

Advanced Printer Driver 6

Status API Manual

Before Use

Describes the information that users need to know before using this product.

APD6 Overview

Provides an overview of APD6.

Using Status API

Explains how to establish a development environment, get ASB statuses, and how to handle the ASB statuses.

Reference for Win32

Describes information of Status API used in Win32 environment.

Reference for .NET

Describes information of Status API used in .NET environment.



Before Use

This chapter describes the information that users need to know before using the EPSON Advanced Printer Driver 6 ("APD6" below).

APD6 Packages

APD6 consists of the following packages.

- **Printer driver package**
These packages are prepared for each TM printer model. Installing the printer driver enables easy printing from software applications. The following manuals are provided.
 - **Install Manual**
This describes APD6 installation, TM printer registration, and how to automatically install the printer driver.
 - **Printer Manual**
This describes the APD6 setting procedures and functions.
 - **Printer Specification**
This describes the printer driver specifications for each TM printer model.
- **Status API package**
This is a special package in APD6 for all TM printers. This must be installed when developing applications that control TM printers using Status API and when APD6 coexists with other Epson drivers. The following manuals are provided.
 - **Status API Manual (this manual)**
This describes how to use Status API to obtain the status of a TM printer from a software application. For the specifications of the APIs available for each TM printer model, see the "Printer Specification" manual contained in the printer driver package.
- **Sample program package**
This is a special package in APD6 for all TM printers. This contains sample programs and sample code for developing applications for printing and control of TM printers. Although no manual is provided, it contains HTML files that describe the programs.

Download

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

www.epson.com/support/

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

www.epson-biz.com/

Meaning of Symbols

**NOTE**

Indicates supplementary explanations and information you should know.

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APD6 Overview

APD6 Features

The EPSON Advanced Printer Driver Version 6 ("APD6" below) is a Windows printer driver for Epson TM printers. By installing the Status API package, you can utilize the following functions.

- You can share your TM printer with applications that run other Epson drivers (such as OPOS). Exclusive control of the applications is automatically performed by the driver, which is why the applications do not need to carry it out.
- The TM printer Status API allows you to acquire information about the TM printer model from a particular application, control the TM printer, and acquire information about the status of the TM printer.
- You can also use the TM printer's device fonts to print in .NET environment applications.

Glossary

Term	Explanation
ASB Status	Auto Status Back: This is a function of the TM printer. This is a status automatically sent from the printer when the printer status changes (opening or closing the cover, out of paper, print completed, etc.).

Operating Environment

See "Install Manual" for the APD6.

Software Requiring Installation of Status API Package

Install the Status API package in the following cases.

- When using the Status API to develop an application that controls the TM printer
- When using one of the following Epson software applications with APD6 on the same computer

Software name	Compatible version
EPSON Advanced Printer Driver 4	Ver.4.56 or later
EPSON Advanced Printer Driver 5	Ver.5.09 or later
EPSON OPOS ADK	Ver.2.68 or later
EPSON OPOS ADK for .NET	Ver.1.11.20 or later
EPSON JavaPOS ADK	Ver.1.11.20 or later
EpsonNet SimpleViewer	Ver.2.30 or later
TM Virtual Port Driver	Ver7.10a or later

Supported TM Printers

These are the TM printers supported by the currently installed APD6. For details, see "TM Printer Specification" included in the currently installed printer driver package.

Development Language

Win32

- Visual C++

.NET

- Visual Basic .NET
- Visual C#

Installing the Status API Package

Follow the procedure described below to install the Status API package.

- 1** Double-click the Status API package installer (APD6_StatusAPI_x.exe) to start the installation process.
- 2** Follow the on-screen instructions to proceed with the installation process.
- 3** If the Status API package has been installed after installation of the printer driver package and registration of the printer, execute printing in order to switch the communication port.

This completes the installation process for the Status API package.

Uninstalling the Package

See "Install Manual" for instructions on how to uninstall the Status API. A Status API package is never uninstalled individually.

Using Status API

In this chapter, the application development environment architecture using Status API and programming method are explained.

Architecture of the Development Environment

The architecture of the application development environment using Status API differs according to the development tool.

Visual C++: [page 9](#)

Visual Basic .NET: [page 10](#)

Visual C#: [page 11](#)



NOTE

This describes the methods for Visual Studio 2017.

Visual C++

The following are examples of the development environment architecture using C++.

- 1 Start Microsoft Visual C++ to open Solution Explorer.**
- 2 Copy EpsStmApi.h from the folder installed with APD and paste the file into the operating folder used when developing applications (folder created by the project).**
 Save as file
 32 bit OS: "C:\Programfiles\Epson\Advanced Printer Tool\StatusAPI"
 64 bit OS: "C:\Program Files(x86)\Epson\Advanced Printer Tool\StatusAPI"
- 3 Open the Source File. Define EpsStmApi.h using the #include directive.**
 Definition Methods: **`#include "EpsStmApi.h"`**
- 4 The Visual C++ environment is ready for developing an application using Status API.**

Visual Basic .NET

The following is an example for creating the development environment using Visual Basic .NET.

- 1 Start Microsoft Visual Basic .NET to open Solution Explorer.
- 2 Right-click on [References] in Solution Explorer, and select [Add References].



NOTE

If the [References] item does not appear, click the [Show All Files] icon in Solution Explorer.

- 3 The “Add References” screen appears. Click the [Browse] tab.
- 4 Specify followings in [Look in].
 32 bit OS: "C:\Programfiles\Epson\Advanced Printer Tool\StatusAPI"
 64 bit OS: "C:\Program Files(x86)\Epson\Advanced Printer Tool\StatusAPI"
- 5 Type the file name “EpsonStatusAPI.dll”, and click [OK].
- 6 Select [References] - [EpsonStatusAPI] in Solution Explorer, and select “False” for [Specific Version] in Properties.
- 7 Using the Imports statement at the very start of the source code, describe as follows.
Imports com.epson.pos.driver
- 8 The Visual Basic .NET environment is ready for developing an application using Status API.

