

# TM-i Series

# WebConfig API User's Manual

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## Overview

Describes an overview of WebConfig API.

## Response Body Format

Describes the response body format.

## Reference

Describes how to refer to and change setting values.

## Sample Program

Describes how to use the 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.

	Provides information that must be observed to avoid damage to your equipment or a malfunction.
	Provides important information and useful tips.

## Restriction of Use

When this product is used for applications requiring high reliability/safety such as transportation devices related to aviation, rail, marine, automotive etc.; disaster prevention devices; various safety devices etc; or functional/precision devices etc, you should use this product only after giving consideration to including fail-safes and redundancies into your design to maintain safety and total system reliability. Because this product was not intended for use in applications requiring extremely high reliability/safety such as aerospace equipment, main communication equipment, nuclear power control equipment, or medical equipment related to direct medical care etc, please make your own judgment on this product's suitability after a full evaluation.

# About this Manual

## Aim of the Manual

The aim of this manual is to provide development engineers with the necessary information to develop applications to set and refer to the EPSON TMNet WebConfig for the TM-i series.

The TM-i series in this manual is a generic term for the following printers.

- TM-T88V-i
- TM-T70-i
- TM-2011-i
- TM-T8211-i
- TM-L90-i

## Manual Content

The manual is made up of the following sections:

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| Chapter 2 | <a href="#">Response Body Format</a> |
| Chapter 3 | <a href="#">Reference</a>            |
| Chapter 4 | <a href="#">Sample Program</a>       |

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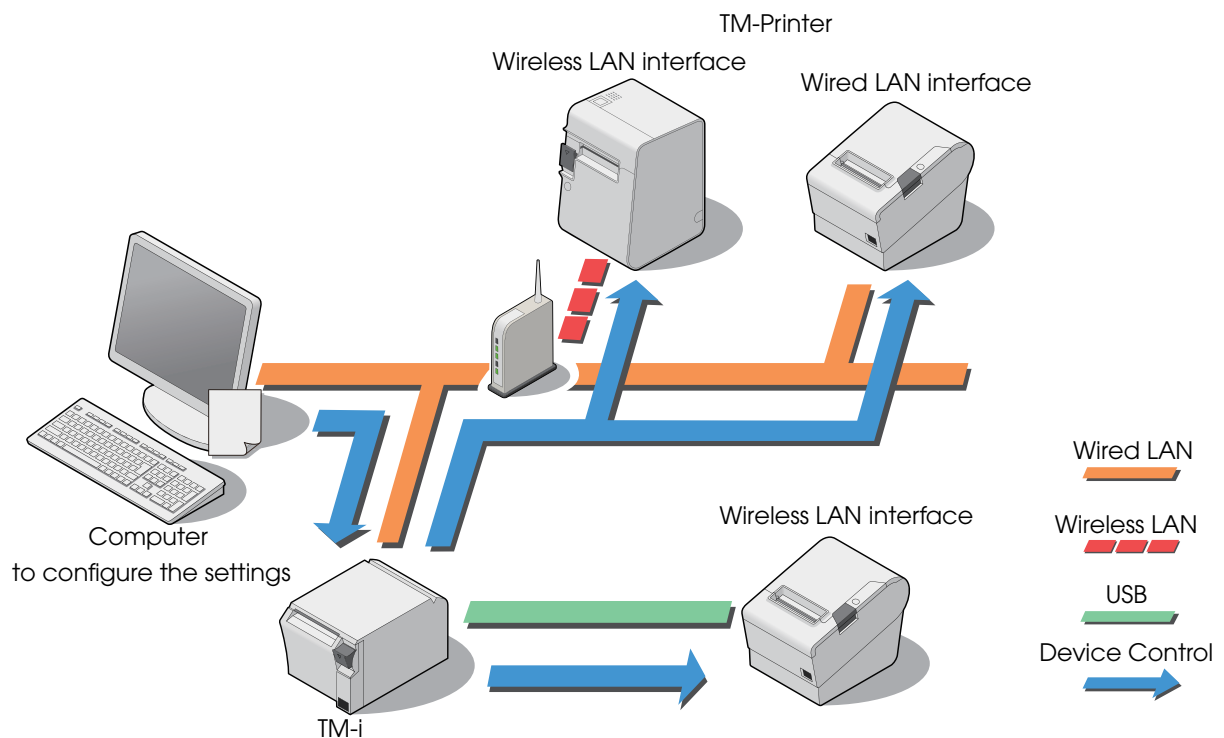
# Overview

## What is WebConfig API?

WebConfig API is an API for setting and referencing the EPSON TMNet WebConfig of the TM-i series. You can use it by including it in your application. This function can be used in the TM-i firmware Ver.2.x or later.

The EPSON TMNet WebConfig of the TM-i series (and of a TM printer\* registered in the TM-i series) can be referenced or set up from the client's application. Setting work has been streamlined for TM printers with a UB-R03 interface because wireless LAN settings can be performed by connecting a USB.

\*: TM-i firmware Ver.3.x or later



- Do not use the WebConfig API if you are directly setting or referring to the TM-i's settings from a browser on a computer.
- For the functions of EPSON TMNet WebConfig, refer to the detailed manual for each printer.

## Function

- ❑ Allows getting/setting setting values of TM-i from HTTP-supported devices. Not OS-dependent.
- ❑ Allows an application to refer to the set values of a TM-i using the GET method (hereafter "GET") defined in HTTP (HyperText Transfer Protocol).
- ❑ Allows an application to change the set values of a TM-i using the POST method (hereafter "POST") defined in HTTP (HyperText Transfer Protocol).

## Usable Formats

- ❑ html :      HyperText Markup Language
- ❑ xml :        Extensible Markup Language
- ❑ json :       JavaScript Object Notation
- ❑ ini :         Text file format mainly used in a Windows OS environment



# Supported printers

## TM-i

TM-i refers to EpsonNet WebConfig setting values. These values can be changed.

- TM-T88V-i
- TM-T70-i
- TM-T20II-i
- TM-T82II-i
- TM-L90-i

## Confirming the TM-i firmware

You can confirm the TM-i firmware version by printing out a status sheet. With the printer ready for printing (paper loaded and power on), press and hold the push button on the rear panel of this device for at least 3 seconds.

TM-i Firmware Ver.4.0 or later	TM-i Firmware Ver.3.x or earlier
<pre> *****       EPSON Status Sheet *****  &lt;General Information&gt; Firmware X.XX ePOS-Device X.XX Model TM-T88V-i           </pre> <p>"Firmware" (TM-i Firmware Version) is printed under &lt;General Information&gt;.</p>	<pre> *****       EPSON Status Sheet *****  &lt;General Information&gt; Software X.XX Model TM-T88V-i Time yyyy-mm-dd hh:nn:ss           </pre> <p>"Software" (TM-i Firmware Version) is printed under &lt;General Information&gt;.</p>

## TM Printer

The TM printer refers to network setting values. These values can be changed.

- TM-T88V
- TM-T88IV
- TM-T70
- TM-T70II
- TM-T90
- TM-L90
- TM-P60II
- TM-T20
- TM-T82II
- TM-P80
- TM-U220

# Contents in the Package

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## **Manual**

- ❑ TM-i WebConfig API User's Manual (This Document)
- ❑ TM-T88V-i Technical Reference Guide
- ❑ TM-T70-i Technical Reference Guide
- ❑ TM-T20II-i Technical Reference Guide
- ❑ TM-T82II-i Technical Reference Guide
- ❑ TM-L90-i Technical Reference Guide

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## **Sample Program**

WebConfigAPISample.xls

## **Download**

For customers in North America, go to the following web site:

<http://www.epsonexpert.com/> and follow the on-screen instructions.

For customers in other countries, go to the following web site:

<https://download.epson-biz.com/?service=pos>

## Restrictions

- ❑ Web contents (zip file) and a certificate cannot be manually uploaded by using WebConfig API.
- ❑ To enable manual uploading of Web contents (zip file) and a certificate, file upload functionality used by applications as standard should be programmed.  
(Manual uploading functionality is embedded in the sample program. Refer to the sample program.)

# Response Body Format

An application can specify the format for the response body to be returned when using GET or POST for a TM-i.

## Referring to the Set Values of a TM-i

An application (e.g. javascript or excel macro) can refer to the set values of a TM-i by executing GET for the following URL:

```
http://%IP Address%/PrinterConfigurationPage/%SettingUrl%?format=[html | xml | json | ini]
```

For TM-i firmware Ver. 4.x or later, use the following URL.

```
http://%IP Address%/webconfig/%SettingUrl%?format=[html | xml | json | ini]
```

- ❑ IP Address : The IP address of the TM-i whose set values to be acquired
- ❑ SettingUrl : The URL of the set values to be acquired
- ❑ format : Specifies the format of the response body to be returned by the TM-i
  - html : HTML format (the same operation as the operation performed when viewing EPSON TMNet WebConfig by using a browser)
  - xml : XML format
  - json : JSON format
  - ini : ini format



- If a password is set for EPSON TMNet WebConfig/ WebConfig API, at the time of access to the above URL, the user name (epson-specific) and password strings will be requested through digest authentication.
- For SettingUrl and values, refer to Chapter 3 "[Reference](#)".
- To use WebConfig API from XmlHttpRequest in javascript, register the Web page where the javascript code is written, to the TM-i as Web contents.

## XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/epos-utility">
  <response success="true"/>
  <%Category%>
    <%Key1%>%Value1%</%Key1%>
    <%Key2%>%Value1%</%Key2%>
    <%Key3%>%Value1%</%Key3%>
    .
    .
  </%Category%>
</epos-utility>
```

The above keys are in no particular order.

*Response body (Example : config\_tcpip\_wired.cgi)*

```
<?xml version="1.0" encoding="UTF-8"?>
<epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/epos-utility">
  <response success="true" />
  <WiredNetwork>
    <IPAddressSettingMethod>Auto</IPAddressSettingMethod>
    <APIPA>Enable</APIPA>
    <IPAddress>192.168.192.168</IPAddress>
    <Netmask>255.255.255.0</Netmask>
    <Gateway>192.168.192.1</Gateway>
    <DNSServerSettingMethod>Auto</DNSServerSettingMethod>
    <DNSServerIPAddress1>192.168.192.1</DNSServerIPAddress1>
    <DNSServerIPAddress2>192.168.192.1</DNSServerIPAddress2>
    <DNSServerIPAddress3>192.168.192.1</DNSServerIPAddress3>
  </WiredNetwork>
</epos-utility>
```

## JSON format

```
{ "response" :  
  {  
    "success" : "true"  
  },  
  "%Category%" :  
  {  
    "%Key1%" : "%Value1%",  
    "%Key2%" : "%Value2%",  
    "%Key3%" : "%Value3%",  
  }  
}
```

The above keys are in no particular order.

*Response body (Example : config\_tcpip\_wired.cgi)*

```
{ "response" :  
  {  
    "success" : "true"  
  },  
  "WiredNetwork" :  
  {  
    "IPAddressSettingMethod" : "Auto" ,  
    "APIPA" : "Enable" ,  
    "IPAddress" : "192.168.192.168" ,  
    "Netmask" : "255.255.255.0" ,  
    "Gateway" : "192.168.192.1" ,  
    "DNSServerSettingMethod" : "Auto" ,  
    "DNSServerIPAddress1" : "192.168.192.1" ,  
    "DNSServerIPAddress2" : "192.168.192.1" ,  
    "DNSServerIPAddress3" : "192.168.192.1"  
  }  
}
```

## ini format

```
[response]
success="true"
[%Category%]
%Key1%="%Value1%"
%Key2%="%Value2%"
%Key3%="%Value3%"
.
.
```

The above keys are in no particular order.

*Response body (Example : config\_tcpip\_wired.cgi)*

```
[response]
success="true"
[WiredNetwork]
IPAddressSettingMethod="Auto"
APIPA="Enable"
IPAddress="192.168.192.168"
Netmask="255.255.255.0"
Gateway="192.168.192.1"
DNSServerSettingMethod="Auto"
DNSServerIPAddress1="192.168.192.1"
DNSServerIPAddress2="192.168.192.1"
DNSServerIPAddress3="192.168.192.1"
```

## Changing the Set Values of a TM-i

An application (e.g. javascript or excel macro) can change the set values of a TM-i by executing POST for the following URL:

Execute POST after putting the set value you want to change and the set value after change into the POST parameter.

```
http://%IP Address%/PrinterConfigurationPage/%SettingUrl%?format=[html | xml | json | ini]
```

For TM-i firmware Ver. 4.x or later, use the following URL.

```
http://%IP Address%/webconfig/%SettingUrl%?format=[html | xml | json | ini]
```

- IP Address : The IP address of the TM-i whose set values to be acquired
- SettingUrl : The URL of the set value to be changed
- format : Specifies the format of the response body to be returned by the TM-i
  - html : HTML format (the same operation as the operation performed when viewing EPSON TMNet WebConfig by using a browser)
  - xml : XML format
  - json : JSON format
  - ini : ini format



- If a password is set for EPSON TMNet WebConfig / WebConfig API, at the time of access to the above URL, the user name (epson-specific) and password strings will be requested through digest authentication.
- For SettingUrl and values, refer to Chapter 3 "[Reference](#)".
- To use WebConfig API from XmlHttpRequest in javascript, register the Web page where the javascript code is written, to the TM-i as Web contents.

## XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/epos-utility">
  <response success="%Result%" code="%Reason%" />
</epos-utility>
```

This portion is added when response fails.

*Response body (Example : set\_tcpip\_wired.cgi)*

### When response is successful

```
<epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/epos-utility">
  <response success="true"/>
</epos-utility>
```

### When response fails

```
<epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/epos-utility">
  <response success="false" code="InvalidIPAddress" />
</epos-utility>
```



For details on an error code when response fails, see ["Error Codes and Actions to Take" on page 50](#).



## JSON format

```
{ "response" :  
  {  
    "success" : "%Result%",  
    "code" : "%Reason%"  
  }  
}
```

This portion is added when response fails.

*Response body (Example : set\_tcpip\_wired.cgi)*

### When response is successful

```
{ "response" :  
  {  
    "success" : "true"  
  }  
}
```

### When response fails

```
{ "response" :  
  {  
    "success" : "false",  
    "code" : "InvalidIPAddress"  
  }  
}
```



For details on an error code when response fails, see ["Error Codes and Actions to Take" on page 50](#).

## ini format

```
[response]
success="%Result%"
code="%Reason%"
```

—————This portion is added when response fails.

*Response body (Example : set\_tcpip\_wired.cgi)*

### When response is successful

```
[response]
success="true"
```

### When response fails

```
[response]
success="false"
code="InvalidIPAddress"
```



For details on an error code when response fails, see ["Error Codes and Actions to Take" on page 50](#).

# Reference

## Referring to Set Values

### Wired LAN

#### General

*SettingUrl* : *config\_general\_wired.cgi*

Refers to the link speed of the wired LAN.

Category	Key	Value	Description
WiredLinkLayer	LinkSpeed		Refers to the link speed.
		10BaseTHalf	10BaseT half duplex
		10BaseTFull	10BaseT full duplex
		100BaseTHalf	100BaseT half duplex
		100BaseTFull	100BaseT full duplex
	AutoNegotiation	Auto-negotiation	

#### TCP/IP

*SettingUrl* : *config\_tcpip\_wired.cgi*

Refers to the IP address, etc. of the wired LAN.

Category	Key	Value	Description
WiredNetwork	IPAddressSettingMethod		Refers to the IP address setting method.
		Auto	Auto
		Manual	Manual
	APIPA		Refers to whether to enable or disable APIPA.
		Enable	Enable
		Disable	Disable
	IPAddress	(String)	Refers to the IP address.
	SubnetMask	(String)	Refers to the subnet mask.
	Gateway	(String)	Refers to the default gateway.
	DNSServerSettingMethod		Refers to the DNS server IP address setting method.
		Auto	Auto
		Manual	Manual
	DNSServerIPAddress1	(String)	Refers to DNS server IP address 1.
DNSServerIPAddress2	(String)	Refers to DNS server IP address 2.	
DNSServerIPAddress3	(String)	Refers to DNS server IP address 3.	

## Wireless LAN

### General

SettingUrl : *config\_general\_wireless.cgi*

Refers to the SSID, etc. of the wireless LAN.

Category	Key	Value	Description
WiredLinkLayer	NetworkMode		Refers to the network mode.
		Infrastructure	Infrastructure mode
		Adhoc	Adhoc mode
	SSID	(String)	Refers to the SSID.
	AdhocChannel	(String)	Refers to the AdhocChannel.
	CommunicationStandard		Refers to the communication standard.
		802.11b/g	802.11b/g
		802.11b/g/n	802.11b/g/n
	AuthenticationMethod		Refers to the authentication method.
		OpenSystem	OpenSystem
		SharedKey	SharedKey
		WPAPSK	WPAPSK
		WPA2PSK	WPA2PSK
	EncryptionMethod		Refers to the encryption method.
		None	No encryption
		WEP	WEP
		TKIP	TKIP
		AES	AES
	DefaultWEPKey		Refers to the WEP key to be used.
		WEPKey1	WEP key 1
		WEPKey2	WEP key 2
		WEPKey3	WEP key 3
		WEPKey4	WEP key 4
WEPKey1	(String)	Refers to WEP key 1.	
WEPKey2	(String)	Refers to WEP key 2.	
WEPKey3	(String)	Refers to WEP key 3.	
WEPKey4	(String)	Refers to WEP key 4.	
PresharedKey	(String)	Refers to the pre-shared key.	

**TCP/IP**

SettingUrl : *config\_tcpip\_wireless.cgi*

Refers to the IP address, etc. of the wireless LAN.

Category	Key	Value	Description	
WirelessNetwork	IPAddressSettingMethod		Refers to the IP address setting method.	
		Auto	Auto	
		Manual	Manual	
	APIPA			Refers to whether to enable or disable APIPA.
		Enable	Enable	
		Disable	Disable	
	IPAddress	(String)	Refers to the IP address.	
	SubnetMask	(String)	Refers to the subnet mask.	
	Gateway	(String)	Refers to the default gateway.	
	DNSServerSettingMethod			Refers to the DNS server IP address setting method.
		Auto	Auto	
		Manual	Manual	
	DNSServerIPAddress1	(String)	Refers to DNS server IP address 1.	
DNSServerIPAddress2	(String)	Refers to DNS server IP address 2.		
DNSServerIPAddress3	(String)	Refers to DNS server IP address 3.		

