

EPSON Advanced Printer Driver for TM series
Status API
Reference Manual

Revision L

Seiko Epson Corporation

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1.Introduction

Status API is a program that offers an Application Program Interface for obtaining the printer and presenter status during printing and when not printing, in conjunction with the TM printer drivers made by Epson. By using this API, printer status handling functions can be integrated more simply with applications.

This manual explains concerning the Status API. In order to utilize this API's functions fully and in order to use them correctly, please use this manual as a reference guide when developing applications.

The following sample programs and source codes are also available. Please use these for reference also when developing your applications.

- Visual Basic 5.0 with Office Service Pack 3, 32-bit Sample Program.
- Visual C++ 4.0 Sample Program

1.1.Modification from the old version

Ver2.07

- Supported for the TM-U950, TM-U295, TM-L60II.
- The performance of the No response status is improved.
- The TM-H6000II with Image Scanner connected through an Ethernet is supported.
- Can process the following for scanned check data, save it in memory or a file on a PC, and extract it when necessary:
 - Convert the check data into 90°-rotated data.
 - Cut both right and left sides of the check data using the selected width.
 - Crop selected areas of the data and save them in memory or a file on the PC.
 - Calculate the size of the scanned check data.

Ver2.06

- Supported of the TM-J7000/7100.
- The following functions related to Check Scanner have been added.
BiSCNDeleteImage, BiSCNGetImageList, BiSCNGetImageRemainingCapacity
- BiGetPrnCapability is added.
- When a user other than an administrator uses a printer with a USB connection, printing will perform correctly when the printer is turned on after starting the OS.
- In Windows 2000/XP, the time-out process with a parallel port is improved.
- With a USB connection, the performance of the printing completion status is improved.
- An installation failure on a specific PC is corrected.

Ver2.05

- Supported of the TM-U325.
- Supports WindowsXP.
- Supports printing with a spooler in Windows2000.
- A trace log can be recorded as an initial state.
- A spool writing error dialog display is prevented when data from a PC is sent while the printer power is off with a USB connection. (Windows2000)
- With WindowsNT4.0/ 2000, No Response notification is sent when turning off the printer power during printing. (WindowsNT4.0/2000)
- With a USB connection, the problem of continuous increment of handle/memory if BiOpenMonPrinter is called while the printer power off is corrected. (Windows2000)
- Problem of a spool error occurring when BiOpenMonPrinter is called repeatedly is corrected. (WindowsNT4.0/2000)

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- When using StatusAPI with a USB, possible blue screen problem is corrected. (Windows98SE/2000)
- Problem of a blue screen when the power of a printer connected to a USB is repeatedly turned on and off is corrected. (Windows98SE/2000)

Ver2.04

- Supported of the TM-U590
- The following functions related to Check Scanner have been added.
BiSCNSetImageQuality, BiSCNSetImageFormat, BiSCNSetScanArea, BiSCNPreScan, BiSCNGetImageQuality, BiSCNGetImageFormat, BiSCNGetScanArea, BiSCNSetReadBackFunction, BiSCNSetReadBackWnd, BiSCNCancelReadBack, BiSCNReadImage, BiSCNRetransmissionImage, BiSCNGetClumpStatus, BiSCNClumpPaper, BiSCNSetCroppingArea, BiSCNGetCroppingArea, BiSCNDeleteCroppingArea
- The following response time setting function has been added in the case where Ethernet is used.
BiSetDefaultEchoTime, BiSetEtherEchoTime
- A log collection function for tracing has been added.

Ver2.03d

- Supported of the TM-L90

Ver2.03c

- Supported of the TM-H6000II and TM-J2000/2100
- Added the function that gets installed fonts information by BiGetType for the TM-H6000.

Ver2.03b

- The TM-T90 printer driver has improved print speed and improved quality in color graphics printing.
- Fixed problem that prevents TM-T88II(R) Reduce35 driver from being installed.

Ver2.03

- Supported of the TM-T90 and TM-U210A(R)
- Fixes the problem that executing BiGetStatus immediately after BiOpenMonPrinter may cause an improper status on WindowsNT4.0
- Improves BiOpenMonPrinter to shorten implementation time.

Ver2.02

- Supported of the TM-U230
- Supported of the RP-U420
- Supported of the TM Reduce Driver

Ver2.01

- Supported of the TM-H3000R
- Supported of Windows2000
- Supported of the USB, Ethernet interface board
- Add API (BiSetMonEthernetInterval)

Ver2.00

New Release

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2. Operating Environment

2.1. Operating System

This software supports the following operating systems.

- Microsoft Windows 95 English (OSR2 or later)
- Microsoft Windows 98 English
- Microsoft Windows NT 4.0 English
- Microsoft Windows 2000 English
- Microsoft Windows XP English

2.2. Computer

This software supports computers, which the above operating systems run on.

- AT Compatible Computers

2.3. Printers

This software is compatible with the printer in the following table.

Please use this API with the printer drivers shown on the right side of the table.

Printer	Printer Driver
TM-T88II	EPSON TM-T88II(R) Receipt
TM-T88IIR	EPSON TM-T88II(R) Reduce35
TM-T88III	EPSON TM-T88III Receipt EPSON TM-T88III Reduce35
TM-T90	EPSON TM-T90 Receipt EPSON TM-T90 Reduce35
TM-L90	EPSON TM-L90 Receipt EPSON TM-L90 Reduce35 EPSON TM-L90 Label
TM-L60II	EPSON TM-L60II Receipt EPSON TM-L60II Label
TM-H5000II	EPSON TM-H5000II Receipt EPSON TM-H5000II Reduce35 EPSON TM-H5000II Slip
TM-U590	EPSON TM-U590 Slip
TM-U950	EPSON TM-U950 Receipt EPSON TM-U950 Slip
TM-U295	EPSON TM-U295 Slip
TM-U675	EPSON TM-U675 Receipt EPSON TM-U675 Slip EPSON TM-U675 Validation
TM-U325	EPSON TM-U325 Receipt EPSON TM-U325 Validation
TM-U230	EPSON TM-U230 Receipt
TM-U210A TM-U210AR	EPSON TM- U210A(R) Receipt
TM-U210B	EPSON TM- U210B Receipt

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TM-U210D	EPSON TM- U210D Receipt
TM-H6000	EPSON TM-H6000 Receipt
	EPSON TM-H6000 Reduce35
	EPSON TM-H6000 Slip
TM-H6000II	EPSON TM-H6000II Receipt
	EPSON TM-H6000II Reduce35
	EPSON TM-H6000II Slip
TM-J2000/2100	EPSON TM- J2000/2100 Receipt
	EPSON TM- J2000/2100 Reduce35
	EPSON TM- J2000/2100 Reverse
TM-J7000/7100	EPSON TM- J7000/7100 Receipt
	EPSON TM- J7000/7100 Reduce35
	EPSON TM- J7000/7100 Slip
TM-J8000	EPSON TM- J8000 Receipt
	EPSON TM-J8000 Reduce35
	EPSON TM-J8000 Slip
TM-H3000R	EPSON TM-H3000(R) Receipt
	EPSON TM-H3000(R) Reduce35
	EPSON TM-H3000(R) Slip

[Note]

- Ensure that the above-mentioned printer driver's printer spool is set to "Enable bi-directional support" when using applications that utilize the status API with Windows 95/98. Failure to observe this will result in printing not being possible from the application.
In addition to this, only parallel connections, serial connections, USB connections and Ethernet connections may be used for connecting to printers currently supported.
- Parallel communications are recommended for high-speed printing. Even higher printing speeds can be attained by setting the parallel port operations mode to the "ECP mode" with the BIOS settings on the computer in use. However, there are certain computers with which printing will not be performed normally and the status API cannot be used when the parallel operations mode is set to the ECP mode. In this event, cancel the ECP mode.
- Make the printer (Handshaking busy condition), always set the Receive buffer full (ON).
- When using a parallel connection with Windows2000/XP, use the ESD_LPTx port. If ESD_LPTx is not displayed, select LPTx.

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- When connecting to a serial cable, use the following wiring

Cable wiring which can be used



Printer side			User side	
D-sub25 Connector Pin Number	Signal name		Signal name	D-sub9 Connector Pin Number
8	(NC)		DCD	1
3	RxD	←→	RxD	2
2	TxD	←→	TxD	3
20	DTR	←→	DTR	4
7	SG	←→	SG	5
6	DSR	←→	DSR	6
4	RTS	←→	RTS	7
5	CTS	←→	CTS	8
22	(NC)		RI	9

Furthermore, there is one more wiring structure of the cable, which cannot be used.

Cable wiring which cannot be used



Printer side			User side	
D-sub25 Connector Pin Number	Signal name		Signal name	D-sub9 Connector Pin Number
8	(NC)	←→	DCD	1
3	RxD	←→	RxD	2
2	TxD	←→	TxD	3
20	DTR	←→	DTR	4
7	SG	←→	SG	5
6	DSR	←→	DSR	6
4	RTS	←→	RTS	7
5	CTS	←→	CTS	8
22	(NC)		RI	9

3.Status API

3.1. Outline

The following functions are provided in the Status API.

- BiOpenMonPrinter ••• Open the printer which is the object of status monitoring.
- BiGetStatus ••• Acquire the status.
- BiSetStatusBackFunction ••• Register the auto status notification callback function.
- BiSetStatusBackWnd ••• Register the auto status notification message acquisition window.
- BiCancelStatusBack ••• Cancel the auto status notification
- BiDirectIO ••• Direct input/output
- BiDirectIOEx ••• Extended Direct input/output
- BiResetPrinter ••• Printer reset
- BiGetOfflineCode ••• Acquire the reason for being off-line
- BiGetCounter ••• Acquire the maintenance counter
- BiResetCounter ••• Reset the maintenance counter
- BiCancelError ••• Restore recoverable printer errors
- BiGetType ••• Acquire the printer's type ID
- BiGetInkStatus ••• Acquires the ink status
- BiSetInkStatusBackFunction ••• Sets the ink status notification call back function
- BiSetInkStatusBackWnd ••• Sets the ink status notification window
- BiCancelInkStatusBack ••• Cancels the ink status notification
- BiMICRSetReadBackFunction ••• Sets the check reading results notification function
- BiMICRSetReadBackWnd ••• Sets the check reading results notification window
- BiMICRSelectDataHandling ••• Selects the check reading operation
- BiMICRReadCheck ••• Reads the check
- BiMICRCancelWaitCheckInsertion ••• Cancels the check insertion wait
- BiMICRCancelReadBack ••• Cancels the check reading results notification
- BiMICRRetransmissionCheckData ••• Rsend the check reading results
- BiMICRGetStatus ••• Acquires the MICR status
- BiMICREjectCheck ••• Ejects the check
- BiMICRLoadCheck ••• Loads the check to the printing position
- BiMICRCleaning ••• Cleans the MICR mechanism
- BiSCNSetImageQuality ••• Sets the scanning quality for image data.
- BiSCNSetImageFormat ••• Sets the scanning format for image data.
- BiSCNSetScanArea ••• Sets the scanning area.
- BiSCNPreScan ••• Sets the image data density automatically.
- BiSCNGetImageQuality ••• Acquires the scanning quality setting value for image data.
- BiSCNGetImageFormat ••• Acquires the scanning format setting value for image data.
- BiSCNGetScanArea ••• Acquires the scanning area setting values.
- BiSCNSetReadBackFunction ••• Sets the image scanning notification call back function.
- BiSCNSetReadBackWnd ••• Sets the image scanning notification window.
- BiSCNCancelReadBack ••• Cancels the image scanning notification.
- BiSCNReadImage ••• Scans an image.
- BiSCNRetransmissionImage ••• Retransmits the image scanning results.
- BiSCNGetClumpStatus ••• Acquires the cut sheet paper clamping status.
- BiSCNClumpPaper ••• Executes clamping of cut sheet paper.
- BiSCNSetCroppingArea ••• Sets the cropping area.
- BiSCNGetCroppingArea ••• Acquires the setting value for the cropping area.

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- BiSCNDeleteCroppingArea ••• Deletes the cropping area.
- BiSCNDeleteImage ••• Deletes the reading result of a selected image
- BiSCNGetImageList ••• Acquires a list of reading result IDs of images
- BiSCNGetImageRemainingCapacity ••• Acquires remaining NV memory capacity used for saving the result of reading images

- BiESCNEnable() ••• Enables use of a scanner extension function.
- BiESCNGetDocumentSize() ••• Acquires the width and height of the currently selected image data.
- BiESCNSetDocumentSize() ••• Selects the width and height of image data.
- BiESCNGetAutoSize() ••• Acquires setting information on cutting any unnecessary area that surrounds the image data.
- BiESCNSetAutoSize() ••• Selects whether the unnecessary area that surrounds the image data is cut or not.
- BiESCNGetCutSize() ••• Acquires setting information on cutting the left and right sides of the image data with the selected size.
- BiESCNSetCutSize() ••• Selects size of cutting the left and right sides of the image data.
- BiESCNGETRotate() ••• Acquires information on whether rotation processing for the image data is enabled.
- BiESCNSetRotate() ••• Selects whether rotation processing for the image data is enabled or disabled.
- BiESCNDefineCropArea() ••• Selects a cropping area for the image data.
- BiESCNGetMaxCropAreas() ••• Acquires a maximum number of defining cropping areas.
- BiESCNSoreImage() ••• Saves cropped image data in memory or a file.
- BiESCNRtrieveImage() ••• Retrieves the data saved in memory or a file.
- BiESCNClearImage() ••• Clears the data saved in memory or a file.
- BiESCNGetRemainingImages() ••• Acquires the amount of data that can be saved in memory or a file.
- BiOpenDrawer ••• Operates the drawer
- BiSetMonInterval ••• Change the interval of the reading of status information.
- BiSetMonEtherInterval ••• Change the interval of the reading of status information of Ethernet connection printer.
- BiSetDefaultEchoTime ••• Sets the default value for confirming the printer's response time in a printer with an Ethernet connection.
- BiSetEtherEchoTime ••• Sets the printer's response time in a printer with an Ethernet connection.
- BiGetPrnCapability ••• Acquire the printer's information
- BiCloseMonPrinter ••• Close the printer that is the object of status monitoring.

In this chapter, we explain concerning methods for acquiring the printer status using BiGetStatus, BiSetStatusBackFunction, BiSetStatusBackWnd, but BiDirectIO or BiDirectIOEx is also provided as a function that enables simple input of data to the printer and output. Use this function if printer data other than the printer status are read, or in cases where you are writing to the printer, etc.

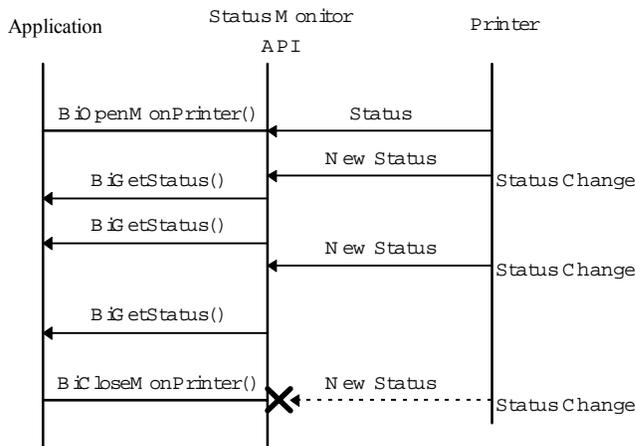
Also see Appendix A and Appendix B concerning operations of each function when the printer is online, offline and when the power is cut off, as well as for judgment methods for determining if function execution is normal or abnormal.

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3.1.1. Acquiring the Status Using BiGetStatus

Using BiGetStatus, the application can acquire the printer's status when necessary as shown in the following figure.

Flow of Status using BiGetStatus

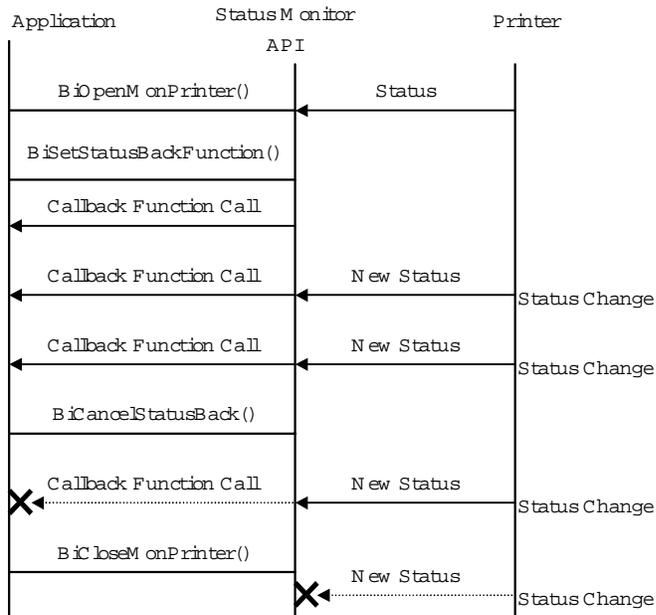


- If the monitored printer is opened by BiOpenMonPrinter(), Status API reads the printer status at that point in time. After that, the Status API reads and saves the printer status each time there is a change in status.
- If BiGetStatus() is called, The printer status which is being saved by the Status API at that point in time is returned to the application
- If BiCloseMonPrinter() is called, the Status API closes monitoring of the printer status.

3.1.2. Acquiring the Status Using BiSetStatusBackFunction

If BiSetStatusBackFunction is used and a method of acquiring auto status notifications is registered, each time the printer status changes, the new status can be acquired through calling of the callback function.

Flow of Status Using BiSetStatusBack Function

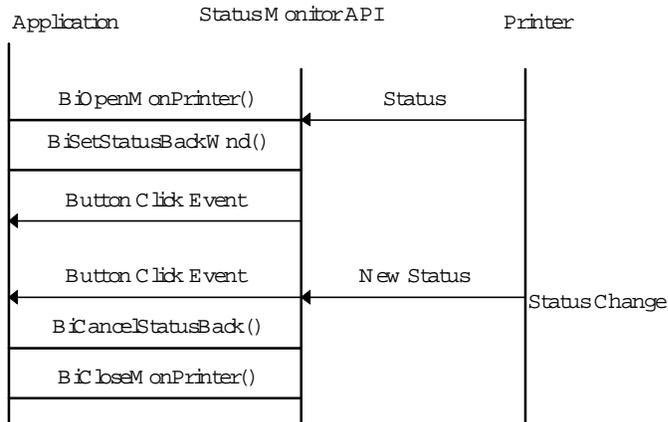


- If the monitored printer is opened by BiOpenMonPrinter(), the status API the printer status at that moment is read.
- If BiSetStatusBackFunction() is called and the callback function is registered, the Status API calls the callback function and notifies it of the printer status at that point in time. After that, each time there is a change in the printer status, the Status API calls the callback function and notifies it of the new printer status.
- If BiCancelStatusBack() is called, status notification by calling the callback function is not performed thereafter.
- If BiCloseMonPrinter() is called, the Status API closes monitoring of the printer status.

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3.1.3.Acquiring the Status Using BiSetStatusBackWnd

Flow of the Status Using BiSetStatusBackWnd



If you are acquiring auto status notification by a language which does not support callback functions like Microsoft Visual Basic 5.0 32-bit with Office Service Pack 3, use BiSetStatusBackWnd. If this function is used and the addresses of the memory where the printer status are stored and the window handle of the buttons on the application's screen, the Status API sets the new status in the specified addresses, and sends a click event to the registered buttons. For details of how to use this method, please refer to the Visual Basic 5.0 32-bit with Office Service Pack 3 sample program which is included in the package.