Visual C#

The following is an example for creating the development environment using Visual C#.

- 1 Start Microsoft Visual C# to open Solution Explorer.
- 2 Right-click on [References] in Solution Explorer, and select [Add References].



NOTE

If the [References] item does not appear, click the [Show All Files] icon in Solution Explorer.

- 3 The "Add References" screen appears. Click the [Browse] tab.
- 4 Specify followings in [Look in].
 32 bit OS: "C:\Programfiles\Epson\Advanced Printer Tool\StatusAPI"
 64 bit OS: "C:\Program Files(x86)\Epson\Advanced Printer Tool\StatusAPI"
- 5 Type the file name "EpsonStatusAPI.dll", and click [OK].
- 6 Select [References] - [EpsonStatusAPI] in Solution Explorer, and select "False" for [Specific Version] in Properties.
- 7 Using the using keyword at the very start of the source code, describe as follows.
using com.epson.pos.driver
- 8 The Visual C# environment is ready for developing an application using Status API.

Types of Status API Functions

Status API has the following functions. Refer to ["Reference for Win32" on page 19](#) for details regarding the functions.



NOTE

The supported functions differ according to the printer model.
Refer to "Printer Specification" for details regarding each model.

Application	Function	Description
Starting/Closing Status API	BiOpenMonPrinter	Calls the specified printer to use Status API.
	BiCloseMonPrinter	Closes Status API.
Occupying TM printer	BiLockPrinter	Occupies TM printer. While occupied, the printer accepts no API from other processes.
	BiUnlockPrinter	Cancels BiLockPrinter.
Acquiring ASB Status	BiGetStatus	Acquires the ASB status when required by the application.
	BiSetStatusBackFunction	Provides notification regarding the call of the callback function notifying the application when the ASB status of Status API changes.
	BiSetStatusBackFunctionEx	Provides notification regarding the call of the callback function notifying the application when the ASB status of Status API changes. Also acquires the port number.
	BiCancelStatusBack	Cancels the auto status notification function. This function is applicable to BiSetStatusBackFunction and BiSetStatusBackFunctionEx.
Acquiring the printer information	BiGetType	Acquires the TM printer information, such as presence of BM sensor and customer display connection.
	BiGetPrnCapability	Acquires printer information, i.e. firmware, etc.
Drawer control	BiOpenDrawer	Opens the drawer.
Printer reset	BiResetPrinter	Resets the parallel / USB / ethernet interface printers. Cannot reset serial interface printers.
	BiForceResetPrinter	Can reset also the TM printers occupied with BiLockPrinter.
Power off preprocess	BiPowerOff	Sets power-off or standby mode. The following processes are performed: <ul style="list-style-type: none"> • Sets the interface to BUSY. • Sets the printer to standby mode.
Sends the ESC/POS command	BiDirectIOEx	Can send and receive the ESC/POS commands. Does not add the ASB suppress command.

Programming Flow for ASB Status Acquisition

In this section, the obtaining method of ASB status using Status API is explained using the sequence chart.



NOTE

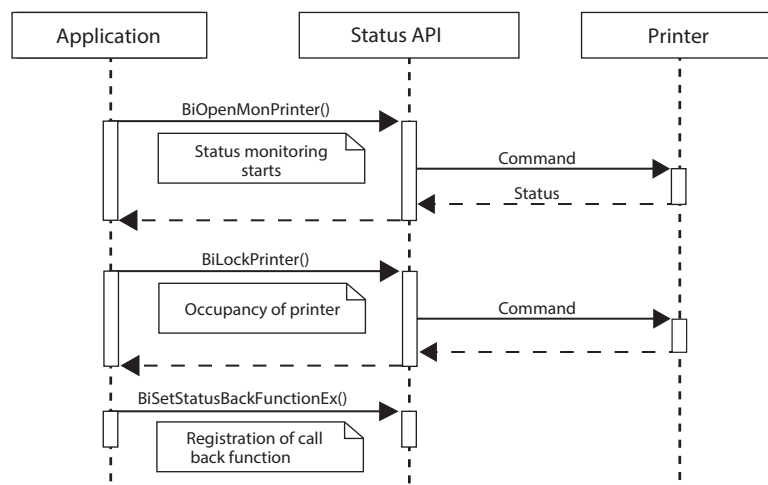
The DLL load is not included in the sequence chart.

When Status API (BiOpenMonPrinter) is started, the TM printer automatically sends ASB status as the status changes to Status API. Following API can be used to obtain ASB status that was sent.