**Device**

SettingUrl : *config\_epos\_print.cgi*

Refers to the registered device settings.

Category	Key	Value	Description
Devices-%DeviceID%			Refers to the device ID by turning it into the string "Devices-% Device ID%". As many values for Category, Model, IPAddress, and RetryInterval as registered devices will be returned from the TM-i.
	Model	(String)	Refers to the device model.
	IPAddress	(String)	Refers to the IP address.
	RetryInterval	(String)	Refers to the communication retry interval (in milliseconds).

*SettingUrl : config\_epos\_display.cgi*

Refers to setting values for customer displays.

Category	Key	Value	Description	
Devices- local_display	Baudrate		Refers to the communication speed.	
		2400	2400 bps	
		4800	4800 bps	
		9600	9600 bps	
		19200	19200 bps	
		38400	38400 bps	
		57600	57600 bps	
		115200	115200 bps	
	Databit			Refers to the data bit.
		7		7 bits
		8		8 bits
	Parity			Refers to the parity.
		None		None
		Even		Even
		Odd		Odd
	Brightness			Refers to the brightness.
		100		100%
		60		60%
		40		40%
		20		20%
Use			Refers to whether customer displays are used.	
	Enable		Enable	
	Disable		Disable	

*SettingUrl : config\_epos\_key\_input\_device.cgi*

Refers to all registered key input device information.

Category	Key	Value	Description
Devices- "Device ID of key input device" (Example) Devices-local_keyboard			
	DeviceName	(String)	Refers to the device name.
	VID	(String)	Refers to vendor ID (4-digit hexadecimal value).
	PID	(String)	Refers to product ID (4-digit hexadecimal value).
	ControlScript	(String)	Refers to file name of a control script to be used.

*SettingUrl : config\_epos\_serial.cgi*

Refers to serial communication device information that has a device ID of (local\_serial).

If the TM-i specifications do not include a serial port, this does not refer to serial communication device information.

Category	Key	Value	Description	
Devices-"Serial Communication DeviceID" (Example) Devices-local_serial				
	Use		Refers to whether a serial communication device is used.	
		Enable	Enable	
		Disable	Disable	
	Baudrate			Refers to the communication speed.
		2400	2400 bps	
		4800	4800 bps	
		9600	9600 bps	
		19200	19200 bps	
		38400	38400 bps	
		57600	57600 bps	
	115200	115200 bps		
	Databit			Refers to the data bit.
		7	7 bits	
		8	8 bits	
	Parity			Refers to the parity.
		None	None	
		Even	Even	
	Odd			
		None	None	
		Even	Even	
	Stopbit			Refers to the stop bit.
1		1 bit		
1.5		1.5 bit		
2				
	1	1 bit		
	1.5	1.5 bit		
FlowControl			Refers to the flow control.	
	XOnXOff	XOnXOff		
	Hardware	Hardware		
None				
	None	None		

## Searching TM printers

SettingUrl : *search\_devices.cgi*

Refers to the settings of TM printers connected to the TM-i.



Referencing is possible under the following conditions.

- TM-i and TM printers are connected to the same subnet network by a LAN cable. (Referencing is not possible if the TM-i and TM printers are connected by a wireless LAN.)
- A TM-i printer and wireless LAN interface with a USB connector of a TM printer are connected by USB. (UB-R03)

Category	Key	Value	Description	
NetworkPrinter-n			Refer to detected printers with the character string, "NetworkPrinter-n". ("n" is a number applied in the order the printers were detected in.)	
	Model	(String)	Refers to the device model.	
	IPAddress	(String)	Refers to the IP address.	
	MACAddress	(String)	Refers to the MAC address.	
	Connection			Refers to the detected printer's connection status.
		Wired		Detects a wired LAN connection printer on the LAN.
		Wireless		Detects a wireless LAN connection printer on the LAN.
	USB			Detects a wireless LAN connection printer via USB connection.
	IPAddressSettingMethod			Refers to the IP address setting method.
		Auto		Auto
		Manual		Manual
	APIPA			Refers to whether to enable or disable APIPA.
		Enable		Enable
Disable			Disable	
SubnetMask	(String)		Refers to the subnet mask.	
Gateway	(String)		Refers to the default gateway.	
NetworkMode			Refers to the network mode.	
	Infrastructure		Infrastructure mode	
	Adhoc		Adhoc mode	



Category	Key	Value	Description	
NetworkPrinter-n	SSID	(String)	Refers to the SSID.	
	AdhocChannel	(String)	Refers to the AdhocChannel.	
	CommunicationStandard			Refers to the communication standard.
			802.11b	802.11b
			802.11b/g	802.11b/g
			802.11b/g/n	802.11b/g/n
	AuthenticationMethod			Refers to the authentication method.
			OpenSystem	OpenSystem
			SharedKey	SharedKey
			WPAPSK	WPAPSK
	EncryptionMethod			Refers to the encryption method.
			None	No encryption
			WEP	WEP
			TKIP	TKIP
			AES	AES
	DefaultWEPKey			Refers to the WEP key to be used.
			WEPKey1	WEP key 1
			WEPKey2	WEP key 2
		WEPKey3	WEP key 3	
		WEPKey4	WEP key 4	

## Web Contents Updater

SettingUrl : `config_web_contents_updater.cgi`

Refers to the Web contents update setting.

Category	Key	Value	Description	
WebContents	AutoUpdate		Refers to whether to automatically update the Web contents.	
		Enable	Enable	
		Disable	Disable	
	Frequency			Refers to the frequency of automatic update.
		Hour		Updates at specified time intervals.
		Daily		Updates daily, at the specified time of day.
		Weekly		Updates weekly, on the specified day of the week and at the specified time of day.
		Monthly		Updates monthly, on the specified day and at the specified time of day.
	Timing		Refers to the timing of automatic update. The return value varies depending on the value for Frequency.	
	(When Frequency=Hour)	(String)	Refers to the interval of automatic update.	
	(When Frequency=Daily)		A blank character is returned.	
	(When Frequency=Weekly)	Sunday		Updates every Sunday.
		Monday		Updates every Monday.
		Tuesday		Updates every Tuesday.
		Wednesday		Updates every Wednesday.
		Thursday		Updates every Thursday.
		Friday		Updates every Friday.
		Saturday		Updates every Saturday.
	(When Frequency=Monthly)	(String)	Refers to the day to perform automatic update.	
	UpdateTimeHour	(String)	Refers to the hour of the time of day to perform automatic update. When Frequency=Hour, an empty character is returned.	

Category	Key	Value	Description	
WebContents	UpdateTimeMinute	(String)	Refers to the minute of the time of day to perform automatic update. When Frequency=Hour, an empty character is returned.	
	FileURL	(String)	Refers to the URL of the Web contents file.	
	UseProxy			Refers to whether to use a proxy server at the time of automatic update.
		Enable	Enable	Enable
		Disable	Disable	Disable
	ProxyURL	(String)	Refers to the URL of the proxy server.	
	LastUpdateYear	(String)	Refers to the year automatic update was performed last.	
	LastUpdateMonth	(String)	Refers to the month automatic update was performed last.	
	LastUpdateDay	(String)	Refers to the day automatic update was performed last.	
	LastUpdateHour	(String)	Refers to the hour of the time automatic update was performed last.	
	LastUpdateMinute	(String)	Refers to the minute of the time automatic update was performed last.	
	LastUpdateResultCode	(String)	Refers to the results of the last automatic update as a numeric value.	
	LastUpdateResultMessage	(String)	Refers to the results of the last automatic update as a message string.	
	LastUpdateSecond	(String)	Refers to the second of the time automatic update was performed last.	
	ServerAuthentication			Refers to whether server authentication is used. If this authentication cannot be acquired, the setting becomes "Disable".
		Enable	Enable	Enable
		Disable	Disable	Disable
	ID	(String)	Refers to an ID for identifying TM-i on the web server side. This is a user ID used for Digest authentication.	
Password	(String)	Refers to the password for web content updates.		

## Server Direct Print

SettingUrl : *config\_server\_direct\_print.cgi*

Refers to Server Direct Print setting values.

Category	Key	Value	Description	
ServerDirectPrint	Use		Refers to whether Server Direct Print is used.	
		Enable	Enable	
		Disable	Disable	
	ID	(String)	Refers to the ID.	
	Password	(String)	Refers to the password.	
	URL	(String)	Refers to the acquisition destination URL for printed data.	
	Interval	(String)	Designates a value in seconds for the standby time from the completion of acquisition of print data until acquisition of the next print data.	
	URL1	(String)	Refers to the acquisition destination URL for printed data.	
	Interval1	(String)	Designates a value in seconds for the standby time from the completion of acquisition of print data until acquisition of the next print data.	
	URL2	(String)	Refers to the acquisition destination URL for printed data.	
	Interval2	(String)	Designates a value in seconds for the standby time from the completion of acquisition of print data until acquisition of the next print data.	
	URL3	(String)	Refers to the acquisition destination URL for printed data.	
	Interval3	(String)	Designates a value in seconds for the standby time from the completion of acquisition of print data until acquisition of the next print data.	
	ServerAuthentication			Refers to whether server authentication is used. If this authentication cannot be acquired, the setting becomes "Disable".
			Enable	Enable
		Disable	Disable	

## Status Notification

*SettingUrl : config\_status\_notification.cgi*

Refers to status notification setting.