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3.2. Printer Statuses that Can Be Acquired

In Status API, using the Automatic Status Back command supported by TM printers, the following statuses are acquired and offered to the application. The acquired status changes into the DWORD value and notifies the application. ON/OFF of each bit with the value of DWORD corresponds to each printer status like the table below. However, depending on the model of printer used, a status may not be necessary, so please use them after you have a good understanding of the Automatic Status Back command specifications for the printer you are using.

Macro Definition	Value	OFF	ON
ASB_NO_RESPONSE	0x00000001	Printer Responds	Printer does not respond.
ASB_PRINT_SUCCESS	0x00000002	-	Printing Finished
ASB_UNRECOVER_ERR	0x00002000	No non-recoverable error.	A non-recoverable error has occurred.
ASB_AUTORECOVER_ERR	0x00004000	No auto-recoverable error.	An auto-recoverable error has occurred.
ASB_OFF_LINE	0x00000008	On-line	Off-line
ASB_PRINTER_FEED	0x00000040	Not feeding paper by the paper feed switch.	Feeding paper by the paper feed switch.
ASB_PANEL_SWITCH	0x00000200	Panel switch OFF	Panel switch ON
ASB_MECHANICAL_ERR	0x00000400	No mechanical error	A mechanical error has occurred.
ASB_AUTOCUTTER_ERR	0x00000800	No cutter error.	A cutter error has occurred.
ASB_DRAWER_KICK	0x00000004	Drawer kick-out connector pin 3 is LOW.	Drawer kick-out connector pin 3 is HIGH.
ASB_RECEIPT_END	0x00080000	Paper at the receipt end detector.	No paper at the receipt end detector.
ASB_COVER_OPEN	0x00000020	Cover is closed.	Cover is open.
ASB_RECEIPT_NEAR_END	0x00020000	Paper at the receipt near end detector.	No paper at the receipt near end detector.
ASB_SLIP_TOF	0x00200000	Paper at the Slip TOF detector.	No Paper at the Slip TOF detector.
ASB_SLIP_BOF	0x00400000	Paper at the Slip BOF detector.	No Paper at the Slip BOF detector.
ASB_SLIP_SELECTED	0x01000000	Slip is selected.	Slip is not selected.
ASB_PRINT_SLIP	0x02000000	Can print on slip.	Can not print on slip.
ASB_VALIDATION_SELECTED	0x04000000	Validation is selected.	Validation is not selected.
ASB_PRINT_VALIDATION	0x08000000	Can print on validation.	Can not print on validation.
ASB_VALIDATION_TOF	0x20000000	Paper at the validation TOF detector.	No Paper at the validation TOF detector.
ASB_VALIDATION_BOF	0x40000000	Paper at the validation BOF detector.	No Paper at the validation BOF detector.

[Supplement]

- It prepares a macro definition file of the above status. As for the location, refer to chapter Installation.

EpsStmApi.h - VC include file

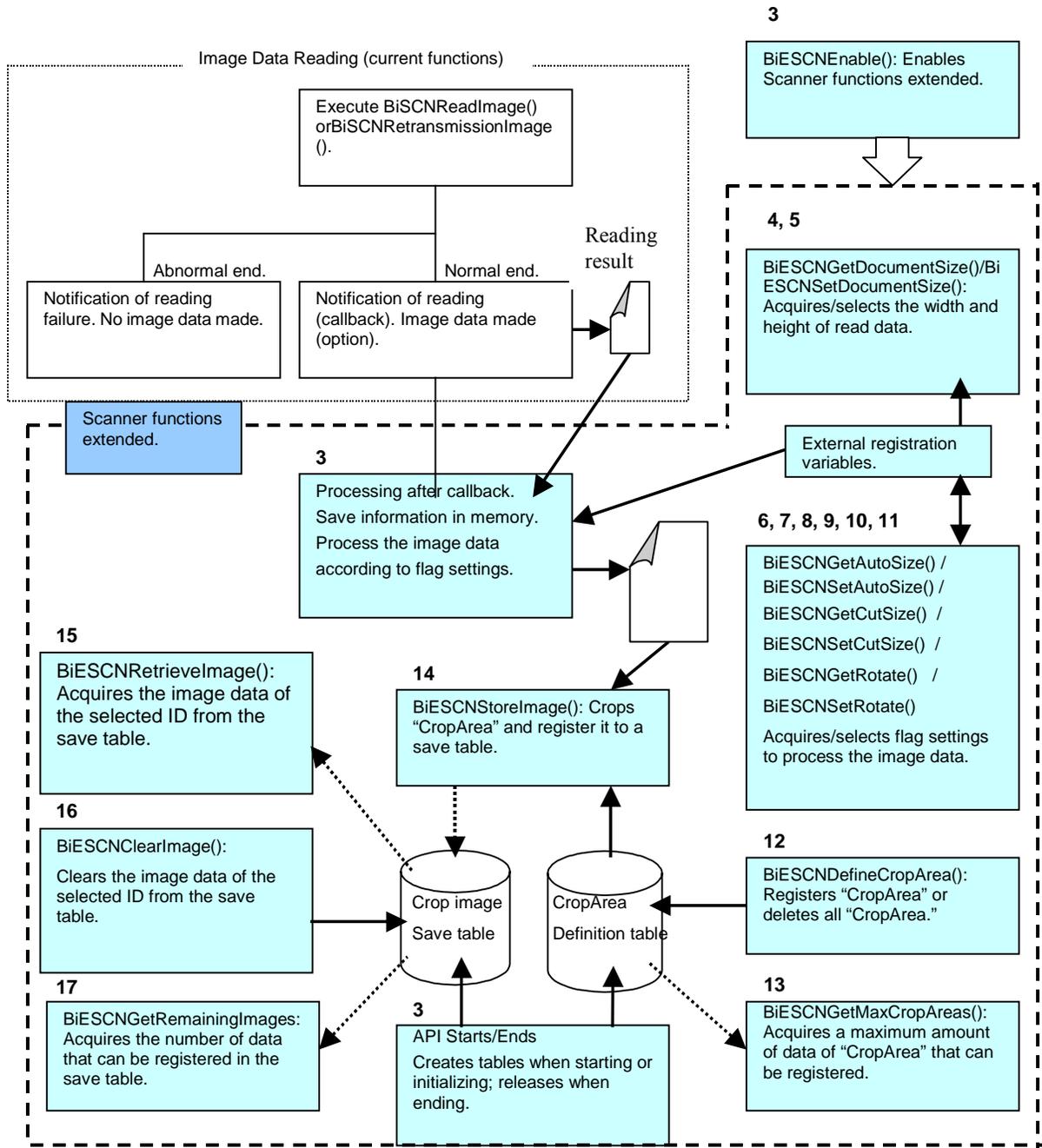
Module1.bas - VB module file

- Transition in the Close printing status (ASB_PRINT_SUCCESS) is as follows.

1. It goes Off when printing starts, and goes On when printing is finished.
2. According to BiGetStatus(), or BiSetStatusBackFunction() or BiSetStatusBackWnd(), after status back notifies of ON once, it goes OFF.

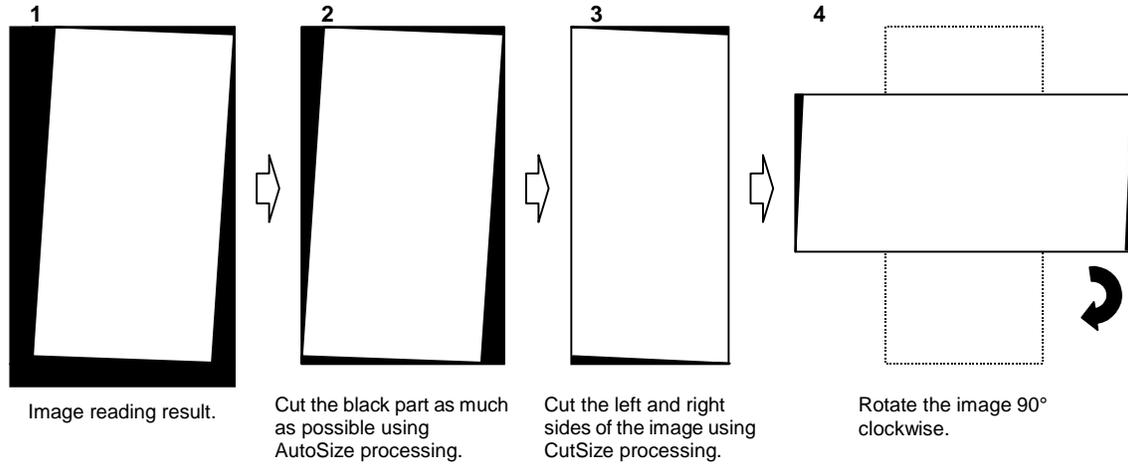
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3.3.Scanning Data Processing Overview



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3.4.Scanning Data Processing



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3.5. BiOpenMonPrinter

[Function]

This opens the printer for which the status is being monitored.

[Format]

int BiOpenMonPrinter (int nType, LPSTR pName):

[Argument]

int nType

This specifies the type of name specified in pName. One of the following two types is specified.

TYPE_PORT The port name is specified in pName.

TYPE_PRINTER The printer name is specified in pName.

LPSTR pName

This specifies the printer that is opened. The specification is as follows, depending on the nType value.

If the nType is TYPE_PORT, it specifies the port name to which the printer is connected.

(Example: "COM1", "COM2", "LPT1", ...)

If the nType is TYPE_PRINTER, the printer name is specified.

(Example: "EPSON TM-H6000 Receipt," ...)

[Return Value]

If opening of the specified printer was successful, the handle value (greater than zero) by which that printer is identified is returned. If there is an error, the following error codes (less than zero) are returned.

ERR_TYPE nType parameter error

ERR_OPENED The specified printer has already been opened.

ERR_NO_PRINTER The specified printer driver does not exist.

ERR_NO_TARGET An unsupported printer was specified.
(The printer's power is not On or the cable connections are faulty, etc.)

ERR_NO_MEMORY Memory is insufficient.

ERR_PARAM Parameter error.

[Explanation]

Before using an API function other than this function, it is necessary that this function be executed first.

The number of the printer that is able to open at a time is to 8 units.

Use of this function when the printer is in the Offline state, and the functions that can be used up to the time when the Online state is restored are limited.

[Note]

The handle value obtained is valid only in the same thread.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, M-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.6. BiGetStatus

[Function]

Acquires the current printer status.

[Format]

int BiGetStatus (int nHandle, LPDWORD lpStatus);

[Argument]

int nHandle

Specify the handle value of the printer you are acquiring the status of. For the handle value, use the value returned by BiOpenMonPrinter().

LPDWORD lpStatus

The current status of the printer is set.

[Return Value]

If acquisition of the printer's status was successful, a 0 is returned. In the case of an error, the following error code (less than zero) is returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

ERR_PARAM Parameter error

[Explanation]

Refer to **5.2, Printer Statures that Can Be Acquired**, for the printer statuses that you can acquire. However, some statuses may be invalid depending on the model of printer used.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.7. BiSetStatusBackFunction

[Function]

This registers the called callback function on the occasion of Automatic Status Back.

[Format]

```
int BiSetStatusBackFunction (int nHandle,  
    int (CALLBACK EXPORT *pStatusCB)(DWORD dwStatus));
```

[Argument]

int nHandle

This specifies the handle value of the printer for which the status is monitored. The BiOpenMonPrinter() return value is used as the handle value.

int (CALLBACK EXPORT *pStatusCB) (DWORD dwStatus)

Sets the callback function's address.

[Return Value]

If registration of the callback function is successful, a 0 is returned. If there is an error, the following error code (less than zero) is returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

ERR_PARAM Parameter error

[Explanation]

If there is a BiSetStatusBackFunction() call, first, the printer status at that point in time is set in dwStatus and the callback function is called. After that, each time the printer's status changes, the new status is set in dwStatus and the callback function is called. Cancellation of Automatic Status Back is accomplished by executing BiCancelStatusBack().

For the value that is set in the callback function's argument dwStatus, see the table in **5.2 Printer Statuses that Can Be Acquired**.

[Note]

Within registered callback function, it is a separate thread. Therefore, StatusAPI cannot be used from the callback function.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.8. BiSetStatusBackWnd

[Function]

This registers a Windows handle for a button which sends a click even when there is an Automatic Status Back, and registers an address in memory where the status information is set.

[Format]

int BiSetStatusBackWnd (int nHandle, long hWnd, LPDWORD lpdwStatus);

[Argument]

int nHandle

This specifies the handle value of the printer for which the status is to be acquired. The value returned from BiOpenMonPrinter() is used as the handle value.

Long hWnd

Specifies the Windows handle of the button which sends a click event during Automatic Status Back.

LPDWORD lpdwStatus

Specifies the address in memory where the printer status is set.

[Return Value]

If registration of the button's windows handle and the address where the status information is saved was successful, 0 is returned. If there is an error, the following error code (less than zero) is returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

ERR_PARAM Parameter error

[Explanation]

If there is a BiSetStatusBackWind() call, first, the printer status at that point is set in lpdwStatus and a click event is sent to the button window specified by hWnd. After that, each time there is a change in the printer status, the new status is set in lpdwStatus and a click event is set to the specified button window. Automatic Status Back is canceled by executing BiCancelStatusBack().

For the value set in the memory address specified by lpdwStatus, see the table in **5.2 Printer Statuses that Can Be Acquired**.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.9. BiCancelStatusBack

[Function]

This cancels Automatic Status Back registered by BiSetStatusBackFunction() or BiSetStatusBackWnd().

[Format]

int BiCancelStatusBack (int nHandle);

[Argument]

int nHandle

Specifies the handle value for the printer for which Automatic Status Back is being canceled. The value returned from BiOpenMonPrinter() is used as the handle value.

[Return Value]

If cancellation of Automatic Status Back was successful, a 0 is returned. If there is an error, the following error code (less than zero) is returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

[Explanation]

The cancel request is ignored and SUCCESS return if a status notification request has not been registered.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.10. BiDirectIO

[Function]

This carries out reading and writing of data with the specified printer.

[Format]

int BiDirectIO (int nHandle, BYTE writeLen, LPBYTE writeCmd, LPBYTE readLen, LPBYTE readBuff, DWORD timeout, BOOL nullTerminate);

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The value returned from BiOpenMonPrinter() is used as the handle value.

BYTE writeLen

This specifies the length of data (length of the command) written to the printer. If this value is zero, writing is not performed, but only reading is done.

LPBYTE writeCmd

This specifies the data (command) to be written to the printer.

LPBYTE readLen

This specifies the length of the data to be read from the printer. If the value is zero, reading is not performed after writing. After return from this function, the number of bytes actually read is saved.

LPBYTE readBuff

This specifies the buffer where data read from the printer are stored.

DWORD timeout

This specifies the data writing and data reading time out time in msec units.

BOOL nullTerminate

If TRUE, reading is finished at the point when a NULL is received from the printer. At this time, the size of the readBuff prepared by the user program in readLen must be specified.

If FALSE, reading of data from the printer is performed until a timeout occurs or the specified length of “readLen” is read.

[Return Value]

If reading/writing was successful, a 0 is returned. If there is an error, the following error codes (less than zero) are returned.

ERR_HANDLE The handle value which specifies the printer is incorrect.

ERR_TIMEOUT A time out error occurred.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_NOT_EPSON Cannot be used (printer not EPSON)

ERR_PARAM Parameter error

[Explanation]

For the readBuff size, memory with a length which is the same as, or greater than the length specified by readLen should be secured.

The following points are also different from BiDirectIOEx. Use BiDirectIOEx as needed.

- A command disabling ASB his added as a prefix to BiDirectIO data. If problems occur when other commands are inserted while writing continuous data with BiDirectIO, use BiDirectIOEx.
- The maximum data length that can be read/write processed by BiDirectIO is 255 bytes. For longer data, use BiDirectIOEx.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.11. BiDirectIOEx

[Function]

This carries out reading and writing of data with the specified printer. No ASB disable command is added.

[Format]

```
int BiDirectIOEx( int nHandle, DWORD writeLen, LPBYTE writeCmd, LPDWORD readLen, LPBYTE readBuff,
                 DWORD timeout, BOOL nullTerminate, BYTE option );
```

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The value returned from BiOpenMonPrinter() is used as the handle value.

DWORD writeLen

This specifies the length of data (length of the command) written to the printer. If this value is zero, writing is not performed, but only reading is done.

LPBYTE writeCmd

This specifies the data (command) to be written to the printer.

LPWORD readLen

This specifies the length of the data to be read from the printer. If the value is zero, reading is not performed after writing. After return from this function, the number of bytes actually read is saved.

LPBYTE readBuff

This specifies the buffer where data read from the printer are stored.

DWORD timeout

This specifies the data writing and data reading time out time in msec units.

BOOL nullTerminate

If TRUE, reading is finished at the point when a NULL is received from the printer. At this time, the size of the readBuff prepared by the user program in readLen must be specified.

If FALSE, reading of data from the printer is performed until a timeout occurs or the specified length of "readLen" is read..

BYTE option

0: ASB disable command (GS a) is sent before data write, and ASB enabled after data write complete.

1: ASB disable and enable commands are not sent.

[Return Value]

If reading/writing was successful, a 0 is returned. If there is an error, the following error codes (less than zero) are returned.

ERR_HANDLE	The handle value which specifies the printer is incorrect.
ERR_TIMEOUT	A time out error occurred.
ERR_ACCESS	Reading/writing with the printer is not possible (printing in progress).
ERR_OFFLINE	It was opened in the offline state, so it cannot be used until the online state is recovered.
ERR_NOT_EPSON	Cannot be used (printer not EPSON)
ERR_PARAM	Parameter error

[Explanation]

For the readBuff size, memory with a length which is the same as, or greater than the length specified by readLen should be secured. This is functionally the same as BiDirectIO, but there are specification differences. See Section 5.8 BiDirectIO.

[Caution]

- Up to 2 Gbytes of data can be specified for read/write processing, but under Windows NT 4.0 the specified memory region is reserved, so please specify the minimum data length.

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- While monitoring printer status, do not use this function to send the ASB status transmit disable command (GS a), or it will make it impossible to acquire status.
- The BiDirectIOEx ASB (Auto Status Back) suppress specification is specified so that a response other than the expected response (such as Status) will not be received if a command is sent for which a response is expected from the printer. If ASB is not suppressed, it is necessary during programming to give consideration to the reception of data other than the expected data.
- Specifying the receiving buffer or not specifying it is equivalent to specifying processing of data received from the printer by BiDirectIOEx or specifying processing by the monitoring thread (notification by callback or BiGetStatus).

Command sent by BiDirectIOEx	Receiving Buffer Specified or Not	BiDirectIOEx Receiving Buffer	Monitoring Thread Operation
Get Status Command	Specified	Status is input to the receiving buffer.	Callback does not occur. Status is not updated.
	Not Specified	–	Callback occurs. Status is updated.
Other commands with a response from the printer	Specified	The printer response is input to the receiving buffer.	No effect on the monitoring thread.
	Not Specified	–	An abnormal callback may occur.
Command without a response from the printer	Specified	A Time Out error occurred.	No effect on the monitoring thread.
	Not Specified	–	No effect on the monitoring thread.

•

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.12. BiResetPrinter

[Function]

Resets the status monitor printer.