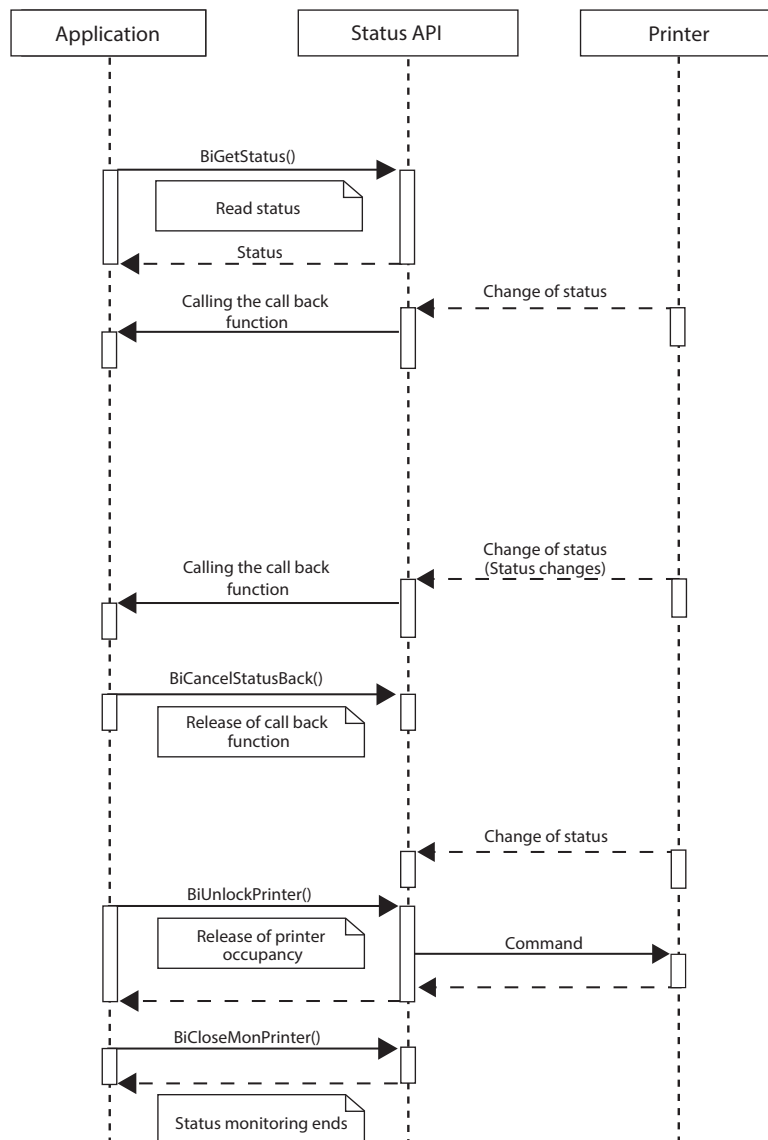
Status API	Description
BiGetStatus	API that obtains ASB status when user (or application) needs.
BiSetStatusBackFunction	API that calls the call back function to send the latest ASB status to the application.
BiSetStatusBackFunctionEx	API that calls the call back function to send the latest ASB status to the application. Called back printer port is also reported.

Visual C++

(1/2)



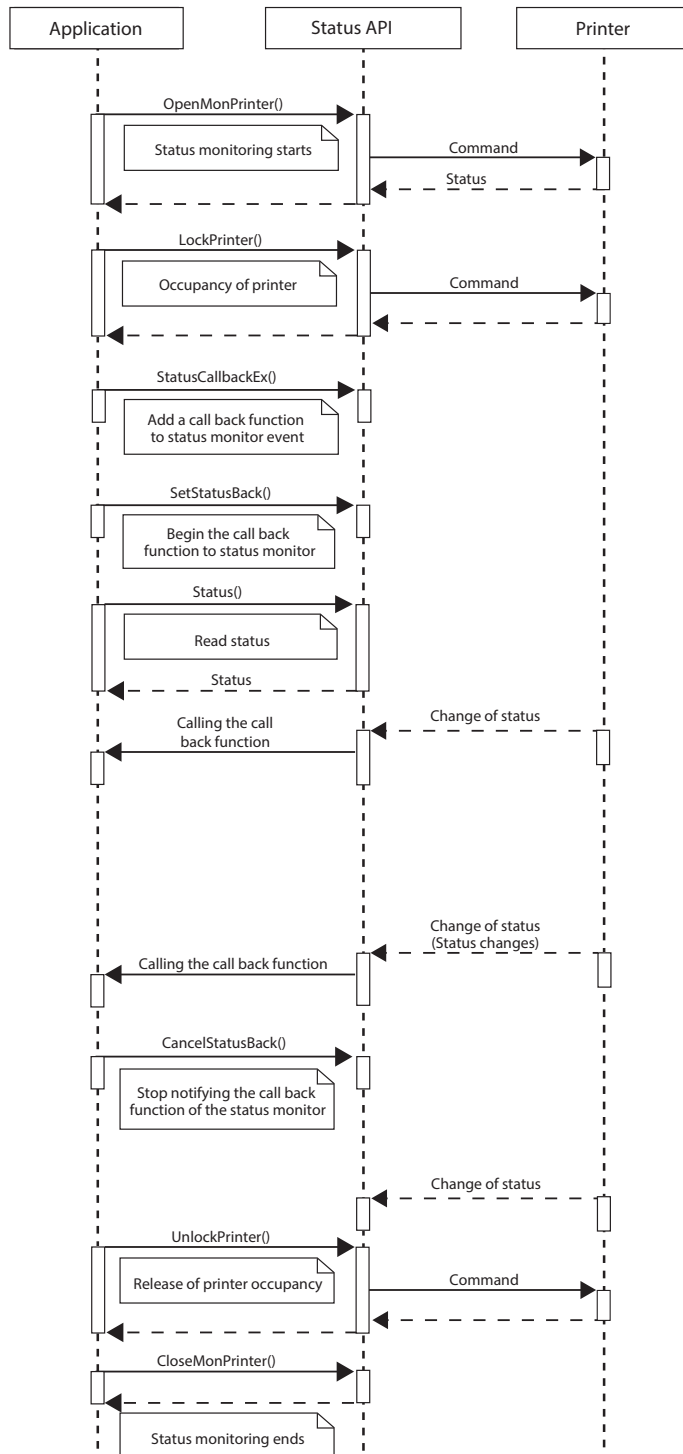
(2/2)



Visual C# / Visual Basic .NET

**NOTE**

When the development environment is Visual C# or Visual Basic .Net, .NET API is used. Refer to ["Reference for .NET" on page 39](#) for .NET API's detail.



Status API Errors and Response

Status API errors are errors when notifying ASB status and errors generated when calling Status API. The following explains the details of the errors and responses. Refer to the following and respond to the application errors.


ASB Status

The following are errors returned when ASB status is acquired. The details differ according to the printer model. Refer to “Printer Specification” for details.

