> • main • sub • waterfall_even • waterfall_main
double_feed_eject		Boolean		true	Set whether to eject the paper when double-feed is detected. If the paper is not ejected, a recoverable error will occur on the main unit. <ul style="list-style-type: none"> • true: The check is ejected even if double-feed is detected. • false: If double-feed is detected, the check is stopped in the route and a recoverable error occurs.
double_feed_pocket		String		main	Specify the paper output destination when double feed is detected. <ul style="list-style-type: none"> • main • sub
double_feed_stop		Boolean		true	Set whether to stop scanning when double-feed is detected.
double_feed_stamp		Boolean		false	Specify whether to stamp paper when double feed is detected.

Item name	Type	Required	Default value	Description
paper_thickness	Numeric		0	Specify the threshold for double feed detection. (Units: 0.01 mm) $0 \leq \text{paper_thickness} \leq 40$ If 10 is specified, the value is set to 0.10 mm. If 0 is specified, the default value is used.
micr	Object			This is an MICR object.
enabled	Boolean		true	Set whether to perform read by MICR.
error_eject	Boolean		true	Select from the following. <ul style="list-style-type: none"> • true: The check is ejected even if an error is detected. • false: If an error is detected, the check is stopped in the route and a recoverable error occurs.
error_pocket	String		main	Specify the paper output destination if a scanning error occurs. <ul style="list-style-type: none"> • main • sub
error_stop	Boolean		true	Set whether to stop scanning if there is an error in the reading results.
error_stamp	Boolean		false	Specify whether to stamp the paper if a scanning error occurs.
baddata_count	Numeric		255	If unrecognized MICR characters are detected as errors, set the number of unrecognized characters that are allowed. $0 \leq \text{baddata_count} \leq 255$
font	String		E13B	Select from the following. <ul style="list-style-type: none"> • E13B: Magnetic waveform analysis module version(E13B) • CMC7: Magnetic waveform analysis module version(CMC7)
parsing	Boolean		true	Set whether to parse MICR strings when the font is E13B. This setting is always false for CMC7.
clear_spaces	Boolean		false	Clears any spaces in MICR data.
buzzer	Array (Object)		[]	This array contains buzzer condition objects.
type	String	✓		Select the conditions under which the buzzer sounds. <ul style="list-style-type: none"> • success: The buzzer sounds if the reading is successful. • error: The buzzer sounds if a read error occurs. • double_feed: The buzzer sounds if double-feed is detected.
frequency	String	✓		Select from the following. <ul style="list-style-type: none"> • 440hz • 880hz • 2500hz
count	Numeric	✓		Number of times the buzzer sounds. $1 \leq \text{count} \leq 3$

Item name	Type	Required	Default value	Description
endorse	Object			This is an endorsement object.
type	String		none	Select from the following. <ul style="list-style-type: none"> • none • electronic
data	Array (Object)		[]	This array contains endorsement printing information objects. For TM-S1000II-NW, only one endorse.data object can be set. If multiple settings are made, the last setting is applied.
font_type	String		sans-serif	Select from the following. <ul style="list-style-type: none"> • serif • sans-serif • monospace
bold	Boolean		false	Set whether to use bold text.
font_size	Numeric		10	Font size. $4 \leq \text{font_size} \leq 72$ If type is image, ignore this setting.
top_left_x	Numeric	✓		X-coordinates for print origin position (units: mm) $0 \leq \text{top_left_x} \leq 235$ If endorse.type is physical or physical_payee, only values up to 214 are valid. (If a value greater than 214 is specified, a value of 214 will be used.)
top_left_y	Numeric	✓		Y-coordinates for print origin position (units: mm) $0 \leq \text{top_left_y} \leq 109$ If endorse.type is physical or physical_payee, only values up to 49 are valid. (If a value greater than 49 is specified, a value of 49 will be used.)
width	Numeric	✓		Print width (units: mm) $1 \leq \text{width} \leq 236$ If endorse.type is physical or physical_payee, only values up to 215 are valid. (If a value greater than 215 is specified, a value of 215 will be used.)
height	Numeric	✓		Print height (units: mm) $1 \leq \text{height} \leq 110$ If endorse.type is physical or physical_payee, only values up to 50 are valid. (If a value greater than 50 is specified, a value of 50 will be used.)
direction	String		left_to_right	Select from the following. <ul style="list-style-type: none"> • left_to_right: From left to right (normal direction) • bottom_to_up: From top to bottom (Rotate 90° clockwise) • right_to_left: From right to left (upside down) • up_to_bottom: From bottom to top (Rotate 90° counterclockwise)
contents	String	✓		If type is text, specify a print string. Min. 1 character Max. 128 characters.

Item name	Type	Required	Default value	Description
iqa	Object			This is an IQA configuration object.
enabled	Boolean		false	Set whether to perform IQA. If images[n].type includes color, IQA cannot be executed.
error_eject	Boolean		false	Set whether to eject the paper if not_pass is in the IQA execution results. If the paper is not ejected, a recoverable error will occur on the main unit.
error_pocket	String		main	Specify the paper output destination if not_pass is in the IQA execution results. <ul style="list-style-type: none"> main sub
error_stop	Boolean		false	Set whether to stop scanning if not_pass is in the IQA execution results.
error_stamp	Boolean		false	Specify whether to stamp the paper if not_pass is in the IQA execution results. Specify whether to stamp the paper if a scanning error occurs.
under_size	Boolean		true	Set whether to determine that the conditions for UndersizeImage have occurred.
over_size	Boolean		true	Set whether to determine that the conditions for OversizeImage have occurred.
min_compressed_image_size	Boolean		true	Set whether to determine that the conditions for MinCompressedImageSize have occurred.
max_compressed_image_size	Boolean		true	Set whether to determine that the conditions for MaxCompressedImageSize have occurred.
front_rear_image_mismatch	Boolean		true	Set whether to determine that the conditions for FrontRearImageMismatch have occurred.
image_too_light	Boolean		true	Set whether to determine that the conditions for ImageTooLight have occurred.
image_too_dark	Boolean		true	Set whether to determine that the conditions for ImageTooDark have occurred.
horizontal_streaks_present	Boolean		true	Set whether to determine that the conditions for HorizontalStreaksPresent have occurred.
excessive_spot_noise	Boolean		true	Set whether to determine that the conditions for ExcessiveSpotNoise have occurred.
image_out_of_focus	Boolean		true	Set whether to determine that the conditions for ImageOutOfFocus have occurred.
folded_torn_doc_corners	Boolean		true	Set whether to determine that the conditions for FoldedTornDocCorners have occurred.
folded_torn_doc_edges	Boolean		true	Set whether to determine that the conditions for FoldedTornDocEdges have occurred.
doc_framing_error	Boolean		true	Set whether to determine that the conditions for DocFramingError have occurred.
excessive_doc_skew	Boolean		true	Set whether to determine that the conditions for ExcessiveDocSkew have occurred.