Category	Key	Value	Description	
StatusNotification	Use		Refers to whether the status notification function is used.	
		Enable	Enable	
		Disable	Disable	
	ID	(String)	Refers to the ID.	
	Password	(String)	Refers to the password.	
	URL	(String)	Refers to the notification destination URL for status.	
	Interval	(String)	Refers to the standby time in seconds from the completion of a status notification until the next notification is sent.	
	ServerAuthentication			Refers to whether server authentication is used. If this authentication cannot be acquired, the setting becomes "Disable".
		Enable	Enable	
		Disable	Disable	

## Certificates

SettingUrl : *listup\_certificates.cgi*

Refers to a list of all certificates installed in TM-i.

Category	Key	Value	Description
Certificate-%X%(1 <= %X%)	ValidFromYear	(String)	Refers to valid period (start year).
	ValidFromMonth	(String)	Refers to valid period (start month).
	ValidFromDay	(String)	Refers to valid period (start day).
	ValidFromHour	(String)	Refers to valid period (start hour).
	ValidFromMinute	(String)	Refers to valid period (start minute).
	ValidFromSecond	(String)	Refers to valid period (start second).
	ValidUntilYear	(String)	Refers to valid period (end year).
	ValidUntilMonth	(String)	Refers to valid period (end month).
	ValidUntilDay	(String)	Refers to valid period (end day).
	ValidUntilHour	(String)	Refers to valid period (end hour).
	ValidUntilMinute	(String)	Refers to valid period (end minute).
	ValidUntilSecond	(String)	Refers to valid period (end second).
	FileDigest	(String)	Refers to the hash value of the certificate.
	issuer	(String)	Refers to the person who issued the certificate.
issuedTo	(String)	Refers to the issue destination for the certificate.	

## Proxy

*SettingUrl : config\_proxy.cgi*

Refers to setting information for the proxy.

Category	Key	Value	Description	
Proxy	ID	(String)	Refers to an ID for proxy authentication.	
	Password	(String)	Refers to the password for proxy authentication.	
	UseProxyServerDirectPrint			Refers to whether a proxy is used for Server Direct Print.
		Enable	Enable	Enable
		Disable	Disable	Disable
	UseProxyStatusNotification			Refers to whether a proxy is used in status notifications.
		Enable	Enable	Enable
		Disable	Disable	Disable
	UseProxyWebContentsUpdate			Refers to whether a proxy is used for automatic updating of web content.
		Enable	Enable	Enable
		Disable	Disable	Disable
	ProxyURL	(String)	Refers to the proxy URL.	

## Administrator and Location

*SettingUrl : config\_administrator.cgi*

Refers to the administrator information.

Category	Key	Value	Description
General	Administrator	(String)	Refers to the string that designates the administrator.
	Location	(String)	Refers to the string that designates the location.

## Time of Day

SettingUrl : *config\_time.cgi*

Refers to the time-of-day setting.

Category	Key	Value	Description	
Time	Year	(String)	Refers to the year of the internal clock of the TM-i.	
	Month	(String)	Refers to the month of the internal clock of the TM-i.	
	Day	(String)	Refers to the day of the internal clock of the TM-i.	
	Hour	(String)	Refers to the hour of the time of the internal clock of the TM-i.	
	Minute	(String)	Refers to the minute of the time of the internal clock of the TM-i.	
	UseTimeServer			Refers to whether to enable or disable the clock alignment by the time server.
		Enable		Enable
		Disable		Disable
	TimeServerSettingMethod			Refers to the time server name acquisition method.
		Auto		Auto
		Manual		Manual
	TimeServer			Refers to the time server name.
	LastUpdateResult			Displays the results of the last time-of-day acquisition synchronized with the time server.
		Success		Time-of-day synchronization with the time server was successful.
		Failure		Time-of-day synchronization with the time server failed.
		-		Time-of-day synchronization not done.
TimeZone			Refers to the time zone.	

## Password

SettingUrl : *config\_password.cgi*

Refers to the set password.

Category	Key	Value	Description
Password	PasswordMD5	(String)	Refers to the string created from the password string through MD5 encryption.



## Changing the Set Values

### Common

You can not send only part of the parameters written in each SettingUrl. Send all the parameters in each SettingURL. If you want to change some set values only, send together the parameters other than those you want to change, without changing their values acquired by referring to the settings.

### Wired LAN

#### General

SettingUrl : *set\_general\_wired.cgi*

Changes the link speed of the wired LAN.

POST parameter	Specifiable value	Description
LinkSpeed		Specifies the link speed.
	10BaseTHalf	10BaseT half duplex
	10BaseTFull	10BaseT full duplex
	100BaseTHalf	100BaseT half duplex
	100BaseTFull	100BaseT full duplex
	AutoNegotiation	Auto-negotiation

#### TCP/IP

SettingUrl : *set\_tcpip\_wired.cgi*

Changes the IP address, etc. of the wired LAN.

POST parameter	Specifiable value	Description
IPAddressSettingMethod		Specifies the IP address setting method.
	Auto	Auto
	Manual	Manual
APIPA		Refers to whether to enable or disable APIPA.
	Enable	Enable
	Disable	Disable
IPAddress	(String)	Specifies the IP address setting method.
SubnetMask	(String)	Specifies the subnet mask.
Gateway	(String)	Specifies the default gateway.
DNSServerSettingMethod		Specifies the DNS server IP address setting method.
	Auto	Auto
	Manual	Manual
DNSServerIPAddress1	(String)	Refers to DNS server IP address 1.
DNSServerIPAddress2	(String)	Refers to DNS server IP address 2.
DNSServerIPAddress3	(String)	Refers to DNS server IP address 3.

## Wireless LAN

### General

SettingUrl : *set\_general\_wireless.cgi*

Changes the SSID, etc. of the wireless LAN.

POST parameter	Specifiable value	Description
NetworkMode		Specifies the network mode.
	Infrastructure	Infrastructure mode
	Adhoc	Adhoc mode
SSID	(String)	Specifies the SSID by a character string using single-byte alphanumeric characters and spaces, 1 character or more to 32 characters or less long.
AdhocChannel	(String)	Specifies the ad hoc channel using an integer in the range 1- 11.
CommunicationStandard		Specifies the communication standard.
	802.11b/g	802.11b/g
	802.11b/g/n	802.11b/g/n
AuthenticationMethod		Specifies the authentication method.
	OpenSystem	OpenSystem
	SharedKey	SharedKey
	WPAPSK	WPAPSK
	WPA2PSK	WPA2PSK
EncryptionMethod		Specifies the encryption method.
	None	No encryption
	WEP	WEP
	TKIP	TKIP
	AES	AES
DefaultWEPKey		Specifies the WEP key to be used.
	WEPKey1	WEP key 1
	WEPKey2	WEP key 2
	WEPKey3	WEP key 3
	WEPKey4	WEP key 4
WEPKey1	(String)	Specifies a value for WEP key 1 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>
WEPKey2	(String)	Specifies a value for WEP key 2 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>

POST parameter	Specifiable value	Description
WEPKey3	(String)	Specifies a value for WEP key 3 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>
WEPKey4	(String)	Specifies a value for WEP key 4 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>
PresharedKey	(String)	Specifies the pre-shared key using one of the following strings: <ul style="list-style-type: none"> <li>• 8 or more to 63 or less single-byte alphanumeric characters and spaces</li> <li>• 64-digit hexadecimal number</li> </ul>

## TCP/IP

SettingUrl : *set\_tcpip\_wireless.cgi*

Changes the IP address, etc. of the wireless LAN.

POST parameter	Specifiable value	Description
IPAddressSettingMethod		Specifies the IP address setting method.
	Auto	Auto
	Manual	Manual
APIPA		Refers to whether to enable or disable APIPA.
	Enable	Enable
	Disable	Disable
IPAddress	(String)	Specifies the IP address.
SubnetMask	(String)	Specifies the subnet mask.
Gateway	(String)	Specifies the default gateway.
DNSServerSettingMethod		Specifies the DNS server IP address setting method.
	Auto	Auto
	Manual	Manual
DNSServerIPAddress1	(String)	Refers to DNS server IP address 1.
DNSServerIPAddress2	(String)	Refers to DNS server IP address 2.
DNSServerIPAddress3	(String)	Refers to DNS server IP address 3.

## Adding a TM Printer

*SettingUrl* : *set\_epos\_print.cgi*

Registers a new device.



Refer to the Technical Reference Guide for printers that can be designated.