[Format]

int BiResetPrinter (int nHandle);

[Argument]

int nHandle

Specifies the handle value of the printer to be reset. The BiOpenMonPrinter() return value is used in the handle value.

[Return value]

0 is returned when printer reset is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_NOT_SUPPORT Not supported (Including when a serial connection is used.)

[Explanation]

Judges the printer's interface automatically and executes parallel connection printer reset processing. Also, if printer reset is executed during printing, the printing job is canceled and printer reset is executed.

[Caution]

- When using a parallel connection with WindowsXP, use the ESD_LPTx port.

[Supported printer]

TM-T88II, TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-U230, TM-U210A, TM-U325, TM-U950, TM-U295, TM-L60II (In each case, it is possible to use a connection other than a serial connection.)

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3.13.BiGetOfflineCode

[Function]

Acquires the bit that indicates the reason for being off-line.

[Format]

int BiGetOfflineCode(int nHandle, LPBYTE offlinecode);

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter() return value is used in the handle value.

LPBYTE offlinecode

Sets the bit that indicates the reason for being off-line.

[Return value]

0 is returned when printer reset is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_NOT_SUPPORT Not supported
- ERR_TIMEOUT A time out error occurred.
- ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state i
- ERR_NOT_EPSON Cannot be used (printer not EPSON)
- ERR_PARAM Parameter error

[Explanation]

The following off-line causes are assigned:

For TM-J2000/2100, TM-J7000/7100

Byte 1

Bit	Function	Value	
		0	1
0	CPU execution error	Not occurred	Occurred
1	R/W error in memory	Not occurred	Occurred
2	R/W error in gate array	Not occurred	Occurred
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

Byte 2

Bit	Function	Value	
		0	1
0	High voltage error	Not occurred	Occurred
1	Low voltage error	Not occurred	Occurred
2	Overcurrent error	Not occurred	Occurred
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	

6	Fixed	Fixed at 1
7	Fixed	Fixed at 0

Byte 3

Bit	Function	Value	
		0	1
0	Thermistor error	Not occurred	Occurred
1	Print head high voltage error	Not occurred	Occurred
2	Print head low voltage error	Not occurred	Occurred
3	RTC error	Not occurred	Occurred
4	Number of carriage operations error	Not occurred	Occurred
5	Number of pump operations error	Not occurred	Occurred
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

Byte 4

Bit	Function	Value	
		0	1
0	Auto cutter error	Not occurred	Occurred
1	Paper roll cover open error (recover automatically)	Not occurred	Occurred
2	Not defined	Fixed at 0	
3	Not defined	Fixed at 0	
4	Home position detection error	Not occurred	Occurred
5	Carriage detection error	Not occurred	Occurred
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

Byte 5

Bit	Function	Value	
		0	1
0	Paper roll cover open error (recover by the command)	Not occurred	Occurred
1	Print head high temperature error	Not occurred	Occurred
2	Print head low temperature error	Not occurred	Occurred
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

For TM-T90, TM-L90

Byte 1

Bit	Function	Value	
		0	1
0	CPU execution error	Not occurred	Occurred
1	R/W error in memory	Not occurred	Occurred
2	R/W error in gate array	Not occurred	Occurred
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	

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5	Not defined	Fixed at 0
6	Fixed	Fixed at 1
7	Fixed	Fixed at 0

Byte 2

Bit	Function	Value	
		0	1
0	High voltage error	Not occurred	Occurred
1	Low voltage error	Not occurred	Occurred
2	Overcurrent error	Not occurred	Occurred
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

Byte 3

Bit	Function	Value	
		0	1
0	Thermistor error	Not occurred	Occurred
1	Not defined	Fixed at 0	
2	Not defined	Fixed at 0	
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	
7	Fixed	Fixed at 0	

Byte 4

Bit	Function	Value	
		0	1
0	Auto cutter error	Not occurred	Occurred
1	Paper roll cover open error (recover automatically)	Not occurred	Occurred
2	Paper layout error (TM-L90 only)	Not occurred	Occurred
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

Byte 5

Bit	Function	Value	
		0	1
0	Paper roll cover open error (recover by the command)	Not occurred	Occurred
1	Print head high temperature error	Not occurred	Occurred
2	Not defined	Fixed at 0	
3	Not defined	Fixed at 0	
4	Not defined	Fixed at 0	
5	Not defined	Fixed at 0	

6	Fixed	Fixed at 1
7	Fixed	Fixed at 0

[Supported printer]

TM-J2000/2100, TM-J7000/7100, TM-T90, TM-L90 (In all cases, they are enabled when there is not a Ethernet connection.)

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3.14. BiGetCounter

[Function]

Acquires the maintenance counter.

[Format]

int BiGetCounter(int nHandle, BYTE readno, LPDWORD readcounter);

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter() return value is used in the handle value.

BYTE readno

Specifies the number of the maintenance counter.

LPWORD readcounter

Sets the maintenance counter value.

[Return value]

0 is returned when printer reset is successful. The following error codes (less than zero) are returned when an error is triggered.

ERR_HANDLE	The handle value specified for the printer is incorrect.
ERR_TIMEOUT	A time out error occurred.
ERR_ACCESS	Reading/writing with the printer is not possible (printing in progress).
ERR_PARAM	Parameter error (specified counter number outside of permissible range)
ERR_NOT_SUPPORT	Not supported
ERR_OFFLINE	It was opened in the offline state, so it cannot be used until the online state i
ERR_NOT_EPSON	Cannot be used (printer not EPSON)

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[Explanation]

In the TM-H5000II, a maintenance counter is assigned as shown below. Depending on the model, there are counter values which cannot be acquired, but please read the product specifications for each model.

Counter No.		Counter	Counter Model
Hexadecimal	Decimal		
0A	10	Number of paper feed lines (slip)	Can be reset
0B	11	Number of printed characters (slip)	Can be reset
14	20	Number of paper feed lines (roll paper)	Can be reset
15	21	Number of times the head is charged (roll paper)	Can be reset
32	50	Number of times the auto cutter is operated	Can be reset
3C	60	Number of times the check is read	Can be reset
46	70	Product operation time	Can be reset
8A	138	Number of paper feed lines (slip)	Cumulative
8B	139	Number of printed characters (slip)	Cumulative
94	148	Number of paper feed lines (roll paper)	Cumulative
95	149	Number of times the head is charged (roll paper)	Cumulative
B2	178	Number of times the auto cutter is operated.	Cumulative
BC	188	Number of times the check is read	Cumulative
C6	198	Product operation time	Cumulative

If this function is executed in a model in which a maintenance counter is not installed, it results in a time out error.

[Supported printer]

TM-T90, TM-L90, TM-H5000II, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R)

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3.15. BiResetCounter

[Function]

Resets the maintenance counter.

[Format]

int BiResetCounter(int nHandle, BYTE writeno)

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter() return value is used in the handle value.

BYTE writeno

Specifies the number of the maintenance counter.

[Return value]

0 is returned when printer reset is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_TIMEOUT A time out error occurred.
- ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).
- ERR_PARAM Parameter error (specified counter number outside of permissible range)
- ERR_NOT_SUPPORT Not supported
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state i
- ERR_NOT_EPSON Cannot be used (printer not EPSON)

[Explanation]

Refer to **BiGetCounter** assigned with TM printer. Only valid for counters that can be reset.

Certain printers are not equipped with maintenance counters. A timeout error will be triggered for this function in this event.

[Supported printer]

TM-T90, TM-L90, TM-H5000II, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R),

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3.16. BiCancelError

[Function]

Restores recoverable printer errors.

[Format]

int BiCancelError(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter() return value is used in the handle value.

[Return value]

0 is returned when printer reset is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_TIMEOUT A time out error occurred.
- ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).
- ERR_NOT_SUPPORT Not supported

[Explanation]

The recoverable errors with the TM printer are shown below

The contents of these allocations may differ depending on the model.

- Cover open error : Close the cover opened during printing and then call this API.
- Auto-cutter error : An error occurred with the cutter. Remove the paper from around the cutter, close the platen and then call this API.

[Caution]

- For a parallel connection with WindowsNT4.0, this function cannot be used and it is impossible to recover the printer from a recoverable error. After resolving the error cause, it is possible to recover by using BiResetPrinter.
- If a recoverable error occurs during print data transmission, the error might not be recovered by BiCanceleror. In this case, recover from the error status by using BiResetPrinter.
- When using the LPTx port with Windows2000/XP, this function cannot be used. Use ESD_LPTx.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950

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3.17. BiGetType

[Function]

Acquires the printer's type ID.

[Format]

```
int BiGetType(int nHandle, LPBYTE typeid, LPBYTE font,  
             LPBYTE exrom, LPBYTE euspecial);
```

[Argument]

int nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter() return value is used in the handle value.

LPBYTE typeid

Sets the printer's type ID (refer to the list of type IDs.)

LPBYTE font

Sets the font mounted on the printer (refer to the list of installed fonts.)

LPBYTE exrom

Sets the capacity of the printer's expanded flash ROM (Not supported.)

LPBYTE euspecial

Sets the printer's type ID(B) (TM-J2000/2100, TM-J7000/7100 and TM-H6000II with scanner.)

[Return value]

0 is returned when printer reset is successful. The following error codes (less than zero) are returned when an error is triggered.

ERR_HANDLE	The handle value specified for the printer is incorrect.
ERR_TIMEOUT	A time out error occurred.
ERR_ACCESS	Reading/writing with the printer is not possible (printing in progress).
ERR_NOT_SUPPORT	Not supported
ERR_OFFLINE	It was opened in the offline state, so it cannot be used until the online state i
ERR_NOT_EPSON	Cannot be used (printer not EPSON)
ERR_PARAM	Parameter error

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[Explanation]

The values are listed below.

Type ID

For the TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

Bit	Function	Value	
		0	1
0	2-byte code	Not supported	Supported
1	A/C	Without	With
2	Customer display direct connection	Without	With
	Label*1	receipt	label
	Not defined*2	-	
3	MICR*3	Without	With
	Not defined	-	
4	Not used	Fixed at 0	
5	Not defined	-	
6	Equipped with endorse printer*4	Without	With
	Not defined	-	
7	Not used	Fixed at 0	

*1 TM-L60II only

*2 TM-U230, TM-U210, TM-T90, TM-L90, TM-U295

*3 TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J7000/7100, TM-U325, TM-U950

*4 TM-H6000, TM-H6000II

Type ID(B)

For the TM-J2000/2100

Bit	Function	Value	
		0	1
0	Color	Monochrome (TM-J2000)	Two-color (TM-J2100)
1,2,3,4,5	Not defined	-	
6	Not used	Fixed at 1	
7	Not used	Fixed at 0	

For the TM-J7000/7100

Bit	Function	Value	
		0	1
0	Color	Monochrome (TM-J7000)	Two-color (TM-J7100)
1	Equipped with endorse printer	Without	With
2,3,4,5	Not defined	-	
6	Not used	Fixed at 1	
7	Not used	Fixed at 0	

For the TM-H6000II with Scanner

Bit	Function	Value	
		0	1
0	2-byte code	Not supported	Supported
1	A/C	Without	With

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2	DM-D connection	OFF	ON
3	Equipped with MICR	Without	With
4	Equipped with Scanner	Without	With
5	Equipped with endorse printer	Without	With
6	Not used	Fixed at 1	
7	Not used	Fixed at 0	

Installed Fonts

For the TM-H5000II, TM-H6000, TM-H6000II, TM-T88II, TM-T88III, TM-T90, TM-T90

Value	Installed Font
00h	Not clear
01h	ANK only
02h	Japanese Kanji (JIS)
03h	Chinese Kanji (Simplified Chinese GB 2312)
04h	Taiwan Kanji (Traditional Chinese BIG-5)
05h	Thai Characters (3-pass)

Depending on the model, no installed fonts are provided. In the case of models with no installation font, nothing is set in the Installed Fonts even if the BiGetType function is called.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.18. BiGetInkStatus

[Function]

Acquires the current ink status.

[Format]

int BiGetInkStatus(int nHandle, LPDWORD Status) ;

[Argument]

int nHandle

Specifies the handle value for the printer whose status is being acquired. The return value of BiOpenMonPrinter() is specified in the handle value.

LPDWORD Status

The current ink status is set.

[Return Value]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_PARAM Parameter error

[Explanation]

The types of the printer's status that can be acquired are as followed.

Macro definition	Value	Status
INK_ASB_NEAR_END	0x0001	INK near end
INK_ASB_END	0x0002	INK end
INK_ASB_NO_CARTRIDGE	0x0004	INK cartridge installed/not installed
INK_ASB_NO_CARTRIDGE2	0x0008	INK cartridge (Color 2) installed/not installed
INK_ASB_CLEANNING	0x0020	Cleaning
INK_ASB_NEAR_END2	0x0100	INK near end (Color2)
INK_ASB_END2	0x0200	INK end (Color2)

About the Color 2 ink status

TM-J8000: Not valid

TM-J2000, TM-J7000: The status should always be “ink present”, “ink adequate”, and “cartridge present”.

[Supported Printer]

TM-J8000, TM-J2000/2100, TM-J7000/7100

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3.19. BiSetInkStatusBackFunction

[Function]

Registers a callback function output when calling for ink status notification.

[Format]

```
int BiSetInkStatusBackFunction( int nHandle,  
                               int (CALLBACK EXPORT *pStatusCB)(DWORD dwStatus) );
```

[Argument]

int nHandle

Specifies the handle value for the printer whose status is being acquired. The return value of BiOpenMonPrinter() is specified in the handle value.

int (CALLBACK EXPORT *pStatusCB)(DWORD dwStatus)

Sets the address of the callback function.

[Return Value]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_PARAM Parameter error

[Explanation]

If BiSetInkStatusBackFunction() is called, first, the ink status at that point is set in dwStatus and the callback function is called. After that, each time the printer's status undergoes a change, the new status is set in dwStatus and the callback function is called. To cancel the automatic status notification, BiCancelInkStatusBack() is executed.

For the value set in the callback function argument dwStatus, see the table in 5.15, BiGetInkStatus.

[Supported Printer]

TM-J8000, TM-J2000/2100, TM-J7000/7100

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3.20. BiSetInkStatusBackWnd

[Function]

Registers a memory address which sets the window handle of the button which sends click events and sets status information when there is an ink status notification.

[Format]

```
int BiSetInkStatusBackWnd( int nHandle, long hWnd, LPDWORD lpdwStatus );
```

[Argument]

int nHandle

Specifies the handle for the printer whose ink status is being acquired. The return value of BiOpenMonPrinter() is specified in the handle value.

long hWnd

Specifies the window handle of the button that sends the click event when there is an ink status notification.

LPDWORD lpdwStatus

Specifies the memory address that sets the ink status.

[Return Value]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

ERR_NOT_SUPPORT Not supported by this printer.

ERR_PARAM Parameter error

[Explanation]

If BiSetInkStatusBackWnd() is called, first, the ink status at that point is set in lpdwStatus and the click event is sent to the button window specified in hWnd. After that, each time the printer's status undergoes a change, the new status is set in lpdwStatus and the click event is sent to the specified button window. To cancel the automatic status notification, BiCancelInkStatusBack() is executed.

For the value set in the callback function argument lpdwStatus, see the table in 5.15, BiGetInkStatus.

[Supported Printer]

TM-J8000, TM-J2000/2100, TM-J7000/7100

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3.21. BiCancelInkStatusBack

[Function]

Cancels the ink status notification registered in BiSetInkStatusBackFunction() or BiSetInkStatusBackWnd().

[Format]

```
int BiCancelInkStatusBack( int nHandle );
```

[Argument]

int nHandle

Specifies the handle value for the printer whose ink status notification is being canceled. The return value in BiOpenMonPrinter() is specified in the handle value.

[Return Value]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

ERR_NOT_SUPPORT Not supported by this printer.

[Explanation]

If registration of the ink status notification request has not been performed, the cancel request is disregarded and 0 is returned.

[Supported Printer]

TM-J8000, TM-J2000/2100, TM-J7000/7100

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3.22. BiMICRSetReadBackFunction

[Function]

Executes reading of checks by BiMICRReadCheck and registers the address of the callback function when the results are notified as well as the memory addresses where each type of information read from the check is set.

[Format]

```
int BiMICRSetReadBackFunction( int nHandle,
int (CALLBACK EXPORT *pMicrCB)(void),LPBYTE pReadBuffSize,
LPBYTE readCharBuff, LPBYTE pStatus, LPBYTE pDetail)
```

[Argument]

int nHandle

Specifies the handle value of the executing printer. The return value specified in BiOPENMonPRinter() is specified as the handle value.

int (CALLBACK EXPORT * pMicrCB)(void)

Specifies the address of the callback function for notifying the results from reading of a check.

LPBYTE pReadBuffSize

Specifies the size of the memory where the reading data are set. After execution of this function, the size of the data which were actually read is set.

LPBYTE readCharBuff

Specifies the memory address where the check reading data are set.

LPBYTE pStatus

Specifies a 1-byte memory address where the reading status is stored. See MICR reading status below concerning the status that is returned.

LPBYTE pDetail

Specifies a 1-byte memory address in which reading of a check ends in an error, which is returned in cases where detailed information is added in accordance with the BiMICRSelectDataHandlingfunction. See the following detailed MICR information concerning the detailed information that is returned.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.
- ERR_PARAM Parameter error

[Explanation]

The following MICR reading states can be acquired.

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For the TM-H6000, TM-H6000II

Bit	Function	Value	
		0	1
0	Reading font	E13B	CMC7
1	Reserved	Fixed at 0	
2	Reserved	Fixed at 0	
3	Detailed information	Not added	Added
4	Reread	Enabled	Disabled
5	Reading results	Normal end	Abnormal end
6	Reading data overflow	No	Yes
7	Fixed	Fixed at 0	

For the TM-H5000II, TM-U675

Bit	Function	Value	
		0	1
0	Reading font	E13B	CMC7
1,2,3	Reserved	Fixed at 0	
4	Reread	Enabled	Disabled
5	Reading results	Normal end	Abnormal end
6	Reading data overflow	No	Yes
7	Fixed	Fixed at 0	

For the TM-J7000/7100

Bit	Function	Value	
		0	1
0	Reading font	E13B	CMC7
1,2	Reserved	Fixed at 0	
3	Detailed Information	Not added	Added
4	Reread	Enabled	Disabled
5	Reading results	Normal end	Abnormal end
6	Fixed	Fixed at 1	
7	Fixed	Fixed at 0	

MICR Detailed Information

For the TM-H6000, TM-H6000II, TM-J7000/7100

Value	Information
40h	No abnormality
41h	Check reading was not executed even once. (The BiMICRREADCheckfunction has not been called.)
42h	Check insertion wait was canceled. (The BiMICRCancelWaitCheckInsertionfunction was called.)
43h	Check insertion wait was canceled by the set time being exceeded. (The time out set time passed while the BiMICRReadCheckfunction was being called.)
44h	A check with a non-standard length was inserted.
45h	The magnetic waveform was not detected.
46h	Characters which could not be analyzed were detected in analysis processing.
47h	An error occurred during check reading processing.
48h	An error was detected in the noise measurement.
49h	Check reading processing was interrupted by the cover being opened.

[Caution]

EPSON	TITLE	Revision	No	
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- Be sure to call this function before calling the BiMICRReadCheckfunction. An error will be returned if the BiMICRReadCheckfunction is called before this function is called.
- Depending on the printer model (firmware version), the detailed information after there is a reading error may not be supported. In that case, nothing will be set.
- If the reading data overflows, bit 6 of the MICR reading status goes ON (reading data overflow).