Item name		Type	Required	Default value	Description																									
	carbon_strip_detection	Boolean		true	Set whether to determine that the conditions for Carbon-StripDetection have occurred.																									
	piggy_back	Boolean		true	Set whether to determine that the conditions for Piggy-back have occurred.																									
ocr_ab		Object			This is an OCR AB information object.																									
enabled		Boolean		false	Set whether to perform OCR AB reading.																									
type		String		ocr_a_alphanum	Select from the following. <table><tr><td>ocr_a_num</td><td>OCR-A font, numeric characters only</td></tr><tr><td>ocr_b_num</td><td>OCR-B font, numeric characters only</td></tr><tr><td>ocr_a_alpha</td><td>OCR-A font, alphabetic characters only</td></tr><tr><td>ocr_b_alpha</td><td>OCR-B font, alphabetic characters only</td></tr><tr><td>ocr_a_alphanum</td><td>OCR-A font, alphanumeric characters</td></tr><tr><td>ocr_b_alphanum</td><td>OCR-B font, alphanumeric characters</td></tr><tr><td>ocr_a_alphanum_wooh</td><td>CR-A font, alphanumeric characters (except the letter O)</td></tr><tr><td>ocr_b_alphanum_wooh</td><td>CR-B font, alphanumeric characters (except the letter O)</td></tr><tr><td>ocr_a_alphanum_wozero</td><td>OCR-A font, alphanumeric characters (except the number 0)</td></tr><tr><td>ocr_b_alphanum_wozero</td><td>OCR-B font, alphanumeric characters (except the number 0)</td></tr><tr><td>ocr_a_symnum</td><td>OCR-A font, numeric characters and symbols (except "+")</td></tr><tr><td>ocr_b_symnum</td><td>OCR-B font, numeric characters and symbols (except "+")</td></tr></table>		ocr_a_num	OCR-A font, numeric characters only	ocr_b_num	OCR-B font, numeric characters only	ocr_a_alpha	OCR-A font, alphabetic characters only	ocr_b_alpha	OCR-B font, alphabetic characters only	ocr_a_alphanum	OCR-A font, alphanumeric characters	ocr_b_alphanum	OCR-B font, alphanumeric characters	ocr_a_alphanum_wooh	CR-A font, alphanumeric characters (except the letter O)	ocr_b_alphanum_wooh	CR-B font, alphanumeric characters (except the letter O)	ocr_a_alphanum_wozero	OCR-A font, alphanumeric characters (except the number 0)	ocr_b_alphanum_wozero	OCR-B font, alphanumeric characters (except the number 0)	ocr_a_symnum	OCR-A font, numeric characters and symbols (except "+")	ocr_b_symnum	OCR-B font, numeric characters and symbols (except "+")
ocr_a_num	OCR-A font, numeric characters only																													
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ocr_b_alpha	OCR-B font, alphabetic characters only																													
ocr_a_alphanum	OCR-A font, alphanumeric characters																													
ocr_b_alphanum	OCR-B font, alphanumeric characters																													
ocr_a_alphanum_wooh	CR-A font, alphanumeric characters (except the letter O)																													
ocr_b_alphanum_wooh	CR-B font, alphanumeric characters (except the letter O)																													
ocr_a_alphanum_wozero	OCR-A font, alphanumeric characters (except the number 0)																													
ocr_b_alphanum_wozero	OCR-B font, alphanumeric characters (except the number 0)																													
ocr_a_symnum	OCR-A font, numeric characters and symbols (except "+")																													
ocr_b_symnum	OCR-B font, numeric characters and symbols (except "+")																													
direction		String		left_to_right	Select from the following. <ul style="list-style-type: none">left_to_rightbottom_to_upright_to_leftup_to_bottom																									
start_x		Numeric	✓	0	Specify the starting X coordinates for the area to be recognized for OCR. (Units: mm) 0 ≤ start_x ≤ 254 and start_x < end_x																									
end_x		Numeric	✓	255	Specify the ending X coordinates for the area to be recognized for OCR. (Units: mm) 1 ≤ end_x ≤ 255 and start_x < end_x																									

Item name	Type	Required	Default value	Description
start_y	Numeric	✓	0	Specify the starting Y coordinates for the area to be recognized for OCR. (Units: mm) $0 \leq \text{start_y} \leq 255$ and $\text{start_y} < \text{end_y}$
end_y	Numeric	✓	256	Specify the ending Y coordinates for the area to be recognized for OCR. (Units: mm) $1 \leq \text{end_y} \leq 256$ and $\text{start_y} < \text{end_y}$
space_enabled	Boolean		false	Includes spaces in the results.

HTTP body(Example)

```
{
  "face": "both",
  "images": [
    {
      "format": "tiff",
      "dual_image": "true",
      "type": "black-and-white"
    }
  ],
  "endorse": {
    "type": "electronic",
    "error_stop": true,
    "data": [
      {
        "font_type": "sans-serif",
        "bold": true,
        "font_size": 10,
        "top_left_x": 0,
        "top_left_y": 0,
        "width": 50,
        "height": 10,
        "direction": "left_to_right",
        "contents": "Hello world!"
      }
    ]
  }
}
```

- In this example, the following images can be acquired.