POST parameter	Specifiable value	Description
DeviceID	(String)	Specifies the device ID by a character string using single-byte alphanumeric characters, underscore(s), period(s), and/or dash(es), one character or more and 30 characters or less long.
Model		Specifies the device model.
	TM-T88V	TM-T88V
	TM-T88IV	TM-T88IV
	TM-T70	TM-T70
	TM-T70II	TM-T70II
	TM-T90	TM-T90
	TM-L90	TM-L90
	TM-P60II	TM-P60II
	TM-T20	TM-T20
	TM-T20II	TM-T20
	TM-T82II	TM-T82II
	TM-P80	TM-P80
TM-U220	TM-U220	
IPAddress	(String)	Specifies the IP address.
RetryInterval	(String)	Specifies the communication retry interval using a numeric value (in milliseconds) in the range 100- 60000.

## Deleting a TM Printer

*SettingUrl* : *delete\_epos\_print.cgi*

Deletes a registered device.

POST parameter	Specifiable value	Description
DeviceID	(String)	Specifies the device ID by a character string using single-byte alphanumeric characters, underscore(s), period(s), and/or dash(es), one character or more and 30 characters or less long.

## Setting a Customer Display

SettingUrl : *set\_epos\_display.cgi*

Changes the settings for customer displays connected to TM-i.

POST parameter	Specifiable value	Description
Baudrate		Specifies the communication speed.
	2400	2400 bps
	4800	4800 bps
	9600	9600 bps
	19200	19200 bps
	38400	38400 bps
	57600	57600 bps
Databit		Specifies the data bit.
	7	7 bits
	8	8 bits
Parity		Specifies the parity.
	None	None
	Even	Even
Brightness		Specifies the brightness.
	100	100%
	60	60%
	40	40%
Use		Refers to whether customer displays are used.
	Enable	Enable
	Disable	Disable

## Adding a key input device

*SettingUrl* : *set\_epos\_key\_input\_device.cgi*

Changes the information for key input devices connected to TM-i.

POST parameter	Specifiable value	Description
DeviceID	(String)	Designates a device ID of 1 to 30 alphanumeric characters, underbars, periods, and hyphens. <i>local_printer</i> , <i>local_display</i> , and <i>local_serial</i> cannot be designated. Designate IDs that are not the same as those used for registered printers and registered key input devices.
DeviceName	(String)	Specifies the device name.
VID	(String)	Designates a vendor ID (4-digit hexadecimal value).
PID	(String)	Designates a product ID (4-digit hexadecimal value).
ControlScript	(String)	Designates the file name of the control script to be used.

## Deleting a key input device

*SettingUrl* : *delete\_epos\_key\_input\_device.cgi*

Deletes the key input device information for the device ID specified in the parameter.

POST parameter	Specifiable value	Description
DeviceID	(String)	Designates a device ID of 1 to 30 alphanumeric characters, underbars, periods, and hyphens.

## Setting a Serial Communication Device

SettingUrl : *set\_epos\_serial.cgi*

Changes the serial communication device information with a device ID of (local\_serial).

If the TM-i specifications include no serial ports, this setting is disabled.

POST parameter	Specifiable value	Description
Use		Designates whether to use a serial communication device.
	Enable	Enable
	Disable	Disable
Baudrate		Specifies the communication speed.
	2400	2400 bps
	4800	4800 bps
	9600	9600 bps
	19200	19200 bps
	38400	38400 bps
	57600	57600 bps
Databit		Specifies the data bit.
	7	7 bits
	8	8 bits
Parity		Specifies the parity.
	None	None
	Even	Even
Stopbit		Specifies the stop bit.
	1	1 bit
	1.5	1.5 bit
FlowControl		Specifies the flow control.
	XOnXOff	XOnXOff
	Hardware	Hardware
	None	None



## Setting a TM printer

### General

SettingUrl : *set\_device\_tcpip.cgi*

Changes the network settings for a TM printer connected to the TM-i.



Setting is possible under the following conditions.

- TM-i and TM printers are connected to the same subnet network by a LAN cable. (Setting is not possible if the TM-i and TM printers are connected by a wireless LAN.)
- A TM-i printer and wireless LAN interface with a USB connector of a TM printer are connected by USB. (UB-R03)

POST parameter	Specifiable value	Description
MACAddress	(String)	Specifies the MAC address.
HostName	(String)	Specifies the IP address.
IPAddressSettingMethod		Specifies the IP address setting method.
	Auto	Auto
	Manual	Manual
APIPA		Refers to whether to enable or disable APIPA.
	Enable	Enable
	Disable	Disable
IPAddress	(String)	Specifies the IP address.
SubnetMask	(String)	Specifies the subnet mask.
Gateway	(String)	Specifies the default gateway.
Password	(String)	Specifies a new password to be set using a single-byte alphanumeric character string 0 (zero) character or more and 20 characters or less long.

### Wireless LAN

SettingUrl : *set\_device\_wireless.cgi*

Changes the wireless LAN settings for a TM printer connected to the TM-i.



Setting is possible under the following conditions.

- A TM-i printer and wireless LAN interface with a USB connector of a TM printer are connected by USB. (UB-R03)

POST parameter	Specifiable value	Description
MACAddress	(String)	Specifies the MAC address.
HostName	(String)	Specifies the IP address.
NetworkMode		Specifies the network mode.
	Infrastructure	Infrastructure mode
	Adhoc	Adhoc mode
SSID	(String)	Specifies the SSID by a character string using single-byte alphanumeric characters and spaces, 1 character or more to 32 characters or less long.

POST parameter	Specifiable value	Description
AdhocChannel	(String)	Specifies the ad hoc channel using an integer in the range 1- 11.
CommunicationStandard		Specifies the communication standard.
	802.11b	802.11b
	802.11b/g	802.11b/g
	802.11b/g/n	802.11b/g/n
AuthenticationMethod		Specifies the authentication method.
	OpenSystem	OpenSystem
	SharedKey	SharedKey
	WPAPSK	WPAPSK
EncryptionMethod		Specifies the encryption method.
	None	No encryption
	WEP	WEP
	TKIP	TKIP
	AES	AES
DefaultWEPKey		Specifies the WEP key to be used.
	WEPKey1	WEP key 1
	WEPKey2	WEP key 2
	WEPKey3	WEP key 3
	WEPKey4	WEP key 4
WEPKey1	(String)	Specifies a value for WEP key 1 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>
WEPKey2	(String)	Specifies a value for WEP key 2 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>
WEPKey3	(String)	Specifies a value for WEP key 3 using one of the following strings: <ul style="list-style-type: none"> <li>• 10-digit hexadecimal number</li> <li>• 26-digit hexadecimal number</li> <li>• 5 single-byte alphanumeric characters and spaces</li> <li>• 13 single-byte alphanumeric characters and spaces</li> </ul>

POST parameter	Specifiable value	Description
WEPKey4	(String)	Specifies a value for WEP key 4 using one of the following strings: <ul style="list-style-type: none"><li>• 10-digit hexadecimal number</li><li>• 26-digit hexadecimal number</li><li>• 5 single-byte alphanumeric characters and spaces</li><li>• 13 single-byte alphanumeric characters and spaces</li></ul>
PresharedKey	(String)	Specifies the pre-shared key using one of the following strings: <ul style="list-style-type: none"><li>• 8 or more, 63 or less single-byte alphanumeric characters and spaces</li></ul>
Password	(String)	Specifies a new password to be set using a single-byte alphanumeric character string 0 (zero) character or more and 20 characters or less long.

## Web Contents Updater

SettingUrl : *set\_web\_contents\_updater.cgi*

Changes the Web contents update setting.

POST parameter	Specifiable value	Description
AutoUpdate		Specifies whether to automatically update the Web contents.
	Enable	Enable
	Disable	Disable
Frequency		Specifies the frequency of automatic update.
	Hour	Updates at specified time intervals.
	Daily	Updates daily, at the specified time of day.
	Weekly	Updates weekly, on the specified day of the week and at the specified time of day.
	Monthly	Updates monthly, on the specified day and at the specified time of day.
Timing		Specifies the timing of automatic update. The value to be specified varies depending on the value for Frequency.
(When Frequency=Hour)	(String)	Specifies the time interval of automatic update using an integer in the range 1- 23.
(When Frequency=Daily)		Specify a blank character.
(When Frequency=Weekly)	Sunday	Updates every Sunday.
	Monday	Updates every Monday.
	Tuesday	Updates every Tuesday.
	Wednesday	Updates every Wednesday.
	Thursday	Updates every Thursday.
	Friday	Updates every Friday.
	Saturday	Updates every Saturday.
(When Frequency=Monthly)	(String)	Specifies the date to perform automatic update using an integer in the range 1- 31.
UpdateTimeHour	(String)	Specifies the hour of the time to perform automatic update using an integer in the range 0- 23. When Frequency=Hour, specifies the empty character.
UpdateTimeMinute	(String)	Specifies the minute of the time to perform automatic update using an integer in the range 0- 59. When Frequency=Hour, specifies the empty character.
FileURL	(String)	Specifies the URL of the Web contents file.
UseProxy		Specifies whether to use a proxy server at the time of automatic update.
	Enable	Enable
	Disable	Disable
ProxyURL	(String)	Specifies the URL of the proxy server.

POST parameter	Specifiable value	Description
ID	(String)	Designates the ID that identifies TM-i on the web server side. This is the user ID used for digest authentication.
Password	(String)	Designates the password used for Digest authentication.
ServerAuthentication		Designates whether to use server authentication. If no password is specified, the current settings are used.
	Enable	Enable
	Disable	Disable

## Automatic Update

*SettingUrl* : *execute\_web\_contents\_updater.cgi*

Forcibly perform automatic update of the Web contents.