Macro Definition (Constant)	Cause	Response
ASB_NO_RESPONSE	<ul style="list-style-type: none"> The power to the printer is not turned ON. The communication cable is not connected. The specified printer name/port is different. 	Confirm the status and ports of the printer, i.e. cables, etc.
ASB_PRINT_SUCCESS	<p>Notifies that printing has completed successfully. There is nothing else that is notified.</p> <p>Notifies that displaying on the customer display has been completed successfully.</p> <p>There is nothing else to be notified.</p>	-
ASB_UNRECOVER_ERR	A print error was generated to the printer.	Immediately turn off the power to the printer. *
ASB_AUTORECOVER_ERR	The temperature of the head has increased.	If the temperature of the head decreases with time, the error automatically cancels. *
ASB_OFF_LINE	An error causing the printer to go offline was generated.	Eliminate the cause of the printer to go offline.
ASB_PAPER_FEED	Paper is being fed.	There is no problem if the paper is being fed.
ASB_PANEL_SWITCH	The printer's panel switch is being pressed.	<ul style="list-style-type: none"> There is no problem if a switch on the printer's panel is being pressed. By setting the TM printer's switch or button to not effective (Ex. FEED button), user can use the feed button control as a trigger which can conduct event generation/handling from the application side.
ASB_MECHANICAL_ERR	A mechanical error was generated, i.e. home position detection error, etc.	Eliminate the cause of the error, and turn the TM printer back on or send a TM printer reset command (BiResetPrinter or BiForceResetPrinter). *
ASB_AUTOCUTTER_ERR	An auto cutter error was generated.	Eliminate the cause of the error, and turn the TM printer back on or send a TM printer reset command (BiResetPrinter or BiForceResetPrinter). *

Macro Definition (Constant)	Cause	Response
ASB_DRAWER_KICK	The drawer is open.	There is no problem if the drawer has been left open intentionally.
ASB_RECEIPT_END	No paper.	Place paper in the printer.
ASB_RECEIPT_NEAR_END	There is only a limited amount of paper remaining.	Place paper in the printer.
ASB_COVER_OPEN	The cover is open.	Close the printer's cover.

* Refer to the detailed operating manuals of the various printers.

 NOTE	The macro definition is defined using the EpsStmApi.h or Module1.bas file when the development environment is constructed.
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Status API Execution Error

The following are errors generated when Status API functions are called. The contents differ according to Status API function. Refer to ["Reference for Win32" on page 19](#) for details.

Macro Definition (Constant)	Cause	Response
ERR_TYPE	The parameters of nType differ.	Specify the correct value.
ERR_OPENED	The specified printer is already opened.	As the printer is already opened, use the handle value or specify a different printer.
ERR_NO_PRINTER	The specified printer driver does not exist.	Confirm the name of the printer driver.
ERR_NO_TARGET	The specified printer cannot be found. An unspecified printer is connected.	Connect to the correct printer.
ERR_NO_MEMORY	There is not enough memory.	Add available memory.
ERR_HANDLE	The handle value specified by the printer is incorrect.	Confirm the handle value.
ERR_TIMEOUT	This is a timeout error.	If the error is continuously generated, confirm whether the printer is properly connected.
ERR_ACCESS	Access cannot be performed on the printer. (The power to the printer is not turned on or the cable is not properly connected, etc.)	Confirm the printer. (Printer power, cable connection, etc.)
ERR_PARAM	This is a parameter error.	Review the syntax as the specified parameter is incorrect.
ERR_NOT_SUPPORT	This is an unsupported model.	Unsupported models cannot be used.
ERR_EXIST	The specified data already exists.	Delete the already existing data. Example: When this error occurs during executing BiSet-StatusBackXXX, retry it after executing BiCancel-StatusBack.
ERR_EXEC_FUNCTION	This function is unavailable as Status API is used by other applications.	Close the Status API used by other applications.
ERR_PH_NOT_EXIST	The PortHandler is not running, or a communication error between the client of PortHandler and the server.	Verify the connection between them, then restart the computer.
ERR_SPL_NOT_EXIST	The spooler service is not operating.	Confirm if the Print Spooler service has started. (Control Panel - Management Tools - Service)
ERR_RESET	This function is unavailable as the printer is being reset.	Recall after waiting a moment.
ERR_LOCKED	The printer is locked.	Wait until the printer becomes unlocked, or execute BiUnlockPrinter in the program that is locking the printer.



The macro definition is defined using the EPStmApi.h or StatusAPI.bas file when the development environment is constructed.

Reference for Win32

This chapter explains Status API and the syntax used in Win32 environment.



NOTE

- The data type is described in C++.
- See "Printer Specification" for details regarding the APIs available for each type of TM printer, ASB status, and reasons for the printer to go offline.

BiOpenMonPrinter

Makes Status API available for the printer and returns the handle.

You can open one printer from multiple processes at the same time.

When you open the opened printer from the same process again, a new different handle will return. In such a case, both handles are valid.

Syntax

```
int BiOpenMonPrinter (int nType, LPSTR pName)
```

Parameter

nType: Specifies the pName type.

Macro Definition (Constant)	Value	Description
TYPE_PORT	1	Specify the port name in <i>pName</i> .
TYPE_PRINTER	2	Specify the printer name in <i>pName</i> .

pName: If 1 is specified in nType, specify the port name (example: "ESDPRT001").

If 2 is specified, specify the printer name (example: "EPSON TM-T88V Receipt").

Example)

- Specifying a printer with the port name (ESDPRT001)
nHandle = BiOpenMonPrinter(1, "ESDPRT001");
- Specifying a printer with the printer name (EPSON TM-T88V Receipt)
nHandle = BiOpenMonPrinter(2, "EPSON TM-T88V Receipt");
- Specifying the shared printer(EPSON TM-T88V Receipt) with the host name "SERVER"
nHandle = BiOpenMonPrinter(2, "\\SERVER\\"EPSON TM-T88V Receipt");

Return value

Returns the variable defined in INT type. If Status API is successfully used, the handle identifying the printer is returned. The handle is returned even if the printer is offline. The following Status API execution errors (value) are returned.