No.	Scan face	File format	Image type
1	Front side	TIFF	Black-and-White
2	Front side	BMP	Grayscale
3	Back side	TIFF	Black-and-White
4	Back side	BMP	Grayscale

Default value

```
{
  "face": "both",
  "images": [
    {
      "format": "tiff",
      "type": "black-and-white",
      "ex_option": "sharp",
      "threshold": 0
    }
  ],
  "brightness": 0,
  "contrast": 0,
  "gamma": 1.0,
  "success_stamp": "false",
  "success_pocket": "main",
  "double_feed_eject": true,
  "double_feed_pocket": "main",
  "double_feed_stop": true,
  "double_feed_stamp": "false",
  "micr": {
    "enabled": true,
    "error_eject": true,
    "error_pocket": "main",
    "error_stop": true,
    "baddata_count": 255,
    "font": "E13B",
    "parsing": true,
    "clear_spaces": false
  },
  "buzzer": [],
  "endorse": {
    "type": "none",
    "error_stop": false,
    "data": []
  },
  "iqa": {
    "enabled": false,
    "error_eject": true,
    "error_pocket": "main",
    "error_stop": false,
    "error_stamp": "false",
    "format": "tiff",
    "type": "black-and-white",
    "ex_option": "sharp",
    "threshold": 0,
    "under_size": true,
    "over_size": true,
    "min_compressed_image_size": true,
    "max_compressed_image_size": true,
    "front_rear_image_mismatch": true,
    "image_too_light": true,
    "image_too_dark": true,
    "horizontal_streaks_present": true,
    "excessive_spot_noise": true,
    "image_out_of_focus": true,
    "folded_torn_doc_corners": true,
    "folded_torn_doc_edges": true,
    "doc_framing_error": true,
    "excessive_doc_skew": true,
    "carbon_strip_detection": true,
    "piggy_back": true
  },
}
```

```

"ocr_ab": {
  "enabled": false,
  "type": "ocr_a_alphanum",
  "direction": "left_to_right",
  "start_x": 0,
  "end_x": 255,
  "start_y": 0,
  "end_y": 256,
  "space_enabled": false
}

```

Request - Description of Endorsement Printing Function

Sequence Printing Function

- ☐ This function specifies the print format for transaction numbers. The format of the keywords enclosed in <> is used when printing.
- ☐ The parameters in the ScanStart API are used to specify the transaction number.
- ☐ There are three patterns for keywords that can be specified for sequence printing.

Keywords	Description
<0000>	The number of "0"s indicates the number of columns to be printed. The number of columns that can be set is from 1 to 9. If a fewer number of transactions than the number of columns is set, a 0 is automatically added.
<xxxx>	The number of "x"s indicates the number of columns to be printed. The number of columns that can be set is from 1 to 9. If a fewer number of transactions than the number of columns is set, a space is automatically added.
<llll>	(Single-byte lower case "l"): The number of "l"s indicates the number of columns to be printed. The number of columns that can be set is from 1 to 9. If a fewer number of transactions than the number of columns is set, the columns are automatically left justified.

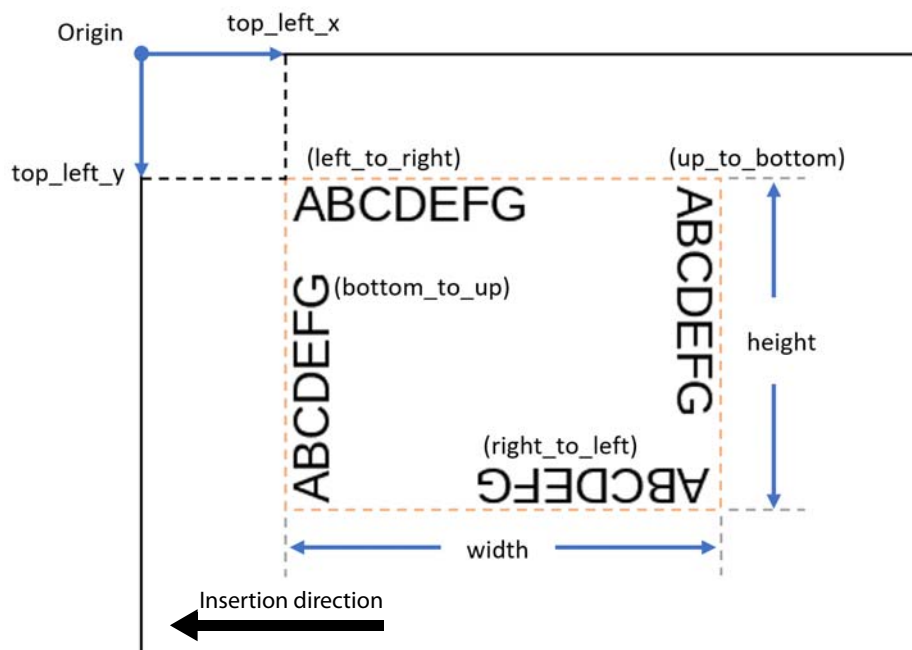


NOTE

- < and > are used as special symbols. To print < and >, specify < for < and > for >.
- If a keyword that does not fit the above rules is specified, such as <00xxabc> (a combination of 0s and x's, or characters other than 0 or x), a normal string enclosed in < and > will be output.
- For sequential printing, if you specify n digits fewer than the transaction number that is currently set, only the last n digits of the transaction number will actually be printed.
<Example>
If the current transaction number is 12345 and you specify <xxxx> for sequential printing with 4 columns, "2345" will be printed.

Printing Position and Direction of Endorsement

The following figure shows how an endorsement will appear if the print position and direction are specified.



Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

```
{
  "face": "both",
  "images": [
    {
      "format": "jpeg",
      "type": "grayscale"
    }
  ],
  "brightness": 0,
  "contrast": 0,
  "gamma": 1.0,
  "double_feed_eject": true,
  "double_feed_stop": true,
  "micr": {
    "enabled": true,
    "error_eject": true,
    "error_stop": true,
    "font": "E13B",
    "parsing": true,
    "clear_spaces": false
  },
  "buzzer": [],
  "endorse": {
    "type": "electronic",
    "error_stop": true,
    "data": [
      {
        "font_type": "sans-serif",
        "bold": true,
        "font_size": 10,
        "top_left_x": 0,
        "top_left_y": 0,
        "width": 50,
        "height": 10,
        "direction": "left_to_right",
        "contents": "Hello world!"
      }
    ]
  }
},
```

```

"iqa": {
  "enabled": false,
  "error_eject": true,
  "error_stop": false,
  "format": "tiff",
  "type": "black-and-white",
  "ex_option": "sharp",
  "threshold": 0,
  "under_size": true,
  "over_size": true,
  "min_compressed_image_size": true,
  "max_compressed_image_size": true,
  "front_rear_image_mismatch": true,
  "image_too_light": true,
  "image_too_dark": true,
  "horizontal_streaks_present": true,
  "excessive_spot_noise": true,
  "image_out_of_focus": true,
  "folded_torn_doc_corners": true,
  "folded_torn_doc_edges": true,
  "doc_framing_error": true,
  "excessive_doc_skew": true,
  "carbon_strip_detection": true,
  "piggy_back": true
},
"ocr_ab": {
  "enabled": false,
  "type": "ocr_a_alphanum",
  "direction": "left_to_right",
  "start_x": 0,
  "end_x": 255,
  "start_y": 0,
  "end_y": 256,
  "space_enabled": false
}
}

```

- ☐ The current setting values that have been configured with this API are returned.
- ☐ Each item is the same as the body of the request.