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

EPSON	TITLE	Revision	No	
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3.23. BiMICRSetReadBackWnd

[Function]

Executes check reading by BiMICRReadCheck, registers the handle of a button which sends the button's click event when the results are notified, and registers the memory addresses where each type of reading information is set.

[Format]

```
int BiMICRSetReadBackWnd( int nHandle, long hWnd, LPBYTE pReadBuffSize,  
                          LPBYTE readCharBuff, LPBYTE pStatus, LPBYTE pDetail)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the operation. The return value in BiOpenMonPrinter() is specified.

Long hWnd

Specifies the button handle. Sends the click even to this button.

LPBYTE pReadBuffSize

Specifies the size of memory where the reading data are set. after this function is executed, the size of the actual reading data is set.

LPBYTE readCharBuff

Specifies the memory addresses where the reading data are set.

LPBYTE pStatus

Specifies a 1-byte memory address where the reading status is set. See the MICR reading status in 5.19, "BiMICRSetReadBackFunction" concerning the status that is returned.

LPBYTE pDetail

Specifies a 1-byte memory address that sets detailed information after a returned reading error in the case that addition of detailed information is specified by the BiMICRSelectDataHandlingfunction. See 5.19 "BiMICRSetReadBackFunction" concerning the MICR detailed information that is returned.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE	The handle value that specifies the printer is incorrect.
ERR_NOT_SUPPORT	Not supported by this printer.
ERR_OFFLINE	It was opened in the offline state, so it cannot be used until the online state is recovered.
ERR_NOT_EPSON	The printer is not an EPSON printer, so it cannot be used.
ERR_PARAM	Parameter error

[Explanation]

Acquires the MICR reading status of 5.19 "BiMICRSetReadBackFunction."

[Cautions]

- Be sure to call this function before calling the BiMICRReadCheckfunction. An error will be returned if the BiMICRReadCheckfunction is called before this function is called.
- Depending on the printer model (firmware version), the detailed information after there is a reading error may not be supported. In that case, nothing will be set.
- If the reading data overflows, bit 6 of the MICR reading status goes ON (reading data overflow).

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.24. BiMICRSelectDataHandling

[Function]

Selects the check reading operation.

[Format]

```
int BiMICRSelectDataHandling( int nHandle, BYTE charSelect,  
                             BYTE detailSelect, BYTE errorSelect)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE charSelect

Specifies handling of characters that cannot be analyzed.

0: Interrupts analysis processing at the point when characters that cannot be analyzed are detected and doesn't add the reading data.

1: Replaces characters which cannot be analyzed with a '?' and continues analysis processing, then if the reading data size is at or less than the reading data size specified in BiMICRSetReadBackFunction / BiMICRSetReadBackWnd, the reading data are added.

BYTE detailSelect

Specifies whether or not to add detailed information after a reading error.

0: Detailed information is not added.

1: Detailed information is added.

BYTE errorSelect

Specifies whether or not to end the MICR function or continue it after an error. Furthermore, the MICR function continues regardless of this setting if reading ends normally or if there was an error in adding the reading results.

0: The MICR function is ended only after there is an error in not adding the reading data.

1: If reading ends due to an error caused by any of the following causes, the MICR function continues even after notification of the reading results.

- A check with a non-standard length is inserted.
- The magnetic waveform cannot be detected.
- Characters which cannot be analyzed are detected in analysis processing.
- Errors were detected in the noise measurements.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE	The handle value which specifies the printer is incorrect.
ERR_PARAM	The argument has an error.
ERR_NOT_SUPPORT	Not supported by this printer.
ERR_OFFLINE	It was opened in the offline state, so it cannot be used until the online state is recovered.
ERR_NOT_EPSON	The printer is not an EPSON printer, so it cannot be used.

[Supported Printer]

TM-H6000, TM-H6000II, TM-J7000/7100

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3.25. BiMICRReadCheck

[Function]

Executes check reading.

If 0 is specified for the check insertion wait time, the printer's wait time is canceled. Furthermore, the check insertion wait time after MICR reading is finished is reset to 0, the printer's default value.

[Format]

int BiMICRReadCheck(int nHandle, BYTE readFont, BYTE waitInsertionTime)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE readFont

Specifies the reading font.

0:E13B

1:CMC 7

BYTE waitInsertionTime

Specifies the check insertion wait time.

0 ~ 15 (x 60 sec.) (The printer's default is 0)

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value which specifies the printer is incorrect.
- ERR_WITHOUT_CB Cannot execute because either BiMICRSetReadBackFunction or BiMICRSetReadBackWnd has not been called.
- ERR_PARAM The argument has an error.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Caution]

- Be sure to call either BiMICRSetReadBackFunction or BiMICRSetReadBackWnd before calling this function.

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.26. BiMICRCancelWaitCheckInsertion

[Function]

Cancels check insertion wait.

[Format]

int BiMICRCancelWaitCheckInsertion(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Caution]

Even if called with a printer which does not have the MICR function built in, the slip insertion wait setting is canceled.

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

EPSON	TITLE	Revision	No	
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3.27. BiMICRCancelReadBack

[Function]

Cancels a reading information notification request registered using BiMICRSetReadBackFunction() or BiMICRSetReadBackWnd().

[Format]

int BiMICRCancelReadBack(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.28. BiMICRRetransmissionCheckData

[Function]

Resends the check reading results.

[Format]

```
int BiMICRRetransmissionCheckData( int nHandle, LPBYTE pReadBuffSize,  
                                   LPBYTE readCharBuff, LPBYTE pStatus, LPBYTE pDetail, DWORD timeout)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pReadBuffSize

Specifies the size of memory where the reading data are set. After this function is executed, the size of the actual reading data is set.

LPBYTE readCharBuff

Specifies the memory addresses where the reading data are set.

LPBYTE pStatus

Specifies a 1-byte memory address where the reading status is set. See the MICR reading status in 5.19, “BiMICRSetReadBackFunction” concerning the status that is returned.

LPBYTE pDetail

Specifies a 1-byte memory address that sets detailed information after a returned reading error in the case that addition of detailed information is specified by the BiMICRSelectDataHandlingfunction. See 5.19 “BiMICRSetReadBackFunction” concerning the MICR detailed information that is returned.

DWORD timeout

Specifies the time-out time for data reading in msec units.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE	The handle value which specifies the printer is incorrect.
ERR_NOT_SUPPORT	Not supported by this printer.
ERR_OFFLINE	It was opened in the offline state, so it cannot be used until the online state is recovered.
ERR_NOT_EPSON	The printer is not an EPSON printer, so it cannot be used.
ERR_PARAM	Parameter error

[Explanation]

If this function is called in the case that check reading is not being executed by the BiMICRReadCheckfunction, the reading data are not set. The reading status ends with an error.

[Cautions]

- Depending on the printer model (firmware version), the detailed information after there is a reading error may not be supported. In that case, nothing will be set.
- If the reading data overflows, bit 6 of the MICR reading status goes ON (reading data overflow).

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.29. BiMICRGetStatus

[Function]

Acquires the MICR status.

[Format]

int BiMICRGetStatus(int nHandle, LPBYTE pStatus)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pStatus

Specifies the memory address where the MICR status is set. See the following MICR states concerning the types of MICR status that are returned.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.
- ERR_PARAM Parameter error

[Explanation]

The types of MICR status that can be acquired are as followed.

For the TM-H6000, TM-H6000II, TM-H5000II, TM-U675, TM-J7000/7100

Bit	Function	Value	
		0	1
0	Fixed	Fixed at 0	
1	Fixed	Fixed at 1	
2	Selects the MICR Function	Selected	Not selected
3	Waits for insertion of a check/cleaning sheet.	Do not wait for insertion	Wait for insertion
4	Fixed	Fixed at 1	
5	TOF Detector	With form	Without form
6	BOF Detector	With form	Without form
7	Fixed	Fixed at 0	

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

3.30. BiMICREjectCheck

[Function]

Ejects the check when the MICR function is selected.

[Format]

int BiMICREjectCheck(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.31. BiMICRLoadCheck

[Function]

Loads the check to the check print start position when the MICR function is selected.

[Format]

int BiMICRLoadCheck(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.32. BiMICRCleaning

[Function]

Cleans the MICR mechanism.

[Format]

int BiMICRCleaning(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value that specifies the printer is incorrect.
- ERR_NOT_SUPPORT Not supported by this printer.
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Explanation]

If this function is called, the mechanism waits for the cleaning sheet to be inserted. Insert the cleaning sheet and carry out cleaning of the mechanism. After cleaning is finished, the MICR function is deselected and roll paper is used for the printing sheets.

[Supported Printers]

TM-H6000, TM-H6000II, TM-U675, TM-H5000II, TM-J7000/7100

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3.33. BiSCNSetImageQuality

[Function]

Sets the image scanning quality. Furthermore, the value set with this function is valid until the printer's power is turned OFF or until the printer is reset.

[Format]

int BiSCNSetImageQuality(int nHandle, BYTE bColorDepth, char bThreshold, BYTE bColor, BYTE bExOption)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE bColorDepth

Specifies the tonal gradation (the number of bits used for 1 pixel). The valid specification values are 1 or 8. The default value after the printer's power is turned off, or after the printer is reset, is 1.

EPS_BI_SCN_1BIT(1): 1bit

EPS_BI_SCN_8BIT(8): 8bit

char bThreshold

Specifies the density threshold value. The valid specification range is -128 ~ 127. The default value after the printer's power is turned off, or after the printer is reset, is 0. If 0 is specified, the printer is set to use the basic density.

BYTE bColor

Specifies the color. Valid specification values are as shown below.

EPS_BI_SCN_MONOCHROME (48) : Black and White

EPS_BI_SCN_COLOR (49) : Color

However, in the current version, this value is fixed at EPS_BI_SCN_MONOCHROME, and any other value that is specified is regarded as invalid.

BYTE bExOption

Specifies the type of density adjustment. The valid specification values are as shown below.

EPS_BI_SCN_AUTO (48) : Density is adjusted automatically.

EPS_BI_SCN_MANUAL (49) : Density is adjusted manually.

However, in the current version, this value is fixed at EPS_BI_SCN_MANUAL, and any other value that is specified is regarded as invalid.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_NOT_SUPPORT Not supported

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_PARAM Parameter error

[Caution]

If this function is executed for a TM-H6000II that is not equipped with a scanner, it ends normally, but the image quality is not set.

Since this function does not check whether the scanner of the printer is capable of gray scale reading, be sure to confirm this before using a printer with the information acquired by using the function BiGetPrnCapability.

Only when pColorDepth is EPS_BI_SCN_1BIT(1), the value of *pThreshold is ignored.

[Supported Printers]

TM-H6000II with scanner

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3.34. BiSCNSetImageFormat

[Function]

Sets the format of the scanning image data. Furthermore, the value set with this function is valid until the printer's power is turned OFF or until the printer is reset.

[Format]

int BiSCNSetImageFormat(int nHandle, BYTE bFormat)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE bFormat

Specifies the format of image data notified. The valid specification values are as shown below.

- EPS_BI_SCN_TIFF(1) : TIFF format CCITT (Group 4) compressed data.
- EPS_BI_SCN_RASTER(2) : Raster format uncompressed data.
- EPS_BI_SCN_BITMAP(3) : Bitmap format uncompressed data.
- EPS_BI_SCN_TIFF256(4) : TIFF format uncompressed data
- EPS_BI_SCN_JPEGHIGH(5) : JPEG format high compression (size priority) data
- EPS_BI_SCN_JPEGNORMAL(6): JPEG format normal compression data
- EPS_BI_SCN_JPEGLOW(7) : JPEG format low compression (quality priority) data

The default value is EPS_BI_SCN_TIFF(1) after the printer's power is turned on, or after it is reset.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_PARAM Parameter error
- ERR_NOT_SUPPORT Not supported
- ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends normally, but the format is not set.

Since this function does not check whether the scanner of the printer is capable of using a specified image data format, be sure to confirm it with the information acquired by the function of BiGetPrnCapability before using.

[Supported Printers]

TM-H6000II with scanner

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3.35. BiSCNSetScanArea

[Function]

Sets the image scanning area. Furthermore, the values set with this function remain in effect until the printer's power is turned off or until the printer is reset.

[Format]

int BiSCNSetScanArea(int nHandle, BYTE bStartX, BYTE bStartY, BYTE bEndX, BYTE bEndY)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE bStartX

Specifies the starting X coordinate of the scanning area. The valid specification range is 0~254 in mm units.

(The valid specification range in the TM-H6000II is 0~99.)

The default value after the printer's power is turned off or after printer reset is 0.

BYTE bStartY

Specifies the starting Y coordinate of the scanning area.

The valid specification range is 0~254 in mm units. The default value after the printer's power is turned off or after printer reset is 0.

BYTE bEndX

Specifies the ending X coordinate of the scanning area. The valid specification range is 0~255 in mm units.

(The valid specification range in the TM-H6000II is 0~100.)

If 0 is specified, that model's maximum value is used.

The default value after the printer's power is turned off or after printer reset is 70.

BYTE bEndY

Specifies the ending Y coordinate of the scanning area. The valid specification range is 0~255 in mm units.

If 0 is specified, that model's maximum value is used.

The default value after the printer's power is turned off or after printer reset is 0.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_PARAM Parameter error

ERR_NOT_SUPPORT Not supported

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends normally, but the scan area is not set.
- The coordinate reference point (0, 0) is the top right when facing toward the check paper insertion direction.
- If bStartX >= bEndX, or bStartY >= bEndY (bEndY is not 0), it results in a parameter error.
- If a bEndX, bEndY which exceeds the printer's scannable area is specified, the values for the printer's maximum scannable area are set.
- The maximum value that can be set may differ depending on the printer model with built-in scanner. Therefore, in the StatusAPI, a check of the scanning area values is not conducted for every model. As a result, the specified value is transmitted as is to the printer and operation is according to the command interpretation specifications of each printer.
 Example: If the end X coordinate 101 is specified for the scanning area of the H6000II, (The original valid specification range is 0 ~ 100.)
 - 1) The API transmits 101 as the scanning area's end X coordinate to the printer.
 - 2) The printer regards the value as having exceeded the scannable area and sets the value to the maximum value 100.

[Supported Printers]

TM-H6000II with scanner

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3.36. BiSCNPreScan

[Function]

This sets the printer's density threshold value after prescanning of the image and returns the set density threshold value. (An image can be scanned at the threshold value obtained from the prescan operation only in the case that this function is called and the image is scanned without ejecting the paper (BiSCNSetImageQuality).)

[Format]

int BiSCNPreScan(int nHandle, LPBYTE pResultStatus, char *pThreshold)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pResultStatus

Specifies the memory address where the prescan results status is set. The set value is as shown below.

Bit	Function	Value	
		0	1
0,1,2,3,4	Reserved	Fixed at 0	
5	Execution Results	Ends normally.	Ends with an error.
6	Fixed	–	Fixed at 1.
7	Fixed	Fixed at 0	–

Char pThreshold

This specifies the memory address where the prescanning results, the threshold value of the density of the paper's automatically measured density, is set. The value is set if the prescanning results are successful, and if the prescanning results are not successful, no value is set, so this value becomes indefinite. It is necessary to judge the Prescan results from PresultStatus.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_PARAM Parameter error.

ERR_TIMEOUT A time out error occurred.

ERR_NOT_SUPPORT Not supported

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.

[Supported Printers]

TM-H6000II with scanner

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3.37. BiSCNGetImageQuality

[Function]

Acquires the scanning quality of the image set in the printer.

[Format]

```
int BiSCNGetImageQuality( int nHandle, LPBYTE pColorDepth, char *pThreshold,
                        LPBYTE pColor, LPBYTE pExOption)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pColorDepth

Specifies the memory address where the tonal gradation is set.

EPS_BI_SCN_1BIT(1): 1bit

EPS_BI_SCN_8BIT(8): 8bit

char *pThreshold

Specifies the memory address where the density threshold value is set.

LPBYTE pColor

Specifies the memory address where color is set. The set value is as shown below.

EPS_BI_SCN_MONOCHROME (48) : Black and White

EPS_BI_SCN_COLOR (49) : Color

LPBYTE pExOption

Specifies the memory address where the type of density adjustment is set. The set value is as shown below.

EPS_BI_SCN_AUTO (48) : Density is adjusted automatically.

EPS_BI_SCN_MANUAL (49) : Density is adjusted manually.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_PARAM Parameter error.

ERR_TIMEOUT A time out error occurred.

ERR_NOT_SUPPORT Not supported

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

If this function is executed for a TM-H6000II that is not equipped with a scanner, it ends with an ERR_TIMEOUT.

[Supported Printers]

TM-H6000II with scanner

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3.38. BiSCNGetImageFormat

[Function]

Acquires the format of the image set in the printer.

[Format]

int BiSCNGetImageFormat(int nHandle, LPBYTE pFormat)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pFormat

Specifies the memory address where the format of the notified image data is set. The set value is as shown below.

- EPS_BI_SCN_TIFF(1) : TIFF format CCITT (Group 4) compressed data.
- EPS_BI_SCN_RASTER(2) : Raster format uncompressed data.
- EPS_BI_SCN_BITMAP(3) : Bitmap format uncompressed data.
- EPS_BI_SCN_TIFF256(4) : TIFF format uncompressed data
- EPS_BI_SCN_JPEGHIGH(5) : JPEG format high compression (size priority) data
- EPS_BI_SCN_JPEGNORMAL(6): JPEG format normal compression data
- EPS_BI_SCN_JPEGLOW(7) : JPEG format low compression (quality priority) data

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_PARAM Parameter error
- ERR_TIMEOUT A time out error occurred.
- ERR_NOT_SUPPORT Not supported
- ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.

[Supported Printers]

TM-H6000II with scanner

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3.39. BiSCNGetScanArea

[Function]

Acquires the image scanning area specified in the printer.

[Format]

int BiSCNGetScanArea(int nHandle, LPBYTE pStartX, LPBYTE pStartY, LPBYTE pEndX, LPBYTE pEndY)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pStartX

Specifies the memory address where the starting X coordinate of the scanning area is set.

LPBYTE pStartY

Specifies the memory address where the starting Y coordinate of the scanning area is set.

LPBYTE pEndX

Specifies the memory address where the ending X coordinate of the scanning area is set.

LPBYTE bEndY

Specifies the memory address where the ending Y coordinate of the scanning area is set.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_PARAM Parameter error

ERR_TIMEOUT A time out error occurred.

ERR_NOT_SUPPORT Not supported

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.

[Supported Printers]

TM-H6000II with scanner

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3.40. BiSCNSetReadBackFunction

[Function]

Executes image scanning by the function BiSCNReadImage and registers the callback function's address called when sending notification of the results as well as the memory addresses for setting each type of scanned information.