Macro Definition (Constant)	Value	Description
ERR_TYPE	-10	Parameter error of <i>nType</i>
ERR_OPENED	-20	The specified printer is already opened.
ERR_NO_PRINTER	-30	The specified printer driver does not exist
ERR_NO_TARGET	-40	Printer unavailable
ERR_NO_MEMORY	-50	Not enough memory
ERR_TIMEOUT	-70	Timeout error
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_PARAM	-90	Parameter error
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_SPL_NOT_EXIST	-350	The spooler service is not operating.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

Call this function before using other Status API functions. The handle of the return value is used as the Parameter by other Status API functions.

The maximum number of printers that can be started at one time is 32.

The following operations are executed according to the printer status when this function is called.

Printer Status	Operation
Online	Returns the handle.
Offline	Returns the handle. However, switch to online as the printer cannot print offline.
Cable Removed/Power Off	Returns "ERR_ACCESS".

BiCloseMonPrinter

Cancels the status monitoring printer.

When a BiOpenMonPrinter function is called, always cancel the status monitoring printer using the BiCloseMonPrinter function.

Syntax

int **BiCloseMonPrinter** (int nHandle)

Parameter

nHandle: Specifies the handle.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

BiLockPrinter

Locks the printer.



NOTE

- This API is used for a shared printer.
- When using a local printer, this API is used to control multiple processes.

Syntax

int **BiLockPrinter** (int nHandle, DWORD timeout)

Parameter

nHandle: Specifies the handle.

timeout: Specifies the timeout time in ms (milliseconds). Specify it with a positive value.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_EXEC_FUNCTION	-310	This function is unavailable as Status API is used by other applications.
ERR_EXEC_MICR	-320	Cannot call as the MICR is reading
ERR_EXEC_SCAN	-330	Cannot call as the scanner is scanning
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

This API allows you to access the TM printer exclusively. The BiUnlockPrinter API is provided for canceling the exclusive access. While the TM printer is exclusively accessed, the printer does not accept any other API requests of direct access to the printer. The printer will return `ERR_LOCKED` to those other API requests.

The exclusive access right to the TM printer is given to a process. Therefore, the exclusive API access is available from other threads in the same process that is locking the printer.

Executing of API in the same process can be repeated. In this case, the printer is locked with multiple accesses. To unlock the printer, execute BiUnlockPrinter the number of times the API has been executed.

When executing exclusive access from a client to a shared printer or to a local printer via Ethernet, the access status is interrupted if the connection is lost, and restored upon recovery of the connection.

However, while the exclusive access status is being interrupted, another process can lock the TM printer for exclusive access. Once the printer is locked by another process, the printer returns `ERR_LOCKED` to API of the previous process. When another process is finished unlocking the printer, the exclusive access status of the previous process is restored.

Possible causes of the connection failure are as follows.

[Failure during exclusive access to a printer connected via Ethernet]

- The printer is turned Off, or the Ethernet connection between the computer and the printer is disconnected.
- The computer has entered Standby or Hibernate mode.

[Failure during exclusive access to a shared printer from a client]

- The connection between the client and the server is disconnected.
- The client computer has entered Standby or Hibernate mode.

BiUnlockPrinter

Unlocks the lock of the printer.



NOTE

- This API is used for a shared printer.
- When using a local printer, this API is used to control multiple processes.

Syntax

```
int BiUnlockPrinter (int nHandle)
```

Parameter

nHandle: Specifies the handle.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_EXEC_FUNCTION	-310	This function is unavailable as Status API is used by other applications.
ERR_EXEC_MICR	-320	Cannot call as the MICR is reading
ERR_EXEC_SCAN	-330	Cannot call as the scanner is scanning
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

This API unlocks the printer locked by "BiLockPrinter". After the lock is canceled, the printer can accept the API from other processes.

If you execute this API when the printer is not locked, "ERR_LOCKED" will be returned to Return value.

BiDirectIOEx

Sends special commands (ESC/POS command) to the printer. Can also acquire command execution results from the printer. The ASB suppress command can be added for differences with BiDirectIO. When the ASB suppress command is added, separate data (ASB status, etc.) is not sent from the printer until this function is complete, therefore, this is recommended when receiving execution results from the printer.



NOTE

- Refer to the following URL for details of the ESC/POS command.
https://reference.epson-biz.com/modules/ref_escpos/index.php?content_id=2

Syntax

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

Parameter

nHandle:	Specifies the handle.
writeLen:	Specifies the data length to write to the printer. Does not write to the printer when "0".
writeCmd:	Specifies the data (ESC/POS command) to write to the printer.
readLen:	Specifies the data length read from the printer. Specify when the command execution results are required from the printer. Specify as "0" when not required.
readBuff:	Specifies the buffer saving the data read from the printer.
timeout:	Specifies the timeout time in ms (milliseconds).
nullTerminate:	In the case of "True", reading is complete when NULL is received from the printer. At this time, specify the readBuff size to readLen. In the case of "FALSE", the length of data specified in readLen is read or data is read from the printer until a timeout error is generated.
option:	Controls the ASB suppression command.

Value	Description
0	Do not acquire ASB status.
1	Acquire ASB status after acquiring data.



NOTE

- Although the maximum data length that can be specified for readLen/writeLen is 2GB, specify the required minimum data length.
- Ensure that the size of readBuff is the same length specified in readLen or longer.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_NO_MEMORY	-50	Not enough memory
ERR_HANDLE	-60	Specified handle is invalid
ERR_TIMEOUT	-70	Timeout error
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_PARAM	-90	Parameter error
ERR_BUFFER_OVER_FLOW	-140	Lack of buffer capacity.
ERR_EXEC_FUNCTION	-310	This function is unavailable as Status API is used by other applications.
ERR_EXEC_MICR	-320	Cannot call as the MICR is reading
ERR_EXEC_SCAN	-330	Cannot call as the scanner is scanning
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to ["Status API Execution Error" on page 18](#).