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Parsing error or analysis error	400	parse_error
Scanner operation in progress	400	device_busy
Authentication error	401	access_token_verification_failed

Start Scan (Check)

This API is used to start the check scanning process.

The feeder waits for paper feed.

Request

Command URI

/api/scan/start/check

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.
Content-Type	✓	application/json; charset=utf-8

Query string

None

HTTP body

Item name	Type	Required	Default value	Description
limit	Numeric or null	-	null	Number of scans $0 \leq \text{limit} \leq 100$ If null, it depends on the ASF (Auto Sheet Feeder).
timeout	Numeric or null	-	null	Document insertion wait timeout (seconds) $1 \leq \text{timeout} \leq 300$ If null, the wait time will be infinite.
transaction_number	Numeric or null	-	null	Transaction number $0 \leq \text{transaction_number} \leq 9999999999999999$ If null is specified, the value is 1 the first time after Connect, and the last transaction number +1 each time thereafter. The transaction assigns a number from 0 to 9999999999999999 to the document.
step	Numeric	-	1	Increments the transaction number $1 \leq \text{step} \leq 10$

HTTP body(Example)

```
{
  "limit": 1,
  "timeout": null,
  "transaction_number": null,
  "step": 1
}
```

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

```
{}
```

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Parsing error or analysis error	400	parse_error
Scanner operation in progress	400	device_busy
USB connection. Scanning cannot be performed with Web API when the scanner is connected via USB.	400	device_busy
Paper remaining in scan path	400	device_busy
Authentication error	401	access_token_verification_failed

Cancel Scan

This API is used to stop the running scan process.

Although canceling a scan will stop it immediately, a scan that is still in progress might continue.

Request

Command URI

/api/scan/cancel

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

<pre>{}</pre>

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scan operation not in progress	400	not_scanning
Authentication error	401	access_token_verification_failed

Get Document List

This API is used to obtain the current scanner status and the results of the most recent scanning process.

If you want to check the device status, run the DeviceStatus API instead of this API.

This API is used to retrieve a list of documents that have been scanned.

Images that have been obtained with the GetImage API are excluded from the GetDocumentList response.

If all of the images in a document are obtained with the GetImage API, that document will be excluded from the GetDocumentList response.

The file path for images is shown below.

`/api/docs/{transaction_no}/{transaction_no}_check_{front_or_back}.{extention}`

Example

`/api/docs/1/1_check_front.jpg`

Item	Description
{transaction_no}	Transaction No. Zero-padding is not used.
{front_or_back}	Specify the front or back of the document.
{extention}	Image extension.

Request

Command URI

`/api/docs`

HTTP Method

GET

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

```
{
  "latest_result": "success",
  "status": "connected",
  "documents": [
    {
      "transaction_number": 1,
      "front": [
        "/api/docs/1/1_check_front.jpg"
      ],
      "back": [
        "/api/docs/1/1_check_back.jpg"
      ],
      "micr": {
        "text": "o005575o t123456780t1234567890o",
        "account_number": "1234567890",
        "amount": "",
        "bank_number": "5678",
        "serial_number": "005575",
        "epc": "",
        "transit_number": "123456780",
        "check_type": 0,
        "country_code": 0,
        "on_us_field": "1234567890o",
        "auxiliary_on_us_field": "005575"
      },
      "iqa": {
        "under_size": {
          "result": "pass",
          "width": 60,
          "height": 27
        },
        "over_size": {
          "result": "pass",
          "width": 60,
          "height": 27
        },
        "min_compressed_image_size": {
          "result": "pass",
          "size": 117335
        },
        "max_compressed_image_size": {
          "result": "pass",
          "size": 117335
        },
        "front_rear_image_mismatch": {
          "result": "pass",
          "abs_width_diff": 0,
          "abs_height_diff": 0
        }
      }
    }
  ]
}
```

```

    "image_too_light": {
      "result": "pass",
      "black_pixels": 0,
      "brightness": 874,
      "contrast": 474
    },
    "image_too_dark": {
      "result": "pass",
      "black_pixels": 0,
      "brightness": 874
    },
    "horizontal_streaks_present": {
      "result": "pass",
      "streak_count": 1,
      "streak_height": 1
    },
    "excessive_spot_noise": {
      "result": "pass",
      "count": 0
    },
    "image_out_of_focus": {
      "result": "pass",
      "image_focus_score": 100
    },
    "folded_torn_doc_corners": {
      "result": "pass",
      "topleft_width": 0,
      "topleft_height": 0,
      "topright_width": 0,
      "topright_height": 0,
      "bottom_left_width": 0,
      "bottom_left_height": 0,
      "bottom_right_width": 0,
      "bottom_right_height": 0
    },
    "folded_torn_doc_edges": {
      "result": "pass",
      "top_width": 0,
      "top_height": 0,
      "left_width": 0,
      "left_height": 0,
      "right_width": 0,
      "right_height": 0,
      "bottom_width": 0,
      "bottom_height": 0
    },
    "doc_framing_error": {
      "result": "pass",
      "top": 0,
      "left": 0,
      "right": 0,
      "bottom": 0
    },
    "excessive_doc_skew": {
      "result": "pass",
      "angle": -3,
      "range": 0
    },
    "carbon_strip_detection": {
      "result": "pass",
      "strip_height": 0
    },
    "piggy_back": {
      "result": "pass"
    }
  },
},

```

```

    "ocr_text": "ABCDEFGHIJKLMNOPQRSTUVWXYZO923456789",
    "barcode": [
      "ABC DEF GHI"
    ]
  }
}