[Format]

```
int BiSCNSetReadBackFunction( int nHandle, int (CALLBACK EXPORT *pScnCB)(void),
                             LPDWORD pBuffSize, LPBYTE pBuff, LPBYTE pImageXsize,
                             LPBYTE pStatus, LPBYTE pDetail)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

int (CALLBACK EXPORT * pScnCB)(void)

Specifies the callback function address for sending notification of the results of image scanning.

LPDWORD pBuffSize

Specifies the size of memory where image data are to be set. After execution of this function, the actual size of the scanned data is set.

LPBYTE pBuff

Specifies the memory address where image data are set.

LPBYTE pImageXsize

Specifies the memory address where the number of data (bytes) of image data in the X direction is set.

LPBYTE pStatus

Specifies the memory address where the read status is stored. Concerning the returned status, refer to the image scanning status items below.

LPBYTE pDetail

Specifies the memory address where detailed information is set after scanning ends with an error. Concerning the returned status, see the detailed image information below.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_NO_MEMORY Memory is insufficient.

ERR_PARAM Parameter error

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Explanation]

Image Read Status

For the TM-H6000II

Bit	Function	Value	
		0	1
0	Reserved	Fixed at 0.	
1	Reserved	Fixed at 0.	
2	Reserved	Fixed at 0.	
3	Reserved	Fixed at 0.	
4	Rescanned	Possible	Not (Fixed)
5	Scanning results	Ends normally.	Ends with an error.
6	Scanning data overflow	No overflow	Overflow
7	Scanning data translation error	No error	Error

Bit 7 is ON when status API fail to receive the scanning data from the printer. In this case, the contents of pBuff is not correct.

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Detailed Image Information

For the TM-H6000II

Value	Information
40h	No error.
41h	The image scanning result do not exist.
44h	The cover was opened, so image scanning was interrupted.
45h	A recoverable error/automatic reset error occurred during image scanning.
46h	Paper which is not the standard length was inserted (longer than approximately 333 mm).
47h	Compressed data error (The amount of data increased in data compression processing, and there was insufficient memory.)
48h	Paper insertion status or paper feed error
60h	Lack of remaining capacity in NV memory for saving reading result of images
61h	Failure of writing process of reading result of images to the NV memory
62h	Failure of deletion process of the NV memory for reading result of images

[Caution]

- This function should always be called before the BiSCNReadImage function is called. If the BiSCNReadImage function is called before this function, it will result in an error.
- If the scanning data overflow, the 6th bit of the read status goes ON (read data overflow). In that case, the “required number of bytes” is set in pBufferSize.
- Sufficient buffer capacity should be specified in pBufferSize and pBuffer. The maximum image data size is 4 megabytes.

[Supported Printers]

TM-H6000II with scanner

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3.41. BiSCNSetReadBackWnd

[Function]

This function executes image scanning with the BiSCNReadImage function and registers the memory address for the handle of the button where button click events are sent when sending notification of the scanning results as well the memory addresses for setting each type of information.

[Format]

```
int BiSCNSetReadBackWnd( int nHandle, long hWnd, LPDWORD pBuffSize,
                          LPBYTE pBuff, LPBYTE pImageXsize,
                          LPBYTE pStatus, LPBYTE pDetail)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

Long hWnd

The button handle. Click events are sent to this button.

LPDWORD pBuffSize

Specifies the size of memory where image data are sent. The actual scanning data size is set after this function is executed.

LPBYTE pBuff

Specifies the memory address where image data are set.

LPBYTE pImageXsize

Specifies the memory address where the number of data (bytes) in the X direction of the image data is set.

LPBYTE pStatus

Specifies the memory address where the scanning status is stored. See the BiSCNSetReadBackFunction image scanning status concerning the returned status.

LPBYTE pDetail

Specifies the memory address where the detailed information is set when scanning ends with an error. See the BiSCNSetReadBackFunction image detailed information concerning the returned status.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_NO_MEMORY Memory is insufficient.

ERR_PARAM Parameter error

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

- This function should always be called before the BiSCNReadImage function is called. If the BiSCNReadImage function is called before this function, it will result in an error.
- If the scanning data overflow, the 6th bit of the read status goes ON (read data overflow). In that case, the “required number of bytes” is set in pBuffSize.
- Sufficient buffer capacity should be specified in pBuffSize and pBuff. The maximum image data size is 4 megabytes.

[Supported Printers]

TM-H6000II with scanner

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3.42. BiSCNCancelReadBack

[Function]

Cancels the scanning information notice request registered using BiSCNSetReadBackFunction () or BiSCNSetReadBackWnd ().

[Format]

int BiSCNCancelReadBack(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Supported Printers]

TM-H6000II with scanner

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3.43. BiSCNReadImage

[Function]

Executes image scanning. If 0 is specified for the paper insertion wait time, the printer wait time is canceled.

[Format]

```
int BiSCNReadImage( int nHandle, WORD wId, BYTE bSelectSheet,
                   BYTE bWaitInsertionTime, BYTE bAddInforDataSize,
                   LPBYTE pAddInforData, BYTE bMemory)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

WORD wId

Specifies the data identifier related to the scanned image. Data identifier can be specified in the range of 1- 65535.

BYTE bSelectSheet

Specifies the paper which is the scanning object. The types that can be specified are as shown below.

- EPS_BI_SCN_JOURNAL(1) : Journal
- EPS_BI_SCN_RECEIPT(2) : Receipt
- EPS_BI_SCN_CHECKPAPER(32) : Check paper

However, in the current version, this setting is fixed on EPS_BI_SCN_CHECKPAPER, and any other value that is specified is regarded as invalid.

BYTE bWaitInsertionTime

Specifies the paper insertion wait time.

0 ~ 15 [x 60 sec.] (The default is 0.)

BYTE bAddInforDataSize

Specifies the memory address where the size of character data is set if character information is added to an image.

LPBYTE pAddInforData

Specifies the memory address where character data are set if character information is added to an image.

BYTE bMemory

Specifies whether to save or not save the result of reading images in the NV memory.

- EPS_BI_SCN_NVMEMORY_NOTSAVE(48) not saved (reading result is saved in the work area)
- EPS_BI_SCN_NVMEMORY_SAVE(49) saved

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).
- ERR_PARAM Parameter error
- ERR_NOT_SUPPORT Not supported
- ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.
- ERR_WITHOUT_CB Cannot execute because either BiSCNSetReadBackFunction or BiSCNSetReadBackWnd has not been called.

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[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends normally, but image scanning is not executed.
- Before using this function, be sure to register it using either BiSCNSetReadBackFunction or BiSCNSetReadBackWnd.
- After image scanning is completed, the check paper insertion read time is reset to the default value 0.
- If the data identifier that is already present is specified, the saved image is deleted and replaced with a new image.
- Since this function does not check whether NV memory in the printer for saving the reading result of an image is present or not, be sure to confirm it with the information acquired by the function of BiGetPrnCapability before using.
- The setting for paper insertion waiting time using bWaitInsertionTime cannot currently be used.
- The other functions cannot be used until the paper is inserted after BiSCNReadImage() is executed.

[Supported Printers]

TM-H6000II with scanner

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3.44. BiSCNRetransmissionImage

[Function]

Retransmits the image scanning results.

[Format]

```
int BiSCNRetransmissionImage( int nHandle, WORD wId, LPDWORD pBuffSize,
                             LPBYTE pBuff, LPBYTE pImageXsize,
                             LPBYTE pStatus, LPBYTE pDetail, DWORD dwTimeout)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

WORD wId

Specifies the data identifier related to the scanned image. Data identifier can be specified in the range of 1- 65535.

LPDWORD pBuffSize

Specifies the size of memory where the image data are set. After this function is executed, the size of the actually scanned data is set.

LPBYTE pBuff

Specifies the memory address where the image data are set.

LPBYTE pImageXsize

Specifies the memory address where the number of image data (bytes) in the X direction is set.

LPBYTE pStatus

Specifies the memory address where the read status is stored. Concerning the status that is returned, see the BiSCNSetReadBackFunction image scanning status.

LPBYTE pDetail

Specifies the memory address where detailed information is set when scanning ends with an error. Concerning the status that is returned, see the BiSCNSetReadBackFunction image scanning status.

DWORD dwTimeout

Specifies the data reading time out time in msec units. This time out is a value that is measured from the point when there is no response from the printer after a rereading request.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_TIMEOUT A time out error occurred.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_PARAM Parameter error

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_WITHOUT_CB Cannot execute because either BiSCNSetReadBackFunction or BiSCNSetReadBackWnd has not been called.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.
- If this function is called by the BiSCNReadImage function when no image scanning is being executed or a specified data identifier is not present, the scanning data are not set (the read status shows that it ended in an error).
- If the scanning data overflows, the 6th bit of the read status goes ON (read data overflow). In that case, the “required number of bytes” is set in pBuffSize.
- Sufficient buffer capacity should be specified in pBuffSize and pBuff. The maximum image data size is 4 megabytes.

[Supported Printers]

TM-H6000II with scanner

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3.45. BiSCNGetClumpStatus

[Function]

Acquires the clamp status of cut sheets.

[Format]

int BiSCNGetClumpStatus(int nHandle, LPBYTE pStatus)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPBYTE pStatus

Specifies the memory address where the cut sheet clamp status is to be stored. See the cut sheet clamp status items shown below concerning the returned status.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_TIMEOUT A time out error occurred.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_PARAM Parameter error

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Explanation]

Cut Sheet Clamp Status

For the TM-H6000II

Bit	Function	Value	
		0	1
0	Top of sheet slip processing	Possible	Not possible
1	Check paper's MICR operation status	Possible	Not possible
2	Check paper image processing status	Possible	Not possible
3	Reserved	Fixed at 0	
4	Reserved	Fixed at 0	
5	Reserved	Fixed at 0	
6	Fixed	-	Fixed at 1
7	Fixed	Fixed at 0	-

When "Possible" is specified for "Top of sheet slip processing," "Check paper's MICR operation status" and "Check paper image processing status," it shows that each operation can be executed without the currently clamped paper being ejected.

Not possible indicates it must be executed after the cut sheet paper is inserted.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.

[Supported Printers]

TM-H6000II with scanner

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3.46. BiSCNClumpPaper

[Function]

Sets the cut sheet paper in the clamped state. After this function is executed, the printer is set in the cut sheet insertion wait state, then the paper is clamped after it is inserted. If paper is already clamped at this time, nothing is done.

[Format]

int BiSCNClumpPaper(int nHandle)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends normally, but the paper is not clamped.

[Supported Printers]

TM-H6000II with scanner

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3.47. BiSCNSetCroppingArea

[Function]

Specifies the cropping area.

[Format]

int BiSCNSetCroppingArea(int nHandle, BYTE bAreaNo, BYTE bStartX, BYTE bStartY, BYTE bEndX, BYTE bEndY)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE bAreaNo

Specifies the cropping area number. The valid setting range is 1~255.

BYTE bStartX

Specifies the starting X coordinate of the cropping area. The valid setting range is 0 ~ 254 in mm units.

BYTE bStartY

Specifies the starting Y coordinate of the cropping area. The valid setting range is 0 ~ 254 in mm units.

BYTE bEndX

Specifies the ending X coordinate of the cropping area. The valid setting range is 1 ~ 255 in mm units.

BYTE bEndY

Specifies the ending Y coordinate of the cropping area. The valid setting range is 1 ~ 255 in mm units.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_PARAM Parameter error

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

- For the TM-H6000II, which is not equipped with a scanner, this function ends normally even if it is executed, but the range is not set.
- The coordinate reference point (0, 0) is the top right when facing toward the check paper insertion direction.
- If $bStartX \geq bEndX$, or $bStartY \geq bEndY$, it results in a parameter error.
- Valid ranges for arguments of BiSCNSetCroppingArea are as follows. A value exceeding the range cannot be set.
 $0 \leq bAreaNo \leq 10$, $0 \leq bStartX \leq 98$, $0 \leq bStartY \leq 228$, $2 \leq bEndX \leq 255$, $2 \leq bEndY \leq 255$
- If the specified Cropping area number already exists, the cropping area with that number is updated.
- If a bEndX, bEndY which exceeds the printer's scannable area is specified, the values for the printer's maximum scannable area are set.

[Supported Printers]

TM-H6000II with scanner

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3.48. BiSCNGetCroppingArea

[Function]

Acquires the cropping area set in the printer.

[Format]

int BiSCNGetCroppingArea(int nHandle, LPWORD pBuffSize, LPBYTE pBuff)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPWORD pBuffSize

Specifies the size of memory where the cropping area information is set. The actual size of the scanned data is set.

LPBYTE pBuff

Specifies the memory address where the cropping area information is set. The information is set in the following format.

Cropping area No. (1 byte)

Cropping area starting X coordinate (1 byte)

Cropping area starting Y coordinate (1 byte)

Cropping area ending X coordinate (1 byte)

Cropping area ending Y coordinate (1 byte)

:

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_TIMEOUT A time out error occurred.

ERR_NOT_SUPPORT Not supported

ERR_PARAM Parameter error

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_BUFFER_OVER_FLOW (-140) Buffer capacity insufficient.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.
- If the buffer capacity is insufficient after this function is executed, the necessary number of bytes is set in pBuffSize. If any other error occurs, nothing is set.

[Supported Printers]

TM-H6000II with scanner

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3.49. BiSCNDeleteCroppingArea

[Function]

Deletes the cropping area set in the printer.

[Format]

int BiSCNDeleteCroppingArea(int nHandle, BYTE AreaNo)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE bAreaNo

Specifies the number of the cropping area to be deleted. The valid setting range is 1 ~ 255. If 0 is set, all the cropping areas are deleted.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends normally, but the cropping area is not deleted.

[Supported Printers]

TM-H6000II with scanner

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3.50. BiSCNDeleteImage

[Function]

Deletes the reading result of an image of a specified data ID or deletes the reading result of all data IDs saved at a time. When executing a collective deletion, both the NV memory used for image saving and the reading result of images saved in the work area are deleted.

[Format]

int BiSCNDeleteImage(int nHandle, WORD wID)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

WORD wID

Specifies data ID to be deleted. A value can be specified in the range of 1 - 65535.

If 0 is specified to the data ID, all the reading result of the ID images saved is deleted at the same time.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends normally, but the scanning data is not deleted.

[Supported Printers]

TM-H6000II with scanner

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3.51. BiSCNGetImageList

[Function]

Acquires a data ID list of the reading result of the images saved in the NV memory. If there is no data ID saved, it returns 0 to pListNum.

[Format]

```
int BiSCNGetImageList( int nHandle, LPWORD pListNum, LPWORD pIDList)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPWORD pListNum

Specifies the number of data ID acquired in the data ID list. After executing this function, the actual total number of the data ID acquired is set. If the number of the data ID saved is bigger than the number of data ID specified, the number of data ID required is set and in the case of the error other than this, nothing is set.

pIDList

Specifies the memory address for setting the data ID list. Information should be set with the format below.

DataID1 (1-65535) , ..., DataIDk

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_PARAM Specified interval in milliseconds is less than or equal to zero.

ERR_TIMEOUT A time out error occurred.

ERR_BUFFER_OVER_FLOW (-140) Buffer capacity insufficient.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.
- Data ID saved in the work area cannot be acquired.

[Supported Printers]

TM-H6000II with scanner

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3.52. BiSCNGetImageRemainingCapacity

[Function]

Acquires the remaining capacity (in bytes) of the NV memory for saving the reading result of images.

[Format]

```
int BiSCNGetImageRemainingCapacity( int nHandle, LPDWORD pSize)
```

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

LPDWORD pSize

Specifies the memory address for setting the remaining capacity of the NV memory for saving the reading result of images.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_PARAM Specified interval in milliseconds is less than or equal to zero.

ERR_TIMEOUT A time out error occurred.

[Caution]

- If this function is executed for the TM-H6000II, which is not equipped with a scanner, it ends with an ERR_TIMEOUT.
- The remaining capacity is the remaining when subtracting fail block, memory management area, and the reading result of images from all the memory capacity for saving the reading result of images.

[Supported Printers]

TM-H6000II with scanner

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3.53. BiESCNEnable

[Function]

Set so that scanner extended functions can be used.

[Format]

```
int BiESCNEnable(BYTE bStoreType);
```

[Argument]

BYTE bStoreType

Select a storing method for a cropped image stored using BiESCNStoreImage().

CROP_STORE_MEMORY(0): Save in memory.

CROP_STORE_FILE(1): Save in a file.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_PARAM(-90)

Parameter error

ERR_ENABLE(-160)

Cannot be used because BiOpenMonPrinter() is called.

[Explanation]

Before calling BiOpenMonPrinter(), it is necessary to enable scanner extended functions by calling this argument.

1. Secure save table area with BiOpenMonPrinter().
2. After calling back image data reading, process the image data acquired by the printer and save it in the WORK AREA.
3. Arguments of the scanner extended functions (BiESCN~) can be used.

[Note]

If this argument is called after calling BiOpenMonPrinter(), the scanner extended functions cannot be used and the way of saving a cropped image cannot be changed.

[Supported Printer]

TM-H6000 with Image Scanner

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3.54. BiESCNGetAutoSize

[Function]

Acquire the value of capAutoSize.

[Format]

```
int BiESCNGetAutoSize(int nHandle, LPBYTE pCapAutoSize);
```

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

LPBYTE pCapAutoSize
Select a memory address to set a capAutoSize value.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Acquire the value of capAutoSize (AutoSize processing flag).

- ❑ If “1” is selected for capAutoSize, after reading image data, AutoSize processing (cut black part that is on the left and at the bottom of the image data off) is executed, and the processed image data is saved in the WORK AREA. The width and height of the image data are automatically set to documentWidth and documentHeight.
- ❑ If “0” is selected for capAutoSize, AutoSize processing and automatic setting for the width and height of the image data are not executed.

[Supported printer]

TM-H6000II with Image Scanner

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3.55.BiESCNSetAutoSize

[Function]

Select the value of capAutoSize.

[Format]

int BiESCNSetAutoSize(int nHandle, BYTE bCapAutoSize);

[Argument]

int nHandle

Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

BYTE bCapAutoSize

Select a value for a capAutoSize.

CROP_AUTOSIZE_ENABLE(1): AutoSize processing enabled.

CROP_AUTOSIZE_DISABLE(0): AutoSize processing disabled.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Acquire a value of capAutoSize (AutoSize processing flag).

- ❑ If an argument other than CROP_AUTOSIZE_ENABLE or CROP_AUTOSIZE_DISABLE is selected, the error (ERR_PARAM) is returned.
- ❑ The AutoSize processing flag that has been set is used in the next image data reading process (AutoSize processing is not used for the image data that have been already read and saved in the WORK AREA.)

[Supported printer]

TM-H6000II with Image Scanner

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3.56.BiESCNGetCutSize

[Function]

Acquire the value of cutSize.

[Format]

int BiESCNGetCutSize(int nHandle, LPWORD pCutSize);

[Argument]

int nHandle

Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

LPWORD pCutSize

Select a memory address to set a cutSize value.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Acquire the value of cutSize (size for cutting the left and right sides of an image data).

- ❑ If a number other than “0” is selected for cutSize, after reading the image data, CutSize processing (cut the left and right sides of the image data for a selected size) is executed, and the processed image data is saved in the WORK AREA.
- ❑ If “0” is selected for cutSize, cutSize is not executed.

[Supported printer]

TM-H6000II with Image Scanner

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3.57.BiESCNSetCutSize

[Function]

Select a value of cutSize.

[Format]

int BiESCNSetCutSize(int nHandle, WORD wCutSize);

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

WORD wCutSize
Select size of cutting the left and right sides of the image data (unit: 0.1mm).
Selectable range is 0 to 1500.
Numbers except "0": CutSize processing is executed with the selected size.
"0": CutSize processing is not executed.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Set the value selected by wCutSize to cutSize.

[Note]

- ❑ The argument unit is 0.1mm.
- ❑ The value of cutSize selected is used in the next image data reading process (CutSize processing is not used for the image data that has been already read and saved in the WORK AREA.)

[Supported printer]

TM-H6000II with Image Scanner

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3.58.BiESCNGetRotate

[Function]

Acquire the value of capRotate.

[Format]

int BiESCNGetRotate(int nHandle, LPBYTE pCapRotate);

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.
LPBYTE pCapRotate
Select a memory address to set a capRotate value.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Acquire the value of capRotate.

- ❑ If CROP_ROTATE_ENABLE is set to capRotate, after reading image data, Rotate processing (rotates the image data 90° clockwise) is executed, the processed image data is saved in the WORK AREA.
- ❑ If CROP_ROTATE_DISABLE is set to capRotate, Rotate is not executed.

[Supported printer]

TM-H6000II with Image Scanner

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3.59. BiESCNSetRotate

[Function]

Select a value of capRotate.

[Format]

int BiESCNSetRotate(int nHandle, BYTE bCapRotate);

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

BYTE bCapRotate
Select a value for capRotate.

CROP_ROTATE_ENABLE(1): Rotate processing enabled.
CROP_ROTATE_DISABLE(0): Rotate processing disabled.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Set the value of capRotate.

[Note]

- ❑ If the argument other than CROP_ROTATE_ENABLE or CROP_ROTATE_DISABLE is selected, the error (ERR_PARAM) is returned.
- ❑ The Rotate processing flag that has been set is used in the next image data reading process (Rotate processing is not used for the image data that has been already read and saved in the WORK AREA.)

[Supported printer]

TM-H6000II with Image Scanner

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3.60.BiESCNGetDocumentSize

[Function]

Acquire the values of documentWidth and documentHeight.

[Format]