Comment

Confirm proper execution of the function by confirming the return value of return value or proper command execution by confirming printer operation. If execution results are acquired from the printer (specify readLen), confirm the execution results.

The following operations are executed according to the printer status when this function is called.

Printer Status	Operation
Online	Returns "SUCCESS" to the return value. Executes the command.
Offline	<ul style="list-style-type: none"> • Returns "SUCCESS" when communication with the printer completed successfully within the time specified with the Timeout. • Returns "ERR_TIMEOUT" when failed to communicate with the printer within the time specified with the Timeout.
Cable Removed/Power Off	Returns "ERR_ACCESS" to the return value.
Printing	Returns "ERR_LOCKED" to the return value.

Caution

- Do not send invalid commands of ASB status transmissions using this function while monitoring the status of the printer. Subsequent status cannot be acquired.
- The ASB (automatic status notification) suppression command ensures that unintended data is not received when sending commands requesting a response from the printer.
If you do not use the ASB suppression, ensure that the programming considers the reception of unintended data.
- Specifying the receiving buffer processes the data received from the printer using this function or processes the data using the same process as the monitoring sled (BiGetStatus function, etc.). Refer to the following.

Transmission Command	Receiving Buffer Specified	Receiving Buffer	Operation of the Monitoring Sled
Acquiring status command	Yes	Saves the ASB status to the receiving buffer	<ul style="list-style-type: none"> • Does not callback • Does not renew the status
	No	-	<ul style="list-style-type: none"> • Does not callback • Does not renew the status
Command with responses from other printers	Yes	Enters the printer response into the receiving buffer	Does not effect the monitoring sled
	No	-	Abnormal callbacks may be generated
Command without responses from other printers	Yes	Generates timeout error	Does not effect the monitoring sled
	No	-	Does not effect the monitoring sled

BiResetPrinter

Resets status monitoring printers.



NOTE

- Cancels print jobs when this is called while printing.
- The TM printer with the serial interface cannot be reset.

Syntax

int **BiResetPrinter** (int nHandle)

Parameter

nHandle: Specifies the handle.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_NOT_SUPPORT	-100	Not supported
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

Confirm proper execution of the function by confirming the return value of *return value* or by resetting the printer and confirming that the printer is online (confirming the ASB status).



NOTE

After this function is executed, the printer cannot receive a print command for 15 seconds. If print is executed during this time, the job is sent to the spooler and the print processes is executed after the passage of the aforementioned time.

The following operations are executed according to the printer status when this function is called.

Printer Status	Operation
Online	Returns "SUCCESS" to the return value and resets.
Offline	Returns "SUCCESS" to the return value and resets.
Cable Removed/Power Off	Returns "ASB_NO_RESPONSE" to ASB status and does not reset.
Printing	Cancels the print job and resets.

BiForceResetPrinter

Forces to reset the TM printer whose status is being monitored.

The TM printer can be reset even in multi-thread/multi-process/multi-user environments.

The TM printer can be reset even if BiLockPrinter is accessed by a different program.

If the connection to a network printer is lost and then re-established, some time will be required before printing is possible again. Use of this API allows that time to be shortened.



NOTE

- This API will force the printer to reset even if printing is in progress, and the data being printed will be deleted.
- The TM printer with the serial interface cannot be reset.

Syntax

```
int BiForceResetPrinter (int nHandle)
```

Parameter

nHandle: Specifies the handle.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_NOT_SUPPORT	-100	Not supported
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

BiGetType

Acquires the type ID of the printer.



NOTE

For information on the type ID that can be acquired, ask your dealer.

Syntax

int **BiGetType** (int nHandle, LPBYTE typeID, LPBYTE font, LPBYTE exrom, LPBYTE special)

Parameter

nHandle: Specifies the handle.
 typeID: A type ID of the printer will be set.
 font: Device font will be set.
 exrom: This is not applicable.
 special: A special ID of the printer will be set.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_TIMEOUT	-70	Timeout error
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_PARAM	-90	Parameter error
ERR_NOT_SUPPORT	-100	Not supported
ERR_EXEC_FUNCTION	-310	This function is unavailable as Status API is used by other applications.
ERR_EXEC_MICR	-320	Cannot call as the MICR is reading
ERR_EXEC_SCAN	-330	Cannot call as the scanner is scanning
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to ["Status API Execution Error" on page 18](#).

Comment

Some information may not be obtained depending on models. In the case, 0 is returned to typeID.

BiGetStatus

Acquires the current printer status (ASB status).

Syntax

int **BiGetStatus** (int nHandle, LPDWORD lpStatus)

Parameter

nHandle: Specifies the handle.
 lpStatus: Returns the ASB status saved to Status API.
 The ASB status is a 4 byte configuration.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_PARAM	-90	Parameter error
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

Refer to "Printer Specification" regarding the ASB status that can be acquired by each printer.

BiSetStatusBackFunction

Automatically acquires the printer status (ASB status) using the callback function when the printer status changes.

Syntax

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

Parameter

nHandle: Specifies the handle.
 *pStatusCB: Specifies the definition address of the callback function.

Parameter of call back function

dwStatus: Returns the ASB status saved to Status API.
 The ASB status is a 4 byte configuration.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_PARAM	-90	Parameter error
ERR_EXIST	-210	The specified data already exists.
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

Call this function to set the printer status to *dwStatus* and call the callback function. When the printer status changes, new information is automatically set to *dwStatus* and calls the callback function. Cancel this function using *BiCancelStatusBack*.

Refer to "Printer Specification" regarding the ASB status that can be acquired by each printer.



NOTE

Status API cannot be used within the registered callback function.

BiSetStatusBackFunctionEx

Automatically acquires the printer status (ASB status) using the callback function when the printer status changes.

Identifies the printer port originating the callback, in addition to the functions of BiSetStatusBackFunction.

Syntax

```
int BiSetStatusBackFunctionEx (int nHandle, int (CALLBACK EXPORT *pStatusCB)
                                (DWORD dwStatus, LPSTR lpcPortName))
```

Parameter

nHandle: Specifies the handle.