```

Item name	Type	Description	
latest_result	String	Results of the latest scan run. When ScanStart API is executed, it is cleared to an empty string.	
		success	Successful
		timeout	Timeout
		no_docs	Timeout for check insertion
		canceled	Canceled
		micr_error	MICR data error
		image_error	Image data error
		not_exec	Not executed
		double_feed	Double-feed detected
		jammed	Paper jam
		cover_open	Cover open
		micr_baddata	MICR character recognition error
		micr_noise	MICR noise error
		print_data_length_exceed	Printed image size exceeded the printable area
		print_image_format_error	Print image format error
		iqa_not_pass	IQA failure
		less_checks	Insufficient number of sheets
		disk_full	Insufficient memory error
		misinsertion	Paper insertion error
		device_access_error	Device access error
paper_exist	Paper exists in the pathway		
ocr_nodata	Could not acquire character information by OCR.		
other_error	Unexpected error		
status	Object	Current scanner status. One of the following <ul style="list-style-type: none">connectedscanningprinting	
documents	Array (Object)	This is an array of document objects.	
transaction_number	Numeric	Transaction number	
front	Array (String)	This array contains the URI string for the front image.	
back	Array (String)	This array contains the URI string for the back image.	

Item name	Type	Description
micr	Object	This is an MICR data object.
text	Numeric	Scanned MICR data
account_number	String	AccountNumber property
amount	String	Amount property
bank_number	String	BankNumber property
serial_number	String	SerialNumber property
epc	String	EPC property
transit_number	String	TransitNumber property
check_type	Numeric	CheckType property
country_code	Numeric	CountryCode property
on_us_field	String	MICR On-US field
auxiliary_on_us_field	String	Auxiliary On-US field
iqa	Object	This is an IQA result object.
under_size	Object	This is an under_size result object.
result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
width	Numeric	Image width (unit: 0.1 inch)
height	Numeric	Image height (unit: 0.1 inch)
over_size	Object	This is an over_size result object.
result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
width	Numeric	Image width (unit: 0.1 inch)
height	Numeric	Image height (unit: 0.1 inch)
min_compressed_image_size	Object	This is a min_compressed_image_size result object.
result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
size	Numeric	Compressed image size (units: bytes)
max_compressed_image_size	Numeric	This is a max_compressed_image_size result object.
result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
size	Numeric	Compressed image size (units: bytes)
front_rear_image_mismatch	Object	This is a front_rear_image_mismatch result object.
result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
abs_width_diff	Numeric	Difference in image width between front and back (units: 0.1 inch)
abs_height_diff	Numeric	Difference in image height between front and back (units: 0.1 inch)

Item name		Type	Description	
	image_too_light	Object	This is an image_too_light result object.	
		result	<ul style="list-style-type: none">• pass• not_pass• not_tested	
		black_pixels	Numeric	Percentage of black pixels in the image (units: 0.1%)
		brightness	Numeric	Image brightness (units: 0.1%)
		contrast	Numeric	Image contrast (units: 0.1%)
	image_too_dark	Object	This is an image_too_dark result object.	
		result	<ul style="list-style-type: none">• pass• not_pass• not_tested	
		black_pixels	Numeric	Percentage of black pixels in the image (units: 0.1%)
		brightness	Numeric	Image brightness (units: 0.1%)
	horizontal_streaks_present	Object	This is a streaks result object.	
		result	<ul style="list-style-type: none">• pass• not_pass• not_tested	
		streak_count	Numeric	Number of black stripes in the binary image
		streak_height	Numeric	Width of thickest black stripe
	excessive_spot_noise	Object	This is a noise result object.	
		result	<ul style="list-style-type: none">• pass• not_pass• not_tested	
		count	Numeric	Average number of spot noise per square inch
	image_out_of_focus	Object	This is a focus result object.	
		result	<ul style="list-style-type: none">• pass• not_pass• not_tested	
		image_focus_score	Numeric	The score is estimated with the following formula: (maximum video gradient)/(gray level dynamic range)*(pixel pitch).
	folded_torn_doc_corners	Object	This is a corners result object.	
		result	<ul style="list-style-type: none">• pass• not_pass• not_tested	
		topleft_width	Numeric	Width of the tear/bend in the upper left corner of the image (units: 0.1 inch)
		topleft_height	Numeric	Height of the tear/bend in the upper left corner of the image (units: 0.1 inch)
		topright_width	Numeric	Width of the tear/bend in the upper right corner of the image (units: 0.1 inch)
		topright_height	Numeric	Height of the tear/bend in the upper right corner of the image (units: 0.1 inch)
		bottom_left_width	Numeric	Width of the tear/bend in the lower left corner of the image (units: 0.1 inch)
		bottom_left_height	Numeric	Height of the tear/bend in the lower left corner of image (units: 0.1 inch)

Item name		Type	Description
	bottom_right_width	Numeric	Width of the tear/bend in the lower right corner of the image (units: 0.1 inch)
	bottom_right_height	Numeric	Height of the tear/bend in the lower right corner of the image (units: 0.1 inch)
	folded_torn_doc_edges	Object	This is an edges result object.
	result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
	top_width	Numeric	Width of the tear/bend in the upper left corner of the image (units: 0.1 inch)
	top_height	Numeric	Height of the tear/bend in the upper left corner of the image (units: 0.1 inch)
	left_width	Numeric	Width of the tear/bend in the upper right corner of the image (units: 0.1 inch)
	left_height	Numeric	Height of the tear/bend in the upper right corner of the image (units: 0.1 inch)
	right_width	Numeric	Width of the tear/bend in the lower left corner of the image (units: 0.1 inch)
	right_height	Numeric	Height of the tear/bend in the lower left corner of image (units: 0.1 inch)
	bottom_width	Numeric	Width of the tear/bend in the lower right corner of the image (units: 0.1 inch)
	bottom_height	Numeric	Height of the tear/bend in the lower right corner of the image (units: 0.1 inch)
	doc_framing_error	Object	This is a framing result object.
	result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
	top	Numeric	Width of the top margin of the image (units: 0.1 inch)
	left	Numeric	Width of the left margin of the image (units: 0.1 inch)
	right	Numeric	Width of the right margin of the image (units: 0.1 inch)
	bottom	Numeric	Width of the bottom margin of the image (units: 0.1 inch)
	excessive_doc_skew	Object	This is a skew result object.
	result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
	angle	Numeric	Inclination angle (units: 0.1 degree)
	range	Numeric	Fixed to 0: Value indicating that the angle is in the range of -90 to +90
	carbon_strip_detection	Object	This is a carbon result object.
	result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested
	strip_height	Numeric	Length of carbon strip (units: 0.1 inch)
	piggy_back	Object	This is a piggy_back result object.
	result	String	<ul style="list-style-type: none"> • pass • not_pass • not_tested

Item name	Type	Description
ocr_text	String	OCR AB reading result string
barcode	Array (String)	This array contains the barcode reading result string.