```
int      BiESCNGetDocumentSize(int nHandle, LPWORD pDocumentWidth,  
                               LPWORD pDocumentHeight);
```

[Argument]

int nHandle
 Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

LPWORD pDocumentWidth
 Select a memory address to set a value of the width of the image data (unit: 0.1 mm).

LPWORD pDocumentHeight
 Select a memory address to set a value of the height of the image data (unit: 0.1 mm).

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Acquire the values of documentWidth and documentHeight (the width and height of the image data saved in the WORK AREA) by using the unit of 0.1 mm.

[Note]

- ❑ The unit of the argument is 0.1 mm.
- ❑ If automatic update by reading the image data or a change with BiESCNSetDocumentSize() is not executed, the default value (width=680, height=1520) is acquired.

[Supported printer]

TM-H6000II with Image Scanner

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3.61.BiESCNSetDocumentSize

[Function]

Select values of documentWidth and documentHeight.

[Format]

```
int BiESCNSetDocumentSize(int nHandle, WORD wDocumentWidth);  
                                WORD wDocumentHeight);
```

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

WORD wDocumentWidth
Select the width of the image data (unit: 0.1 mm).
Selectable range is 100 to 3000.

WORD wDocumentHeight
Select the height of the image data (unit: 0.1 mm).
Selectable range is 100 to 3000.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Set the width and height selected to documentWidth and documentHeight.

[Note]

The argument unit is 0.1mm.

[Supported printer]

TM-H6000II with Image Scanner

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3.62. BiESCNDerineCropArea

[Function]

Register CropArea or delete all the CropArea registered.

[Format]

```
int BiESCNDerineCropArea(int nHandle, BYTE bCropAreaID, WORD wStartX,
                        WORD wStartY, WORD wEndX, WORD wEndY);
```

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

BYTE bCropAreaID
Select CropAreaID to be registered. Selectable values are 1 to 255.

CROP_AREA_RESET_ALL(0): All the CropAreas registered are deleted.
 CROP_AREA_ENTIRE_IMAGE(1): "0" is set to starting points (X,Y) of CropArea. The values of documentWidth and documentHeight are set to ending points (X,Y) respectively.
 The argument other than the above: the coordinate selected is set.

WORD wStartX
Select a starting point (X) of CropArea. Selectable values are 0 to documentWidth-1 (unit: 0.1 mm)

WORD wStartY
Select a starting point (Y) of CropArea. Selectable values are 0 to documentHeight-1 (unit: 0.1 mm)

WORD wEndX
Select an ending point (X) of CropArea. Selectable values are 1 to documentWidth (unit: 0.1 mm)
 CROP_AREA_RIGHT(65535): The value of documentWidth is set to the ending X coordinate.

WORD wEndY
Select an ending point (Y) of CropArea. Selectable values are 1 to documentHeight (unit: 0.1 mm)
 CROP_AREA_BOTTOM(65535): The value of documentHeight is set to the ending Y coordinate.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Select each coordinate for CropArea and register it to the CropArea definition table of status API by using CropArea ID selected.

If the data of CropAreaID selected has already been defined, the registration is executed by overwriting.

If CROP_AREA_RESET_ALL is selected for CropAreaID, all the data defined in the CropArea definition table are deleted.

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[Note]

- ❑ The number of CropArea data that can be defined is up to 255 (limited item).
- ❑ The argument unit is 0.1 mm.
- ❑ If wStartX >= wEndX, wStartY >= wEndY, the error (ERR_PARAM) is returned.
- ❑ When BiCloseMonPrinter() is being executed, all the data defined in the CropArea definition table are deleted.

[Supported printer]

TM-H6000II with Image Scanner

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3.63.BiESCNGetMaxCropArea

[Function]

Acquire a maximum number of data of CropArea that can be registered .

[Format]

int BiESCNGetMaxCropAreas(int nHandle, LPBYTE pMaxCropAreas);

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.
LPBYTE pMaxCropAreas
Select a memory address to set a maximum number of data of CropArea that can be registered.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Supported printer]

TM-H6000II with Image Scanner

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3.64. BiESCNStoreImage

[Function]

Register a Crop image.

[Format]

```
int BiESCNStoreImage(int nHandle, DWORD dwFileIndex, LPSTR pFileID,
                    LPSTR pImageTagData, BYTE bCropAreaID);
```

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

DWORD dwFileIndex
Select FileIndex that is identification data of the Crop image to be saved.
NULL can be selected.

LPSTR pFileID
Select FileID that is identification data of the Crop image to be saved.
Selectable length of a character string is up to 64 bytes.
NULL can be selected. The symbols \ / : , ; * ? " < > and | cannot be used.

LPSTR pImageTagData
Select ImageTagData that is identification data of the Crop image to be saved.
Selectable length of a character string is up to 64 bytes.
NULL can be used. The symbols \ / : , ; * ? " < > and | cannot be used.

BYTE bCropAreaID
Select CropAreaID that has already been defined by using BiESCNDefineCropArea().
Selectable values are 1 to 255.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

- ERR_HANDLE(-60) The handle value that selects the printer is incorrect.
- ERR_NO_MEMORY(-50) Lack of memory.
- ERR_PARAM(-90) Parameter error.
- ERR_NOT_SUPPORT(-100) Not supported.
- ERR_DISK_FULL(-170) Lack of remaining memory.
- ERR_NO_IMAGE(-180) Image data is not present.
- ERR_ENTRY_OVER(-190) Number exceeding the maximum number of being able to be registered cannot be registered.
- ERR_CROPAREAID(-200) Crop area selected is not present.
- ERR_EXIST(-210) Data selected is already present.
- ERR_IMAGE_FILEOPEN(-230) Failure in opening image data file
- ERR_IMAGE_UNKNOWNFORMAT(-240) Incorrect in formatting image data file.
- ERR_IMAGE_FAILED(-250) Failure in creating image data file.
One of the following errors is returned when an error occurs because image data is not present in the WORK AREA or an error occurs during creation of the WORK AREA.
- ERR_WORKAREA_NO_MEMORY(-260) Failure in creating the WORK AREA because of lack of memory.
- ERR_WORKAREA_UNKNOWNFORMAT(-270)

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Failure in creating the WORK AREA because image data formatting is incorrect.

ERR_WORKAREA_FAILED(-280) Failure in creating the WORK AREA.

[Explanation]

Crop the CropArea from the image data saved in the WORK AREA by using CropAreaID selected and register the data to the Crop image saving table.

- ❑ The cropped data are the same format as the original image data; however, if they are JPEG format, they are compressed and saved with JPEG standard compression.
- ❑ If CropArea exceeds the range of image data of the WORK AREA, the excess area is solid white.
- ❑ The cropped image data are saved in memory or a file by using the saving method selected with BiESCNEnable().
- ❑ When saving image data in a file, a file name is created by a printer handle and identification data and is saved in the Windows temporary folder.
Example: Printer handle(nHandle)=1, fileIndex=1, fileID="AA", imageTagData="BBB",
When Image format=JPEG:
File name: C:\Windows\Temp\1ESCN1_AA_BBB.jpg
When imageTagData=NULL, the file name is as follows:
File name: C:\Windows\Temp\1ESCN1_AA_.jpg

[Note]

- ❑ Crop image data that can be saved is up to 255 (limited item). The error (ERR_ENTRY_OVER) is returned if a number exceeding the maximum number of image data being able to be registered is set.
- ❑ If NULL is selected for all identification data, the error (ERR_PARAM) is returned.
- ❑ If registered data that match all the selected identification data are already present, the error (ERR_EXIST) is returned. Capital and small letters are not distinguished for the arguments of pFileID and pImageTagData. If data that is the same except for the difference of capital and small letters is already present, the error (ERR_EXIST) is returned.
- ❑ If cropped image data cannot be registered because system memory is lacking or remaining memory on the hard disk is not enough, the error (ERR_NO_MEMORY/ERR_DISK_FULL) is returned.
- ❑ When saving in a file, if a file that has the same file name is already present, it is overwritten (the content of the original data is not guaranteed.)
- ❑ If image data reading cannot be executed, the error (ERR_NO_IMAGE) is returned.
- ❑ When executing BiCloseMonPrinter(), all the data defined in Crop image saving table are deleted.
- ❑ If the format of image data that is read from the printer is raster format (EPS_BI_SCN_RASTER(2)), the non-supported error (ERR_WORKAREA_UNKNOWNFORMAT) is returned.

[Supported printer]

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3.65. BiESCNRetrieveImage

[Function]

Acquire Crop image.

[Format]

```
int BiESCNRetrieveImage(int nHandle, DWORD dwFileIndex, LPSTR pFileID,
    LPSTR pImageTagData, LPDWORD pImageSize, LPBYTE pImageData);
```

[Argument]

- int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.
- DWORD dwFileIndex
Select FileIndex that is identification data of the Crop image to be acquired.
If NULL is selected, searching is not executed with this identification data.
- LPSTR pFileID
Select FileID that is identification data of the Crop image to be acquired.
If NULL is selected, searching is not executed with this identification data. The symbols \ / : ; * ? " < > and | cannot be used.
- LPSTR pImageTagData
Select ImageTagData that is identification data of the Crop image to be acquired.
If NULL is selected, searching is not executed with this identification data. The symbols \ / : ; * ? " < > and | cannot be used.
- LPWORD pImageSize
Select memory size that sets Crop image data. After executing this argument, the actual CROP image data size is set. If buffer capacity is not enough, necessary bytes are set; however, in the other error cases or if data is not present, nothing is set.
- LPBYTE pImageData
Select a memory address that sets Crop image data.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

- ERR_HANDLE(-60) The handle value that selects the printer is incorrect.
- ERR_PARAM(-90) Parameter error.
- ERR_NOT_SUPPORT(-100) Not supported.
- ERR_BUFFER_OVER_FLOW(-140) Lack of buffer capacity.
- ERR_NOT_FOUND(-220) Selected data is not present.
- ERR_IMAGE_FILEOPEN(-230) Failure in opening image data file
- ERR_IMAGE_FILEREAD(-290) Failure in reading image data file.

[Explanation]

Acquire Crop image data that match the selected identification data from Crop image save table of statusAPI.

[Note]

- If NULL is selected for all identification data, the error (ERR_PARAM) is returned.
- If Crop image data that match identification data selected are not present, the error (ERR_NOT_FOUND) is returned.

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- ❑ If the size of Crop image data is bigger than the memory size selected with pImageSize, the error (ERR_BUFFER_OVERFLOW) is returned.
- ❑ If Crop image data that match the selected identification data are present more than once, only the data that has been searched first is acquired.

Example:

If the Crop image data are saved as follows:

	FILEINDEX	fileID	imageTagData	DATA	
In order of registration ↓	1	"A"	NULL	...	← 1
	1	"B"	NULL	...	← 3
	1	"C"	NULL	...	← 2
	2	"A"	NULL	...	
	2	"B"	NULL	...	
	2	"C"	NULL	...	
	3	"A"	"A"	...	
	
	

- When "dwFileIndex=1,pFileID=NULL,pImageTagData=NULL" is specified, fileIndex=1,fileID="A" is acquired.
 - When "dwFileIndex=2,pFileID=NULL,pImageTagData=NULL" is specified, fileIndex=2,fileID="A" is acquired.
 - When "dwFileIndex=NULL,pFileID="B",pImageTagData=NULL" is specified, fileIndex=1,fileID="B" is acquired.
- ❑ If registered data that match all the selected identification data are already present, the error (ERR_EXIST) is returned.
 - ❑ If the method of saving Crop image is set to "Save in a file," if Crop image file fails to open, the error (ERR_IMAGE_FILEOPEN) is returned and if Crop image file cannot be read, the error (ERR_IMAGE_FILEREAD) is returned.

[Supported printer]

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3.66.BiESCNClearImage

[Function]

Clear the registered Crop image.

[Format]