No parameter to be set.

## Server Direct Print

*SettingUrl* : *set\_server\_direct\_print.cgi*

Changes the Server Direct Print settings.

POST parameter	Specifiable value	Description
Use		Designates whether to use Server Direct Print.
	Enable	Enable
	Disable	Disable
ID	(String)	Designates an ID of no more than 30 alphanumeric characters, underbars, periods, and hyphens.
Password	(String)	Designates a password of no more than 30 alphanumeric characters, underbars, periods, and hyphens.
URL	(String)	Designates the acquisition destination URL for print data. If URL1 is specified, this parameter is ignored.
Interval	(String)	Designates a value (seconds) between 1 and 86400 for the standby time from the completion of acquisition of print data until acquisition of the next print data.
URL1	(String)	Designates the acquisition destination URL for print data.
Interval1	(String)	Designates a value (seconds) between 1 and 86400 for the standby time from the completion of acquisition of print data until acquisition of the next print data.

POST parameter	Specifiable value	Description
URL2	(String)	Designates the acquisition destination URL for print data.
Interval2	(String)	Designates a value (seconds) between 1 and 86400 for the standby time from the completion of acquisition of print data until acquisition of the next print data.
URL3	(String)	Designates the acquisition destination URL for print data.
Interval3	(String)	Designates a value (seconds) between 1 and 86400 for the standby time from the completion of acquisition of print data until acquisition of the next print data.
ServerAuthentication		Designates whether to use server authentication. If no password is specified, the current settings are used.
	Enable	Enable
	Disable	Disable

## Status Notification

*SettingUrl : set\_status\_notification.cgi*

Changes the settings for status notifications.

POST parameter	Specifiable value	Description
Use		Designates whether the status notification function is used.
	Enable	Enable
	Disable	Disable
ID	(String)	Designates an ID of no more than 30 alphanumeric characters, underbars, periods, and hyphens.
Password	(String)	Designates a password of no more than 30 alphanumeric characters, underbars, periods, and hyphens.
URL	(String)	Designates the status notification destination URL.
Interval	(String)	Designates a value (seconds) between 1 and 86400 for the standby time from the completion of acquisition of print data until acquisition of the next print data.
ServerAuthentication		Designates whether to use server authentication. If no password is specified, the current settings are used.
	Enable	Enable
	Disable	Disable

## Certificate

*SettingUrl : delete\_certificate.cgi*

Deletes the specified certificate.

POST parameter	Specifiable value	Description
FileDigest	(String)	Designates the "MD5" hash value for the certificate to be deleted.

## Proxy

*SettingUrl : set\_proxy.cgi*

Changes the proxy information.

POST parameter	Specifiable value	Description
ProxyURL	(String)	Enter the proxy server URL and port number in the following: "http://host name: port number". Example: http://10.0.0.1:8008
ID	(String)	Designates an ID of no more than 30 alphanumeric characters, underbars, periods, and hyphens.
Password	(String)	Designates a password of no more than 30 alphanumeric characters, underbars, periods, and hyphens.
UseProxyServerDirectPrint	Enable	Enable
	Disable	Disable
UseProxyStatusNotification	Enable	Enable
	Disable	Disable
UseProxyWebContentsUpdate	Enable	Enable
	Disable	Disable

## Administrator and Location

SettingUrl : *set\_administrator.cgi*

Changes the administrator information.

POST parameter	Specifiable value	Description
Administrator	(String)	Specifies the string that designates the administrator, 255 characters or less long.
Location	(String)	Specifies the string that designates the location, 255 characters or less long.

## Time of Day

SettingUrl : *set\_time.cgi*

Changes the time-of-day setting.

POST parameter	Specifiable value	Description
Year	(String)	Specifies the year of the internal clock of the TM-i using an integer in the range 2012-2036.
Month	(String)	Specifies the month of the internal clock of the TM-i using an integer in the range 1-12.
Day	(String)	Specifies the day of the internal clock of the TM-i using an integer in the range 1-31.
Hour	(String)	Specifies the hour of the time of the internal clock of the TM-i using an integer in the range 0-23.
Minute	(String)	Specifies the minute of the time of the internal clock of the TM-i using an integer in the range 0-59.
UseTimeServer		Specifies whether to enable or disable the clock alignment by the time server.
	Enable	Enable
	Disable	Disable
TimeServerSettingMethod		Specifies the time server name acquisition method.
	Auto	Auto
	Manual	Manual
TimeServer	(String)	Specifies the time server name.
TimeZone	(String)	Specifies the time zone with a value that is -14 or higher to 12 or lower.



## Password

*SettingUrl* : *set\_password.cgi*

Changes the set password.

POST parameter	Specifiable value	Description
NewPassword	(String)	Specifies a new password to be set using a single-byte alphanumeric character string 0 (zero) character or more and 20 characters or less long.

## Resetting and Initializing the Settings

*SettingUrl* : *set\_reset.cgi*

Resets the wired LAN/wireless LAN and restores the factory default settings.

POST parameter	Specifiable value	Description
Operation	Reset	Resets the wired LAN/wireless LAN.
	FactoryDefault	Restores the factory default settings.

## Error Codes and Actions to Take

This section describes an error code returned to the response body when POST fails and an action to take.

code	Action to Take
FirmwareUpdating	Firmware is being updated by the remote update tool. Wait until the execution of the remote update tool becomes complete.
InvalidLinkSpeed	Invalid LinkSpeed parameter value. Correct the error.
InvalidIPAddressSettingMethod	Invalid IPAddressSettingMethod parameter value. Correct the error.
InvalidAPIPA	Invalid APIPA parameter value. Correct the error.
InvalidIPAddress	Invalid IPAddress parameter value. Correct the error.
InvalidSubnetMask	Invalid SubnetMask parameter value. Correct the error.
InvalidGateway	Invalid Gateway parameter value. Correct the error.
InvalidDNSServerSettingMethod	Invalid DNSServerSettingMethod parameter value. Correct the error.
InvalidDNSServerIPAddress	Invalid value for any of the parameters DNSServerIPAddress1 to DNSServerIPAddress3. Correct the error.
InvalidNetworkMode	Invalid NetworkMode parameter value. Correct the error.
InvalidSSID	Invalid SSID parameter value. Correct the error.
InvalidAdhocChannel	Invalid AdhocChannel parameter value. Correct the error.
InvalidCommunicationStandard	Invalid CommunicationStandard parameter value. Check the values for the communication standard supported by the printer to correct the value.
InvalidAuthenticationMethod	Invalid AuthenticationMethod parameter value. Correct the error.
InvalidAuthenticationMethodAdhoc	When Adhoc is specified for the NetworkMode parameter, WPAPSK/WPA2PSK cannot be specified for AuthenticationMethod. Correct the error.
InvalidEncryptionMethod	Invalid EncryptionMethod parameter value. Correct the error.
InvalidEncryptionMethodAdhoc	When Adhoc is specified for the NetworkMode parameter, TKIP/AES cannot be specified for EncryptionMethod. Correct the error.
InvalidEncryptionMethodOpenSystem	When OpenSystem is specified for the AuthenticationMethod parameter, TKIP/AES cannot be specified for EncryptionMethod. Correct the error.

code	Action to Take
InvalidEncryptionMethodWPAPSK	When WPAPSK is specified for the AuthenticationMethod parameter, None/WEP cannot be specified for EncryptionMethod. Correct the error.
InvalidDefaultWEPKey	Invalid DefaultWEPKey parameter value. Correct the error.
InvalidWEPKey1	Invalid WEPKey1 parameter value. Correct the error.
InvalidWEPKey2	Invalid WEPKey2 parameter value. Correct the error.
InvalidWEPKey3	Invalid WEPKey3 parameter value. Correct the error.
InvalidWEPKey4	Invalid WEPKey4 parameter value. Correct the error.
InvalidPresharedKey	Invalid PresharedKey parameter value. Correct the error.
InvalidDeviceID	Invalid DeviceID parameter value. Correct the error.
DeviceIDAlreadyRegistered	The device specified for the DeviceID parameter cannot be registered because it is already registered. Specify a different ID.
InvalidModel	Invalid Model parameter value. Correct the error.
InvalidRetryInterval	Invalid RetryInterval parameter value. Correct the error.
DeviceIDNotRegistered	The device specified for the DeviceID parameter cannot be deleted because it is not registered. Specify an already registered ID.
InvalidMACAddress	Invalid MACAddress parameter value. Correct the error.
InvalidHostName	Invalid HostName parameter value. Correct the error.
PasswordNotCorrect	The string specified for the Password parameter did not match the password string set into the detected TM printer. Correct the error.
DeviceNotFound	The TM printer specified for the MACAddress or HostName parameter could not be found. Check the connection status of the TM printer.
InvalidCommunicationStandardAdhoc	When Adhoc is specified for the NetworkMode parameter, 802.11b/g/n cannot be specified for CommunicationStandard. Correct the error.
DeviceNotWireless	The TM printer specified for the MACAddress or HostName parameter is not a printer with any wireless LAN interface. Check the interface of the TM printer.
InvalidAutoUpdate	Invalid AutoUpdate parameter value. Correct the error.