*pStatusCB: Specifies the definition address of the callback function.

Parameter of call back function

dwStatus: Returns the ASB status saved to Status API. The ASB status is a 4 byte configuration.

lpcPortName: Returns the printer port name originating the callback.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_PARAM	-90	Parameter error
ERR_EXIST	-210	The specified data already exists.
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

Call this function to set the printer status to dwStatus and call the callback function. When the printer status changes, new information is automatically set to dwStatus and calls the callback function. Cancel this function using BiCancelStatusBack.

Refer to "Printer Specification" regarding the ASB status that can be acquired by each printer.



NOTE

Status API cannot be used within the registered callback function.

BiCancelStatusBack

Cancels the automatic status notification request process called using the BiSetStatusBackFunction/ BiSetStatusBackFunctionEx function.

Syntax

```
int BiCancelStatusBack (int nHandle)
```

Parameter

nHandle: Specifies the handle.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use



NOTE

- Returns "SUCCESS" even when executed when the automatic status notification request process is not registered.
- For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

BiPowerOff

Turns the TM printer off or sets it to standby mode.



NOTE

This API cannot be used when the TM printer is waiting to recover from an offline state. Also, if the TM printer goes offline while this API is active, the API can no longer be used.

Syntax

```
int BiPowerOff(int nHandle)
```

Parameter

nHandle: Specifies the handle.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_NO_MEMORY	-50	Not enough memory
ERR_HANDLE	-60	Specified handle is invalid
ERR_TIMEOUT	-70	Timeout error
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_NOT_SUPPORT	-100	Not supported
ERR_EXEC_FUNCTION	-310	Cannot call as another Status API is in use
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to ["Status API Execution Error" on page 18](#).

BiGetPrnCapability

Acquires the specified printer information in printer ID.



NOTE

- For information on the Printer Capability that can be acquired, ask your dealer.
- There are printer ID's that are not supported by printers. If unsupported printer ID's are specified, a timeout error is generated.

Syntax

int **BiGetPrnCapability** (int nHandle, BYTE prnID, LPBYTE pBuffSize, LPBYTE pBuff)

Parameter

- nHandle: Specifies the handle.
- prnID: Specifies the acquiring printer information.
- pBuffSize: Specifies the memory size to set the printer information (1 to 80). Returns the actual read data size after calling this function. In the case of insufficient buffer capacity, the required byte size is returned.
- pBuff: Specifies the memory address to set the printer information.

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_TIMEOUT	-70	Timeout error
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_PARAM	-90	Parameter error
ERR_BUFFER_OVER_FLOW	-140	Lack of buffer capacity.
ERR_EXEC_FUNCTION	-310	This function is unavailable as Status API is used by other applications.
ERR_EXEC_MICR	-320	Cannot call as the MICR is reading
ERR_EXEC_SCAN	-330	Cannot call as the scanner is scanning
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.




NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

BiOpenDrawer

Opens the drawer.

 NOTE	Opens the drawer even when the TM printer is offline.
---	---

Syntax

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

Parameter

nHandle: Specifies the handle.

drawer: Specifies the drawer to open.

Macro Definition (Constant)	Value	Description
EPS_BI_DRAWER_1	1	Opens drawer 1
EPS_BI_DRAWER_2	2	Opens drawer 2

pulse: Specifies the time when the drawer kick signal is on.

Macro Definition (Constant)	Value	Description
EPS_BI_PLUSE_100	1	Signal for 100 milliseconds
EPS_BI_PLUSE_200	2	Signal for 200 milliseconds
EPS_BI_PLUSE_300	3	Signal for 300 milliseconds
EPS_BI_PLUSE_400	4	Signal for 400 milliseconds
EPS_BI_PLUSE_500	5	Signal for 500 milliseconds
EPS_BI_PLUSE_600	6	Signal for 600 milliseconds
EPS_BI_PLUSE_700	7	Signal for 700 milliseconds
EPS_BI_PLUSE_800	8	Signal for 800 milliseconds

Return value

Macro Definition (Constant)	Value	Description
SUCCESS	0	Success
ERR_HANDLE	-60	Specified handle is invalid
ERR_ACCESS	-80	Access cannot be performed on the printer
ERR_PARAM	-90	Parameter error
ERR_NOT_SUPPORT	-100	Not supported
ERR_EXEC_FUNCTION	-310	This function is unavailable as Status API is used by other applications.
ERR_EXEC_MICR	-320	Cannot call as the MICR is reading
ERR_EXEC_SCAN	-330	Cannot call as the scanner is scanning
ERR_PH_NOT_EXIST	-340	The PortHandler is not running or a communication error between the client of PortHandler and the server.
ERR_RESET	-400	Cannot call as the printer is restarting
ERR_LOCKED	-1000	The printer is locked.



NOTE

For information on remedies for the Status API execution errors, refer to "[Status API Execution Error](#)" on page 18.

Comment

The following operations are executed according to the printer status when this function is called.

Printer Status	Operation
Online	Returns "SUCCESS" to the return value. Opens the drawer.
Offline	Returns "SUCCESS" to the return value. Opens the drawer.
Cable Removed/Power Off	Returns "ERR_ACCESS" to the return value. Does not open the drawer.

Reference for .NET

This chapter explains Status API and the syntax used in .NET environment.

Properties

IsValid

Acquires the open status of the printer.

Access: Read only

Data type: System.Boolean

Explanation

Returns either of the following values.

true: Successfully opened.

false: Not opened or failed to be opened.

LastError

Acquires the error code of the last executed API.

Access: Read only

Data type: com.epson.pos.driver.ErrorCode

Explanation

Can acquire an error code at any time because this module retains the last executed API.

This method is used to judge success or failure because APIs implemented in properties cannot return error codes.

Error codes for errors that may occur in all APIs. For details, see ["Status API Execution Error" on page 18](#).