```
int BiESCNClearImage(int nHandle, BYTE bFlag, DWORD dwFileIndex,
                    LPSTR pFileID, LPSTR pImageTagData);
```

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.

BYTE bFlag
Select the flag for the method of clearing.
The Crop image to be cleared can be identified by a combination of flags.

- CROP_CLEAR_ALL_IMAGE (0): Clear all the Crop image data saved.
- CROP_CLEAR_BY_FILEINDEX(1): Clear all the Crop image data that have the values selected to dwFileIndex.
- CROP_CLEAR_BY_FILEID(2): Clear all the Crop image data that have the values selected to pFileID.
- CROP_CLEAR_BY_IMAGETAGDATA(4): Clear all the Crop image data that have the values selected to pImageTagData.

Example of selecting: When CROP_CLEAR_BY_FILEINDEX + CROP_CLEAR_BY_FILEID + CROP_CLEAR_BY_IMAGETAGDATA is selected to bFlag, all the Crop image data that match all the identification data are cleared.

DWORD dwFileIndex
Select FileIndex, the identification data of the Crop image to be cleared.

LPSTR pFileID
Select FileID, the identification data of the Crop image to be cleared.
The symbols \ / : ; * ? " < > and | cannot be used.

LPSTR pImageTagData
Select ImageTagData, the identification data of the Crop image to be cleared.
The symbols \ / : ; * ? " < > and | cannot be used.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

- ERR_HANDLE(-60) The handle value that selects the printer is incorrect.
- ERR_PARAM(-90) Parameter error.
- ERR_NOT_SUPPORT(-100) Not supported.
- ERR_NOT_FOUND(-220) Selected data is not present.

[Explanation]

Clear the Crop image data that match the selected identification data from the saving table of Crop image data of statusAPI. It is possible to clear all by selecting bFlag.

[Note]

- ❑ The error (ERR_NOT_FOUND) is returned if the Crop image data that match the selected identification data are not present.

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□ When executing BiCloseMonPrinter(), all the data defined in the saving table of the Crop image are cleared.

[Supported printer]

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3.67. BiESCNGetRemainingImages

[Function]

Acquire the remaining number of data of the Crop image that can be registered.

[Format]

int BiESCNGetRemainingImages(int nHandle, LPBYTE, pRemainingImages);

[Argument]

int nHandle
Select a printer handle value. Specify a return value of BiOpenMonPrinter() to the handle value.
LPBYTE pRemainingImages
Select a memory address to set a value of the number of remaining data that can be registered.

[Return value]

SUCCESS(0) is returned if the execution is successful. If an error occurs, one of the following error codes (negative value) is returned:

ERR_HANDLE(-60)	The handle value that selects the printer is incorrect.
ERR_PARAM(-90)	Parameter error.
ERR_NOT_SUPPORT(-100)	Not supported.

[Explanation]

Acquire the number of remaining data that can be registered in the saving table of Crop image data of statusAPI.

[Supported printer]

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3.68. BiGetPrnCapability

[Function]

Acquires printer information specified by printer ID.

[Format]

int BiGetPrnCapability(int nHandle, BYTE prnID, LPBYTE pBuffer, LPBYTE pBuff)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE PrnID

Specifies a printer ID to acquire information. See the following tables.

LPBYTE pBuffer

Specifies the memory size to set the printer information. A value can be set in the range of 1 - 80.

After executing this function, the size of the actually read data is set. If the buffer capacity is not enough, the required number of bytes is set and in case of errors other than this, nothing is set.

LPBYTE pBuff

Specifies a memory address to set printer information.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value specified for the printer is incorrect.

ERR_ACCESS Reading/writing with the printer is not possible (printing in progress).

ERR_NOT_SUPPORT Not supported

ERR_OFFLINE It was opened in the offline state, so it cannot be used until the online state is recovered.

ERR_PARAM Specified interval in milliseconds is less than or equal to zero.

ERR_TIMEOUT A time out error occurred.

[Explanation]

Printer ID List

Printer ID Value set to prnID	Type of Printer ID	Acquired Data
1	Printer ID	1-byte data. Acquired data differs depending on models.
2	Type ID	1-byte data. See (A) for details.
3	Firmware version ID	1-byte data. Acquired data differs depending on firmware versions.
33	Type Information	2-byte data. See (B) for details.
66	Manufacturer	Character string data, "EPSON."
67	Printer Name	Character string data. Acquired data differs depending on models. Example "TM-T90."
68	Serial Number	Character string data. Acquired data differs depending on models. Example "DEKK000015"

69	Character type	Character string data. Acquired data differs depending on equipped fonts. ANK :None Kanji: “KANJI JAPANESE ” Simplified Chinese: “CHINA GB2312 ” Traditional Chinese: “TAIWAN BIG-5 ” Thai: “THAI 3 PASS ” Korean: “KOREA C-5601C ”
112	Settings relating to models · DIP switches · Type ID (B)	Acquired data differs depending on models. →2 or 4-byte data. See (C) for details. →1-byte data. See (D) for details.
114	Settings depending on models · Extended ROM capacity	Acquired data differs depending on models. →1-byte data. See (E) for details.
115	Settings depending on models · EU Special Type ID	Acquired data differs depending on models. →1-byte data. See (F) for details.

(A) Type ID (Printer ID=2)

Bit	Function	Value	
		0	1
0	2-byte code	Not supported	Supported
1	A/C	Without	With
2	Customer display direct connection	Without	With
	Label*1	receipt	label
	Not defined*2	-	
3	MICR*3	Without	With
	Not defined	-	
4	Not used	Fixed at 0	
5	Not defined	-	
6	Equipped with endorse printer*4	Without	With
	Not defined	-	
7	Not used	Fixed at 0	

*1 TM-L60II only

*2 TM-U230, TM-U210, TM-T90, TM-L90, TM-U295

*3 TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J7000/7100, TM-U325, TM-U950

*4 TM-H6000, TM-H6000II

(B) Type Information (Printer ID=33)*4

The first byte

Bit	Function	Value	
		0	1
0	2-byte code	Not supported	Supported
1	Autocutter	Not equipped	Equipped
2	DM-D connection	Not connected	Connected
3	MICR reader	Not equipped	Equipped
4	Image scanner	Not equipped	Equipped
5	E/P	Not equipped	Equipped
6	Fixed	--	Fixed to 1
7	Fixed	Fixed to 0	--

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The second byte

Bit	Function	Value	
		0	1
0	NV memory for saving the reading result of images	Not present	Present
1	Gray scale reading	Not capable	Capable
2 - 5	(Reserved)	(Fixed to 0)	--
6	Fixed	--	Fixed to 1
7	Fixed	Fixed to 0	--

*4 Available only for TM-H6000II.

(C) DIP switch status (Printer ID=112) *5

The first byte

Bit	Function	Value	
		0	1
0	DIP switch [SW1-1]	OFF	ON
1	DIP switch [SW1-2]	OFF	ON
2	DIP switch [SW1-3]	OFF	ON
3	DIP switch [SW1-4]	OFF	ON
4,5	(Reserved)	(Fixed to 0)	--
6	Fixed	--	(Fixed to 1)
7	Fixed	(Fixed to 0)	--

The second byte

Bit	Function	Value	
		0	1
0	DIP switch [SW1-5]	OFF	ON
1	DIP switch [SW1-6]	OFF	ON
2	DIP switch [SW1-7]	OFF	ON
3	DIP switch [SW1-8]	OFF	ON
4,5	(Reserved)	(Fixed to 0)	--
6	Fixed	--	Fixed to 1
7	Fixed	Fixed to 0	--

The third byte *6

Bit	Function	Value	
		0	1
0	DIP switch [SW2-1]	OFF	ON
1	DIP switch [SW2-2]	OFF	ON
2	DIP switch [SW2-3]	OFF	ON
3	DIP switch [SW2-4]	OFF	ON
4,5	(Reserved)	(Fixed to 0)	--
6	Fixed	--	Fixed to 1
7	Fixed	Fixed to 0	--

The fourth byte *6

Bit	Function	Value	
		0	1
0	DIP switch [SW2-5]	OFF	ON

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1 - 5	(Reserved)	(Fixed to 0)	--
6	Fixed	--	Fixed to 1
7	Fixed	Fixed to 0	--

^{*5} Available only for TM-U675, TM-H6000, TM-H6000II, TM-T90, and TM-L90.

^{*6} The third and fourth bytes are available only for TM-U675, TM-H6000, and TM-H6000II.

(D) Type ID (B) (Printer ID=112) ^{*7}

Bit	Function	Value	
		0	1
0	Monochrome / 2-color	Mono- chrome	2-color
1	Endorsement ^{*8}	Not equipped	Equipped
2 - 5	(Reserved)	(Fixed to 0)	--
6	Fixed	--	Fixed to 1
7	Fixed	Fixed to 0	--

^{*7} Available only for TM-J2100/2000, and TM-J7000/7100.

^{*8} Available only for TM-J7000/7100.

[Caution]

- There are non-supported printer IDs depending on models. If a non-supported printer ID is specified, the error ERR_TIMEOUT will be returned.

[Supported Printers]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.69. BiOpenDrawer

[Function]

Executes drawer operation.

[Format]

int BiOpenDrawer(int nHandle, BYTE drawer, BYTE pulse)

[Argument]

int nHandle

Specifies the handle value of the printer executing the function. The return value in BiOpenMonPrinter() is specified.

BYTE drawer

Specifies the drawer to be opened.

EPS_BI_DRAWER_1: Operates Drawer 1

EPS_BI_DRAWER_2: Operates Drawer 2

BYTE pulse

Specifies the interval until drawer operation.

EPS_BI_PULSE_100: Operates the drawer after 100 msec.

EPS_BI_PULSE_200: Operates the drawer after 200 msec.

EPS_BI_PULSE_300: Operates the drawer after 300 msec.

EPS_BI_PULSE_400: Operates the drawer after 400 msec.

EPS_BI_PULSE_500: Operates the drawer after 500 msec.

EPS_BI_PULSE_600: Operates the drawer after 600 msec.

EPS_BI_PULSE_700: Operates the drawer after 700 msec.

EPS_BI_PULSE_800: Operates the drawer after 800 msec.

[Return Values]

If execution is successful, 0 is returned. If an error occurs, the following error codes (negative values) are returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

ERR_NOT_SUPPORT Not supported by this printer.

ERR_OFFLINE Cannot be used (waiting to recover from offline state)

ERR_NOT_EPSON The printer is not an EPSON printer, so it cannot be used.

[Explanation]

The drawers operate even when the printer is off-line.

[Supported Printers]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U325

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3.70. BiSetMonInterval

[Function]

A status API that specifies the interval of the status information from the printer which is expressed in milliseconds.

[Format]

int BiSetMonInterval (int nHandle, WORD wNoPrnInterval, WORD wPrnInterval);

[Argument]

int nHandle

Specifies the handle value of the printer to change the interval. The BiOpenMonPrinter() return value is used in the handle value.

WORD wNoPrnInterval

Specifies the interval to get information from the printer expressed in milliseconds during non-printing.

WORD wPrnInterval

Specified the interval to get information from the printer expressed in milliseconds during printing.

[Return value]

0 is returned when changing the interval to get information from the printer is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_PARAM Specified interval in milliseconds is less than or equal to zero.

[Supported printer]

TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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3.71. BiSetMonEtherInterval

[Function]

A status API that specifies the interval of the status information from the Ethernet connection printer which is expressed in seconds.

[Format]

int BiSetMonEtherInterval (int nHandle, WORD wEtherInterval);

[Argument]

int nHandle

Specifies the handle value of the printer to change the interval. The BiOpenMonPrinter() return value is used in the handle value.

WORD wEtherInterval

Specifies the interval to get information from the Ethernet connection printer expressed in seconds.

[Return value]

0 is returned when changing the interval to get information from the printer is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_PARAM Specified interval in milliseconds is less than or equal to zero.
- ERR_NOT_SUPPORT Not supported by this printer.

[Explanation]

If this function is not called, a default value exists. It is 2 seconds.

[Caution]

When using this function and the interval mode is very long, the serial reception buffer overflows and the right status notice become unreliable.

[Supported printer]

TM-T88II, TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-U230, TM-U210A, TM-U325, TM-U950, TM-U295, TM-L60II

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3.72. BiSetDefaultEchoTime

[Function]

Sets the number of response confirmations and the length of 1 time out.

[Format]

int BiSetDefaultEchoTime(BYTE Count, WORD Timeout)

[Argument]

BYTE Count

Specifies the number of response confirmations. (0 < Count ≤ 255)

WORD Timeout

Specifies the length of 1 time out (Millisecond units (0 < Timeout ≤ 65535))

[Return value]

0 is returned when changing the interval to get information from the printer is successful. The following error codes (less than zero) are returned when an error is triggered.

ERR_PARAM Specified interval in milliseconds is less than or equal to zero.

ERR_REGISTRY Registry Error

[Explanation]

Immediately after StatusAPI is installed, the number of times is 1 time and the timer out duration is 1 second. The value set by this function is enabled when BiOpenMonPrinter () is called the next time. Also, this function is enabled only when connected through Ethernet.

[Supported printer]

TM-T88II, TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-U230, TM-U210A, TM-U325, TM-U950, TM-U295, TM-L60II

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3.73. BiSetEtherEchoTime

[Function]

Sets the number of network printer response confirmations and the length of 1 time out after opening the StatusAPI.

[Format]

int BiSetEtherEchoTime(int nHandle, BYTE Count, WORD Timeout)

[Argument]

int nHandle

Specifies the handle value of the printer to change the interval. The BiOpenMonPrinter() return value is used in the handle value.

BYTE Count

Specifies the number of response confirmations. (0 < Count ≤ 255)

WORD Timeout

Specifies the length of 1 time out (Millisecond units (0 < Timeout ≤ 65535))

[Return value]

0 is returned when changing the interval to get information from the printer is successful. The following error codes (less than zero) are returned when an error is triggered.

- ERR_HANDLE The handle value specified for the printer is incorrect.
- ERR_PARAM Specified interval in milliseconds is less than or equal to zero.
- ERR_REGISTRY Registry Error

[Explanation]

If a value is not specified by this function, the value set by BiSetDefaultEchoTime () becomes the effective value. If it has not been set by BiSetDefaultEchoTime (), the number of times is set at 1 and the time out duration becomes 1 second. This function is enabled only when connected through Ethernet.

[Supported printer]

TM-T88II, TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-U230, TM-U210A, TM-U325, TM-U950, TM-U295, TM-L60II

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3.74. BiCloseMonPrinter

[Function]

This closes the printer that is undergoing status monitoring.

[Format]

```
int BiCloseMonPrinter ( int nHandle);
```

[Argument]

int nHandle

This specifies the handle value of the printer to be closed. The value returned from BiOpenMonPrinter() is used as the handle value.

[Return Value]

If closing of the printer was successful, a 0 is returned. If there is an error, the following error code (less than zero) is returned.

ERR_HANDLE The handle value that specifies the printer is incorrect.

[Explanation]

None

[Supported printer]

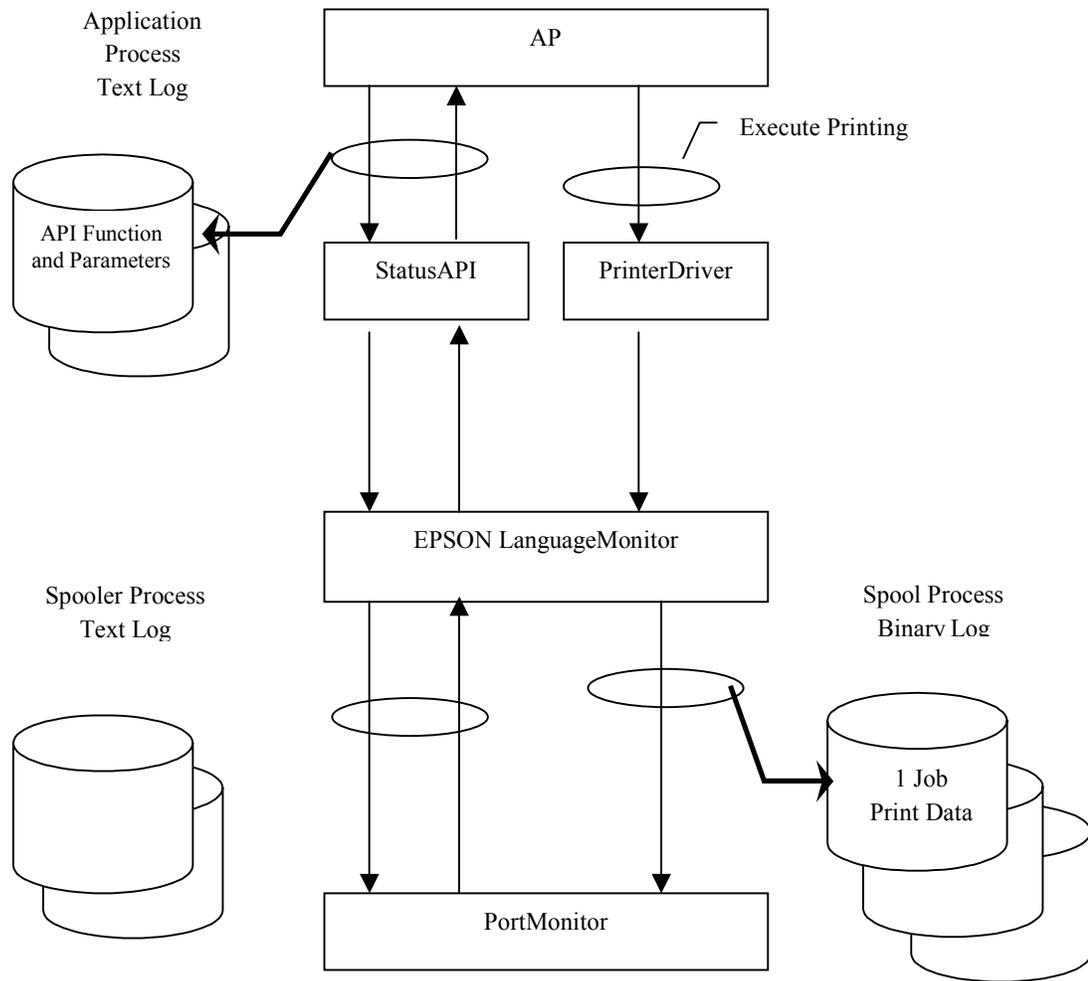
TM-T88II(R), TM-T88III, TM-T90, TM-L90, TM-H5000II, TM-U590, TM-U675, TM-H6000, TM-H6000II, TM-J8000, TM-J2000/2100, TM-J7000/7100, TM-H3000(R), TM-U230, TM-U210, TM-U325, TM-U950, TM-U295, TM-L60II

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4. Log Collection Function

4.1. Log File Outline

The trace log is collected in accordance with Registry specifications.



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4.2.Registry Details

The log is output in accordance with the contents that are already set in the Registry. When the Registry is corrected and the OS is rebooted, the new settings become valid. (The Registry may be corrected unintentionally and the OS may not start. Be sure to create a backup copy before correcting the Registry.)

Also delete existing log files in advance if you are correcting this Registry.

A tool for changing this registry is provided separately. Use it for your convenience.

- Key: HKEY_LOCAL_MACHINE\SOFTWARE\EPSON\SD APD

Name	Type	Pre-determined value	Example of Data	Explanation
LogPath	REG_SZ	\windows	C:\log	Specifies the log output destination path. The number of characters that can be specified is 240 or less. No log is output if nothing is specified, or if the directory does not exist.
LogLevel	REG_DWORD	111	1	Specifies the log output level 0x00000001: API function sequence output to EpsStmApi.log 0x00000010: Port I/O data output to EpsStmMon.log 0x00000100: Print data output to EpsStmMon.log and EpsStmMon.bin 0x00001000: Image reading data output. (EpsScnImg.bin, EpsScnImgR.bin from output) Specifications which combine the above bits are possible. If anything other than the above bits is specified, it is regarded as if 1 was specified.
MaxLogSize	REG_DWORD	5120	5120	Specifies maximum text log size (Kbyte). The specifiable range is 1 to 10240. If a value outside the above range is specified, it will be regarded as if 5120 was specified. Since this specified size is the minimum guaranteed size, the actual file size may become larger depending on the final record length.
MaxBinFile	REG_DWORD	3	3	Specifies the maximum number of binary log files. The specifiable range is 1 to 9. If a value other than a value in the above range is specified, it is regarded as if a 3 was specified. The size of this file is in accordance with 1 job of print data.
APRegKey	REG_SZ	None	HKEY_LOCAL_MACHINE\SOFTWARE\EPSON\SD APD	Specifies an application inherent registry key which shows the same setting contents as the above log settings. If nothing is specified, or if the key does not exist, the application inherent setting is disregarded, and the setting is in accordance with the HKEY_LOCAL_MACHINE\SOFTWARE\EPSON\SD setting. If each of the values preceding the specified value are incorrect, (values which are not in the specification range) and in the case that the HKEY_LOCAL_MACHINE\SOFTWARE\EPSON\SD APD setting is a value within the correct range, this value is used.

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4.3. Log File Details

File Name	Outline	Remarks
EpsStmApi.log EpsStmApi_BAK.log	<p>A variable length record text log file output by the application process.</p> <p>Output only if 0x00000001: API Function Sequence is specified in LogLevel, and the contents of the API function and parameters, and the status information from before and after the callback call, respectively, are output in single record units.</p> <p>At the point when the file specified in MaxLogSize is exceeded, the current log file name is renamed to "EpsStmApi_BAK.log," then output resumes from the header of "EpsStmApi.log" with the subsequent record cleared.</p>	<p>[Source] EpsStmApi.dll EpsCom.dll EpsLoif.dll EpsNetif.dll [Destination] LogPath specification directory</p>
EpsStmMon.log EpsStmMon_BAK.log	<p>A variable length record text log file output by the spooler process.</p> <p>Output is 0x00000010: Port I/O Data is specified or 0x00000100: Print Data is specified in LogLevel, and StartDoc/EndDoc/ReadPort and accompanying data as well as WritePort and accompanying data, respectively, are output in single record units.</p> <p>At the point when the file specified in MaxLogSize is exceeded, the current log file name is renamed to "EpsStmMon_BAK.log," then output resumes from the header of "EpsStmMon.log" with the subsequent record cleared.</p>	<p>[Source] Tmstmmon.dll [Destination] LogPath specification directory</p>
EpsStmMon.bin EpsStmMon_BAK*.bin *:1 to 8(MaxBiFile-1)	<p>Binary file output by the spooler process.</p> <p>Output only if 0x00000100:Print Data is specified in LogLevel. Outputs the print data for 1 job (WritePort data from StratDoc to EndDoc) in binary format.</p> <p>If previous print data files exist, they are renamed with backup file names up to the upper limit for the number of files specified in MaxBinFile.</p> <p>When the number of backup files reaches the upper limit specified in MaxBinFile, then for subsequent files, the oldest backup file is treated as the object of the next backup file. (The latest file is always EpsStmMon.bin)</p> <p>The file size is indefinite (it depends on the print data).</p>	<p>[Source] Tmstmmon.dll [Destination] LogPath specification directory</p>
EpsScnImg.bin EpsScnImgR.bin	<p>Binary file that is output in the application process.</p> <p>0x00001000 in the LogLevel: Output if image reading data are specified. Outputs image data after calling the BiSCNReadImage function to EpsScnImg.bin in binary format. After that, it outputs retransmission image data to EpsScnImgR.bin in binary format after calling the BiSCNRetransmissionImage function.</p> <p>EpsScnImg.bin/EpsScnImgR.bin are both overwritten as a new log each time an image is scanned.</p>	<p>[Source] EpsStmApi.dll [Destination] LogPath specification directory</p>

- Variable Length Record Text Log (EpsStmApi.log/EpsStmMon.log) Format

For 1 Variable length record

32	Indefinite	2
Common Header	Log Data	CRLF
:	:	:
Common Header	Log Data	CRLF

Common Header

18	1	3	1	8	1
Output Date and Time "YYYYMMDDhhmmss.sss"	,	Type [Application Process Log] "FUI": Calls a function "FUO": Returns a function "CBI": Calls a callback "CBO": Returns a callback [Spool Process Log] "WDI": Write command call "WDO": Write command return "WPI": Write print data call "WPO": Write print data return "RDI": Read data call "RDO": Read data return "STD": Start sending print data (StartDoc) "EDD": End sending print data (EndDoc) "RPN": Reset printer	,	Thread ID "00000000" to "FFFFFFF"	,

Log Data

Indefinite	1
<p><1> If the type is "FUI", "CBI" "Function name, parameter value 1, ..., parameter value n" If there are multiple parameters they are continued in the order in which they are specified, using ',' as a separator. For structural parameters, break down the members and let 1 parameter = 1 member. Output parameter values in decimal character string format or in hexadecimal character string format. Output if 0x00000001 is specified in the LogLevel.</p> <p><2> If the type is "FUO", "CBO" "Function name, parameter value 1, ..., parameter value n, <Return value>" If there are multiple parameters they are continued in the order in which they are specified, using ',' as a separator. For structural parameters, break down the members and let 1 parameter = 1 member. Output parameter values in decimal character string format or in hexadecimal character string format. The values shown within the final <> is the function's return value. The return value is output in hexadecimal character string format. Output if 0x00000001 is specified in the LogLevel.</p> <p><3> If the type is "WDI" "Write request size, write data" The output format when command data are sent from the API. Write request size: The write request size to the port monitor is output in hexadecimal character string format. Write data: Write data to the port monitor are output in hexadecimal character string format. Output when 0x00000010 or 0x00000100 is specified in the LogLevel.</p>	,

<p><4> If the type is “WDO”</p> <p>“Return size”</p> <p>Format output when returned from the port monitor.</p> <p>Return Size: The size of the data returned from the port monitor is output in hexadecimal character string format.</p> <p>Output if 0x00000010 or 0x00000100 is specified in LogLevel.</p> <p><5> If the type is “WPI”</p> <p>”Write request size</p> <p>Format that is output when sending print data from the printer driver.</p> <p>Write request size: The write request size to the port monitor is output in hexadecimal character string format.</p> <p>Output if 0x00000010 or 0x00000100 is specified in LogLevel.</p> <p><6> If the type is “WPO”</p> <p>“Return Size”</p> <p>Format that is output when returning from the port monitor</p> <p>Return Size: The written size of data returned from the port monitor is output in hexadecimal character string format.</p> <p>Output if 0x00000010 or 0x00000100 is specified in LogLevel.</p> <p><7> If the type is “RDI”</p> <p>“Read Request Size”</p> <p>Format that is output when receiving data from the API.</p> <p>Read Request Size: The read request size to the port monitor is output in hexadecimal character string format.</p> <p>Output if 0x00000010 or 0x00000100 is specified in LogLevel.</p> <p><8> If the type is “RDO”</p> <p>“Return size, read data”</p> <p>Format that is output when data are returned from the port monitor.</p> <p>Return Size: The read size of data returned from port monitor is output in hexadecimal character string format.</p> <p>Read Data: Read data from the port monitor are output in hexadecimal character string format.</p> <p>Output if 0x00000010 or 0x00000100 is specified in LogLevel.</p> <p><5> If the type is “STD” ,“EDD” or “RPN”</p> <p>None.</p> <p>Output if 0x00000010 or 0x00000100 is specified in LogLevel.</p>
--

- Variable length binary log (EpsStmMon.bin) format
The latest print data are treated as 1 job of binary data.
Output if 0x00000100 is specified in the LogLevel.
- Variable length binary log (EpsScnImg.bin/EpsScnImgR.bin) format
Converts the latest image reading data and retransmission image data to binary data.
Image data change to the format specified by the BiSCNSetImageFormat function.
Output if 0x00001000 is specified in the LogLevel

<1> Shows the log output results in the case that the maintenance counter (number of paper feed lines) is acquired.

Reference: int BiGetCounter(int nHandle, WORD readno, LPDWORD eradcounter)

[EpsStmApi.log]

“20010409130000.000,FUI,000000FF,BiGetCounter,00000001,0014,00000000CRLF”

“20010409130001.000,FUO,000000FF,BiGetCounter,00000001,0014,000007D0,<00000000>CRLF”

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The 1st record shows that the BiGetCounter function was called and that the contents of the 3 parameters are nHandle=1 (0x00000001), readno=20 (0x0014), *readcounter=0 (0x00000000).

The 2nd record shows that the BiGetCounter function was returned, that the contents of the 3 parameters are nHandle=1 (0x00000001), readno=20 (0x0014), *readcounter=2000 (0x000007D0) and that the function's return value = 0 (SUCCESS).

[EpsStmMon.log]