<b>code</b>	<b>Action to Take</b>
InvalidFrequency	Invalid Frequency parameter value. Correct the error.
InvalidTiming	Invalid Timing parameter value. Correct the error.
InvalidUpdateTimeHour	Invalid UpdateTimeHour parameter value. Correct the error.
InvalidTimeMinute	Invalid UpdateTimeMinute parameter value. Correct the error.
InvalidFileURL	Invalid FileURL parameter value. Correct the error.
InvalidUseProxy	Invalid UseProxy parameter value. Correct the error.
InvalidProxyURL	Invalid ProxyURL parameter value. Correct the error.
AccessToFileURLFailed	Failed to access the URL specified for the FileURL parameter. Check the network settings for the TM-i and for the server.
AccessToProxyURLFailed	Failed to access the proxy URL specified for the ProxyURL parameter. Check the network settings for the TM-i and for the server.
NotEnoughFreeSpace	The amount of free ROM space on the TM-i is not enough to explode the Web contents downloaded from the URL specified for FileURL. Check that the file size of the Web contents is 30MB or less.
FileURLNotZip	The Web contents downloaded from the URL specified for FileURL were not of a zip file format. Correct the error.
WebContentsUpdaterDisabled	The Web contents automatic update setting is disabled. Correct the error.
microSDNotFound	The Web contents save destination is specified as microSD, but no microSD could be detected. Check that a microSD is mounted to the TM-i.
InvalidUse	Invalid Use parameter value. Correct the error.
InvalidID	Invalid ID parameter value. Correct the error.
InvalidPassword	Invalid Password parameter value. Correct the error.
IDNeededToSetPassword	When a string with no null character is specified for the Password parameter, a null character string cannot be specified for the ID parameter. Set a value for the ID parameter.
InvalidURL	Invalid URL parameter value. Correct the error.
InvalidInterval	Invalid Interval parameter value. Correct the error.
InvalidAdministrator	Invalid Administrator parameter value. Correct the error.

<b>code</b>	<b>Action to Take</b>
InvalidLocation	Invalid Location parameter value. Correct the error.
InvalidYear	Invalid Year parameter value. Correct the error.
InvalidMonth	Invalid Month parameter value. Correct the error.
InvalidDay	Invalid Day parameter value. Correct the error.
InvalidHour	Invalid Hour parameter value. Correct the error.
InvalidMinute	Invalid Minute parameter value. Correct the error.
InvalidTimeZone	Invalid TimeZone parameter value. Correct the error.
InvalidUseTimeServer	Invalid UseTimeServer parameter value. Correct the error.
InvalidTimeServerSettingMethod	Invalid TimeServerSettingMethod parameter value. Correct the error.
InvalidTimeServer	Invalid TimeServer parameter value. Correct the error.
InvalidDate	Invalid Year/Month/Day parameter combination. Correct the error.
InvalidTime	Invalid Hour/Minute parameter combination. Correct the error.
InvalidNewPassword	Invalid NewPassword parameter value. Correct the error.
InvalidOperation	Invalid Operation parameter value. Correct the error.



# Sample Program

This sample program can acquire/change the set values of the TM-i and upload files.

## Screen

The following screen appears when the sample program starts.

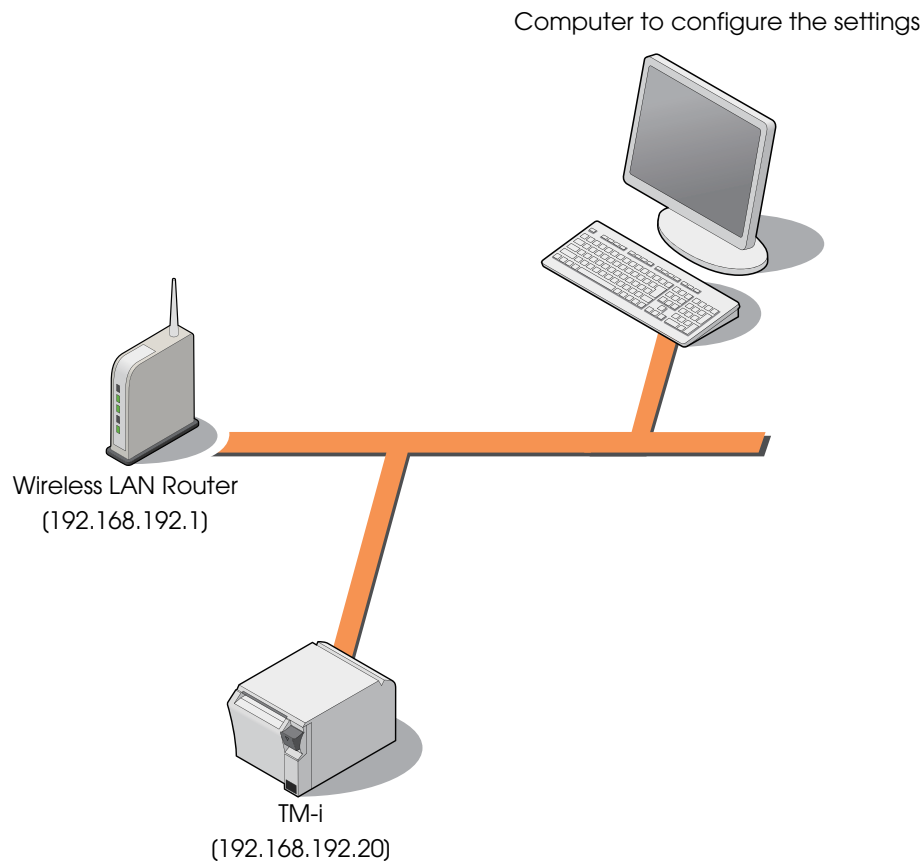
	A	B	C	D
1				
2		IP Address	192.168.192.168/PrinterConfigurationPage	
3		CGI Name	config_general_wired.cgi/set_general_wired.cgi	
4		Format	json	
5		User Name	epson	
6		Password		
7				
8		GET	SET	Upload Web Contents
9				Upload Certificate File
10		response		
11		success		
12		code		
13				
14		HTTP status code		
15		Response body		
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
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31				
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33				
34				
35				

# Operating Environment

The system configuration diagram for the sample programs is as below.



The IP address value is just an example. Set the value that suits your use environment.



- Wireless LAN Router
- TM-i (1 set)  
TM-T88V-i/ TM-T70-i/TM-L90-i
- Computer to configure the settings  
Computer in which Microsoft Office Excel 2003(Excel2003) or later and Microsoft Internet Explorer 7 or later are installed.



## Basic Usage of the Sample Program

This sample program is implemented using VBA macros. Use this program by enabling macros.

- 1 Specify values for IP Address, CGI Name, Format, User Name, and Password.  
For CGI Name and Format each, select a parameter from a list.

	A	B	C	D
1				
2		IP Address	192.168.192.20/PrinterConfigurationPage	
3		CGI Name	config_general_wired.cgi/set_general_wired.cgi	
4		Format	json	
5		User Name	epson	
6		Password		
7				
8		GET	SET	Upload Web Contents
9				
10		response		
11		success		
12		code		
13				

- 2 Click the (GET) button.  
The response body and set values will be filled into the cells.

	A	B	C	D
7				
8		GET	SET	Upload Web Contents
9				Upload Certificate File
10		response		
11		success	TRUE	
12		code		
13				
14		HTTP status code	200	
		Response body	<pre>{ "response" : { "success" : "true" } }, "WiredNetwork" : { "DNSServerIPAddress2" : "", "DNSServerSettingMethod" : "Manual", "IPAddress" : "192.168.192.20", "IPAddressSettingMethod" : "Manual", "SubnetMask" : "255.255.255.0", "APIPA" : "Disable", "DNSServerIPAddress1" : "", "DNSServerIPAddress3" : "", "Gateway" : "192.168.192.1" } }</pre>	
15				
16				
17		<b>WiredNetwork</b>		
18		DNSServerIPAddress2		
19		DNSServerSettingMethod	Manual	
20		IPAddress	192.168.192.20	
21		IPAddressSettingMethod	Manual	
22		SubnetMask	255.255.255.0	
23		APIPA	Disable	
24		DNSServerIPAddress1		
25		DNSServerIPAddress3		
26		Gateway	192.168.192.1	
27				

- 3** Change the set value you want to change and click the (SET) button. The response body and set values will be filled into the cells.

7				
8		GET	SET	Upload Web Contents
9				Upload Certificate File
10	response			
11	success		TRUE	
12	code			
13				
14	HTTP status code		200	
15	Response body		<pre>{ "response" :   {     "success" : "true"   },   "WiredNetwork" :   {     "DNSServerIPAddress2" : "",     "DNSServerSettingMethod" : "Manual",     "IPAddress" : "192.168.192.20",     "IPAddressSettingMethod" : "Manual",     "SubnetMask" : "255.255.255.0",     "APIPA" : "Disable",     "DNSServerIPAddress1" : "",     "DNSServerIPAddress3" : "",     "Gateway" : "192.168.192.1"   } }</pre>	
16				
17	<b>WiredNetwork</b>			
18	DNSServerIPAddress2			
19	DNSServerSettingMethod		Manual	
20	IPAddress		192.168.192.20	
21	IPAddressSettingMethod		Manual	
22	SubnetMask		255.255.255.0	
23	APIPA		Disable	
24	DNSServerIPAddress1			
25	DNSServerIPAddress3			
26	Gateway		192.168.192.1	

- 4** Success or failure of the process to change the set value will be displayed. If the process fails, the reason will be filled into the cell. The following screen shows the case in which the IP address failed to be set.