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Authentication error	401	access_token_verification_failed
Output JSON data too large	503	output_json_data_too_large

Delete All Documents

This API is used to delete all scan result documents.

Request

Command URI

/api/docs

HTTP Method

DELETE

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

<pre>{}</pre>

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Authentication error	401	access_token_verification_failed

Get Image

This API is used to obtain scan result image data.

Images that have been obtained with this API are excluded from the GetDocumentList response.

If all of the images in a document are obtained with this API, that document will be excluded from the GetDocumentList response.

Request

Command URI

/api/docs/{transaction_number}/{image_file_name}

Item name	Required	Value
transaction_number	✓	Transaction number of the image to be obtained
image_file_name	✓	File name of the image to be obtained

HTTP Method

GET

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	{Different for each image format}
Content-Disposition	attachment; filename="{Filename}"

Content-Type by image format

Image type	Content-Type
JPEG	image/jpeg
TIFF	image/tiff
Bitmap	image/bmp

Status code

200

HTTP body

Image data

Response - Error response**HTTP header**

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Authentication error	401	access_token_verification_failed
Could not find the specified image	404	not_found

Get Device Status

This API is used to obtain the device status.

Request

Command URI

/api/device/status

HTTP Method

GET

HTTP header

None

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

<pre>{ "device_status": ["ok"] }</pre>

Item name	Type	Description
device_status	Array (String)	This array contains device status strings.
		ok
		off_line
		cover_open
		mechanical_err
		unrecover_err
		autorecover_err
		wait_insert
		paper_detected

Error cause / Status code / Error code string

None

Reset Device

This API is used to reset the main unit of the scanner.

Request

Command URI

/api/device/reset

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

<pre>{}</pre>

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scanner operation in progress	400	device_busy
Authentication error	401	access_token_verification_failed

MICR Cleaning

This API is used to perform MICR cleaning of the scanner.



NOTE

If this command is issued without the cleaning paper inserted, the scanner will wait 60 seconds for the cleaning paper to be inserted. After 60 seconds, a timeout error will occur.

Request

Command URI

/api/device/cleaning/micr

HTTP Method

POST

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

```
{}
```

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Timeout while waiting for cleaning paper insertion (60 sec)	400	timeout
Scanner operation in progress	400	device_busy
Authentication error	401	access_token_verification_failed

Get Maintenance Counter

This API is used to obtain maintenance counter information.

Request

Command URI

/api/device/counter

HTTP Method

GET

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

```
{
  "resettable": {
    "count_of_check_paper_scanning": 0,
    "count_of_hopper_open_close": 0,
    "count_of_franking": 0,
    "count_of_pocket_switch": 0
  },
  "cumulative": {
    "count_of_check_paper_scanning": 0,
    "count_of_hopper_open_close": 0,
    "count_of_franking": 0,
    "count_of_pocket_switch": 0
  }
}
```

Item name	Type	Description
resettable	Object	This is a maintenance_counter object that can be reset.
		count_of_check_paper_scanning
		Count of cut sheet scanning [count]
		count_of_hopper_open_close
		Count of hopper open/close [count]
cumulative	Object	This is a cumulative maintenance_counter object that cannot be reset.
		count_of_check_paper_scanning
		Count of cut sheet scanning [count]
		count_of_hopper_open_close
		Count of hopper open/close [count]

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scanner operation in progress	400	device_busy
Authentication error	401	access_token_verification_failed

Reset Maintenance Counter

This API is used to reset maintenance counter information.

Use a path parameter to specify the item to be reset.

Request

Command URI

/api/device/counter/{counter_name}

Item name	Required	Value	
counter_name	✓	Counter name to be reset	
		count_of_check_paper_scanning	Count of cut sheet scanning [count]
		count_of_hopper_open_close	Count of hopper open/close [count]
		count_of_franking	Franking count [count]
		count_of_pocket_switch	Count of pocket switch [count]

HTTP Method

DELETE

HTTP header

Header name	Required	Value
Authorization	✓	Specify the token string obtained with the Connect API.

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

{}

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scanner operation in progress	400	device_busy
Authentication error	401	access_token_verification_failed
Attempted to reset a non-existent counter	404	not_found

Get Default Scan Setting (Check)

This API is used to obtain the default scan setting values (check).

Request

Command URI

/api/scan/setting/check

HTTP Method

GET

HTTP header

None

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

Refer to the POST body of the Set Scan Setting API (Check). ([page 24](#))

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scanner operation in progress	400	device_busy

Save Default Scan Setting (Check)

This API is used to register the default scan settings for checks.

The initial value that is registered with this API is retained even after the device is disconnected or turned off.

Request

Command URI

/api/scan/setting/check

HTTP Method

PUT

HTTP header

Header name	Required	Value
Content-Type	✓	application/json; charset=utf-8

Query string

None

HTTP body

Refer to the POST body of the Set Scan Setting API (Check). ([page 24](#))

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

{}

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scanner operation in progress	400	device_busy
Parsing error or analysis error	400	parse_error
The setting information to be saved is too large.	400	default_setting_too_large

Reset Default Scan Setting (Check)

This API is used to reset the registered default scan settings for checks to the factory settings.

Request

Command URI

/api/scan/setting/check

HTTP Method

DELETE

HTTP header

None

Query string

None

HTTP body

None

Response - Normal Response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Status code

200

HTTP body

{}

Response - Error response

HTTP header

Header name	Value
Content-Type	application/json; charset=utf-8

Error cause / Status code / Error code string

Error cause	Status code	Error code string
Scanner operation in progress	400	device_busy

Scan Web API Sample Program

Overview

The sample program uses Web API to scan a check, obtain the image and MICR data.
The data to be sent and received is displayed here, to help customers create their applications.

Screen

The screenshot shows the Scan Web API Sample Program interface. It includes an API List on the left, input fields for IP Address and Token at the top, a URL field for the API endpoint, a Send button, a Headers section, a Body section, a Format button, and a Response section at the bottom. Numbered callouts 1 through 9 highlight specific elements: 1 (IP Address), 2 (Token), 3 (API List), 4 (URL), 5 (Send button), 6 (Headers), 7 (Body), 8 (Format button), and 9 (Response section).