```

“20010409130000.200,WDI,00000055,6,1D 67 32 00 14 00CRLF”...<1>
“20010409130000.210,WDO,00000055,6CRLF” ...<2>
“20010409130000.220,RDI,00000055,1CRLF” ...<3>
“20010409130000.230,RDO,00000055,1,5FCRLF” ...<4>
“20010409130000.240,RDI,00000055,1CRLF”
“20010409130000.250,RDO,00000055,1,32CRLF”
“20010409130000.260,RDI,00000055,1CRLF”
“20010409130000.270,RDO,00000055,1,30CRLF”
“20010409130000.280,RDI,00000055,1CRLF”
“20010409130000.290,RDO,00000055,1,30CRLF”
“20010409130000.300,RDI,00000055,1CRLF”
“20010409130000.310,RDO,00000055,1,30CRLF”
“20010409130000.320,RDI,00000055,1CRLF”
“20010409130000.330,RDO,00000055,1,00CRLF”
“20010409130000.340,RDI,00000055,1CRLF”
“20010409130000.350,RDO,00000055,0,00CRLF”...<5>

```

The 1st record <1> shows that writing of 6 bytes of data (1D6732001400) to the port monitor was required.

The 2nd record <2> shows that the writing of 6 bytes of data is completed, from the port monitor.

The 3rd record <3> shows that reading of 1 byte of data to the port monitor was required.

The 4th record <4> shows that reading of 1 byte of data from the port monitor was completed, and that that data was (5F) .

Thereafter, reading of data one byte at a time is recorded, then at <5>, the status becomes No Data (reading data size: 0).

<2> Shows the log output results if BiRestPrinter (printer reset) is executed during printing.

Reference: int BiRestPrinter(int nHandle)

[EpsStmApi.log]

```

“20010409130010.000,FUI,000000FF,BiResetPrinter,00000001CRLF”
“20010409130011.000,FUO,000000FF,BiResetPrinter,00000001,<00000000>CRLF”

```

The 1st record shows that the BiResetPrinter function was called and that the content of 1 parameter is nHandle=1 (0x00000001).

The 2nd record shows that the BiResetPrinter function was returned, that the content of 1 parameter is nHandle=1 (0x00000001) and that the function's return value = 0 (SUCCESS).

[EpsStmMon.log]

```

“20010409130000.000,STD,00000055CRLF”...<1>
“20010409130000.010,WPI,00000055,1000CRLF”...<2>
“20010409130000.020,WPO,00000055,1000CRLF”...<3>
:
“20010409130009.990,WPI,00000055,1000CRLF”
“20010409130010.000,WPO,00000055,1000CRLF”

```

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“20010409130010.010,RPN,00000055CRLF” ...<4>
 “20010409130010.300,RDI,00000055,1CRLF” ...<5>
 “20010409130010.310,RDO,00000055,1,xxCRLF” ...<6>
 “20010409130010.320,RDI,00000055,1CRLF”
 “20010409130010.330,RDO,00000055,1,xxCRLF”
 “20010409130010.340,RDI,00000055,1CRLF”
 “20010409130010.350,RDO,00000055,1,xxCRLF”
 “20010409130010.360,RDI,00000055,1CRLF”
 “20010409130010.370,RDO,00000055,1,xxCRLF”
 “20010409130010.380,RDI,00000055,1CRLF”
 “20010409130010.390,RDO,00000055,0,00CRLF” ...<7>
 “20010409130010.400,EDD,00000055CRLF” ...<8>

<1> shows that a print start request was sent to the port monitor.

<2> shows that 4096 bytes of print data were written to the port monitor and that the print data were written to “EpsStmMon.bin.”

<3> shows writing of 4096 bytes in response to the write request to the port monitor was completed.

Thereafter, writing of print data is repeated.

<4> shows that there was a printer reset request from the API.

<5> shows 1 byte of a status reception request to the port monitor.

<6> shows that 1 byte of data xx was received from the port monitor.

Thereafter, status reception is repeated.

<7> shows a return from the port monitor indicating that there are no reception data.

<8> shows that a print end request was sent to the port monitor.

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5. Notes

- 1) There are certain computers with which printing will not be performed normally and the status API cannot be used when the parallel operations mode is set to the ECP mode. In this event, cancel the ECP mode.
- 2) When using the printer driver for EPSON Terminal Printers (Page printer, ink-jet printer and others) and TM printer driver at the same time, the installation and uninstallation goes by the following order:

[Installation]

1. EPSON Terminal Printer driver
2. TM printer driver

[Uninstallation]

1. TM printer driver
2. EPSON Terminal Printer driver

Furthermore, after installation pay attention to the following:

- When installing the EPSON Terminal Printer driver after the TM printer driver is installed, uninstall first the TM printer driver.
 - When EPSON Printer Port is unwanted, make BIOS LPT setting other than ECP mode.
 - When uninstalling the EPSON Printer Port after the TM printer driver is installed, uninstall first the TM printer driver.
- 3) During status API monitoring, macro execution for DM-D is not working correctly.
 - 4) When printer is connected to an Ethernet and is reset (e.g. OFF to ON), the printer is unusable for 20 seconds. Therefore, error is returned when using API within this duration.
 - 5) Status API can only monitor printers that are local connected. If the printer is connected over Ethernet I/F, it cannot monitor the shared printer via print server.
 - 6) When using MICR in a high speed interface connection, set the handshake to Xon/Xoff. DTR/DSR cannot use MICR functions.
 - 7) TM printers other than the following printer must be set to "Receive buffer full" for the BUSY condition with the DIP switch. However, the following printer can be set automatically with BiOpenMonPrinter:
TM-T90, TM-L90, TM-J2000/2100, TM-J7000/7100
 - 8) It is set that a log is output with StatusAPI installed. If outputting a log is not necessary, change a folder name so that LogPath does not exist or change LogLevel to 0.
 - 9) If printing is executed under the following conditions, the whole print job may not be completed normally. To recover from this, click the "Details" tab in the printer's "Properties" dialog, and change the "Timeout settings Transmission retry:" to 3sec.
When using Windows 95/98 and
When selecting ECP mode and
When using the low speed printer such as Slip printer.
 - 10) A status callback doesn't occur when the following conditions exist.
 - If multiple status information is received simultaneously, the latest status only is notified. Simultaneous is the case where the status changes within an interval of approximately 400 msec or less.
 - In some cases, the status that is received during callback processing is not notified. As a criterion, this may occur in cases where a callback processing time of approximately 800 msec or longer is required.
 - If the receiving buffer is specified in BiDirectIOEx (if ASB suppression is not specified), the altered Status is not sent back during execution of BiDirectIO or BiDirectIOEx. BiDirectIO or BiDirectIOEx read the Status, so processing of the receiving data should be done by the calling side.
 - If BiDirectIO and BiDirectIOEx (if ASB suppression is specified) do not specify the receiving buffer, the altered Status is not sent back during command execution and for approximately 1.5 sec. after BiDirectIO or BiDirectIOEx is executed.
 - After the above conditions exist, changes in the Status cannot be detected just as in the case when BiGetStatus is used, so the Status acquired last is sent back.
 - 11) When an Ethernet connection is used, the following functions related to Check Scanner are not supported.
BiSCNSetImageQuality, BiSCNSetImageFormat, BiSCNSetScanArea, BiSCNPreScan, BiSCNGetImageQuality, BiSCNGetImageFormat, BiSCNGetScanArea, BiSCNSetReadBackFunction, BiSCNSetReadBackWnd, BiSCNCancelReadBack, BiSCNReadImage, BiSCNRetransmissionImage, BiSCNGetClumpStatus, BiSCNClumpPaper, BiSCNSetCroppingArea, BiSCNGetCroppingArea, BiSCNDeleteCroppingArea
 - 12) If printer status is checked by BiGetStatus continuously, it is recommended to have an appropriate Sleep setting so that the resource is not occupied.

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- 13) When using the TM-H6000II with Image Scanner with a RS-232C by hardware control (CTS/RTS), be sure that the PC does not become busy. If there is a possibility that the PC becomes busy, use an equalized cable of RTS on the PC and DSR on the TM-H6000II.
- 14) All the functions, including the extended functions, do not operate correctly with a PC with a USB host controller manufactured by NEC or an extended board with a USB host controller manufactured by NEC; therefore, EPSON does not guarantee the operation with a PC or extended board with a USB host controller manufactured by NEC. With other PCs or extended boards with a USB host controller, the functions should operate correctly; however, EPSON cannot guarantee the operation with all PCs or all extended boards with a USB host controller.
- 15) In Windows2000 and WindowsXp, if the printers that are listed below have ESD_LPT specified as the connection port, the BiOpenMonPrinter may fail or the Status of the printer may not be obtainable. If either of these situations occur, changing the connection port to LPT shall allow for normal operation to resume.
 . TM-L60II • TM-U295 • TM-U950 parallel port.

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Appendix A Operation of each Function According to Printer Status

Function Name	Printer Online Status	Printer Offline Status	Printer Power Off, Cable Disconnected Status	API Open Status Offline (Period during which the API is opened offline, until the Online status is recovered)	Remarks
BiOpenMonPrinter	The API is normally Open if the parameters are normal.	In the Offline Open status until the printer recovers Online status.	Ends with No Target.	After Online recovery is confirmed, API should be executed or printing should be executed.	The Status API cannot be used from a thread other than a thread that calls this function.
BiGetStatus BiGetInkStatus BiMICRGetStatus	Status notified	←	←	←	
BiSetStatusBack Function BiSetStatusBackWnd and other functions which register the callback function.	Callback registration is completed	←	←	←	The Status API cannot be used from inside a registered function.
BiCancelStatusBack and other functions which cancel registration of the callback function.	Callback cancellation is completed.	←	←	←	
BiDirectIO BiDirectIOEx	The command is executed normally.	If Readlen is not specified, the function ends normally, but the commands ESC, GS and FS are executed when Online recovery takes place. If Readlen is specified, ERR_TIMEOUT is made a return value and the function ends.	ERR_ACCESS is made a return value, then the function ends.	ERR_OFFLINE is made a return value, then the function ends.	ERR_ACCESS is made a return value during sending of print data from the driver, then the function ends.
BiResetPrinter	Reset is executed normally. It is judged from the Status	If the Offline cause is not removed, the reset is completed, but the	The function ends normally, but reset is not executed.	If the Offline cause is not removed, the reset is completed,	After reset is executed, the Status is transferred as shown

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	that Online recovery occurred and reset was completed.	Offline state remains as is.	It remains in the No Response state.	but the Offline state remains as is.	below. No Response→ Without cause Offline→Online If there is an error, No Response→ Without cause Offline→With cause Offline The intermediate Status may not be sent back depending on the conditions.
BiGetOfflineCode	No cause is sent back.	The function can get data normally. The latest Offline cause is sent back.	The function ends normally, but the Offline cause is not sent back.	The function ends normally, but the Offline cause is not sent back.	The cause cannot be acquired if it is not done approximately 500 msec after reset.
BiGetCounter	The counter value is acquired normally.	ERR_TIMEOUT is made a return value, then the function ends.	ERR_ACCESS is made a return value, then the function ends.	ERR_OFFLINE is made a return value, then the function ends.	ERR_ACCESS is made a return value during sending of print data from the driver, then the function ends.
BiResetCounter	The counter value is reset normally.		ERR_ACCESS is made a return value, then the function ends.	ERR_OFFLINE is made a return value, then the function ends.	ERR_ACCESS is made a return value during sending of print data from the driver, then the function ends.
BiGetType	The ID is acquired normally.	ERR_TIMEOUT is made a return value, then the function ends.	ERR_ACCESS is made a return value, then the function ends.	ERR_OFFLINE is made a return value, then the function ends.	ERR_ACCESS is made a return value during sending of print data from the driver, then the function ends.
BiMICRSelect DataHandling BiMICRReadCheck BiMICRCancelWait CheckInsertion BiMICRRetransmissionCheckData BiMICREjectCheck BiMICRLoadcheck BiMICRCleaning	Set normally.	The function ends normally, but the parameter is not set. It is reset when Online recovery takes place.	The function ends normally, but the parameter is not set	ERR_OFFLINE is made a return value, then the function ends.	

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BiSCNSetImageQuality BiSCNSetImage Format BiSCNSetScanArea BiSCNReadImage BiSCNClumpPaper BiSCNSetCropping Area BiSCNDelete CroppingArea	Set normally.	The function ends normally, but the parameter is not set. It is reset when Online recovery takes place.	The function ends normally, but the parameter is not set	ERR_OFFLINE is made a return value, then the function ends.	
BiSCNPreScan	Set normally.	ERR_TIMEOUT is made a return value, then the function ends.	ERR_ACCESS is made a return value, then the function ends.	ERR_OFFLINE is made a return value, then the function ends.	ERR_ACCESS is made a return value during sending of print data from the driver, then the function ends.
BiSCNGetImageQuality BiSCNGetImageFormat BiSCNGetScanArea BiSCNRetransmission Image BiSCNGetClump Status BiSCNGetCropping Area	Set normally.	ERR_TIMEOUT is made a return value, then the function ends.	ERR_ACCESS is made a return value, then the function ends.	ERR_OFFLINE is made a return value, then the function ends.	ERR_ACCESS is made a return value during sending of print data from the driver, then the function ends.
BiOpenDrawer	The drawer opens normally.	←	The function ends normally, but the drawer does not pen	ERR_OFFLINE is made a return value, then the function ends.	
BiSetMonInterval BiSetDefaultEchoTime BiSetEtherEchoTime	Set normally.	←	←	←	
BiCloseMonPrinter	Ends normally.	←	←	←	

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Appendix B End of Processing Judgment Method after Each Function is Executed

Function Name	Normal End	Abnormal End	Remark
BiOpenMonPrinter	Return value > 0	Return value < 0	
BiGetStatus BiGetInkStatus BiMICRGetStatus	Return value = 0	Return value < 0	
BiSetStatusBack Function BiSetStatusBackWnd and other functions which register the callback function.	Return value = 0	Return value < 0	
BiCancelStatusBack and other functions which cancel registration of the callback function	Return value = 0	Return value < 0	
BiDirectIO BiDirectIOEx (If Readlen is specified)	Return value = 0	Return value < 0	If a command to return a response is sent, specify ReadLen. (except for a presenter command)
BiDirectIO BiDirectIOEx (If Readlen is not specified)	Return value = 0 and Judgment is made by the printer's status, such as paper position.	Return value < 0 or Judgment is made by the printer's status, such as paper position.	
BiResetPrinter	Return value = 0 and Finally, the printer goes Online. (No Response → without cause Offline → Online)	Return value < 0 or Finally, the printer does not go Online. (No Response → Without cause Offline → With cause Offline)	
BiGetOfflineCode	Return value = 0	Return value < 0	
BiGetCounter	Return value = 0	Return value < 0	It is preferable for the Status just before execution to be confirmed to be Online and that there be a Call.
BiResetCounter	Return value = 0 and	Return value < 0 or	It is preferable for the Status just before

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	the specified counter acquired by BiGetCounter is 0.	the specified counter acquired by BiGetCounter is not 0.	execution to be confirmed to be Online and that there be a Call.
BiGetType	Return value = 0	Return value < 0	It is preferable for the Status just before execution to be confirmed to be Online and that there be a Call.
BiMICRSelect DataHandling BiMICRReadCheck BiMICRCancelWait CheckInsertion BiMICRRetrans missionCheckData BiMICREjectCheck BiMICRLoadcheck BiMICRCleaning	Return value = 0	Return value < 0 or Judgment is made by the printer's status, such as paper position.	It is preferable for the Status just before execution to be confirmed to be Online and that there be a Call.
BiSCNSetImageQuality BiSCNSetImageFormat BiSCNSetScanArea BiSCNReadImage BiSCNClumpPaper BiSCNSetCroppingArea BiSCNDeleteCropping Area	Return value = 0	Return value < 0 or Judgment is made by the printer's status, such as paper position.	It is preferable for the Status just before execution to be confirmed to be Online and that there be a Call.
BiSCNGetImageQuality BiSCNGetImageFormat BiSCNGetScanArea BiSCNRetransmission Image BiSCNGetClumpStatus BiSCNGetCroppingArea	Return value = 0	Return value < 0	It is preferable for the Status just before execution to be confirmed to be Online and that there be a Call.
BiOpenDrawer	Return value = 0	Return value is < 0 or judgment is made by the printer's status, such as the drawer open or closed state.	

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BiSetMonInterval BiSetDefaultEchoTime BiSetEtherEchoTime	Return value = 0	Return value < 0	
BiCloseMonPrinter	Return value = 0	Return value < 0	

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