7				
8		GET	SET	Upload Web Contents
9				Upload Certificate File
10	response			
11	success		FALSE	
12	code		InvalidIPAddress	
13				
14	HTTP status code		200	
15	Response body		<pre>{ "response" :   {     "success" : "false",     "code" : "InvalidIPAddress"   } }</pre>	
16				
17	<b>WirelessNetwork</b>			
18	DNSServerIPAddress2			
19	DNSServerSettingMethod		Manual	
20	IPAddress		192.168.255.255	
21	IPAddressSettingMethod		Manual	
22	SubnetMask		255.255.255.0	

**Note**

If (config\_epos\_print.cgi, set\_epos\_print.cgi) is selected for CGI Name and the (GET) button is clicked, all the registered devices will be filled into (Response body).

All the registered devices are displayed.

7		GET	SET	Upload Web Contents	Upload C																
8																					
9																					
10	response																				
11	success		TRUE																		
12	code																				
13																					
14	HTTP status code	200																			
	Response body	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/ep &lt;response success="true" /&gt; &lt;Devices-local_printer&gt; &lt;IPAddress&gt;&lt;/IPAddress&gt; &lt;Model&gt;TM-T70&lt;/Model&gt; &lt;RetryInterval&gt;100&lt;/RetryInterval&gt; &lt;/Devices-local_printer&gt; &lt;Devices-printer&gt; &lt;IPAddress&gt;192.168.192.168&lt;/IPAddress&gt; &lt;Model&gt;TM-T70&lt;/Model&gt; &lt;RetryInterval&gt;100&lt;/RetryInterval&gt; &lt;/Devices-printer&gt; &lt;/epos-utility&gt;</pre>																			
		<table border="1"> <tr> <td><b>Devices-local_printer</b></td> <td></td> </tr> <tr> <td>IPAddress</td> <td></td> </tr> <tr> <td>Model</td> <td>TM-T70</td> </tr> <tr> <td>RetryInterval</td> <td>100</td> </tr> <tr> <td><b>Devices-printer</b></td> <td></td> </tr> <tr> <td>IPAddress</td> <td>192.168.192.168</td> </tr> <tr> <td>Model</td> <td>TM-T70</td> </tr> <tr> <td>RetryInterval</td> <td>100</td> </tr> </table>				<b>Devices-local_printer</b>		IPAddress		Model	TM-T70	RetryInterval	100	<b>Devices-printer</b>		IPAddress	192.168.192.168	Model	TM-T70	RetryInterval	100
<b>Devices-local_printer</b>																					
IPAddress																					
Model	TM-T70																				
RetryInterval	100																				
<b>Devices-printer</b>																					
IPAddress	192.168.192.168																				
Model	TM-T70																				
RetryInterval	100																				
15																					
16																					
17																					
18																					
19																					
20																					
21																					

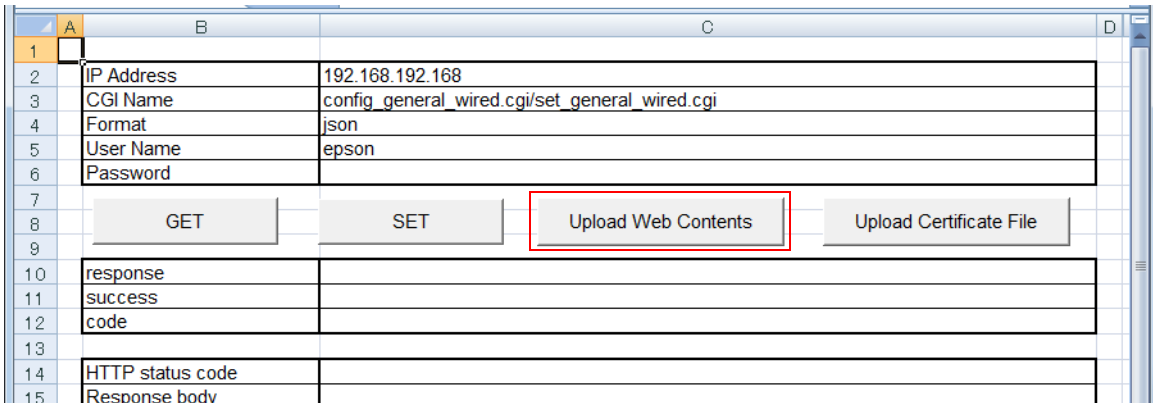
Note that one device at a time can be registered (SET).

Write only one device to be registered.

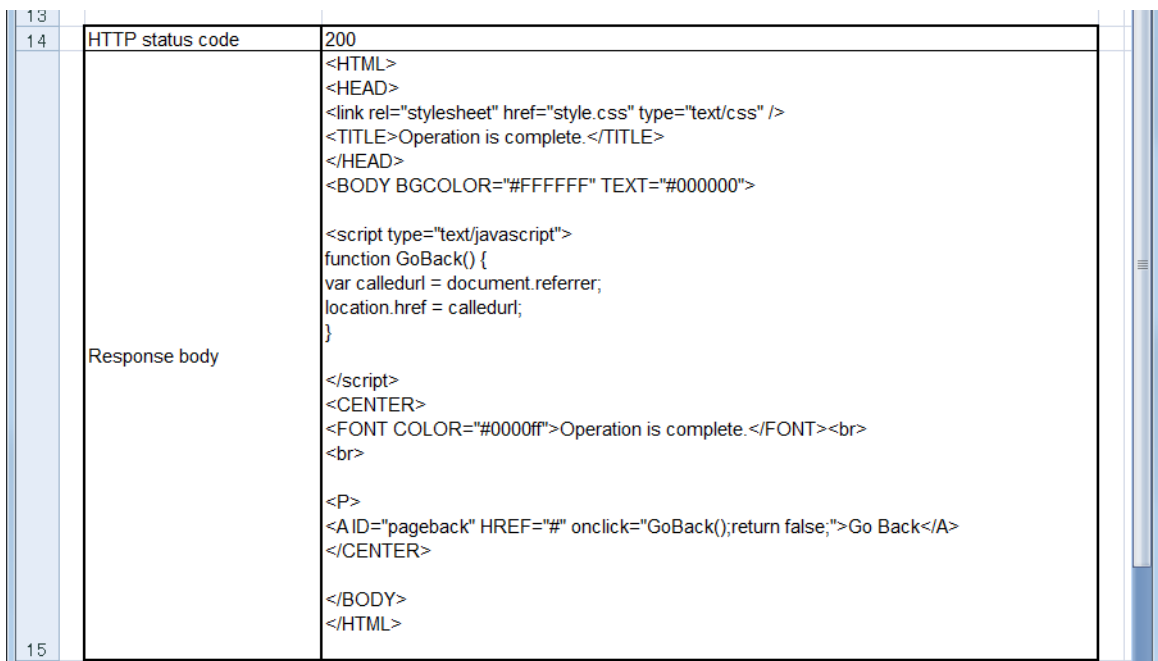
7		GET	SET	Upload Web Contents	Upload C								
8													
9													
10	response												
11	success		TRUE										
12	code												
13													
14	HTTP status code	200											
	Response body	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;epos-utility xmlns="http://www.epson-pos.com/schemas/2012/02/epo &lt;response success="true" /&gt; &lt;/epos-utility&gt;</pre>											
		<table border="1"> <tr> <td>DeviceID</td> <td>printer1</td> </tr> <tr> <td>IPAddress</td> <td>192.168.192.168</td> </tr> <tr> <td>Model</td> <td>TM-T70</td> </tr> <tr> <td>RetryInterval</td> <td>100</td> </tr> </table>				DeviceID	printer1	IPAddress	192.168.192.168	Model	TM-T70	RetryInterval	100
DeviceID	printer1												
IPAddress	192.168.192.168												
Model	TM-T70												
RetryInterval	100												

# Uploading Files

- 1 Click the (Upload Web Contents) button.



- 2 The file selection screen appears. Select the file to be uploaded to the TM-i. Click the (OPEN) button and the file starts to be uploaded.
- 3 The results are displayed in the cell.  
The following screen shows the case in which the file has been successfully uploaded.



## Uploading Certificate

- 1 Click the (Upload Certificate File) button.

	A	B	C	D
1				
2		IP Address	192.168.192.168	
3		CGI Name	config_general_wired.cgi/set_general_wired.cgi	
4		Format	json	
5		User Name	epson	
6		Password		
7				
8		GET	SET	Upload Web Contents
9				Upload Certificate File
10		response		
11		success		
12		code		
13				
14		HTTP status code		
15		Response body		

- 2 The file selection screen appears. Select the file to be uploaded to the TM-i. Click the (OPEN) button and the file starts to be uploaded.
- 3 The results are displayed in the cell.  
The following screen shows the case in which the file has been successfully uploaded.