No.	Name	Description
1	IP Address	Enter the IP address of the scanner to connect to.
2	Access Token	Displays the access token obtained via the Connect API.
3	API List	Displays a list of APIs that can be executed with the sample program. The content of (4), (6), and (7) will change according to the selected API.
4	URL	Displays the HTTP method for the API and the URL to request.
5	Send button	Executes the API.
6	Request Header	Displays the request header for the API.
7	Request Body	Enter the request body for the API in JSON format. The color of the border around the input field indicates the following: Blue: The entered content is correct. Red: The entered content does not match JSON format.
8	Format	Formats the JSON in the input field so that it is easy to read.
9	Response informations	Displays the response content after the API is executed. This will be displayed once the API has been executed.

Operating Environment

Web Browser

- Mozilla Firefox 91 or later
- Google Chrome 89 or later
- Microsoft Edge 91 or later
- Safari on iOS 13 or later

* Windows Internet Explorer is not supported.

Function

The sample program uses the following APIs.

- Functions provided by the sample program

API Name	Method	URI
Connect	POST	/api/connect
Disconnect	POST	/api/disconnect
ScanSetting(Check)	POST	/api/scan/setting/check
ScanStart(Check)	POST	/api/scan/start/check
ScanCancel	POST	/api/scan/cancel
GetDocumentList	GET	/api/docs
DeleteAllDocuments	DELETE	/api/docs
GetImage	GET	/api/docs/{transaction_number}/{image_file_name}
GetDeviceStatus	GET	/api/device/status

- Functions not provided by the sample program

API Name	Method	URI
KeepAlive	POST	/api/keepalive
DeviceReset	POST	/api/device/reset
MICRCleaning	POST	/api/device/cleaning/micr
GetCounter	GET	/api/device/counter
ResetCounter	DELETE	/api/device/counter/{counter_name}
GetDefaultScanSetting(Check)	GET	/api/scan/setting/check
SaveDefaultScanSetting(Check)	PUT	/api/scan/setting/check
ResetDefaultScanSetting(Check)	DELETE	/api/scan/setting/check



Using the Sample Program

The following operations are described in this document.

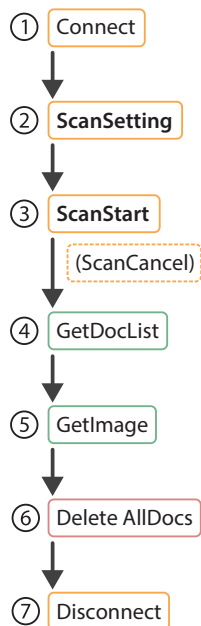
- Connecting, scanning a check, and disconnecting

Work Flow

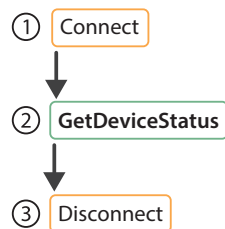
The work flow for the sample program is shown below.

- When you want to obtain a check image and MICR data  Scan a check
- When you want to obtain the printer status  Obtain a device (printer: StatusAPI)

● Scan a check



● Obtain a device (printer: StatusAPI)



POST :

Get :

Delete :

Starting the Sample Program

Use the following steps to start the sample program.

- 1 Extract the sample program (scan-webapi-sample_v2.0.0.zip) in a folder of your choice.
- 2 Open index.html in your browser. The following screen is displayed.

The screenshot displays the Scan Web API Sample Program interface. At the top, there are input fields for 'IP Address' (168.254.128.80) and 'Token' (Get by calling Connect API). Below these, the 'API List' is shown on the left, with 'Connect' selected. The main area displays the configuration for the 'Connect' endpoint (POST) at 'http://168.254.128.80/api/connect'. The 'Headers' section shows 'Content-Type' as 'application/json; charset=utf-8'. The 'Body' section contains a JSON object: { "timeout": 300 }. A 'Send' button is visible next to the URL field. At the bottom, there is a small copyright notice: 'Check Scan WebAPI Sample Version 1.0.0 Copyright© SEIKO EPSON CORPORATION 2022. All rights reserved. This web page is using [Bootstrap CSS](#) and [jQuery](#)'.

Connecting

Start the use of the scanner. The Connect API is used to gain exclusive access to the scanner. No other programs or devices will be able to use the scanner while this device is connected. When the timeout period specified in the parameters is exceeded, the connection is automatically disconnected and any documents that have been scanned are deleted.

1 Enter the IP address of the scanner.

IP Address: 192.168.192.168 Token: Get by calling Connect API

API List: POST http://192.168.192.168/api/connect Send

2 Select [Connect] in the [API List].

IP Address: 192.168.192.168 Token: Get by calling Connect API

API List: POST Connect POST Disconnect POST ScanSetting POST ScanStart POST ScanCancel GET GetDocList

POST http://192.168.192.168/api/connect Send

Headers

Key	Value
Content-Type	application/json; charset=utf-8

Body

```
{
  "timeout": 300
}
```

Format

3 Click the [Send] button to execute the Connect API.

IP Address: 192.168.192.168 Token: Get by calling Connect API

API List: POST Connect POST Disconnect POST ScanSetting POST ScanStart POST ScanCancel GET GetDocList

POST http://192.168.192.168/api/connect Send

Headers

Key	Value
Content-Type	application/json; charset=utf-8

Body

```
{
  "timeout": 300
}
```

Format

The result of executing the API is displayed.

POST Connect POST Disconnect POST ScanSetting POST ScanStart POST ScanCancel GET GetDocList GET GetImage DEL DeleteAllDocs GET GetDeviceStatus

Status: 200 OK

Body

```
{
  "pocket": "1 pocket",
  "software": {
    "scanner_version": "0.23 ESC/POS",
    "main_version": "1B17M6",
    "interface1_version": "ZY01M7",
    "interface2_version": "06.95",
    "webapi_version": "1.0.0"
  }
}
```

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This web page is using Bootstrap CSS and JS.

Scanning a Check

This section describes how to scan a check to obtain image data. To configure the scan settings, first execute ScanSetting and then ScanStart.

- 1 Make sure the scanner is connected.
- 2 Select [ScanStart] in the [API List].