Status

Acquires the current printer status.

Access: Read only

Data type: com.epson.pos.driver.ASB

Explanation

Constants defined in com.epson.pos.driver.ASB shall be used for the value. For details, see ["BiGetStatus" on page 31](#).

Methods

OpenMonPrinter

Starts controlling the specified printer. For details, see ["BiOpenMonPrinter" on page 19](#).

Syntax

ErrorCode **OpenMonPrinter** (OpenType type, String name)

Parameters

OpenType type:	Type of name to be specified for name. Constants defined in com.epson.pos.driver.OpenType shall be used for the value.
String name:	Starts controlling the specified printer.

CloseMonPrinter

Stops controlling the specified printer. For details, see ["BiCloseMonPrinter" on page 21](#).

Syntax

ErrorCode **CloseMonPrinter** ()

LockPrinter

Occupies the printer. For details, see ["BiLockPrinter" on page 22](#).

Syntax

ErrorCode **LockPrinter** (int timeout)

Parameters

int timeout:	Timeout time (in ms units).
--------------	-----------------------------

UnlockPrinter

Stops occupying the printer. For details, see ["BiUnlockPrinter" on page 24](#).

Syntax

ErrorCode **UnlockPrinter** ()

DirectIOEx

After sending the specified data to the printer, receives data of the specified length from the printer.

For details, see ["BiDirectIOEx" on page 25](#).

Syntax

- ErrorCode **DirectIOEx** (byte[] writeCmd, ref byte[] readBuff, int timeout, bool nullTerminate, byte option)

Description: Sends the ESC/POS commands to the TM printer and receives the execution result (binary data) from the printer.

- ErrorCode **DirectIOEx** (byte[] writeCmd, out String response, int timeout, byte option)

Description: Sends the ESC/POS commands to the TM printer and receives the execution result (character string data) from the printer.

- ErrorCode **DirectIOEx** (byte[] writeCmd, int timeout)

Description: Only sends the ESC/POS commands to the TM printer. Receives neither the execution result nor ASB statuses from the printer.

Parameters

byte[] writeCmd:	Data to be sent to the printer
ref byte[] readBuff:	Data received from the printer
int timeout:	Timeout time for data transmission and reception (in ms units)
bool nullTerminate:	Whether or not to terminate reception when NULL is received
byte option:	In the case of "True", reading is complete when NULL is received from the printer. At this time, specify the readBuff size to readLen. In the case of "False", the length of data specified in readLen is read or data is read from the printer until a timeout error is generated.
out String response:	Data received from the printer (to be converted into strings)

ResetPrinter

Resets the printer. When resetting the printer during printing, cancels print jobs and performs printer resetting. For details, see ["BiResetPrinter" on page 28](#).

Syntax

ErrorCode **ResetPrinter**()

ForceResetPrinter

Forces to reset the TM printer whose status is being monitored.

Can reset also the TM printers occupied with LockPrinter. This also resets TM printers during printing. Be careful in using this API. For details, see ["BiForceResetPrinter" on page 29](#).

Syntax

ErrorCode **ForceResetPrinter**()

GetType

Acquires the type ID of the printer. For details, see ["BiGetType" on page 30](#).

Syntax

ErrorCode **GetType** (out byte typeid, out byte font,
out byte exrom, out byte euspecial)

Parameters

out byte typeid:	Type ID of the printer
out byte font:	Fonts installed in the printer
out byte exrom:	Capacity of the printer's extended Flash ROM.
out byte euspecial:	Special ID of the printer

SetStatusBack

Starts status notification through StatusCallback/StatusCallbackEx events.

For details, see ["BiSetStatusBackFunctionEx" on page 33](#).

Syntax

ErrorCode ***SetStatusBack*** ()

CancelStatusBack

Stops status notification through StatusCallback/StatusCallbackEx events.

For details, see ["BiCancelStatusBack" on page 34](#).

Syntax

ErrorCode ***CancelStatusBack*** ()

PowerOff

Executes the power-off process of the printer. For details, see ["BiPowerOff" on page 35](#).

Syntax

ErrorCode ***PowerOff*** ()

GetPrnCapability

Acquires information about the printer specified by the printer ID.

For details, see ["BiGetPrnCapability" on page 36](#).

Syntax

- ErrorCode **GetPrnCapability** (byte printerID, out byte[] data)

Description: Acquires information (binary data) of the TM printer specified with printer ID.

- ErrorCode **GetPrnCapability** (byte printerID, out String data)

Description: Acquires information (character string data) of the TM printer specified with printer ID.

Parameters

byte printerID:	ID of the printer from which information is acquired.
out byte[] data:	Printer information
out String data:	Printer information

OpenDrawer

Activates the drawer. Can be used also when the printer is offline. For details, see ["BiOpenDrawer" on page 37](#).

Syntax

ErrorCode **OpenDrawer** (Drawer drawer, Pulse pulse)

Parameters

Drawer drawer:	Drawer to be opened Constants defined in com.epson.pos.driver.Drawer shall be used for the value.
Pulse pulse:	Specifies the time when the drawer kick signal is on. Constants defined in com.epson.pos.driver.Pulse shall be used for the value.

Events

StatusCallback

Event that handles ASB status notification.

For details, see ["BiSetStatusBackFunction" on page 32](#).

Syntax

StatusCallbackHandler (ASB asb)

Parameters

ASB asb: ASB status. For details, see “Printer Specification”.

StatusCallbackEx

Event that handles ASB status notification. For details, see ["BiSetStatusBackFunctionEx" on page 33](#).

Syntax

StatusCallbackHandlerEx (ASB asb, String portName)

Parameters

ASB asb: ASB status. For details, see “Printer Specification”.

String portName: Port name

Appendix

Acknowledgements

Info-ZIP

"Advanced Printer Driver" incorporate compression code from the Info-ZIP group.

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Windows Template Library

This application uses the Microsoft Windows Template Library (WTL).

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