The screenshot shows the API configuration interface. At the top, there are input fields for 'IP Address' (192.168.192.168) and 'Token' (Saf51b32-6878-4d91-8321-9a51e53e85e3). Below these is the 'API List' on the left, where 'ScanStart' is selected and highlighted with a blue box. The main area shows the configuration for the 'POST' method to 'http://192.168.192.168/api/scan/start/check'. The 'Headers' section contains 'Authorization' (Saf51b32-6878-4d91-8321-9a51e53e85e3) and 'Content-Type' (application/json; charset=utf-8). The 'Body' section contains a JSON object: { "limit": 1 }. A 'Send' button is located at the top right of the configuration area.

- 3 Click the [Send] button to execute the ScanStart API.
- 4 The scanner waits for a check to be inserted. When a check is inserted, scanning is performed.
- 5 Select [GetDocList] in the [API List].

The screenshot shows the API configuration interface. At the top, there are input fields for 'IP Address' (192.168.192.168) and 'Token' (Saf51b32-6878-4d91-8321-9a51e53e85e3). Below these is the 'API List' on the left, where 'GetDocList' is selected and highlighted with a blue box. The main area shows the configuration for the 'GET' method to 'http://192.168.192.168/api/docs'. The 'Headers' section contains 'Authorization' (Saf51b32-6878-4d91-8321-9a51e53e85e3). The 'Body' section is empty. A 'Send' button is located at the top right of the configuration area.

- 6 Click the [Send] button to execute the GetDocumentList API.

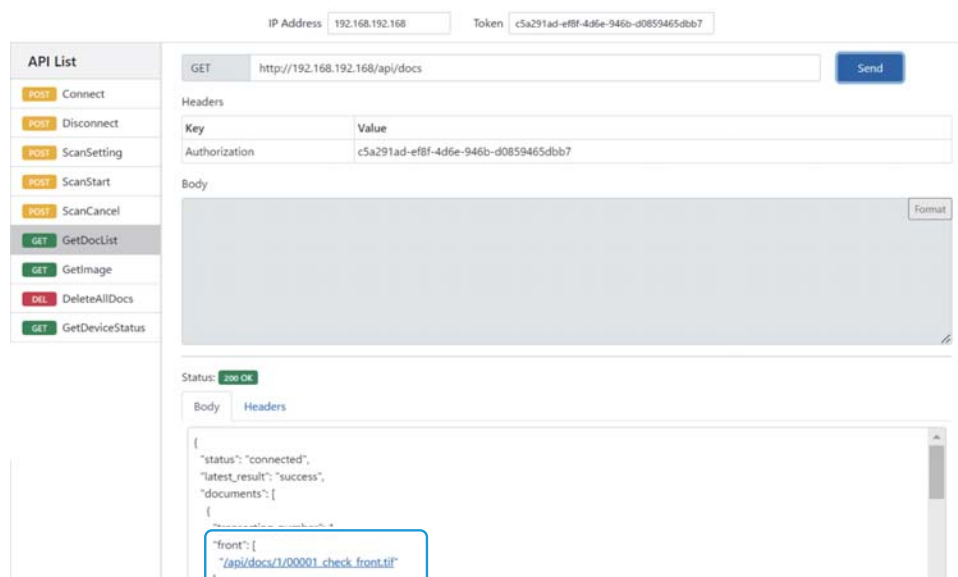
7 The scan results are displayed.

In the "documents" section, a "transaction_number" is assigned to each check. The "front" and "back" sections contain the URLs of the images, and the "micr" section contains the MICR data.

```
{
  "status": "connected",
  "latest_result": "canceled",
  "documents": [
    {
      "transaction_number": 22,
      "front": [
        "/api/docs/22/22_check_front.jpg"
      ],
      "back": [
        "/api/docs/22/22_check_back.jpg"
      ],
      "micr": {
        "text": "t123456780t1234567890o 1309",
        "account_number": "1234567890",
        "amount": "",
        "bank_number": "5678",
        "serial_number": "1309",
        "epc": "",
        "transit_number": "123456780",
        "check_type": 0,
        "country_code": 0,
        "on_us_field": "1234567890o 1309",
        "auxiliary_on_us_field": ""
      }
    },
    {
      "transaction_number": 23,
```

8 Select a URL for an image in the results.

When you select a URL, the GetImage API in the API list will be selected.



- 9** Click the [Send] button to execute the GetImage API.
The specified image data is displayed.

The screenshot shows the Scan Web API interface. At the top, there are input fields for IP Address (192.168.192.168) and Token (c5a291ad-ef8f-4d6e-946b-d0859465dbb7). Below these is the API List on the left, which includes various endpoints like Connect, Disconnect, ScanSetting, ScanStart, ScanCancel, GetDocList, GetImage, DeleteAllDocs, and GetDeviceStatus. The GetImage endpoint is selected. The main configuration area shows the GET method and the URL http://192.168.192.168/api/docs/1/00001_check_front.tif. The Headers section shows the Authorization header with the token. The Body section is empty. The Status is 200 OK. The Body tab is selected, and the scanned image of an Epson check is displayed. The check is from EPSON AMERICA, INC. and has a serial number of 1278. The check is dated 12/28/2024 and is for the amount of \$94.00. The check is marked as VOID.

- 10** When you have obtained the image, delete the data in the scanner. Select [DeleteAllDocs] in the [API List].
- 11** Click the [Send] button to execute the DeleteAllDocs API.

Disconnecting

- 1 Make sure the scanner is connected.
- 2 Select [Disconnect] in the [API List]. Edit the Body for the content to be printed.

IP Address: 192.168.192.168 Token: 0c0514e4-f270-48e4-ae59-4efca136a4c5

API List	
POST	Connect
POST	Disconnect
POST	ScanSetting
POST	ScanStart
POST	ScanCancel
GET	GetDocList

POST http://192.168.192.168/api/disconnect Send

Headers

Key	Value
Authorization	0c0514e4-f270-48e4-ae59-4efca136a4c5

Body

Format

- 3 Click the [Send] button to execute the Disconnect API.

IP Address: 192.168.192.168 Token: 0c0514e4-f270-48e4-ae59-4efca136a4c5

API List	
POST	Connect
POST	Disconnect
POST	ScanSetting
POST	ScanStart
POST	ScanCancel
GET	GetDocList

POST http://192.168.192.168/api/disconnect Send

Headers

Key	Value
Authorization	0c0514e4-f270-48e4-ae59-4efca136a4c5

Body

Format